TIMPLUS

# Advanced call analytics
# for small to mid-size organisations

---

## Product Documentation

**Last Updated: February 2016**

---

# Table of Contents

# Home

## Legal & copyright notices

### Software license

When you purchase this software, you are actually purchasing a license to use it.

One license covers one installation, although one installation may cover up to five sites.

Your support contract, if applicable, will cover all sites logged by this TIM Plus installation.

### Disclaimer

Tri-Line Network Telephony Ltd (hereafter named "Tri-Line") makes no warranties nor representations (neither expressed nor implied) with respect to the contents or performance of the product or this documentation. It particularly disclaims any warranty of fitness or merchantability for any particular purpose.

The product is sold "as is" with any faults. Any claims made by sales literature or salespersons do not constitute warranties.

Because of the diversity of hardware, software and conditions under which the system may be used, Tri-Line cannot make any warranty of fitness for a particular purpose. The entire risk of using the product must be assumed by the user. Accordingly, the user is recommended to thoroughly test the product before relying on it. In any event, any liability of Tri-Line is limited exclusively to a refund of the purchase price of the product.

It is the user's responsibility to ensure that the product or its use conforms to any laws concerning the provision of data protection in their organisation.

Tri-Line reserves the right to revise and make changes to the software and/or the hardware and/or this documentation without incurring any obligation to notify any person of such changes and/or revisions.

> By using the software you agree to be bound by these terms and conditions.

### Copyright



The contact details of the copyright holders are:

```
Tri-Line Network Telephony Limited
9-10 Telfords Yard
The Highway
London
E1W 2BS

Switchboard: +44 20 7265 2600
Technical Support: +44 20 7265 2626
Website: http://www.tri-line.com/
```

### Free upgrades

We operate a free upgrade scheme for customers who purchase maintenance at the same time as purchasing a license; whilst a maintenance contract is in place, minor software updates and enhancements are made available free of charge.

Free upgrades are solely at the discretion of Tri-Line and are usually delivered by electronic means over the internet. It is the customer's responsibility to ensure that these updates can be received.

Customers without a maintenance contract will be charged for any software upgrades they require, as well as for any technical assistance needed during the upgrade procedure.

# System requirements

## Hardware

A computer with the following specification will comfortably run a single copy of TIM Plus:

- **CPU:** 2 GHz Dual-Core x86/x86-64 CPU
- **Memory:** 2 GB
- **Hard disk:** 80 GB
- **Operating system:** Windows XP SP3 - Windows 8 (inc. Server editions)
- **Network:** Ethernet TCP/IP
- **I/O:** Dedicated serial RS232-C port for each PBX (if required)

We do not recommend integration of the internal SQL database of TIM Plus with third-party applications such as CRM systems; for this type of solution, we would recommend our TIM Enterprise product.

## Software

- Microsoft Internet Explorer 6+
- Mozilla Firefox 2+
- Apple Safari
- Google Chrome
- Opera

For automatic licensing during installation of the software, a connection to the internet is also required. For best results, ensure that the PC can access external websites on TCP ports 80 (HTTP) and 443 (HTTPS) without the need for a proxy login.

### Summary

- TIM Plus must be installed on a Windows PC but can be viewed from any web browser running on any operating system without the need for additional client software.
- TIM Plus comes with its own in-built web server, so a server edition of Windows is not required nor is an external web server such as IIS or Apache.

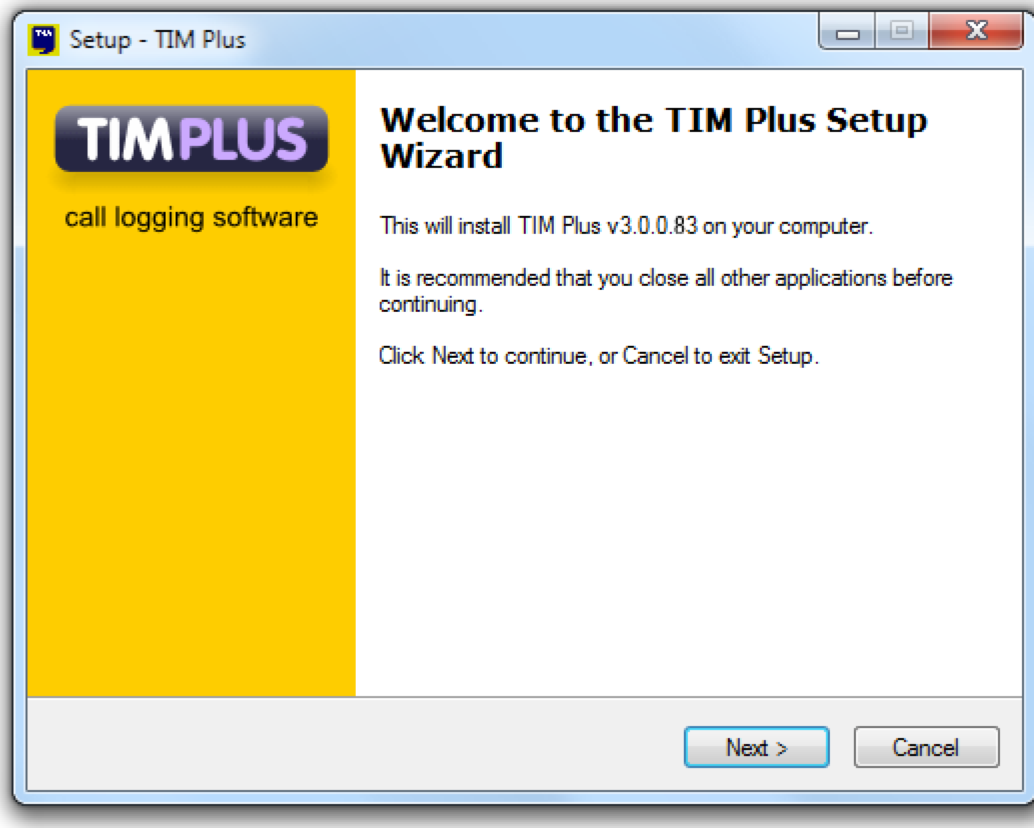
# Setup

## Obtaining and installing TIM Plus

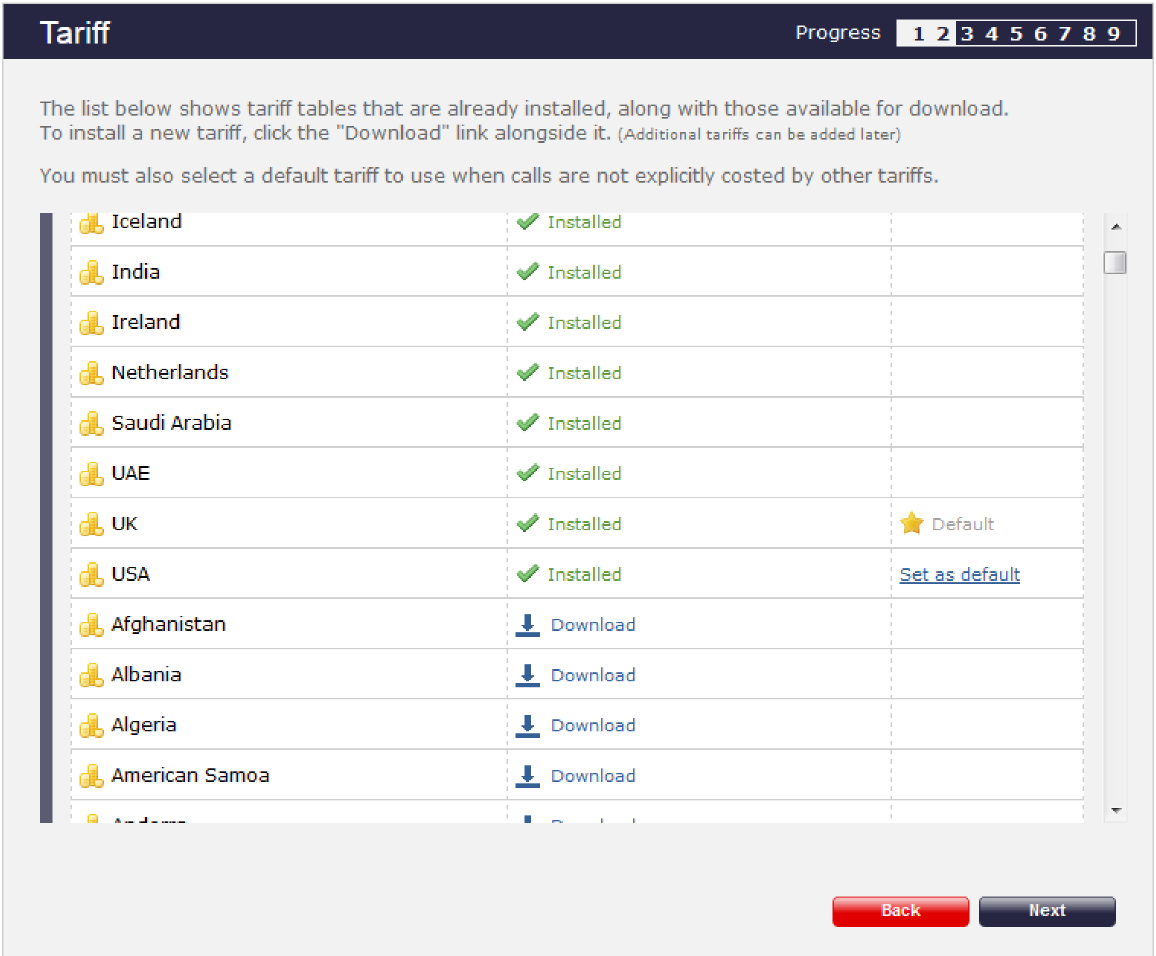
Log on to the Tri-Line Gateway using the credentials you created when you first enquired about TIM Plus. Once logged on, you will be directed to your **Home** page, from where you can download your personal copy of the software.

> It is important that you download your software only from this location, since each installation package is tagged with an unique ID bound to your account.

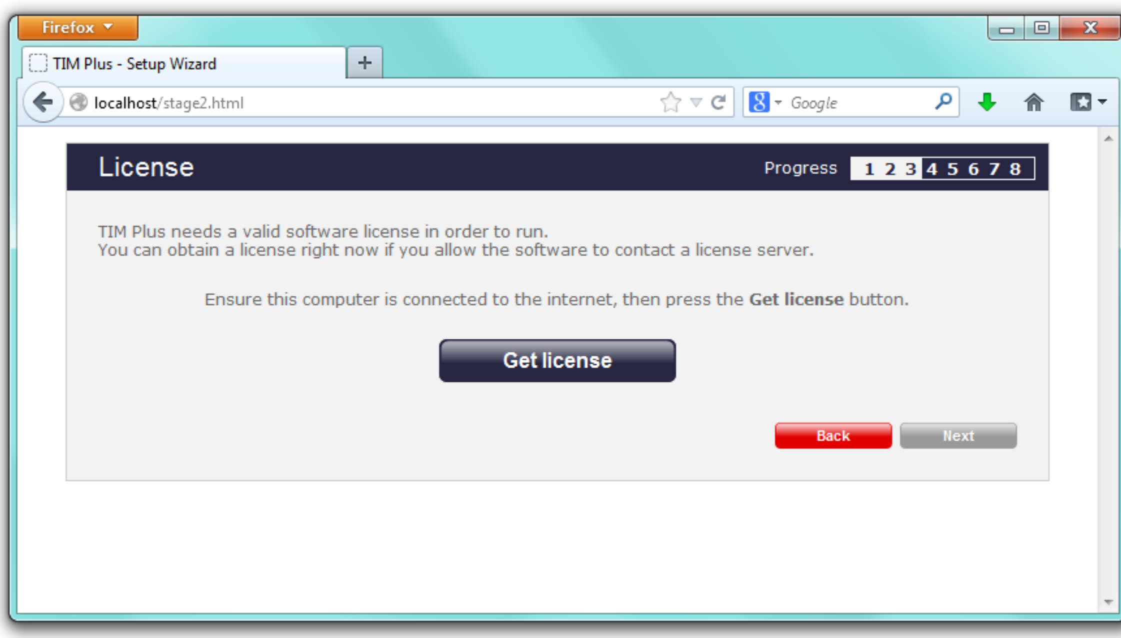
When you have downloaded the setup package, double-click on it and follow the setup wizard in order to complete the installation.




When prompted to select a tariff table, scroll down the list to locate the one relevant to your country and click on **`Set as default`**. If the tariff is not installed by default, click on the **`Download`** link first.




When asked to provide a license certificate, click on the Get license button to retrieve this automatically from our servers.




### Obtaining a license manually

If you cannot update your software license automatically, you can apply this manually by following the steps below:

1. In the **`Get license`** window, click on the Next button and copy the product key displayed in the **`License`** box, as shown below:


```
--- BEGIN PRODUCT KEY --------------------------
UAAAAHicAVAAr/9s8zxjdyBcmwqLZ8IknMhQr3UETOj9j3DJ
O36fheDXOz5PAFW9GWpPDffai6UUh1tu06+HqtIXrPK6PaAV
yy/arfUj1Avz8EOx5xNkp2qOLRhgJ/c=
--- END PRODUCT KEY ----------------------------
```


2. Log in to the Gateway using your username and password.
3. In the **`Products`** panel, click on the TIM Plus product.
4. In the **`Software license`** panel, click on the **`Activate now`** link.
5. Paste the product code in the activation text box.
6. Enter the number of users you intend to log and the version number of the software, then click on the Activate Now to obtain the license certificate.
7. Copy and paste the certificate in the **`License`** box of the TIM Plus setup wizard.

# Connecting to your PBX

## 3COM

### 3COM VCX

These instructions help you configure your 3COM VCX phone system to work with TIM Plus. Contact your system maintainer if you are not familiar with the configuration of your PBX.

Connection Type

TIM Plus receives FTP transfers from this PBX.

Support Files

**`3Com VCX-NBX.TDT`**

**`3Com VCX-NBX.TDS`**

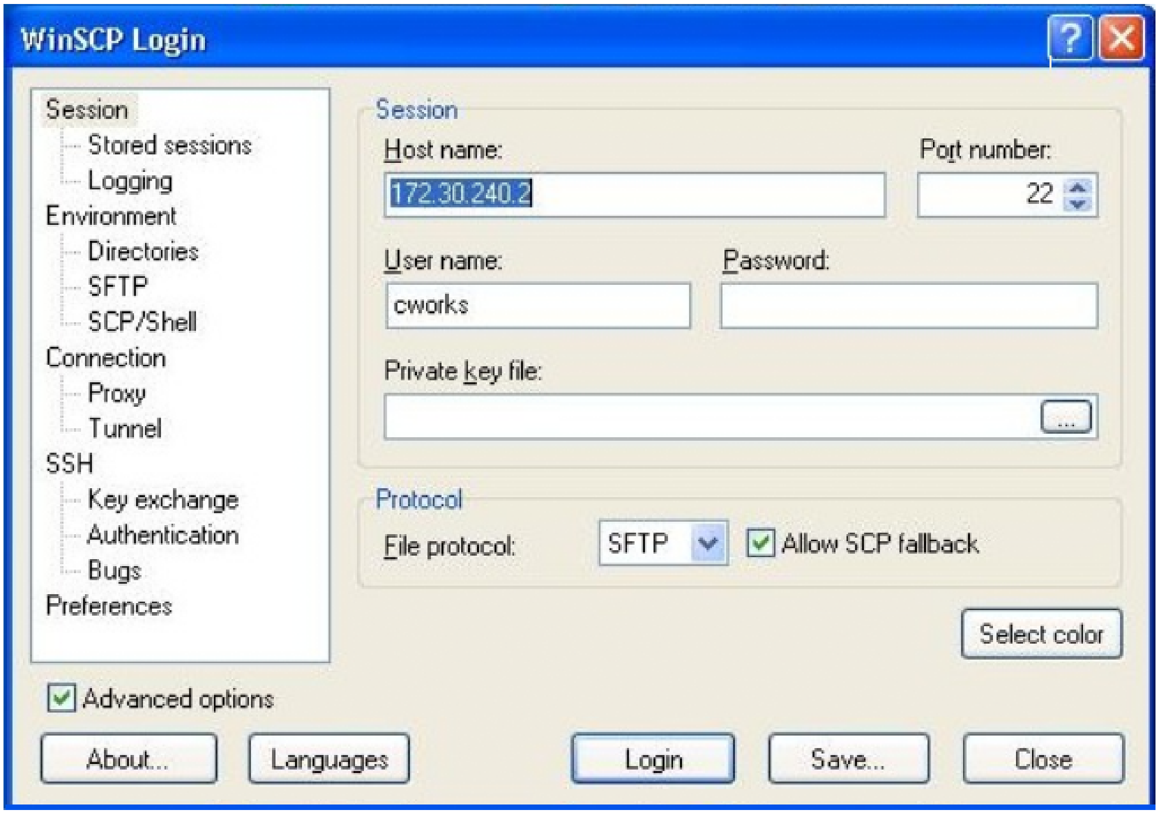
Required Tasks

Configure the SMDR output

Configure TIM Plus

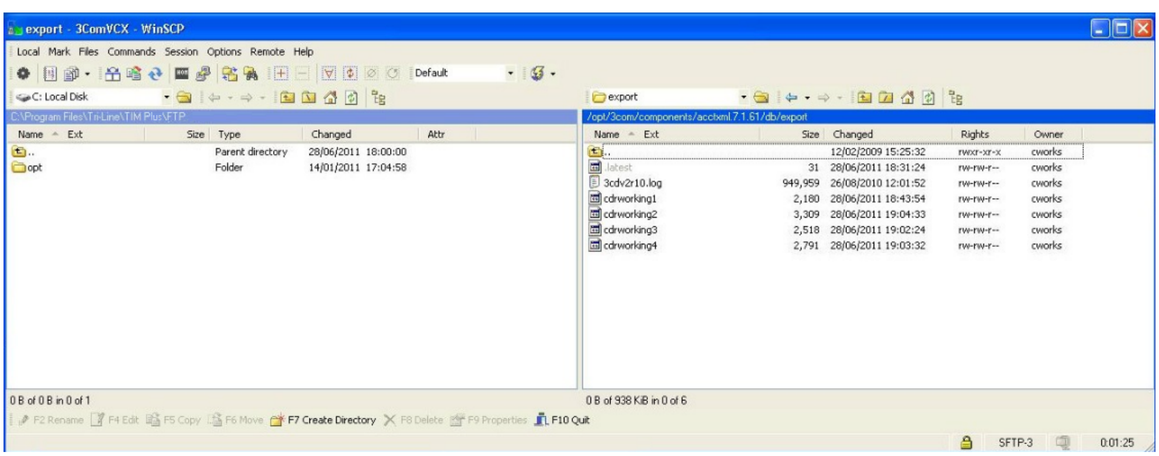
#### Configuring your SMDR output

To retrieve call logging data from your 3COM VCX phone system, you need to set up an SFTP transfer. Below is an example of how to configure this, using WinSCP - a free FTP client software. Any other third-party client software can be used instead.




| Field | Description |
|---|---|
| **Host name** | The IP address or host name of the phone system |
| **Port number** | The port number for the SFTP transfer. The default port number is **22** |
| **User name** | The username required to log in to your 3COM VCX phone system |
| **Password** | The password required to log in to your 3COM VCX phone system |

Once connected to the phone system, you can transfer the CDR files, located by default in **`opt/3com/VCX/acctxml/db/export`**, to the PC running TIM Plus.




In this example, the XML files are being copied in the following location: **`C:\Program Files\Tri-Line\TIM Enterprise\FTP`**, given the **`FTP`** folder has been created in advance for this purpose.


#### Creating a batch file

To enable TIM Plus to collect and process the XML files, you need to create a batch file containing the following lines:

```
xcopy/Y "C:\Program Files\Tri-Line\TIM Plus\FTP\*.XML"
"C:\Program Files\Tri-Line\TIM Plus\spool\*.{sitecode}"
cd "\Program Files\Tri-Line\TIM Plus\FTP\"
del *.* /q
cd\
```

In the above example, the **`{sitecode}`** needs to be replaced with the unique ID of the site object you are trying to send the data to. To obtain the ID of a site, hover the mouse pointer over it on the Directory screen in TIM Plus and it will be displayed as a tooltip.

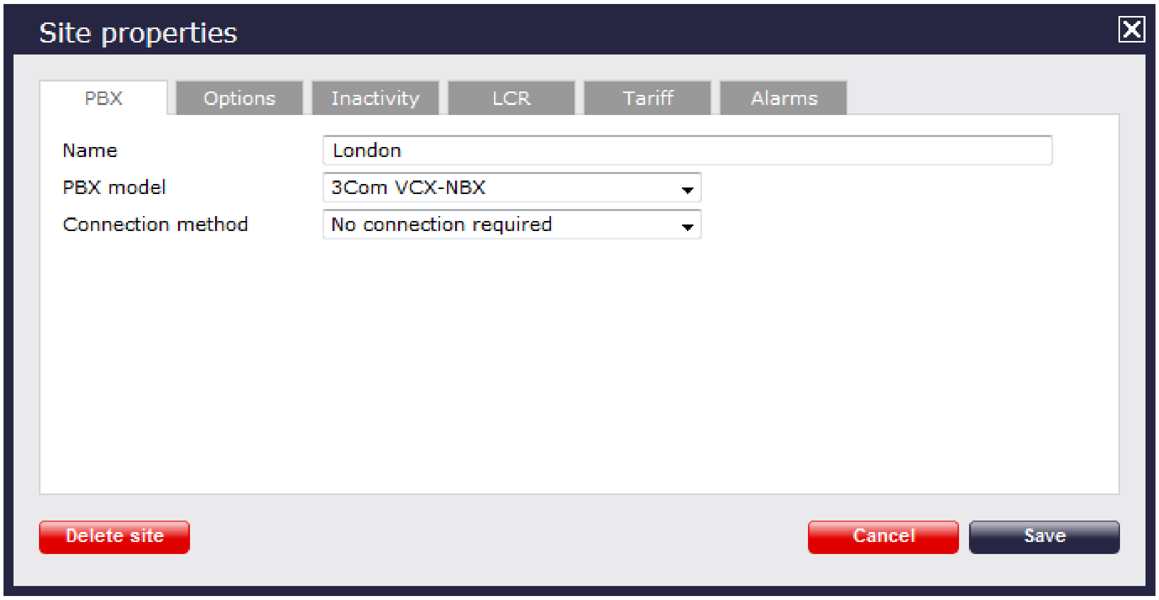
The batch file will change the `.xml` file extension to the designated site code and move the files in the **`Spool`** folder for processing.

A Windows scheduled task must be set up as well in order to run the batch file every 5 minutes or so.

### Configuring TIM Plus

Once the batch file has been configured, log in to TIM Plus and perform the steps below:

1. Click on the Directory tab.
2. Choose the site you want to configure and click Properties .




3. In the **Site Properties** window, select **3Com VCX-NBX** from the **PBX model** drop-down list.
4. In the **Connection method** field, select **No connection required** from the drop-down list.
5. Click on the Save button to apply the settings.

# 3CX

## 3CX (below v14)

These instructions help you configure your 3CX phone system to work with TIM Plus. Contact your system maintainer if you are not familiar with the configuration of your PBX.

Connection Type

TIM Plus listens for connections from this PBX.

Support Files

**3CX.TDT**

**3CX.TDS**

**CDRTemplate-Socket.xml**

Required Tasks

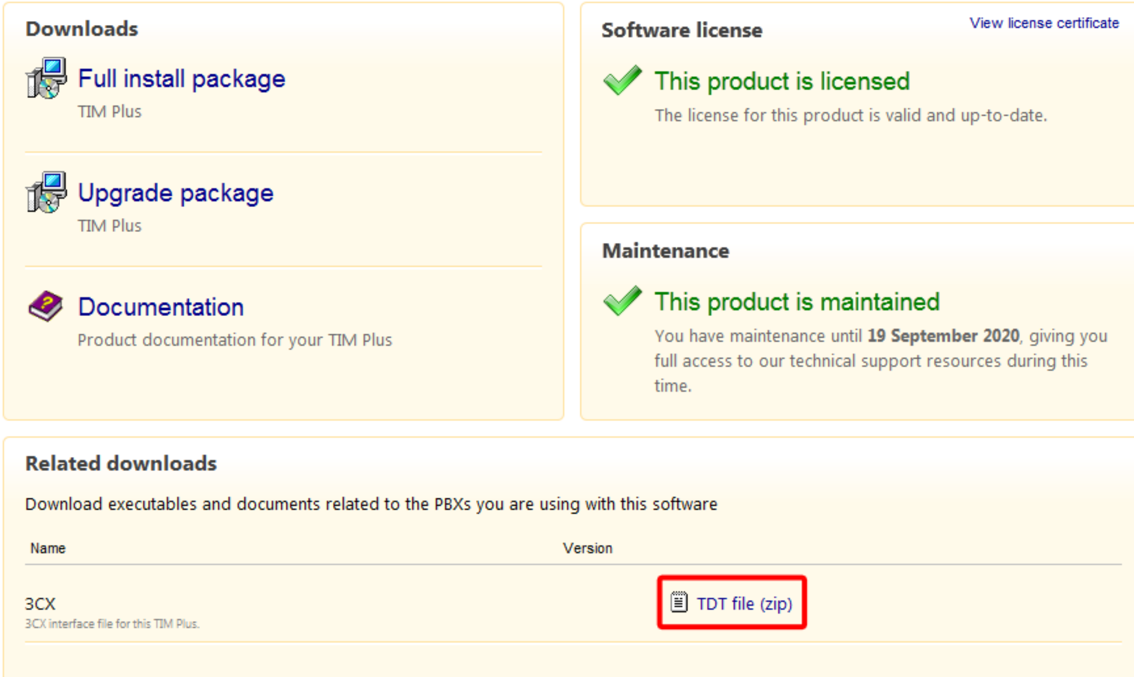
Configure the SMDR output

Configure TIM Plus

### Configuring your SMDR output

#### Download the interface file

1. Visit the Gateway and download the interface files from the **Related downloads** section, as shown below:




2. Extract the **`3CX.ZIP`** file onto the desktop.

3. Copy the **`3CX.TDT`** and **`3CX.TDS`** files into **`C:\Program Files\Tri-Line\TIM Plus\config`**, overwriting any existing files with the same name.

### Configure the interface file

1. Transfer the **`CDRTemplate-Socket.xml`** file onto the 3CX server and place it in the following location: **`C:\Documents and Settings\All Users\Application Data\3CX\Data\CDRTemplates`**.

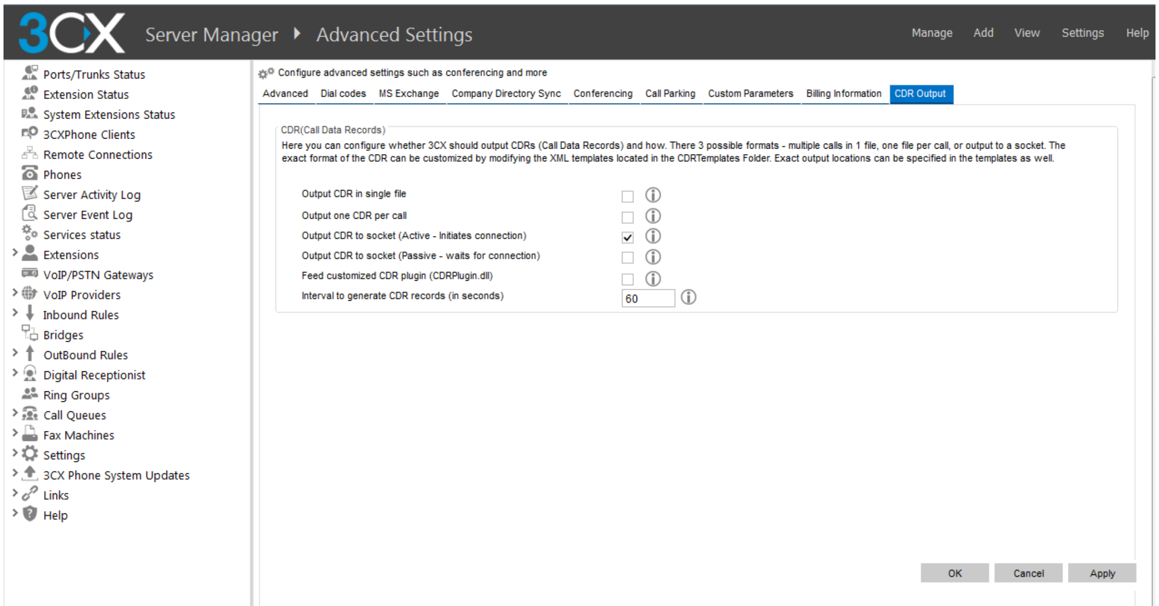
2. Edit **`CDRTemplate-Socket.xml`** and update the relevant entry to point to the IP address of the machine running TIM Plus.

```
<?xml version="1.0" encoding="utf-8"?>
<CallTemplate Host="127.0.0.1" Port="33555" OutboundOnly="false">
  <idcallhistory3 fmt="&#xD;&#xA;&quot;Call {0}&quot;," />
  <callid   fmt="&quot;{0}&quot;," />
  <duration fmt="&quot;{0}&quot;," />
  <starttime fmt="&quot;{0:yyyy-MM-dd HH:mm:ss}&quot;," />
  <answertime fmt="&quot;{0:yyyy-MM-dd HH:mm:ss}&quot;," />
  <endtime  fmt="&quot;{0:yyyy-MM-dd HH:mm:ss}&quot;," />
  <from_no  fmt="&quot;{0}&quot;," />
  <to_no    fmt="&quot;{0}&quot;," />
  <group_no fmt="&quot;{0}&quot;," />
  <line_no  fmt="&quot;{0}&quot;," />
```

### Enable the CDR output

1. Log in to your 3CX server and from the main menu go to **`Settings->Advanced`**.

2. Select CDR output from the **`Advanced Settings`** screen, as shown below:




3. Enable the tick box for **Output CDR to Socket (Active - Initiates connection)** and click Apply .

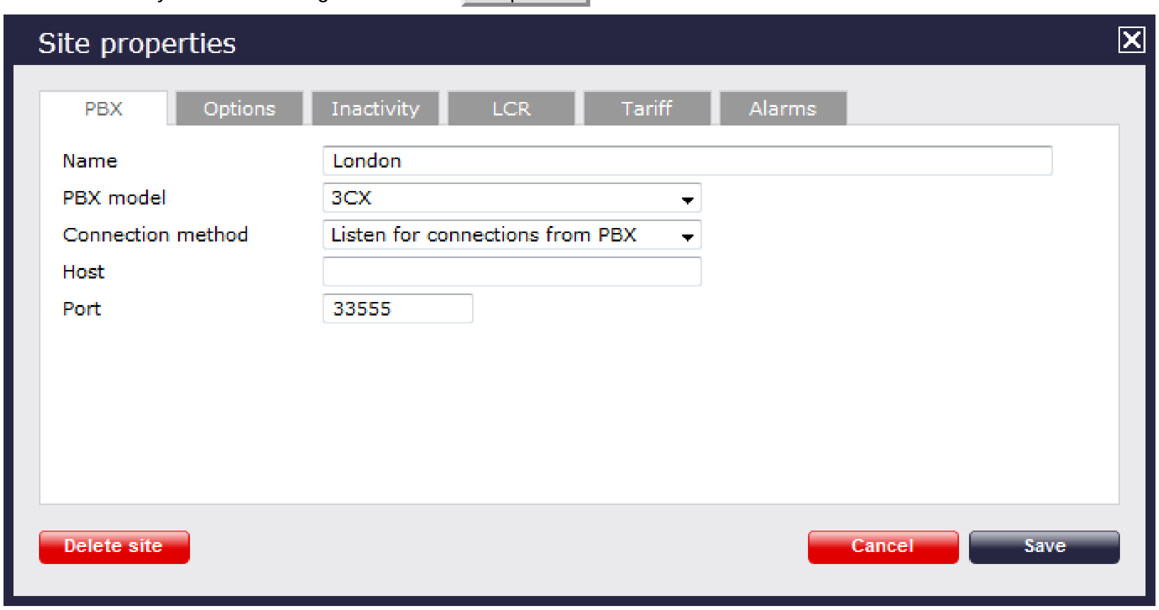
4. Under **3CX Phone System**, click Service Status and within the **Service Name** section, select **3CX PhoneSystem Call History**.

5. Click Restart to load the new XML file.

### Configuring TIM Plus

Follow the steps below to configure TIM Plus to listen for SMDR data from your 3CX phone system:

1. Click on the Directory tab.
2. Choose the site you want to configure and click Properties .




3. In the **Site Properties** window, select **3CX** from the **PBX model** drop-down list.
4. In the **Connection method** field, select **Listen for connections from PBX** from the drop-down list.

5. Leave the **`Host`** field blank.
6. In the **`Port`** field, enter **`33555`** as the default port for connections to this PBX.
7. Click on the Save button to apply the settings.

## 3CX v14 SP2+

These instructions help you configure your 3CX phone system to work with TIM Plus. Contact your system maintainer if you are not familiar with the configuration of your PBX.

Connection Type

TIM Plus establishes a TCP connection to this PBX.

Support Files

**`3CX v14 SP2+.TDS`**

**`3CX v14 SP2+.TDT`**

Required Tasks

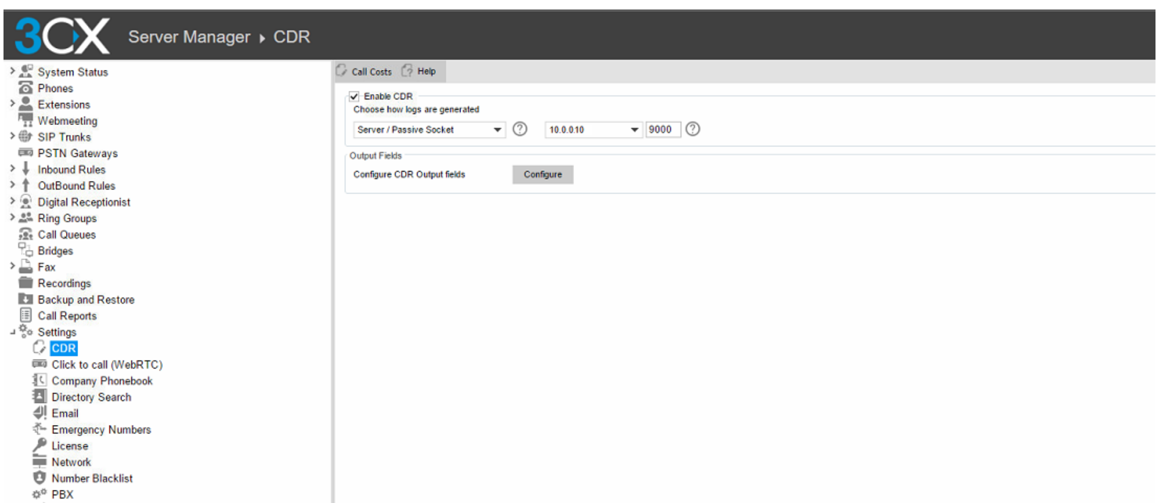
Configure the SMDR output

Configure TIM Plus

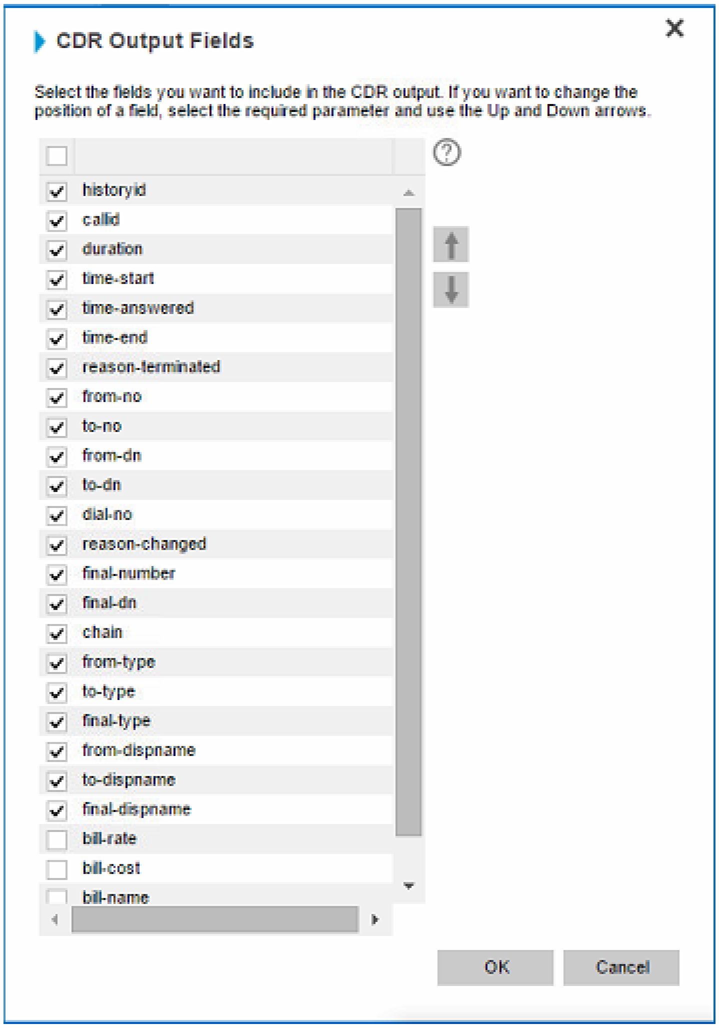
### Configure the SMDR output

Follow the steps below to enable the SMDR output in your telephone system:

1. Log in to your 3CX server and from the main menu go to **`Settings->CDR`**, as shown below:




2. Tick the **`Enable CDR`** box and from the drop-down list, select the **`Server/Passive Socket`** option.
3. In the IP address field, enter the IP address of the machine running TIM Plus and select a listening port. We recommend using the 9000 range.
4. To configure the SMDR output, click on the Configure tab. Enable the required fields, as shown in the screenshot below:

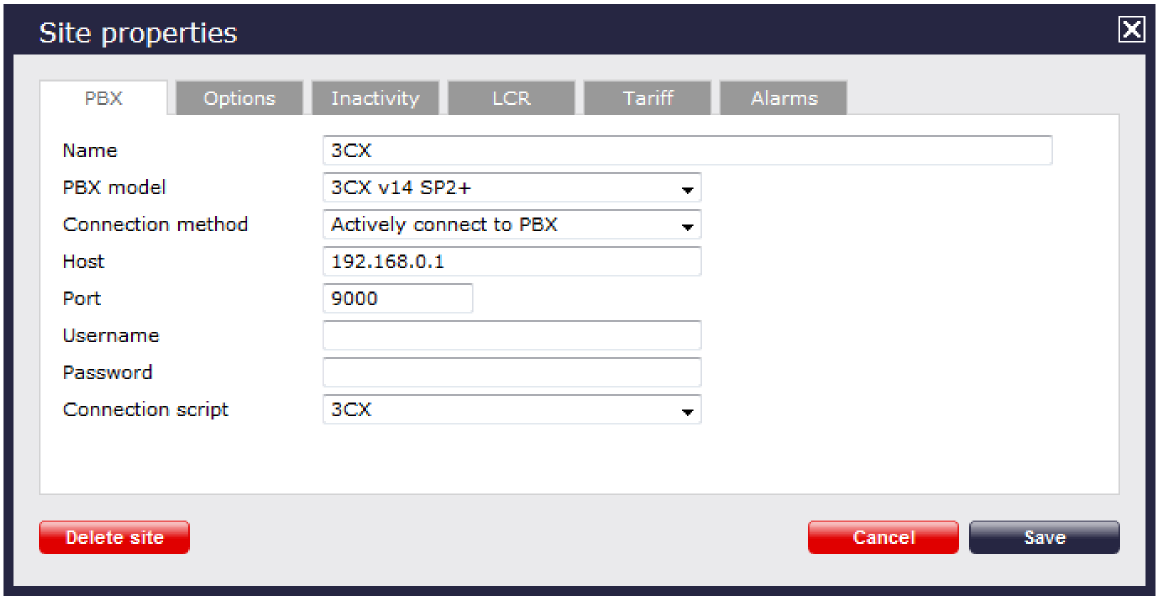



5. Click OK to save the changes.

### Configure TIM Plus

Follow the steps below to configure TIM Plus to connect to your telephone system:

1. Click on the Directory tab.
2. Choose the site you want to configure and click Properties .




3. In the **Site Properties** window, select **3CX v14 SP2+.TDT** from the **PBX model** drop-down list.
4. In the **Connection method** field, select **Actively connect to PBX** from the drop-down list.
5. In the **Host** field, enter the IP address of your telephone system.
6. In the **Port** field, enter the port number configured in the telephone system.
7. Leave the **Username** and **Password** fields blank.
8. In the **Connection script** field, select **3CX** from the drop-down list.
9. Click on the Save button to apply the settings.

# Aastra (Mitel)

## Aastra BP

These instructions help you configure your Aastra BP phone system to work with TIM Plus. Contact your system maintainer if you are not familiar with the configuration of your PBX.

Connection Type

TIM Plus establishes a serial connection with this PBX.

Support Files

**Aastra BP.TDT**

**Aastra BP.TDS**

Required Tasks

Configure the SMDR output

Install NetPBX

Configure TIM Plus

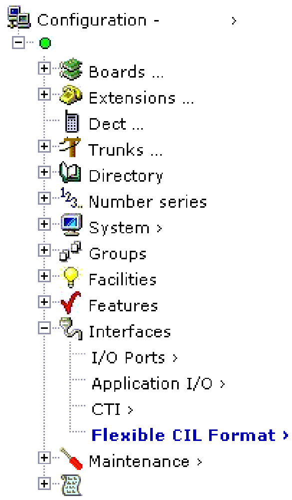
### Configuring your SMDR output

### BP firmware R12 or older

If you are using firmware older than R12, set the SMDR output to type **`CIL 3`** which is a fixed format requiring no further configuration.

### BP firmware R13+

If you are using firmware R13+, set the SMDR output to **`Flexible CIL`** and configure the options as below:




Record length 193

| Index | Offset | Field type | Edit | Insert | Delete |
|---|---|---|---|---|---|
| 1 | 1 | Message code | ... | Insert | Delete |
| 2 | 4 | Sequence number CIL4 | ... | Insert | Delete |
| 3 | 8 | TAG identifier | ... | Insert | Delete |
| 4 | 14 | Call date CIL4 | ... | Insert | Delete |
| 5 | 21 | End time hh:mm:ss | ... | Insert | Delete |
| 6 | 30 | Caller's number DDI | ... | Insert | Delete |
| 7 | 39 | Call duration CIL4 | ... | Insert | Delete |
| 8 | 45 | Dialled access code CIL4 | ... | Insert | Delete |
| 9 | 50 | Dialled number CIL4 | ... | Insert | Delete |
| 10 | 75 | Information status 3 | ... | Insert | Delete |
| 11 | 84 | ORG/TERM DEFINITION | ... | Insert | Delete |
| 12 | 87 | Account code CIL4 | ... | Insert | Delete |
| 13 | 103 | Authorisation code DDI | ... | Insert | Delete |
| 14 | 112 | Queue time, answer CIL4 | ... | Insert | Delete |
| 15 | 117 | Meter pulses CIL4 | ... | Insert | Delete |
| 16 | 122 | Cost state CIL4 | ... | Insert | Delete |
| 17 | 124 | Cost CIL4 | ... | Insert | Delete |
| 18 | 136 | Trunk number CIL4 | ... | Insert | Delete |
| 19 | 141 | Sent access code CIL4 | ... | Insert | Delete |
| 20 | 146 | Sent number CIL4 | ... | Insert | Delete |
| 21 | 171 | A-number CIL4 | ... | Insert | Delete |
| 22 | 192 | Carriage return/LF | ... | Insert | Delete |
| 23 | | ------- not used ---------- | ... | Insert | Delete |
| 24 | | ------- not used ---------- | ... | Insert | Delete |
| 25 | | ------- not used ---------- | ... | Insert | Delete |
| 26 | | ------- not used ---------- | ... | Insert | Delete |
| 27 | | ------- not used ---------- | ... | Insert | Delete |
| 28 | | ------- not used ---------- | ... | Insert | Delete |
| 29 | | ------- not used ---------- | ... | Insert | Delete |
| 30 | | ------- not used ---------- | ... | Insert | Delete |

## Installing NetPBX

The Aastra BP phone system sends SMDR information via a serial connection. To collect the data from the serial port and send it to TIM Plus, you first need to install the NetPBX software. For setup instructions, click on the link below:

### Configuring TIM Plus

Once NetPBX is configured and collecting data, log in to TIM Plus and perform the following steps:

1. Click on the Directory tab.
2. Choose the site you want to configure and click Properties .


3. In the **Site Properties** window, choose **Aastra BP** from the **PBX model** drop-down list.
4. In the **Connection method** field, select **No connection required** from the drop-down list.
5. Click on the Save button to apply the settings.

## Aastra Intelligate Series

The Aastra Intelligate Series can be configured to send its SMDR data over a serial (RS232) or an IP connection. Click on one of the links below that relates to your preferred connection method.

### Aastra Intelligate Series - Serial connection

These instructions help you configure your Aastra Intelligate phone system to work with TIM Enterprise. Contact your system maintainer if you are not familiar with the configuration of your PBX.

Connection Type

TIM Plus establishes a serial connection with this PBX.

Support Files

**Aastra PC5.TDT**

**Aastra PC5.TDS**

Required Tasks

Configure the SMDR output

Install NetPBX

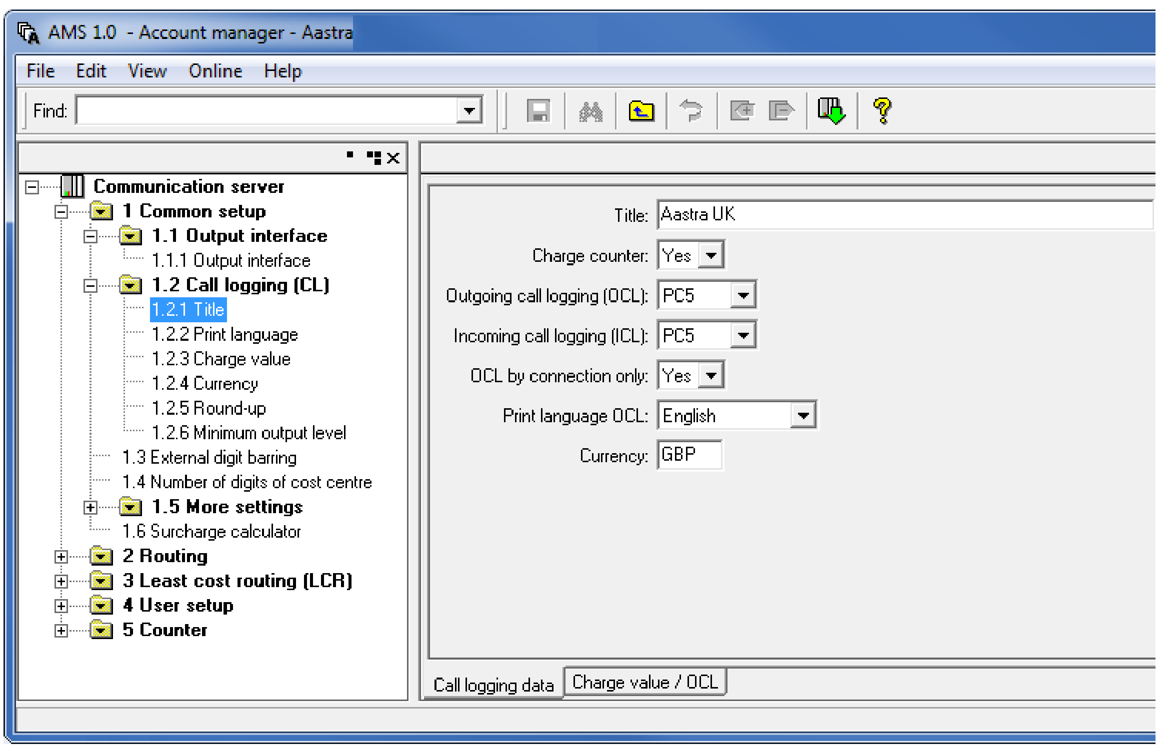
Configure TIM Plus

### Configuring your SMDR output

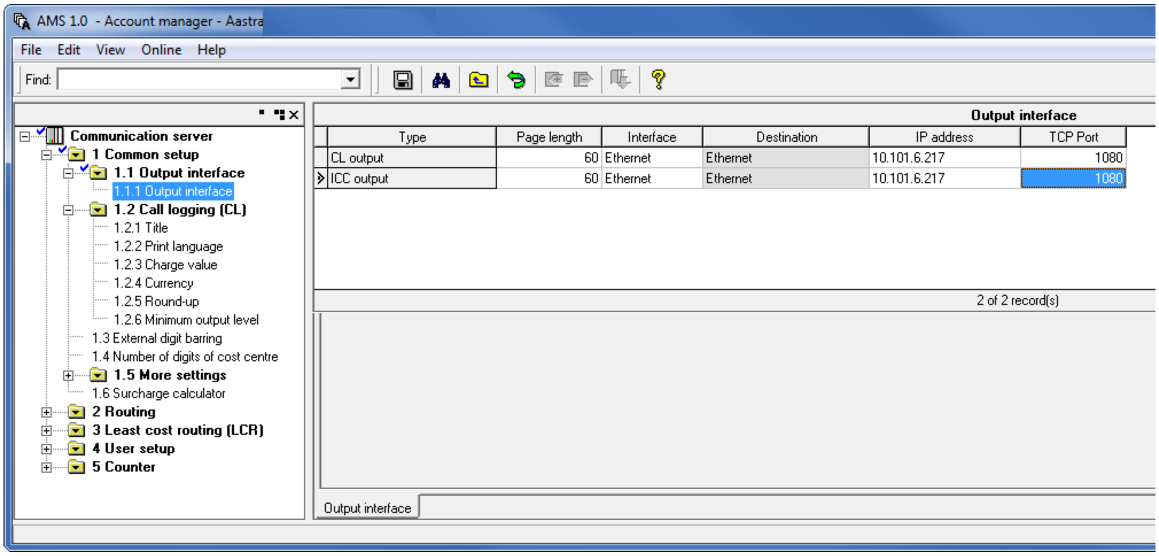
The Aastra Intelligate Series can output SMDR information in multiple formats. You should always select the **PC5** format for use with TIM Plus.

Below are some screenshots to demonstrate how the Aastra Intelligate Series should be configured:

Setting the SMDR format to **PC5**




Setting the SMDR format to **TCP/IP**




Setting the SMDR format to PC5

The OIP Server has a very basic `call logging` module. If you intend to install TIM Plus alongside the OIP Server, you need to uninstall the `call logging` module from the OIP Server suite, otherwise, when configuring your Aastra to output the data to the PC running TIM Plus, the OIP Server will overwrite some required settings.

### Installing NetPBX

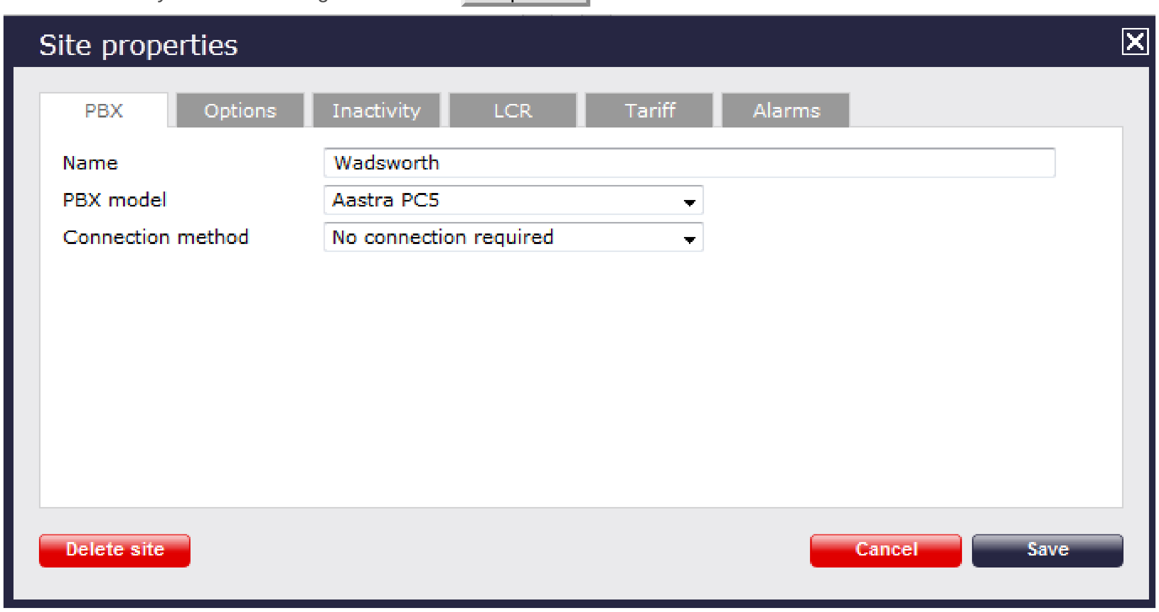
If your Aastra Intelligate has been configured to send SMDR data via a serial connection, you first need to install the NetPBX software to collect the data from the serial port and send it to TIM Plus. For setup instructions, click on the link below:

Install and configure NetPBX

### Configuring TIM Plus

Once NetPBX is configured and collecting data, log in to TIM Plus and perform the following steps:

1. Click on the **Directory** tab.
2. Choose the site you want to configure and click **Properties** .



3. In the **Site Properties** window, select **Aastra PC5** from the **PBX model** drop-down list.
4. In the **Connection method** field, select **No connection required** from the drop-down list.
5. Click on the Save button to apply the changes.

## Aastra Intelligate Series - IP connection

These instructions help you configure your Aastra Intelligate phone system to work with TIM Plus. Contact your system maintainer if you are not familiar with the configuration of your PBX.

Connection Type

TIM Plus listens for connections from this PBX.

Support Files

**Aastra PC5.TDT**

**Aastra PC5.TDT**

Required Tasks

Configure the SMDR output

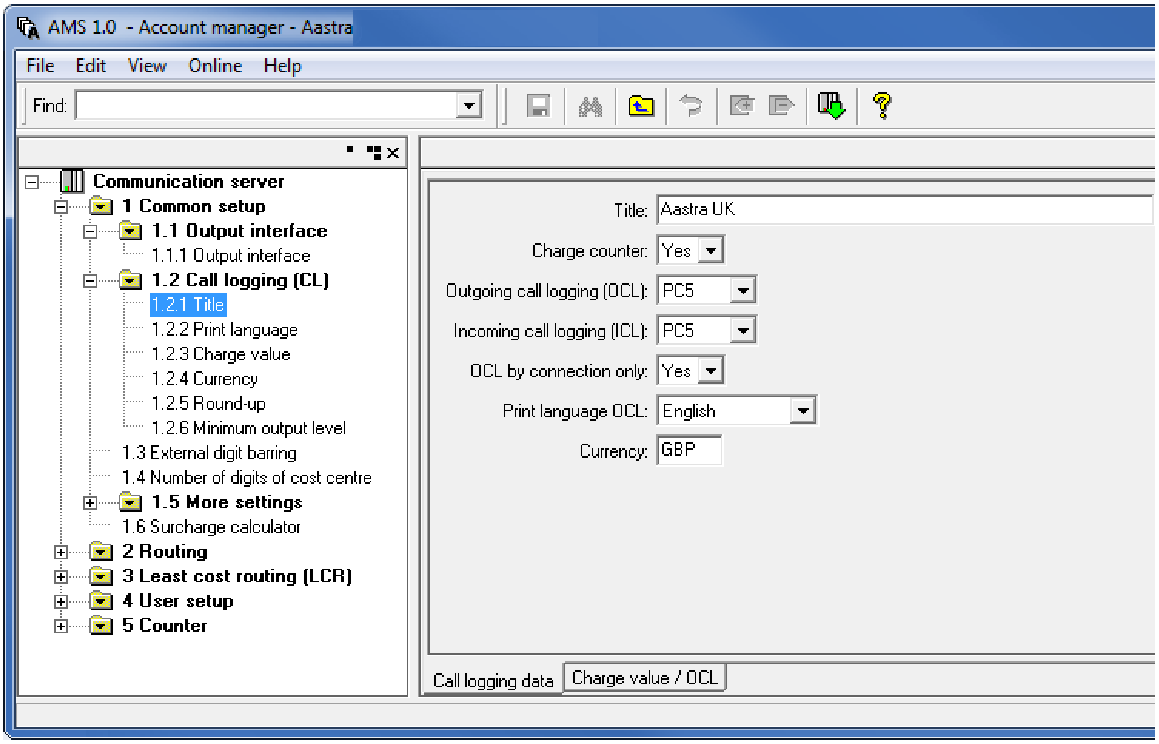
Configure TIM Plus

### Configuring your SMDR output

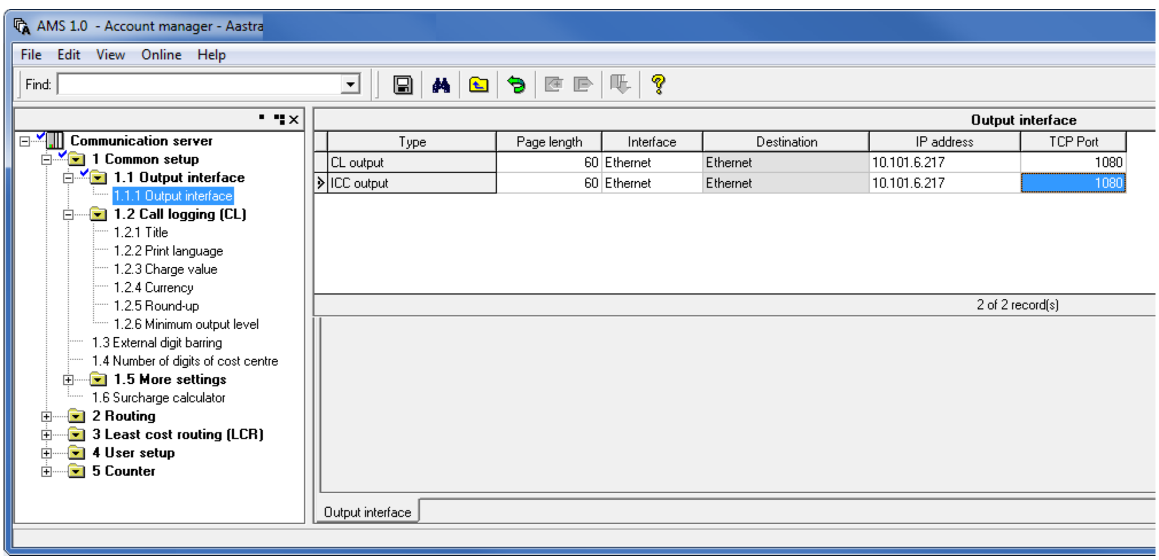
Note that the Aastra Intelligate Series can output SMDR information in multiple formats. You should always select the **PC5** format for use with TIM Plus.

Below are some screenshots to demonstrate how the Aastra Intelligate Series should be configured:

Setting the SMDR format to **PC5**




### Setting the SMDR format to TCP/IP



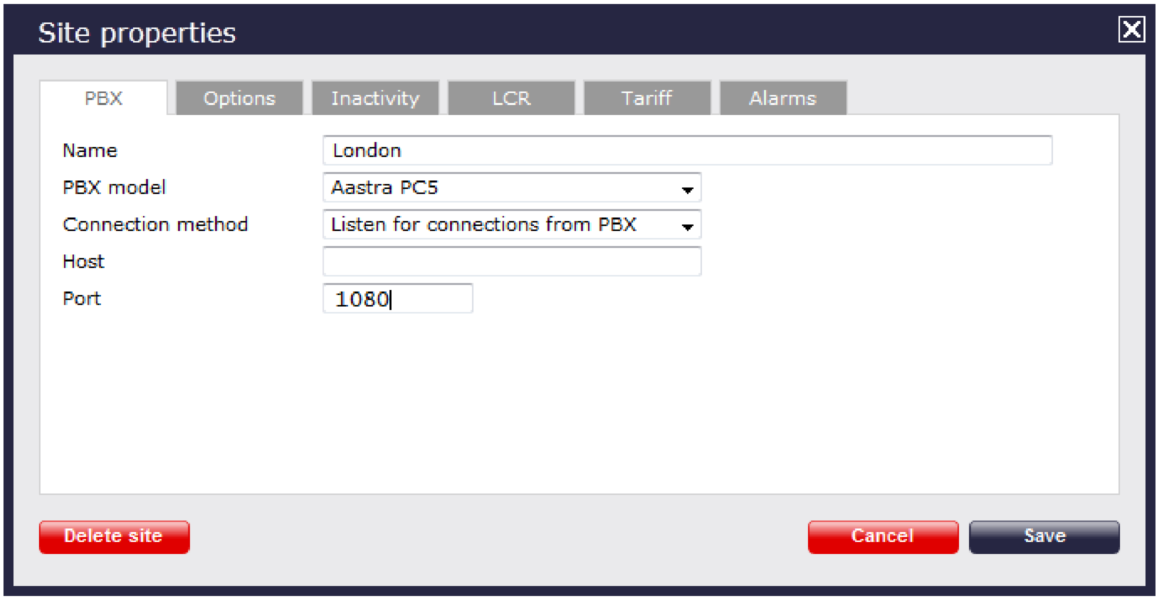

### OIP Server and TIM Plus

The OIP Server has a very basic `call logging` module. If you intend to install TIM Plus alongside the OIP Server, you need to uninstall the `call logging` module from the OIP Server suite, otherwise, when configuring your Aastra to output the data to the PC running TIM Plus, the OIP Server will overwrite some required settings.

### Configuring TIM Plus

Follow the steps below to configure TIM Plus to listen for SMDR data from your Aastra Intelligate Series:

1. Click on the Directory tab.
2. Choose the site you want to configure and click Properties .




3. In the **Site Properties** window, select **Aastra PC5** from the **PBX model** drop-down list.

4. In the **Connection method** field, select **Listen for connections from PBX** from the drop-down list.

5. Leave the **Host** field blank.

6. In the **Port** field, enter **1080**, the default port number for your Aastra Intelligate phone system.

7. Click on the Save button to apply the settings.

## Aastra MX-ONE

The Aastra MX-ONE can be configured to send its SMDR data over a serial (RS232) or an IP connection. Click on one of the links below that relates to your preferred connection method.

### Aastra MX-ONE - IP connection

These instructions help you configure your Aastra MX-ONE phone system to work with TIM Plus. Contact your system maintainer if you are not familiar with the configuration of your PBX.

Connection Type

TIM Plus listens for connections from this PBX.

Support Files

**Aastra MX-ONE - BC13.TDT**

**Aastra MX-ONE - BC13.TDS**

Required Tasks

Configure the SMDR output

Configure TIM Plus

#### Configuring your SMDR output

The MX-One phone system saves the call logging information into a local database, located by default in:

```
/var/opt/eri_sn/call_logging
```


To edit the default path, SSH into each MX-One and use the `mc` command. To configure the directory structure, use the `mkdir (key 7)` command.

Next, you need to enter the following commands for the primary MX-One (the one that will send the data via IP to TIM Plus):

```
callinfo_output_set  -output 0  -lim 1  -type file  -subtype general
-local    -dbname /var/opt/eri_sn/call_logging/log0  -format ": {stoptime
md110date L 4 4}{stoptime md110time L 4 4}{stoptime second 0R 2 2}
{duration md110duration L 5 5}; [taxpulses != 0]: {taxpulses R 4 4};
[taxpulses == 0]:     ; {conditionCodeUserDefined L 3 3} {accesscode1 R 5
5}{accesscode2 R 5 5}; [conditionCodePos == 17]: {chargedNumber R 20 20};
[conditionCodePos != 17]: {dialednumber R 20 20}; {callingnumber L 20 20}
{accountcode L 15 15} {cilcode L 6 6} {queueTimeCounter 0R 3 3}
{ringTimeCounter 0R 3 3} {ogTrnkId R 10 10} {incTrnkId R 10 10}
{connectedNumber R 16 16}{return}{newline};"  -eol NL  -record call
-localtime
```

```
callinfo_output_set  -output 1  -lim 1  -type tcp  -subtype general
-server 192.168.0.1  -port 9000  -format ": {stoptime md110date L 4
4}{stoptime md110time L 4 4}{stoptime second 0R 2 2} {duration
md110duration L 5 5}; [taxpulses != 0]: {taxpulses R 4 4}; [taxpulses ==
0]:     ; {conditionCodeUserDefined L 3 3} {accesscode1 R 5 5}{accesscode2
R 5 5}; [conditionCodePos == 17]: {chargedNumber R 20 20};
[conditionCodePos != 17]: {dialednumber R 20 20}; {callingnumber L 20 20}
{accountcode L 15 15} {cilcode L 6 6} {queueTimeCounter 0R 3 3}
{ringTimeCounter 0R 3 3} {ogTrnkId R 10 10} {incTrnkId R 10 10}
{connectedNumber R 16 16}{return}{newline};"  -eol NL  -record call
-localtime
```

The server IP address specified above will be the IP address of the TIM Plus machine. The port number can be set to any free TCP port, but we would recommend one in the 9000 range.

```
callinfo_output_set  -output 2  -lim 1  -type file  -subtype none  -record
call  -utc
callinfo_output_set  -output 3  -lim 1  -type file  -subtype none  -record
call  -utc
callinfo_output_set  -output 4  -lim 1  -type file  -subtype none  -record
call  -utc
callinfo_output_set  -output 5  -lim 1  -type file  -subtype none  -record
call  -utc
callinfo_output_set  -output 6  -lim 1  -type file  -subtype none  -record
call  -utc
callinfo_output_set  -output 7  -lim 1  -type file  -subtype none  -record
call  -utc
callinfo_output_set  -output 8  -lim 1  -type file  -subtype none  -record
call  -utc
callinfo_output_set  -output 9  -lim 1  -type file  -subtype none  -record
call  -utc
```

To send the data, add the following two commands for the primary MX-One:

```
callinfo_status_set  -lim 1  -output 0  -state on
callinfo_status_set  -lim 1  -output 1  -state on
```

For each additional MX-One in the cluster, the following commands need to be entered, applying `lim 2, 3, 4...n`, accordingly.

```
callinfo_output_set  -output 0  -lim 2  -type file  -subtype general
-local    -dbname /var/opt/eri_sn/call_logging/log0  -format ": {stoptime
md110date L 4 4}{stoptime md110time L 4 4}{stoptime second 0R 2 2}
{duration md110duration L 5 5}; [taxpulses != 0]: {taxpulses R 4 4};
[taxpulses == 0]:     ; {conditionCodeUserDefined L 3 3} {accesscode1 R 5
5}{accesscode2 R 5 5}; [conditionCodePos == 17]: {chargedNumber R 20 20};
[conditionCodePos != 17]: {dialednumber R 20 20}; {callingnumber L 20 20}
{accountcode L 15 15} {cilcode L 6 6} {queueTimeCounter 0R 3 3}
{ringTimeCounter 0R 3 3} {ogTrnkId R 10 10} {incTrnkId R 10 10}
{connectedNumber R 16 16}{return}{newline};"  -eol NL  -record call
-localtime
```

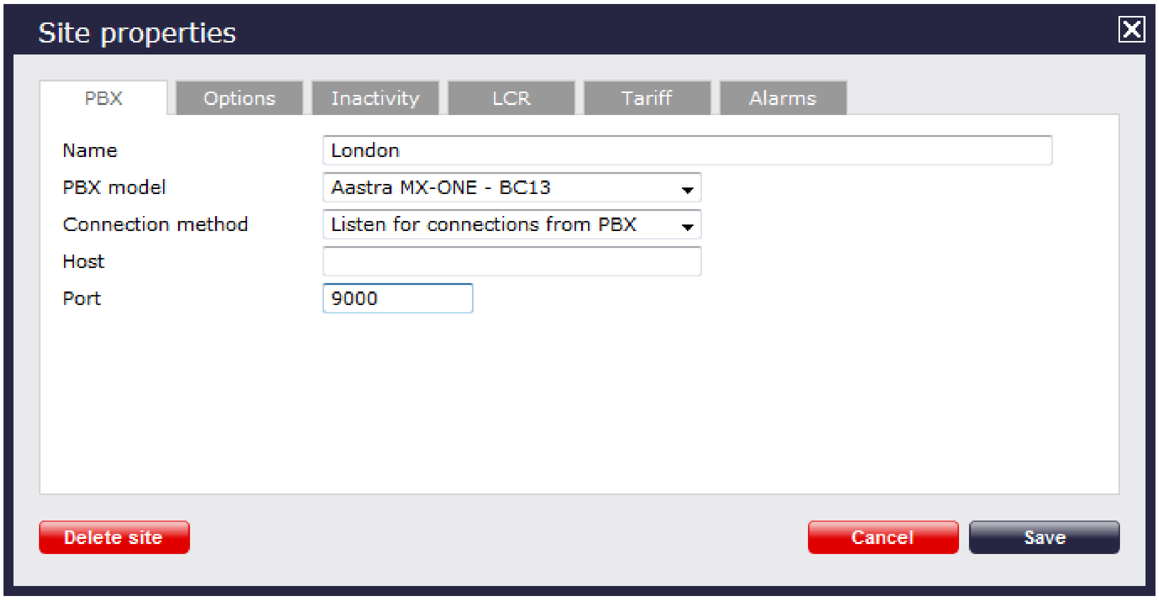
```
callinfo_output_set  -output 1  -lim 2  -type file  -subtype none  -record
call  -utc
callinfo_output_set  -output 2  -lim 2  -type file  -subtype none  -record
call  -utc
callinfo_output_set  -output 3  -lim 2  -type file  -subtype none  -record
call  -utc
callinfo_output_set  -output 4  -lim 2  -type file  -subtype none  -record
call  -utc
callinfo_output_set  -output 5  -lim 2  -type file  -subtype none  -record
call  -utc
callinfo_output_set  -output 6  -lim 2  -type file  -subtype none  -record
call  -utc
callinfo_output_set  -output 7  -lim 2  -type file  -subtype none  -record
call  -utc
callinfo_output_set  -output 8  -lim 2  -type file  -subtype none  -record
call  -utc
callinfo_output_set  -output 9  -lim 2  -type file  -subtype none  -record
call  -utc
```

```
callinfo_status_set  -lim 2  -forward 1  -state on
```

### Configuring TIM Plus

Follow the steps below to configure TIM Plus to listen for SMDR data from your MX-One:

1. Click on the Directory tab.
2. Choose the site you want to configure and click Properties .




3. In the **Site Properties** window, select **Aastra MX-ONE - BC13** from the **PBX model** drop-down list.

4. In the **Connection method** field, select **Listen for connections from PBX** from the drop-down list.

5. Leave the **Host** field blank.

6. In the **Port** field, enter the port number you have configured in the phone system.

7. Click on the Save button to apply the settings.

## Aastra MX-ONE - Serial connection

These instructions help you configure your Aastra MX-ONE phone system to work with TIM Plus. Contact your system maintainer if you are not familiar with the configuration of your PBX.

Connection Type

TIM Plus establishes a serial connection with this PBX.

Support Files

**Aastra MX-ONE BC10.TDT**

**Aastra MX-ONE BC10.TDS**

Required Tasks

Configure the SMDR output

Install NetPBX

Configure TIM Plus

### Configuring your SMDR output

The Aastra MX-ONE supports multiple SMDR output formats. TIM Plus requires the SMDR format to be set to either **BC8**, **BC10** or **BC13**. For more information on how to configure the data output, please contact your system maintainer.

### Installing NetPBX

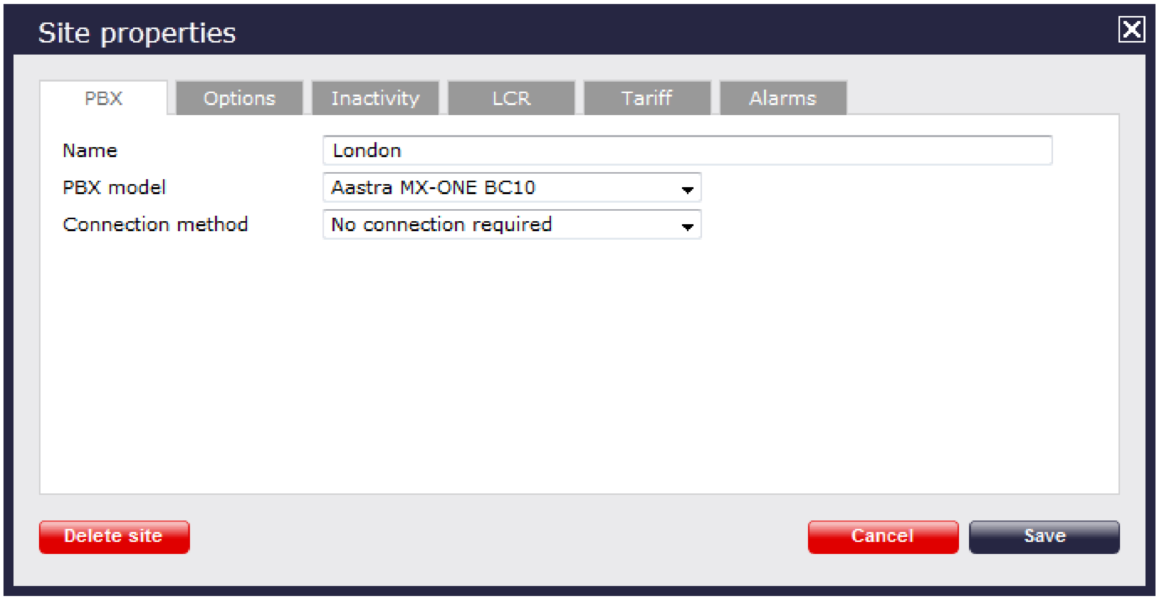
The Aastra MX-ONE phone system sends SMDR information via a serial connection. To collect the data from the serial port and send it to TIM Plus you first need to install the NetPBX software. For setup instructions, click on the link below:

Install and configure NetPBX

### Configuring TIM Plus

Once NetPBX is configured and collecting data, log in to TIM Plus and perform the following steps:

1. Click on the Directory tab.
2. Choose the site you want to configure and click Properties .




3. In the **Site Properties** window, select **Aastra MX-ONE BC10** from the **PBX model** drop-down list.
4. In the **Connection method** field, select **No connection required** from the drop-down list.
5. Click on the Save button to apply the settings.

# AGFEO

## AGFEO AC-AS Series

These instructions help you configure your AGFEO AC-AS phone system to work with TIM Plus. Contact your system maintainer if you are not familiar with the configuration of your PBX.

Connection Type

TIM Plus establishes a serial connection with this PBX.

Support Files

**AGFEO AC-AS Series.TDT**

Required Tasks

- Configure the SMDR output
- Install NetPBX
- Configure TIM Plus

### Configuring your SMDR output

The AGFEO AC-AS Series outputs its call records via a serial connection. You need to directly connect a serial cable between your AGFEO AC-AS phone system and the PC that NetPBX is installed and running on.

For more information about the output and configuration of your SMDR data, please contact your system maintainer.

### Installing NetPBX

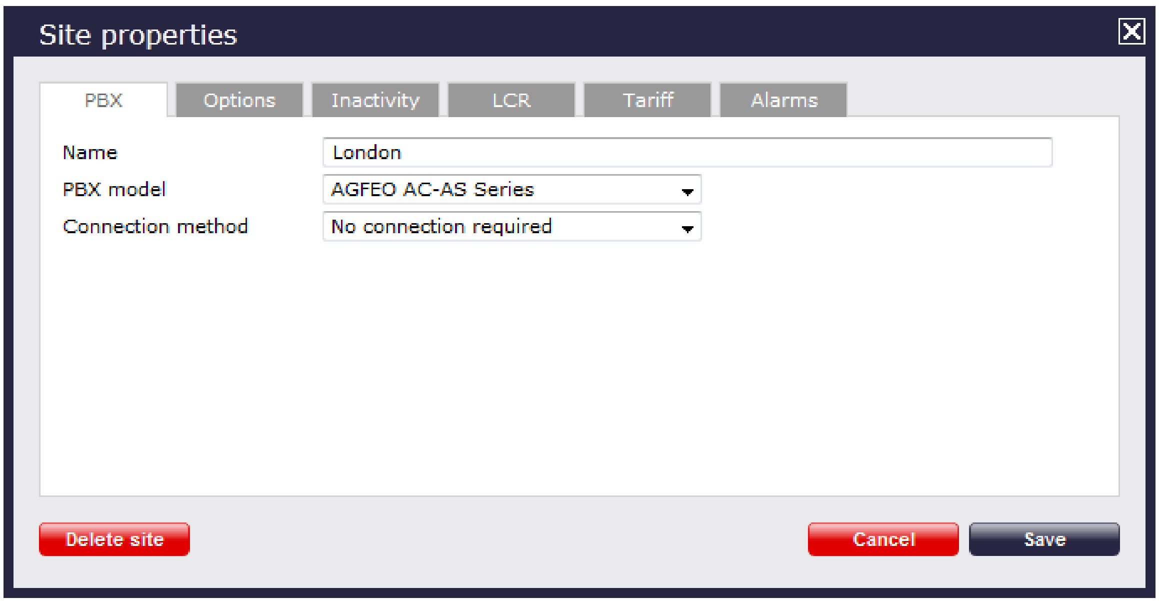
The AGFEO phone system sends SMDR information via a serial connection. To collect the call logging data from the serial port and send it to TIM Plus, you first need to install the NetPBX software. For setup instructions, click on the link below:

Install and configure NetPBX

### Configuring TIM Plus

Once NetPBX is configured and collecting data, log in to TIM Plus and perform the following steps:

1. Click on the **Directory** tab.
2. Choose the site you want to configure and click **Properties** .




3. In the `Site Properties` window, select `AGFEO AC-AS Series` from the `PBX model` drop-down list.
4. In the `Connection method` field, select `No connection required` from the drop-down list.
5. Click on the **Save** button to apply the settings.

## Alcatel

### Alcatel 4200-4400e

These instructions help you configure your Alcatel 4200-4400e phone system to work with TIM Plus. Contact your system maintainer if you are not familiar with the configuration of your PBX.

Connection Type

TIM Plus establishes a serial connection with this PBX.

Support Files

`Alcatel 4400E.TDT`

Required Tasks

- Configure the SMDR output
- Download the interface file
- Install NetPBX
- Configure TIM Plus

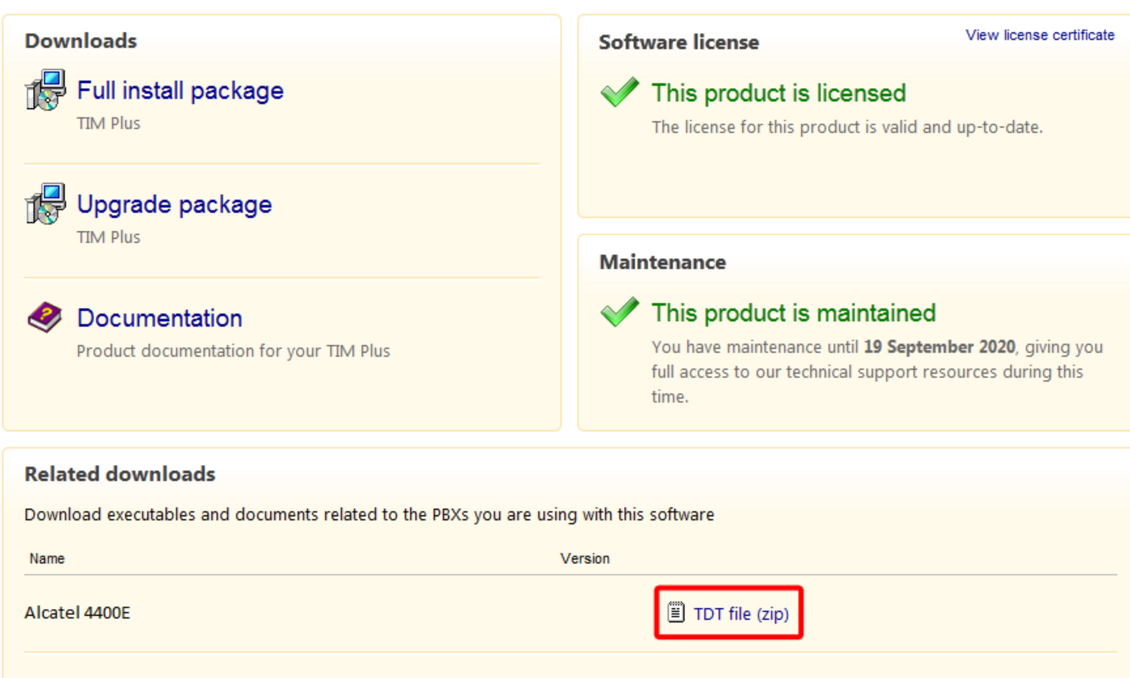
### Configuring your SMDR output

The Alcatel 4200-4400e phone system sends its call records via a serial connection. The most recent units already have a `.v24` port but, for older units, you may need to purchase a `.v24` module. Connect a serial cable between your Alcatel 4200-4400e `.v24` module and the PC that NetPBX is installed and running on. See the table below for a summary of data output from Alcatel 4200-4400e:

| Manufacturer | Model | Account Codes | CLI | DDI | Internal Calls | Ring Time | Unanswered |
|---|---|---|---|---|---|---|---|
| Alcatel | 4200 | Y | Y | N | N | Y | Y |
| | 4300 | Y | Y | N | N | Y | Y |
| | 4400e | N | Y | Y | Y | Y | Y |
| | OmniPCX Enterprise | N | Y | Y | Y | Y | Y |
| | OmniPCX Office | Y | Y | N | Y | Y | Y |

### Download the interface file

1. Visit Tri-Line's Gateway and download the interface file, as shown below:



2. Extract the **Alcatel 4400E.ZIP** file onto your computer's Desktop. This ZIP contains the following file: **Alcatel 4400E.TDT**.
3. Copy the file into the `C:\Program Files\Tri-Line\TIM Plus\config` folder.

### Installing NetPBX

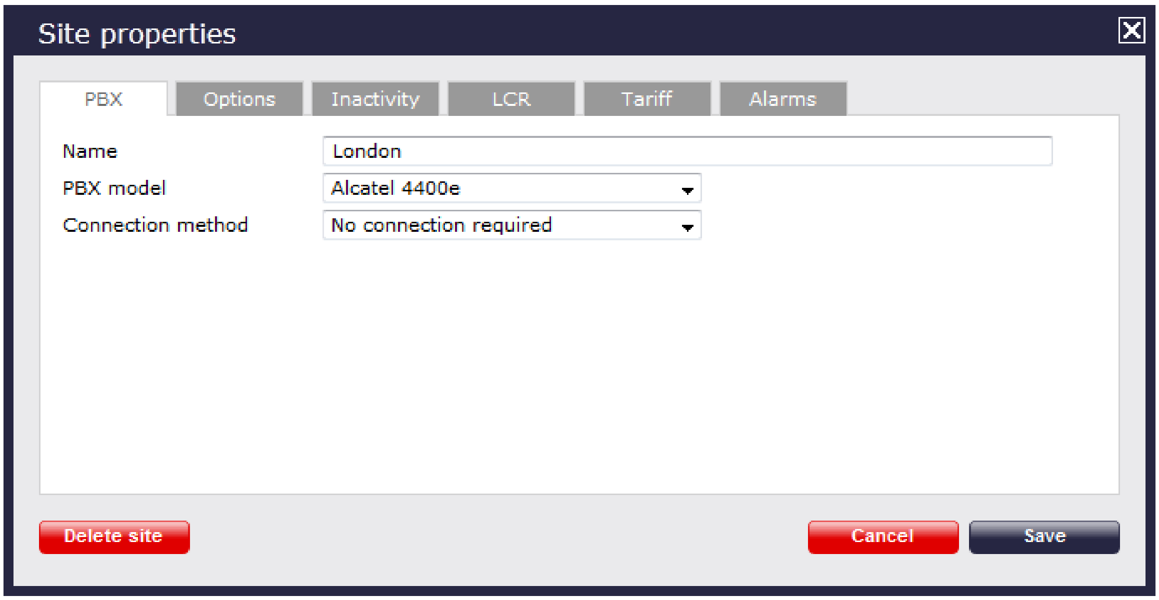
The Alcatel 4200-4400e phone system sends its call records via a serial connection. To collect the data from the serial port and send it to TIM Plus, you first need to install the NetPBX software. For setup instructions, click on the link below:

Install and configure NetPBX

### Configuring TIM Plus

Once NetPBX is configured and collecting data, log in to TIM Plus and perform the following steps:

1. Click on the Directory tab.
2. Choose the site you want to configure and click Properties .




3. In the **Site Properties** window, select **Alcatel 4400e** from the **PBX model** drop-down list.
4. In the **Connection method** field, select **No connection required** from the drop-down list.
5. Click on the Save button to apply the settings.

## Alcatel OmniPCX Enterprise

The Alcatel OmniPCX Enterprise can be configured to send its SMDR data over a serial (RS232) or an IP connection. Click on one of the links below that relates to your preferred connection method.

### Alcatel OmniPCX Enterprise - Serial connection

These instructions help you configure your Alcatel OmniPCX Enterprise phone system to work with TIM Plus. Contact your system maintainer if you are not familiar with the configuration of your PBX.

Connection Type

TIM Plus establishes a serial connection with this PBX.

Support Files

`Alcatel OmniPCX Enterprise.TDT`

`Alcatel OmniPCX Enterprise.TDS`

Required Tasks

- Configure the SMDR output
- Install NetPBX
- Configure TIM Plus

### Configuring your SMDR output

Before enabling the SMDR output, you will need to speak with your phone maintainer to buy the required licenses for your Alcatel phone system.

Follow the instructions below to configure the SMDR output via a serial connection. These instructions are taken from the Alcatel OmniPCX Enterprise manual:

Using Telnet, connect to the IP address of your Alcatel OmniPCX Enterprise and follow the steps below:

1. Applications ( Enter )
2. Accounting ( Enter )
3. Review/Modify ( Enter )
4. All Instance ( F1 )
5. Realtime ticket Output: Set this to `ethernet`. Note that if you don't have an appropriate license, you may only select V24 (serial) here.
6. Save changes and exit.

Below is an example of the data output from an Alcatel OmniPCX Enterprise:

| Manufacturer | Model | Account Codes | CLI | DDI | Internal Calls | Ring Time | Unanswered |
|---|---|---|---|---|---|---|---|
| Alcatel | 4200 | Y | Y | N | N | Y | Y |
| | 4300 | Y | Y | N | N | Y | Y |
| | 4400e | N | Y | Y | Y | Y | Y |
| | OmniPCX Enterprise | N | Y | Y | Y | Y | Y |
| | OmniPCX Office | Y | Y | N | Y | Y | Y |

### Installing NetPBX

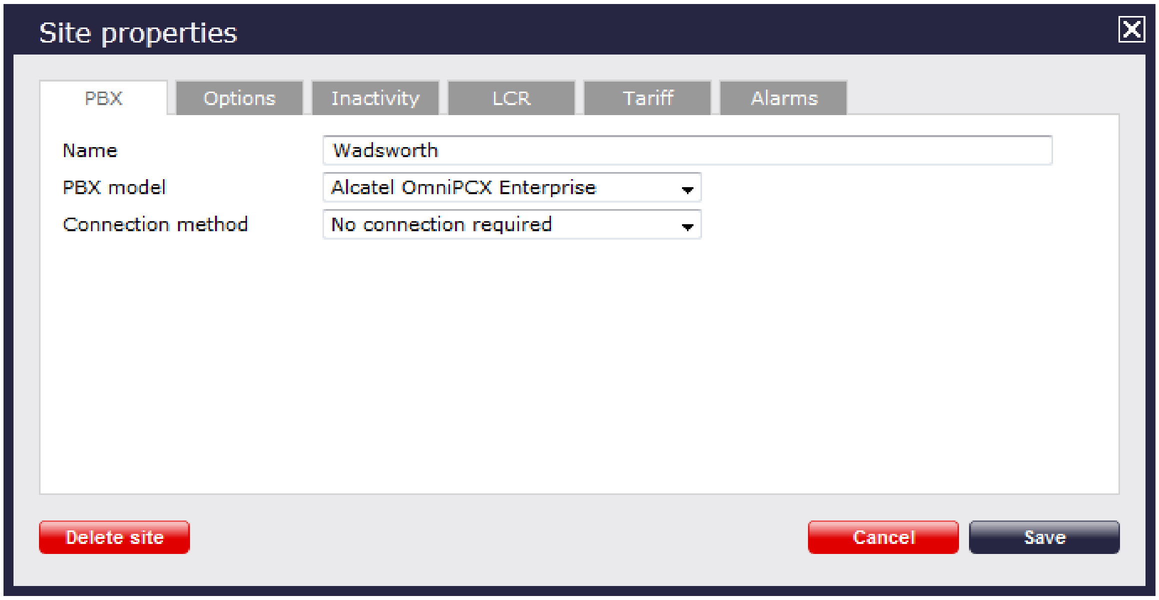
If your Alcatel OmniPCX Enterprise has been configured to send SMDR data via a serial connection, you first need to install the NetPBX software to collect the data from the serial port and send it to TIM Plus. For setup instructions, click on the link below:

Install and configure NetPBX

### Configuring TIM Plus

Once NetPBX is configured and collecting data, log in to TIM Plus and perform the following steps:

1. Click on the Directory tab.
2. Choose the site you want to configure and click Properties .




3. In the **Site Properties** window, select **Alcatel OmniPCX Enterprise** from the **PBX model** drop-down list.
4. In the **Connection method** field, select **No connection required** from the drop-down list.
5. Click on the Save button to apply the settings.

### Alcatel OmniPCX Enterprise - IP connection

These instructions help you configure your Alcatel OmniPCX Enterprise phone system to work with TIM Plus. Contact your system maintainer if you are not familiar with the configuration of your PBX.

Connection Type

TIM Plus establishes a TCP connection to this PBX.

Support Files

**Alcatel OmniPCX Enterprise.TDT**

**Alcatel OmniPCX Enterprise.TDS**

Required Tasks

Configure the SMDR output

Configure TIM Plus

#### Configuring your SMDR output

Before enabling the SMDR output, you will need to speak with your phone maintainer to buy the required licenses for your Alcatel phone system.

Follow the instructions below to configure the SMDR output via an IP connection. These instructions are taken from the Alcatel OmniPCX Enterprise manual:

Connect to your PBX via telnet and follow the steps below:

1. Applications ( Enter )
2. Accounting ( Enter )
3. Review/Modify ( Enter )
4. All Instance ( F1 )
5. Realtime ticket Output: Set this to `ethernet`. Note that if you don't have appropriate license, you can only select V24 (serial) here.
6. Save changes and exit

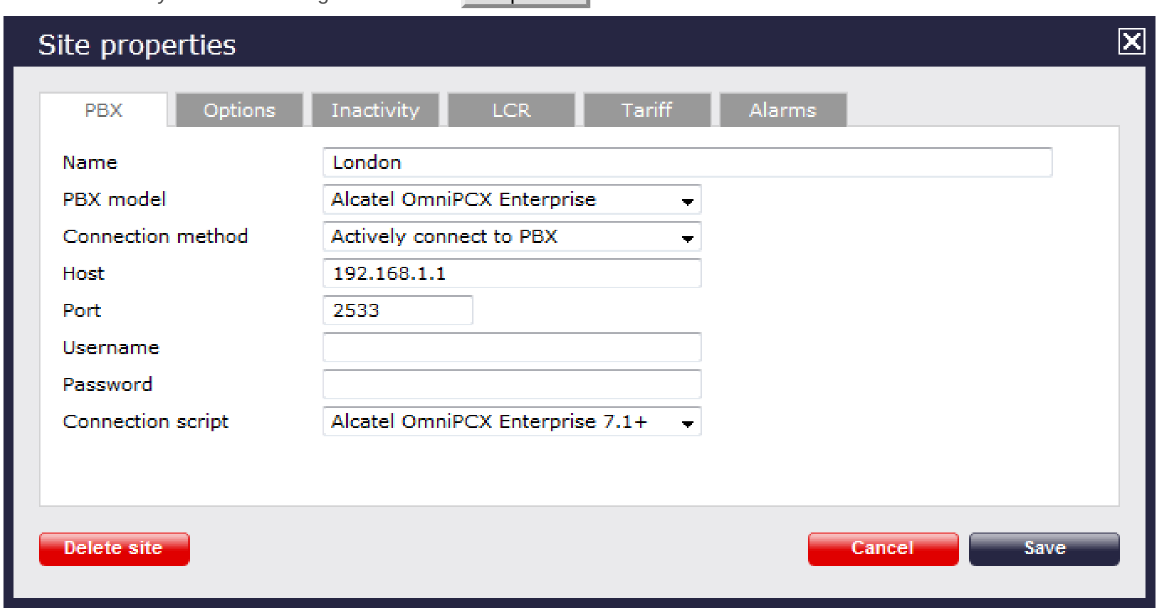
The table below presents a summary of data output from Alcatel:

| Manufacturer | Model | Account Codes | CLI | DDI | Internal Calls | Ring Time | Unanswered |
|---|---|---|---|---|---|---|---|
| Alcatel | 4200 | Y | Y | N | N | Y | Y |
| | 4300 | Y | Y | N | N | Y | Y |
| | 4400e | N | Y | Y | Y | Y | Y |
| | OmniPCX Enterprise | N | Y | Y | Y | Y | Y |
| | OmniPCX Office | Y | Y | N | Y | Y | Y |

### Configuring TIM Plus

Follow the steps below to configure TIM Plus to collect the SMDR data from your Alcatel OmniPCX Enterprise:

1. Click on the Directory tab.
2. Choose the site you want to configure and click Properties .



3. In the **Site Properties** window, select **Alcatel OmniPCX Enterprise** from the **PBX model** drop-down list.

4. In the **Connection method** field, select **Actively connect to PBX** from the drop-down list.

5. In the **Host** field, enter the IP address of your Alcatel OmniPCX Enterprise.

6. In the **Port** field, enter **2533** as the default port number for this PBX.

7. Leave the **Username** and **Password** fields blank.

8. In the **Connection script** field, select **Alcatel OmniPCX Enterprise 7.1+** from the drop-down list.

9. Click on the Save button to apply the changes.

## Alcatel OmniPCX Office

The Alcatel OmniPCX Office can be configured to send its SMDR data over a serial (RS232) connection or it can be outputted to a file. Click on one of the links below that relates to your preferred connection method.

### Alcatel OmniPCX Office - Serial connection

These instructions help you configure your Alcatel OmniPCX Office phone system to work with TIM Plus. Contact your system maintainer if you are not familiar with the configuration of your PBX.

Connection Type

TIM Plus establishes a serial connection with this PBX.

Support Files

**Alcatel OmniPCX Office.TDT**

**Alcatel OmniPCX Office.TDS**

Required Tasks

Configure the SMDR output

Install NetPBX

Configure TIM Plus

#### Configuring your SMDR output

Before enabling the SMDR output, you will need to speak with your phone maintainer to buy the required licenses for your Alcatel phone system.

Alcatel-Lucent OmniPCX Office Communication Server supports two types of call metering:

- V24 metering supports V24 printing for all call metering tickets
- IP metering supports IP printing for call metering tickets originating from a 3rd party application (Business or Hotel) via an IP connection

The type of metering must be specified when the Office Link driver is installed. The driver can be set to one of two modes: **hotel** or **metering**. You can use the **OMC Counting** function to specify the type of call metering for hardcopy printouts.

To set printing options for call metering tickets, follow the steps below:

1. Open the **Counting** function window in the OMC console and select the Accounting Printout tab.
2. Select the metering type from the drop-down list: **Ext. Accounting Activation IP** or **Ext. Accounting Activation V24.**
3. Click OK to save the settings.

The table below presents a summary of the data output from an Alcatel:

| Manufacturer | Model | Account Codes | CLI | DDI | Internal Calls | Ring Time | Unanswered |
|---|---|---|---|---|---|---|---|
| Alcatel | 4200 | Y | Y | N | N | Y | Y |
| | 4300 | Y | Y | N | N | Y | Y |
| | 4400e | N | Y | Y | Y | Y | Y |
| | OmniPCX Enterprise | N | Y | Y | Y | Y | Y |
| | OmniPCX Office | Y | Y | N | Y | Y | Y |

### Installing NetPBX

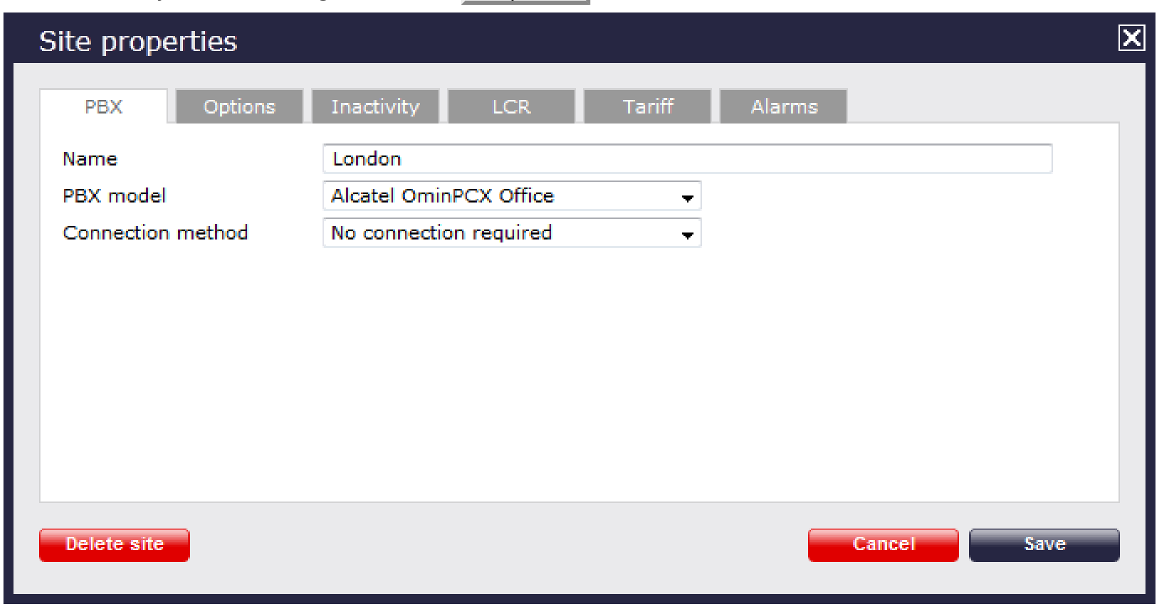
If your Alcatel OmniPCX Office has been configured to send SMDR data via a serial connection, you first need to install the NetPBX software to collect the data from the serial port and send it to TIM Plus. For setup instructions, click on the link below:

Install and configure NetPBX

### Configuring TIM Plus

Once NetPBX is configured and collecting data, log in to TIM Plus and perform the following steps:

1. Click on the Directory tab.
2. Choose the site you want to configure and click Properties .




3. In the **Site Properties** window, select **Alcatel OmniPCX Office** from the **PBX model** drop-down list.
4. In the **Connection method** field, select **No connection required** from the drop-down list.
5. Click on the Save button to apply the settings.

## Alcatel OmniPCX Office - File output

These instructions help you configure your Alcatel OmniPCX Office phone system to work with TIM Plus. Contact your system maintainer if you are not familiar with the configuration of your PBX.

Connection Type

The SMDR data is outputted to a file

Support Files

`Alcatel OmniPCX Office.TDT`

`Alcatel OmniPCX Office.TDS`

`Alcatel OmniPCX Office OHL.DBS`

Required Tasks

- Configure the SMDR output
- Install Alcatel Office Link Driver
- Configure the interface file
- Set up a DSN connection
- Configure TIM Plus

**Configuring your SMDR output**

> Before enabling the SMDR output, you will need to speak with your phone maintainer to buy the required licenses for your Alcatel phone system.

Follow the instructions below to configure the SMDR output for your Alcatel OmniPCX Office phone system:

Alcatel-Lucent OmniPCX Office Communication Server supports two types of call metering:

- V24 metering supports V24 printing for all call metering tickets
- IP metering supports IP printing for call metering tickets originating from a 3rd party application (Business or Hotel) via an IP connection

The type of metering must be specified when the Office Link driver is installed. The driver can be set to one of two modes: `hotel` or `metering`. You can use the OMC Counting function to specify the type of call metering for hardcopy printouts.

## To set printing options for call metering tickets, follow the steps below:

1. Open the `Counting` function window in the OMC console and select the Accounting Printout tab.
2. Select the metering type from the drop-down list: `Ext. Accounting Activation IP` or `Ext. Accounting Activation V24.`
3. Click OK to save the settings.

The table below presents a summary of the data output from an Alcatel:

| Manufacturer | Model | Account Codes | CLI | DDI | Internal Calls | Ring Time | Unanswered |
|---|---|---|---|---|---|---|---|
| Alcatel | 4200 | Y | Y | N | N | Y | Y |
| | 4300 | Y | Y | N | N | Y | Y |
| | 4400e | N | Y | Y | Y | Y | Y |
| | OmniPCX Enterprise | N | Y | Y | Y | Y | Y |
| | OmniPCX Office | Y | Y | N | Y | Y | Y |

### Installing the Alcatel Office Link Driver

If your Alcatel OmniPCX Office has been configured to send SMDR data via IP, you need to install the Alcatel Office Link Driver to enable the SMDR output.

For information on how to install the Alcatel Office Link Driver, please refer to the Alcatel OmniPCX Office manual or speak to your system maintainer.

### Configuring the interface file

Once the OHL driver is installed, the SMDR data will be outputted to a file, called the `TicketCollector.xml`, which is located by default in **`C:\Program Files (x86)\Alcatel\OHL Driver\TicketCollector.xml`**

For TIM Plus to collect the data from this location, follow the steps below:

1. Go to TIM's installation folder and open the **`config`** folder.
2. Locate the `Alcatel OmniPCX Office.tdt` file, right-click on it and select **`Edit`**.
3. Enable the **`File path`** option by removing the apostrophe sign in front of it, and enter the path of the Ticket Collector file, as shown in the screenshot below:

```
'For TIM pre-processing modules

Type                = SCRIPT

[Options]

ScriptFile          = Alcatel OminPCX Office.tds

PrePendCLIZero      = False

FilePath           = C:\Program Files (x86)\Alcatel\OHL Driver\TicketCollector.xml
OutputUserName      = True
UseTimeStamp       = True
'HuntGroups         = 2XX
'Use voice enabled if the RTA needs to be querried for transfers
VoiceEnabled       = True
```

4. Save the changes to apply the settings.

### Setting up a DSN connection for TIM Plus

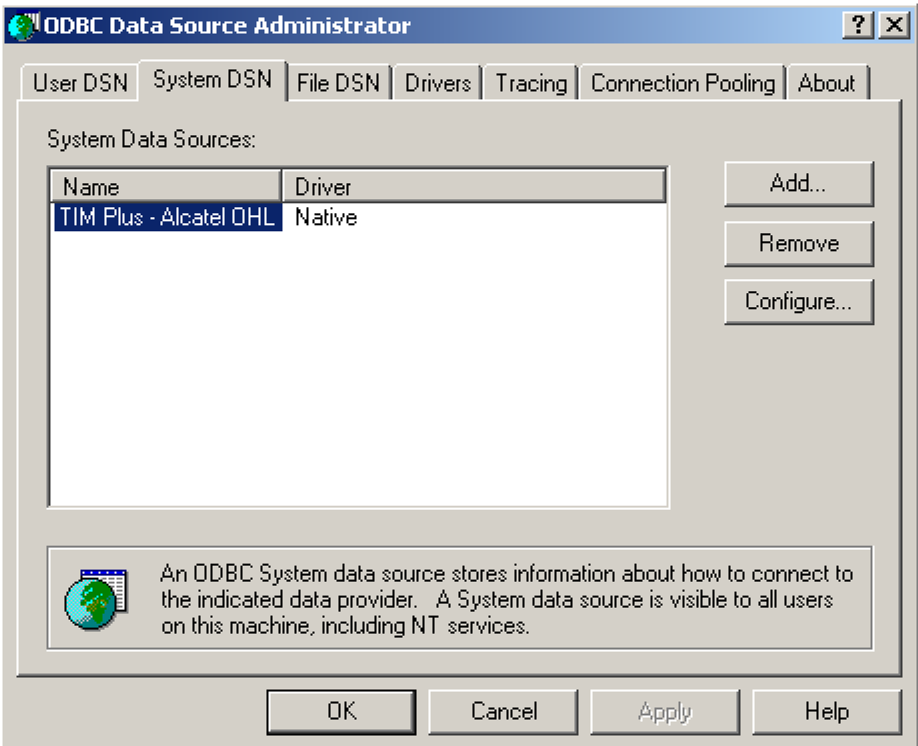
To enable TIM to regularly check for new data being outputted in the `Ticket Collector` file, you need to setup a DSN connection. Follow the instructions below to perform this operation within Microsoft Windows:

1. Open `Windows Control Panel`.
2. Double click on the Administrative tools icon.
3. Double click on the Data Sources (ODBC) icon to open the `ODBC Data Source Administrator` window.

> For a 64 bit system, access the `ODBC Data Source Administrator` from the following location `C:\Windows\SysWOW64\odbcad32.exe`

4. Click on the System DSN tab.
5. Click on the Add button.
6. Select **Native** from the list of drivers and click Finish .
7. In the **Name** field enter: **TIM Plus - Alcatel OHL**.
8. In the **Database name** field enter: **Native**.
9. Click on the OK button, then close the window.

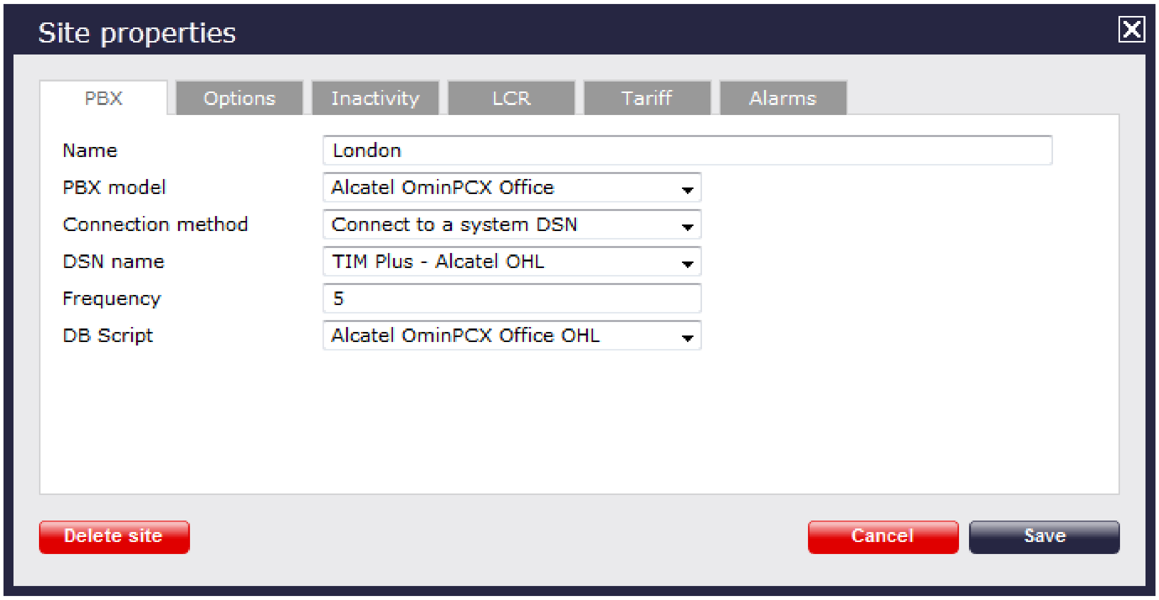
An example of an ODBC setup is shown below:




### Configuring TIM Plus

Once the DSN connection has been set up, log in to TIM Plus and perform the following steps:

1. Click on the Directory tab.
2. Choose the site you want to configure and click Properties




3. In the **Site Properties** window, select **Alcatel OmniPCX Office** from the **PBX model** drop-down list.
4. In the **Connection method** field, select **Connect to a system DSN** from the drop-down list.
5. In the **DSN name** field, select **TIM Plus - Alcatel OHL** from the drop-down list.
6. In the **Frequency** field, enter **5** to check for data every five seconds.
7. In the **DB script** field, select **Alcatel OmniPCX Office OHL** from the drop-down list.
8. Click on the Save button to apply the settings.

## Asterisk

### Asterisk PBX

These instructions help you configure your Asterisk phone system to work with TIM Plus. Contact your system maintainer if you are not familiar with the configuration of your PBX.

Connection Type

TIM Plus establishes a TCP connection to this PBX.

Support Files

**Asterisk.TDT**

**Asterisk.TDS**

Required Tasks

Configure the SMDR output

Configure TIM Plus

### Configuring your SMDR output

Follow the steps below to enable the SMDR output on your Asterisk phone system:

1. Enter the **Server Setup System.**

2. Under the Advanced section, edit the `manager_custom.conf` file.

3. Add the following lines to the file:

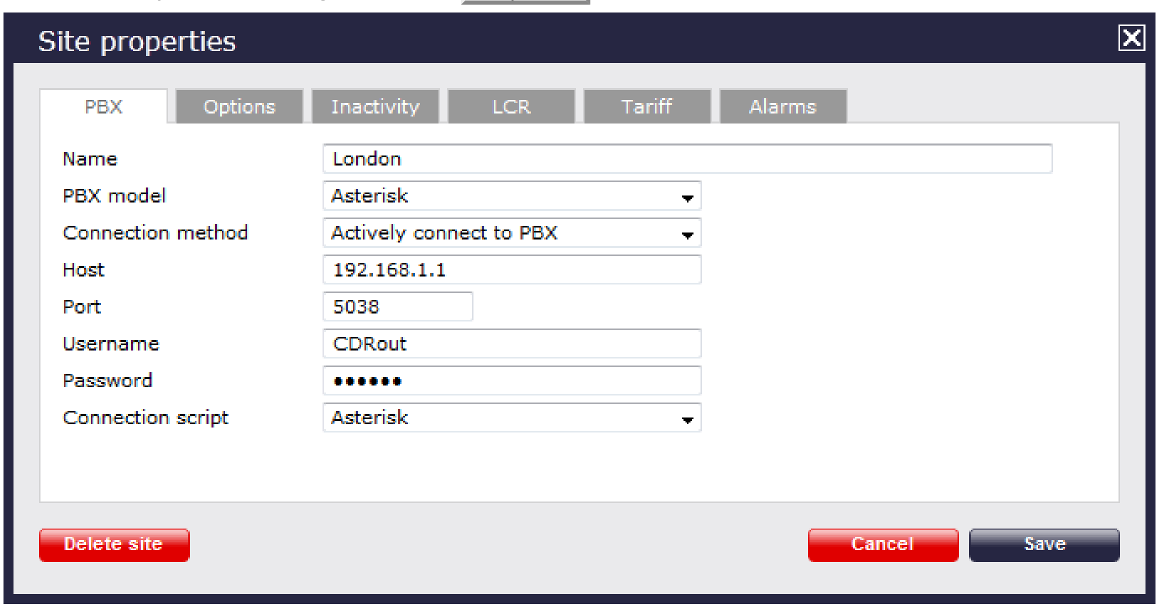
```
[CDRout]
secret =
cdrdeny = 0.0.0.0/0.0.0.0
permit = 10.0.0.0/255.0.0.0
permit = 192.168.0.0/255.255.0.0
permit = 212.57.232.128/255.255.255.128
read =
write =
```

4. Verify and save the changes.

### Configuring TIM Plus

Follow the steps below to configure TIM Plus to collect the SMDR data from your Asterisk phone system:

1. Log in to TIM Plus and click on the Directory tab.
2. Choose the site you want to configure and click Properties .




3. In the **Site Properties** window, select **Asterisk** from the **PBX model** drop-down list.
4. In the **Connection method** field, select **Actively connect to PBX** from the drop-down list.
5. In the **Host** field, enter the IP address of your Asterisk phone system.
6. In the **Port** field, enter **5038**.
7. In the **Username** and **Password** fields, enter your username and password accordingly.
8. In the **Connection script** field, select **Asterisk** from the drop-down list.
9. Click on the Save button to apply the settings.

## Avaya

## Avaya BCM up to v3.x

These instructions help you configure your Avaya BCM phone system (up to v3.x) to work with TIM Plus. Contact your system maintainer if you are not familiar with the configuration of your PBX.

Connection Type

TIM Plus establishes a TCP connection to this PBX.

Support Files

`Avaya BCM.TDT`

`Avaya BCM.TDS`

Required Tasks

- Configure the SMDR output
- Create a CDR user
- Install and configure NetPBX
- Configure TIM Plus

### Configuring your SMDR output

Follow the steps below to configure your Avaya BCM (up to v3.x) to output SMDR to TIM Plus:

1. Open your Business Communications Manager Unified Manager.
2. Click on the **Services** tree node.
3. Click on the **Call Detail Recording** node.
4. On the right-hand panel the `Summary` window will appear. Ensure that `Up` is selected in the `Status` drop-down list.
5. Select the **Report Parameters** tree node and configure the fields as shown below:

| SMDR field | Value |
|---|---|
| **Format** | `Norstar` |
| **Report Type** | `All` |
| **Language** | `English` |
| **Report Filter** | `All` |

6. Select the **Report Options** tree node and configure the fields as shown below:

| SMDR field | Value |
|---|---|

| | |
|---|---|
| **Date Format** | `MM/DD/YY` |
| **Header Format** | `Line/Station` |
| **DNIS Info** | `Enabled` |
| **Connection Char** | Leave as default |
| **Clip File Schedule** | Leave as default |
| **Clip File Size** | Leave as default |
| **CDR Disk Space Limit** | Leave as default |

7. For the Market Parameters settings, please leave as the system defaults.
8. For the Prefix Bin Options setting please leave as the system defaults.
9. Once you have completed the above changes, choose Commit from the Configuration file menu.

### Creating a CDR User

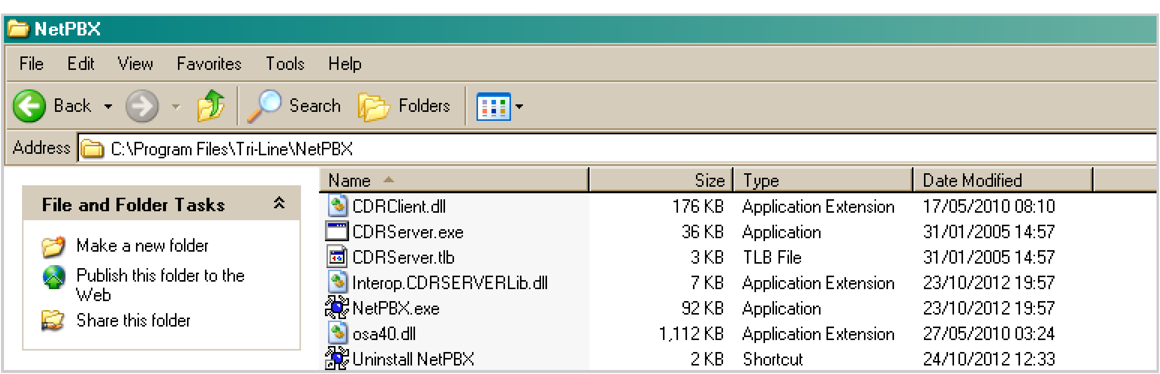
To enable TIM Plus to connect to your Avaya BCM you will need to create a **`CDR User`** in the System option of your BCM Unified Manager configuration utility. The Avaya BCM connection requires the DCOM service to be enabled on the machine running TIM Plus. Following the introduction of enhanced security in Windows XP Service Pack 2, the username and password for the **`CDR User`** now need to be exactly the same as the credentials of the Windows account under which TIM Plus runs.

### Installing and configuring NetPBX

To collect the call logging data from the Avaya BCM up to v3.x phone system and send it to TIM Plus, you first need to install the NetPBX software.

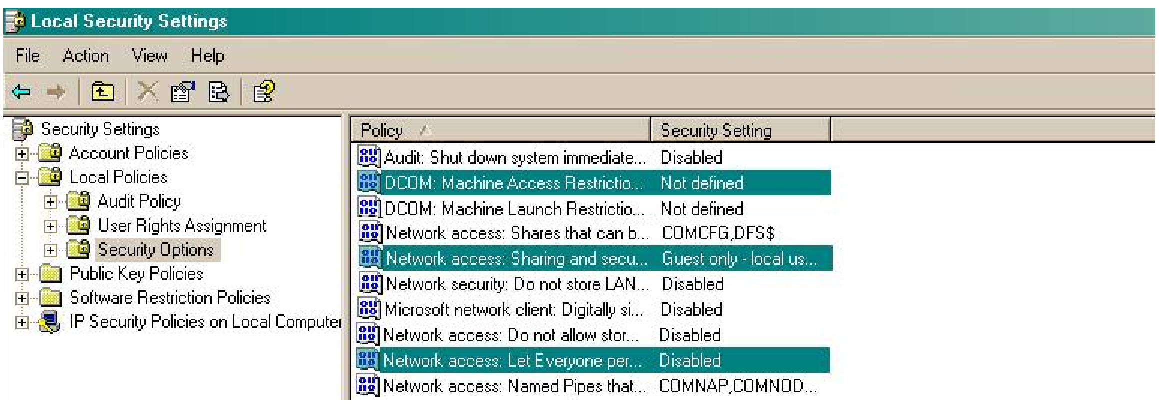
After the installation, follow the instructions below to set up a connection between BCM and NetPBX:

1. Make sure the **`CDRServer.EXE`** and **`Interop.CDRSERVERLib.dll`** files are placed in the same folder as **`NetPBX.EXE`**, usually located in **`{pf}\Tri-Line\NetPBX`**.

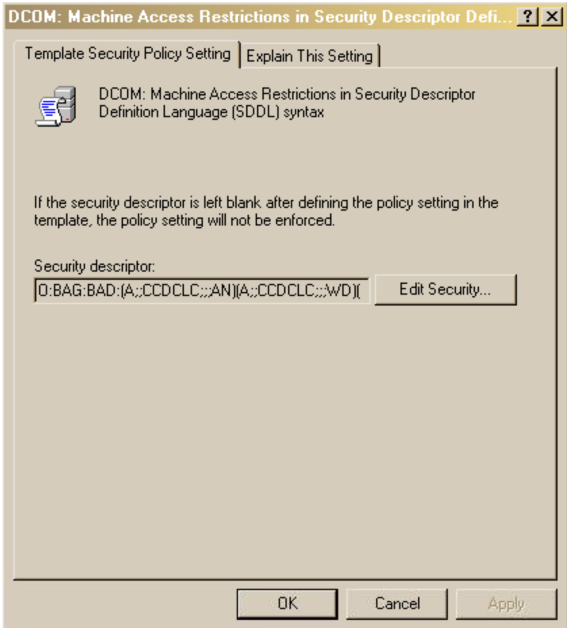


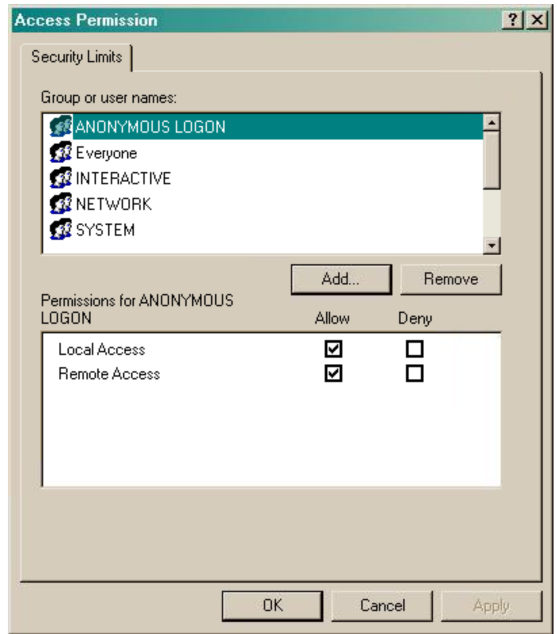
2. Register `CDRServer.EXE` by running the command line with administrator privileges and typing the following command under the directory path of the NetPBX folder: `CDRServer.EXE/regserver`.
3. Open the computer's local security policies: `Start -> Control Panel -> Administrative Tools -> Local Security Policy.`


4. Within the `Security Settings\Local Policies\Security Options` tree, change the following items as highlighted in the screenshot below:

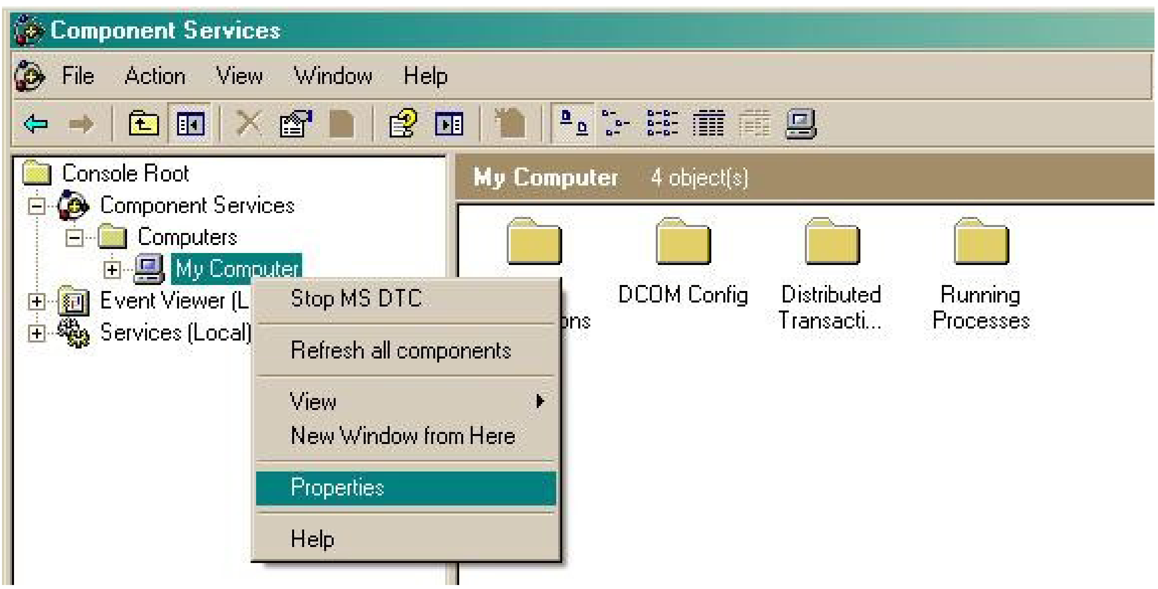



   a. **`Network Access: Let Everyone permissions apply to anonymous users`**. Set this to **`Enabled`**.
   b. **`Network Access: Sharing security model for local accounts`**. Set this to **`Classic`**.
   c. **`DCOM: Machine Access Restrictions`**: Click on Edit Security and add the following user accounts: **`Anonymous, Everyone, Interactive, Network, System`**. Set each one to have full access rights.




5. Next step is to modify the way DCOM behaves on the computer by executing the DCOM configuration program: `Start` -> `Run -> DCOM CNFG [enter]`. Browse the tree to the following location: `Console Root -> Component Services -> Computers -> My Computer`. Right-click on `My Computer` for Properties and amend or update the following options:

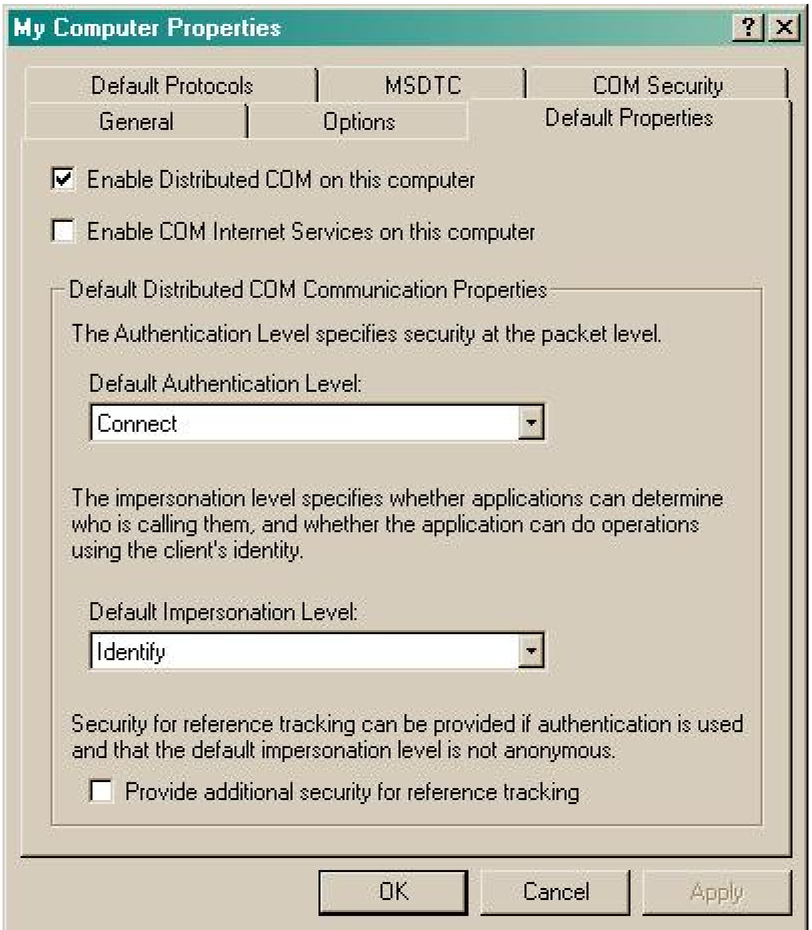



a. On the Default Properties tab:

`Enable Distributed COM on this computer`: tick the box for his option

`Default Authentication Level`: set this to `Connect`

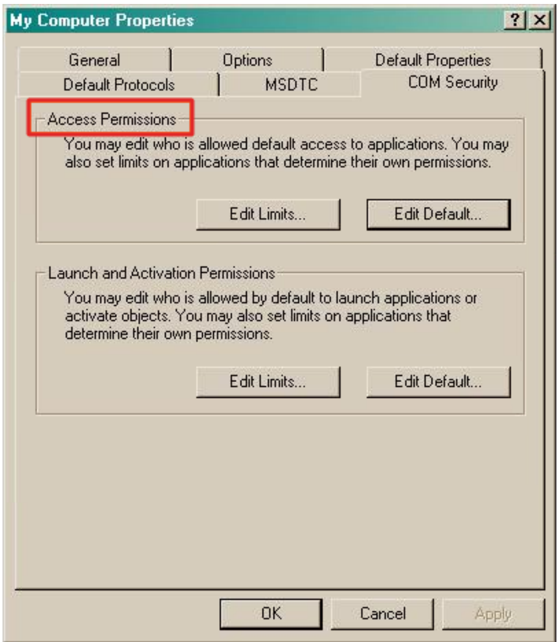
**Default Impersonation Level**: set this to **Identify**

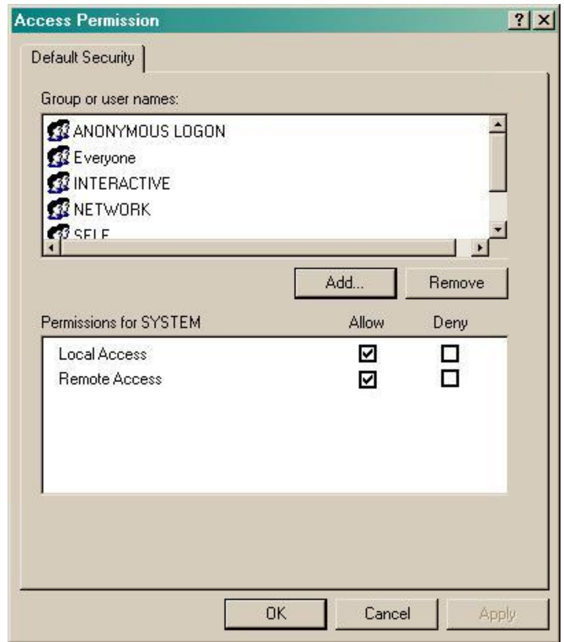



b. On the COM Security tab:

Go to the **Access Permissions** section and select Edit default .

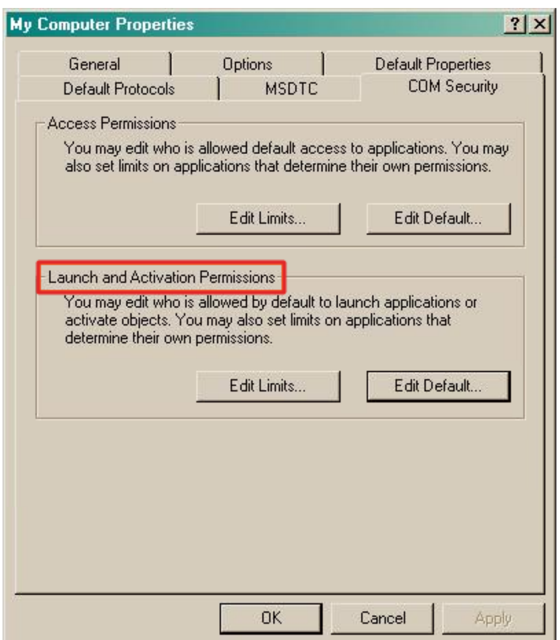
Add the following accounts and set both local and remote access permissions: **Anonymous, Everyone, Interactive, Network, Local Service** and **System**.

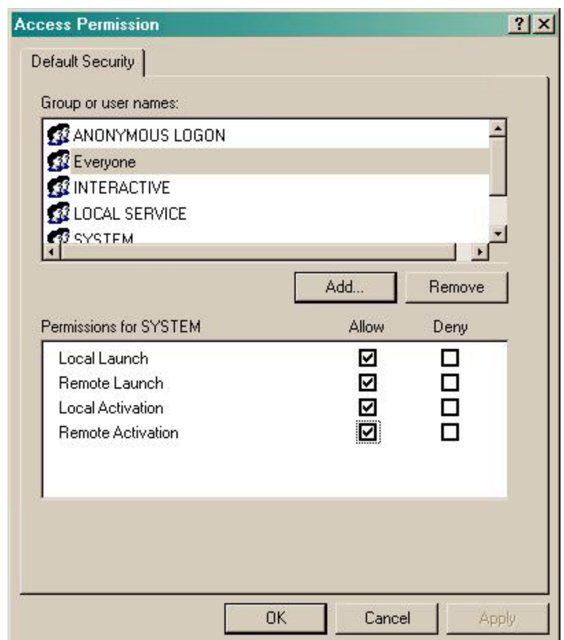



Go to the **`Launch and Activation Permissions`** section and click on Edit default tab.

Add or update the following accounts to give them all local and remote access permissions: **`Anonymous, Everyone, Interactive, Network, Local Service`** and **`System`**.

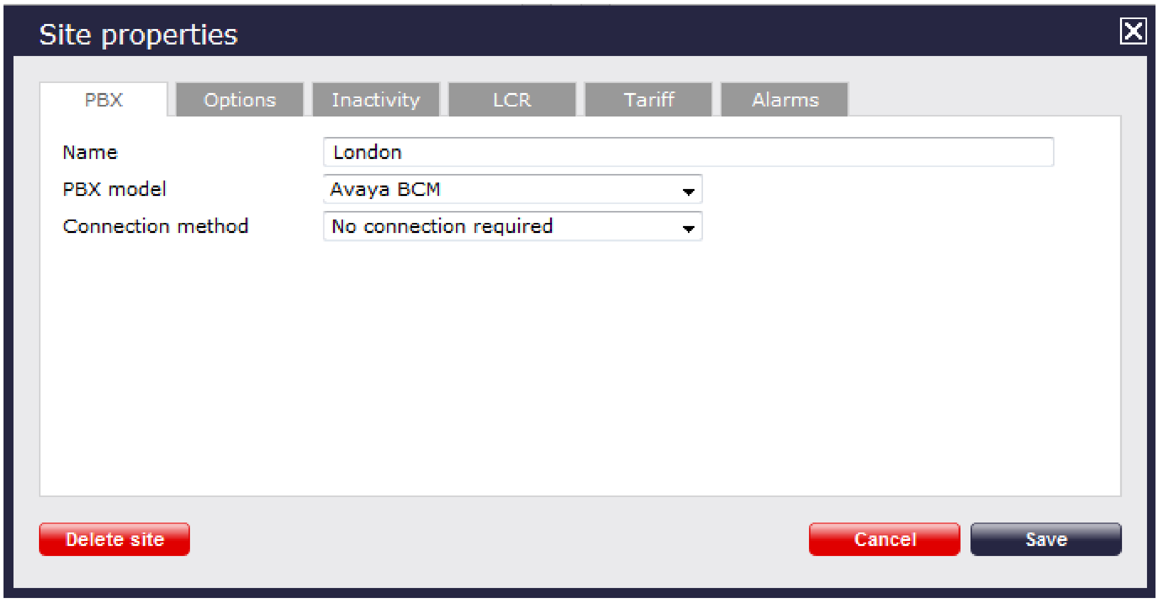



## Configuring TIM Plus

Once NetPBX is configured and collecting data, log in to TIM Plus and perform the following steps:

1. Log in to TIM Plus and click on the Directory tab.
2. Choose the site you want to configure and click Properties .




3. In the **Site Properties** window, select **Avaya BCM** from the **PBX model** drop-down list.
4. In the **Connection method** field, select **No connection required** from the drop-down list.
5. Click on the Save button to apply the settings.

## Avaya BCM v4.0+

These instructions help you configure your Avaya BCM (v4.0+) phone system to work with TIM Plus. Contact your system maintainer if you are not familiar with the configuration of your PBX.

Connection Type

TIM Plus establishes a TCP connection to this PBX.

Support Files

**Avaya BCM.TDT**

**Avaya BCM.TDS**

Required Tasks

Configure the SMDR output

Configure a CDR user

Configure TIM Plus

### Configuring your SMDR output

Follow the steps below to configure your Avaya BCM to output SMDR data to TIM Plus:

1. Log in to the BCM Element Manager.
2. On the **Task Navigation Panel**, click the Configuration tab.
3. Click on Telephony .
4. Click on Call Detail Recording .
5. In the **Call Detail Recording** panel that appears, configure the options as below:

| SMDR field | Value |
|---|---|
| **Format** | `Norstar` |
| **Report Type** | `All` |
| **Language** | `English` |
| **Date Format** | `MM/DD/YY` |
| **Header Format** | `Line/Station` |
| **Filter Type** | `All` |
| **Feature Code F9** | Leave as default |
| **Minimum Call Duration** | Leave as default |
| **Hospitality Records** | Leave as default |
| **Include DNIS Info** | `Enable` |
| **Include CLID with call type** | `Enable` |
| **Include Long CLID** | Leave as default |
| **Use answer supervision** | Leave as default |
| **Display connection character** | Leave as default |
| **Suppress digits after connect** | Leave as default |
| **Maximum digits after connect** | Leave as default |

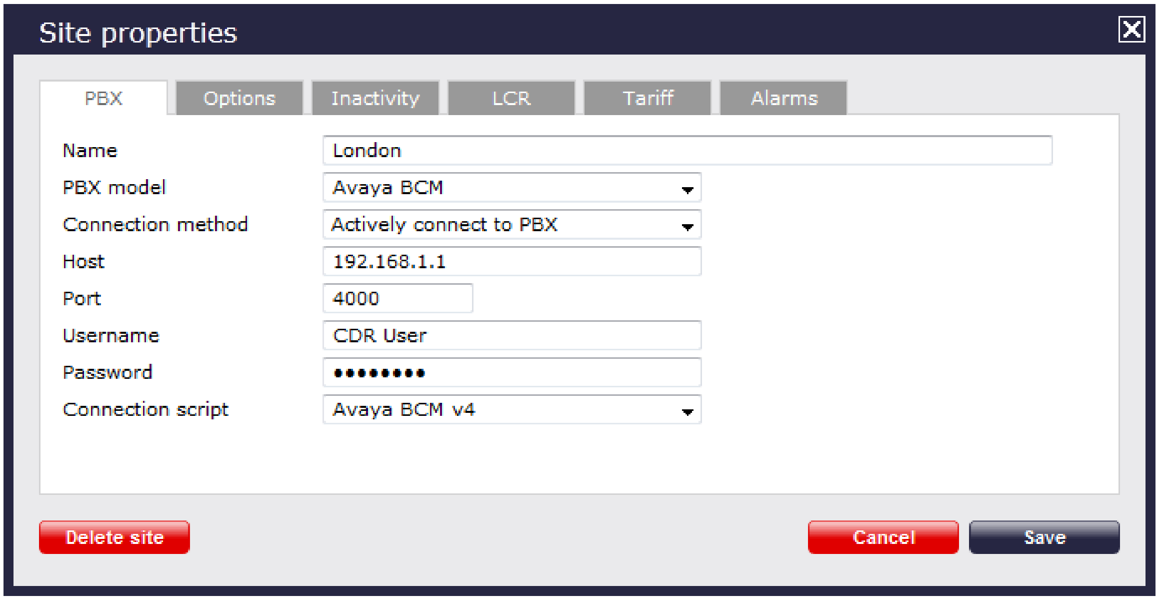
### CDR User

To enable TIM Plus to connect to your Avaya BCM, you need to create a **`CDR User`** under the System option in the BCM Unified Manager configuration utility.

### Configuring TIM Plus

Follow the steps below to configure TIM Plus to collect SMDR data from your Avaya BCM:

1. Log in to TIM Plus and click on the Directory tab.
2. Choose the site you want to configure and click Properties .




3. In the **Site Properties** window, select **Avaya BCM** from the **PBX model** drop-down list.
4. In the **Connection method** field, select **Actively connect to PBX** from the drop-down list.
5. In the **Host** field, enter the IP address of your Avaya BCM.
6. In the **Port** field, enter **4000**.
7. In the **Username** field, enter the username of the CDR user you configured in the BCM Unified Manager utility (above)
8. In the **Password** field, enter the password for the CDR user.
9. In the **Connection script** field, select **Avaya BCM v4** from the drop-down list.
10. Click on the Save button to apply the settings.

## Avaya Communications Manager

These instructions help you configure your Avaya Communications Manager phone system to work with TIM Plus. Contact your system maintainer if you are not familiar with the configuration of your PBX.

Connection Type

TIM Plus listens for connections from this PBX.

Support Files

**Avaya Communications Manager.TDT**

**Avaya Communications Manager.TDS**

Required Tasks

Configure the SMDR output

Configure TIM Plus

### Configuring your SMDR output

Connect to your Avaya Communications Manager using an RS232 or IP terminal client and, after logging in with your administrative credentials, follow the steps below:

### Configuring node-names ip

Issue the `change node-names` command to add a new node. Two fields need to be specified as follows:

- **Name:** `TIMPlus`.
- **IP Address:** (the IP address of the machine running TIM Plus)

Here is an example of a `node-names` configuration:

```
change node-names ip                                          Page   1 of   1
                                  IP NODE NAMES
    Name               IP Address           Name              IP Address
CLAN                 10. 10 .2 .211                          .   .   .
MEDPRO               10. 10 .2 .212                          .   .   .
RDTT                 10. 10 .2 .50                           .   .   .
SiteB                10. 10 .3 .13                           .   .   .
TIMPlus              10. 10 .2 .80                           .   .   .
default              0   .0  .0  .0                          .   .   .
procr                10. 10 .2 .201                          .   .   .
```

### Configuring ip-services

Issue the `change ip-services` command to add or amend IP services. There are three pages to configure:

On **Page 1**, the following fields are required:

- **Service type:** `CDR1`
- **Local Node:** (set this to the node-name of the CLAN board)
- **Local Port:** `0` (this cannot be changed)
- **Remote Node:** `TIMPlus` (the same node-name as created in the `node-names` section above)
- **Remote Port:** (the TCP port that TIM Plus will use to listen for CDR data, e.g. `9000`)

Here is an example of an ip-services configuration (page 1):

```
change ip-services                                            Page   1 of   3

                                   IP SERVICES
 Service     Enabled     Local       Local       Remote      Remote
  Type                   Node        Port        Node        Port

CDR1                    CLAN          0        TIMPlus       9000
```

On **Page 2** no configuration changes are needed.

On **Page 3** the following fields are required:

- **Reliable Protocol:** `n`
- **Packets Resp Timer:** `30` (default value)
- **Sessions Connect Message Cntr:** `3` (default value)
- **SPDU Cntr:** `3` (default value)
- **Connectivity Timer:** `60` (default value)

Here is an example of an ip-services configuration (page 3):

```
change ip-services                                            Page   3 of   3

                              SESSION LAYER TIMERS
  Service      Reliable  Packet Resp   Session Connect  SPDU  Connectivity
   Type        Protocol     Timer       Message Cntr    Cntr     Timer

 CDR1             n         30               3           3         60
```

### Configuring system-parameters cdr

Use the **`change system-parameters cdr`** command to amend the CDR format. The following screenshots describe how the settings should appear on your system:

**Page 1**

```
change system-parameters cdr                                  Page   1 of   2
                            CDR SYSTEM PARAMETERS

 Node Number (Local PBX ID): 1                    CDR Date Format: day/month
      Primary Output Format: customized    Primary Output Endpoint: CDR1
    Secondary Output Format:
           Use ISDN Layouts? n                  Enable CDR Storage on Disk? n
       Use Enhanced Formats? n      Condition Code 'T' For Redirected Calls? n
     Use Legacy CDR Formats? y                 Remove # From Called Number? n
Modified Circuit ID Display? y                            Intra-switch CDR? y
                  Record Outgoing Calls Only? n     Outg Trk Call Splitting? y
  Suppress CDR for Ineffective Call Attempts? y       Outg Attd Call Record? y
      Disconnect Information in Place of FRL? n      Interworking Feat-flag? n
 Force Entry of Acct Code for Calls Marked on Toll Analysis Form? n
                                    Calls to Hunt Group - Record: member-ext
Record Called Vector Directory Number Instead of Group or Member? n

     Inc Trk Call Splitting? y                 Inc Attd Call Record? y
  Record Non-Call-Assoc TSC? n          Call Record Handling Option: warning
      Record Call-Assoc TSC? n   Digits to Record for Outgoing Calls: dialed
   Privacy - Digits to Hide: 0               CDR Account Code Length: 6
```

**Page 2**

```
change system-parameters cdr                                  Page   2 of   2
                            CDR SYSTEM PARAMETERS

     Data Item - Length         Data Item - Length         Data Item - Length
 1: date             - 6   17: dialed-num       - 18  33:  auth-code       - 13
 2: space            - 1   18: space            - 1   34:  return          - 1
 3: time             - 4   19: in-trk-code      - 4   35:  line-feed       - 1
 4: space            - 1   20: space            - 1   36:                  -
 5: sec-dur          - 5   21: in-crt-id        - 3   37:                  -
 6: space            - 1   22: space            - 1   38:                  -
 7: cond-code        - 1   23: calling-num      - 15  39:                  -
 8: space            - 1   24: space            - 1   40:                  -
 9: attd-console     - 2   25: vdn              - 5  41:                  -
10: space            - 1   26: space            - 1   42:                  -
11: code-used        - 4   27: bcc              - 1   43:                  -
12: space            - 1   28: space            - 1   44:                  -
13: out-crt-id       - 3   29: ppm              - 5   45:                  -
14: space            - 1   30: space            - 1   46:                  -
15: code-dial        - 4   31: acct-code        - 15  47:                  -
16: space            - 1   32: space            - 1   48:                  -

                              Record length = 126
```

### Configuring trunk-group

To ensure that response times for incoming calls are included in your CDR data, the CDR field for each trunk group must be set to **`r`**. This must be applied to all trunk groups using the following command:

**`change trunk-group X`** (where X is the trunk group number)

An example trunk-groups configuration screen is shown below:

```
change trunk-group 3                                                Page   1 of  21
                                TRUNK GROUP

Group Number:3                  Group Type: isdn         CDR Reports: r
  Group Name: ToSimulatedPSTN              COR: 1        TN: 1         TAC: 113
   Direction: two-way       Outgoing Display? y         Carrier Medium: PRI/BRI
 Dial Access? y               Busy Threshold: 255       Night Service:
Queue Length: 0
Service Type: tie                  Auth Code? n            TestCall ITC: rest
                         Far End Test Line No:
TestCall BCC: 4
```

#### Configuring intra-switch-cdr

To have internal calls included in your CDRs, ensure that the **`intra-switch-cdr`** table is populated with the extension numbers you are interested in. To modify the table, issue the following command:

**`change intra-switch-cdr`**

Here is an example of an intra-switch-cdr configuration table:

```
change intra-switch-cdr                                              Page   1 of   3
                           INTRA-SWITCH CDR

                                Assigned Members:   4    of 5000   administered
   Extension          Extension          Extension          Extension
   301
   302
   303
   311
```

#### Configuring multiple Avaya Communications Manager systems

If you have more than one Avaya Communications Manager, configuration of your CDR depends on which of the following scenarios you have implemented:

- LSPs (Local Survivable Processors)

  If your Avaya Communications Manager systems are connected and the remote sites are LSPs then you need only configure the **`Master /Primary`** Avaya Communications Manager. When TIM Plus receives the CDR information, it will include CDRs from all of the remote LSPs.

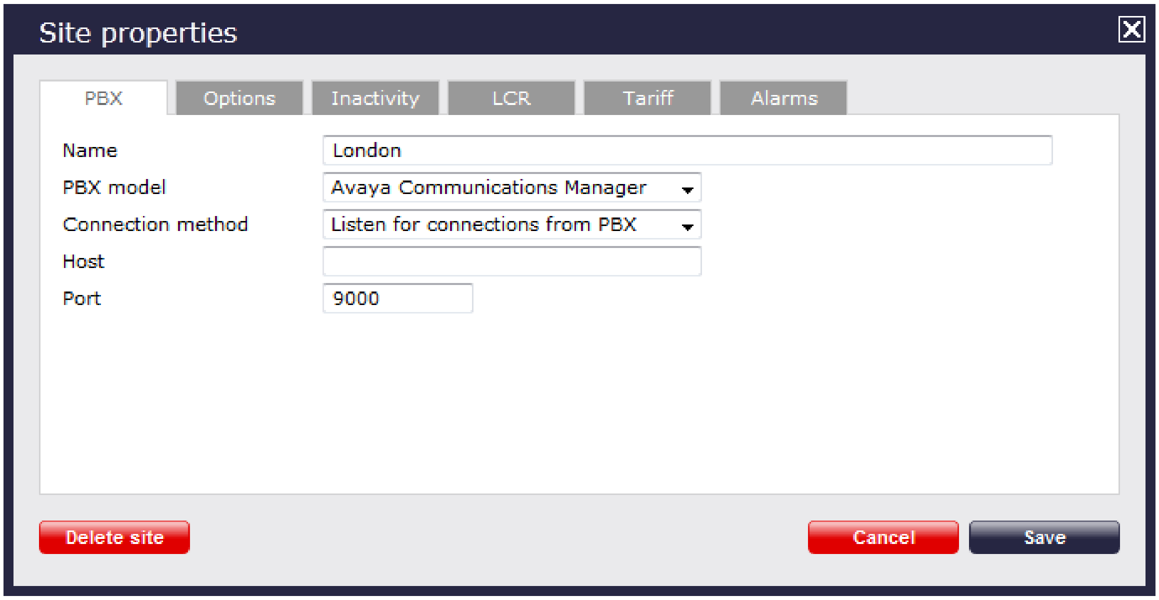
- Not linked

  If you have multiple Avaya Communications Manager systems where LSPs aren't in use, you need to configure each Avaya Communications Manager separately. You must ensure that each Avaya Communications Manager has its own unique Remote Port (IP-services) setup.

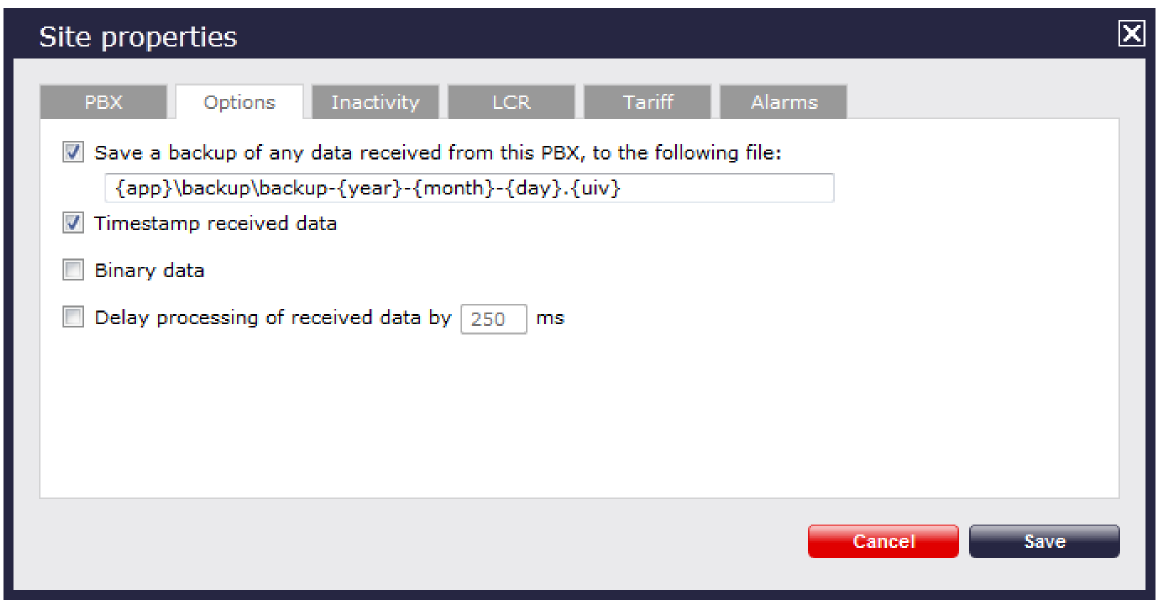
### Configuring TIM Plus

Follow the steps below to configure TIM Plus to listen for SMDR data from your Avaya Communications Manager:

1. Click on the Directory tab.
2. Choose the site you want to configure and click Properties .




3. In the **Site Properties** window, select **Avaya Communications Manager** from the **PBX model** drop-down list.
4. In the **Connection method** field, select **Listen for connections from PBX** from the drop-down list.
5. Leave the **Host** field blank.
6. In the **Port** field, enter the **Remote Port (ip-services)** that you configured above.
7. Click on the Options tab and tick the box **Timestamp received data**.




8. Click on the Save button to apply the settings.

## Avaya EuroGeneris

These instructions help you configure your Avaya EuroGeneris phone system to work with TIM Plus. Contact your system maintainer if you are not familiar with the configuration of your PBX.

Connection Type

TIM Plus establishes a serial connection with this PBX.

Support Files

**`Avaya EuroGeneris.TDT`**

**`Avaya EuroGeneris.TDS`**

Required Tasks

- Configure the SMDR output
- Install NetPBX
- Configure TIM Plus

To obtain the **`Avaya EuroGeneris.TDS`** and **`Avaya EuroGeneris.TDT`** support files, contact our Technical Support team.

### Configuring your SMDR output

The Avaya EuroGeneris has multiple SMDR output options and formats. TIM Plus requires the SMDR output type to be set to **`customized`** and the format to **`Format 5 rows 80 columns`**. For more information about the output and configuration of your SMDR data, contact your system maintainer.

### Installing NetPBX

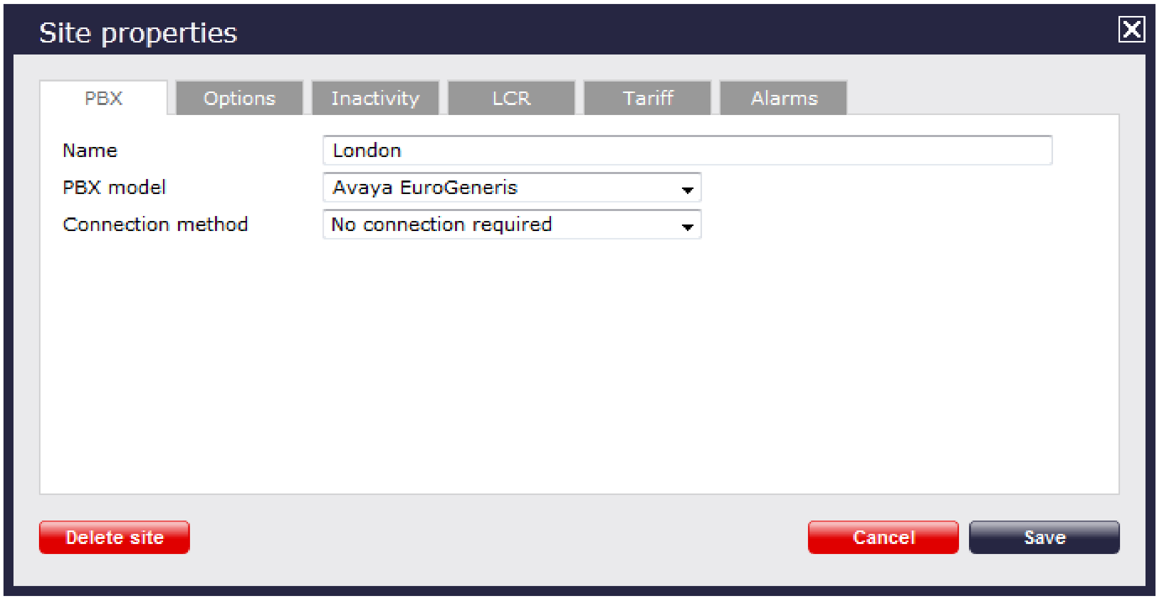
The Avaya EuroGeneris phone system sends SMDR information via a serial connection. To collect the data from the serial port and send it to TIM Plus, you first need to install the NetPBX software. For setup instructions, click on the link below:

Install and configure NetPBX

### Configuring TIM Plus

Once NetPBX is configured and collecting data, log in to TIM Plus and perform the steps below:

1. Click on the Directory tab.
2. Choose the site you want to configure and click Properties .




3. In the **Site Properties** window, select **Avaya EuroGeneris** from the **PBX model** drop-down list.
4. In the **Connection method** field, select **No connection required** from the drop-down list.
5. Click on the Save button to apply the changes.

## Avaya INDeX

These instructions help you configure your Avaya INDeX phone system to work with TIM Plus. Contact your system maintainer if you are not familiar with the configuration of your PBX.

Connection Type

TIM Plus establishes a serial connection with this PBX.

Support Files

**Avaya INDeX v7.TDT**

**Avaya INDeX v7.TDS**

Required Tasks

Configure the SMDR output

Install NetPBX

Configure TIM Plus

### Configuring your SMDR output

To configure the SMDR output from your Avaya INDeX, follow the steps below:

1. Log in to your Avaya INDeX through a terminal.
2. Select option 1 for **Reports**.
3. Select option 2 for **Set up SMDR**.
4. Configure the SMDR options as shown below:

```
- Reports > Set up SMDR [1-4]
                      Set up SMDR 1

      1. Minimum call time         : 0
      2. Call type                 : Any
      3. International included    : yes
      4. Long distance included    : yes
      5. Other outgoing included   : yes
      6. Page size                 : 60
      7. Line spacing              : 1

      <ESC> Reports
```

5. Press the Esc key to return to the **Reports** menu.
6. Select option 5 for **Start Logs/DECT**.
7. Use the arrows keys to select the port you intend to use for the SMDR output.
8. Enable the **SMDR and Event** or **SMDR** option, depending on the version of your PBX.

### Installing NetPBX

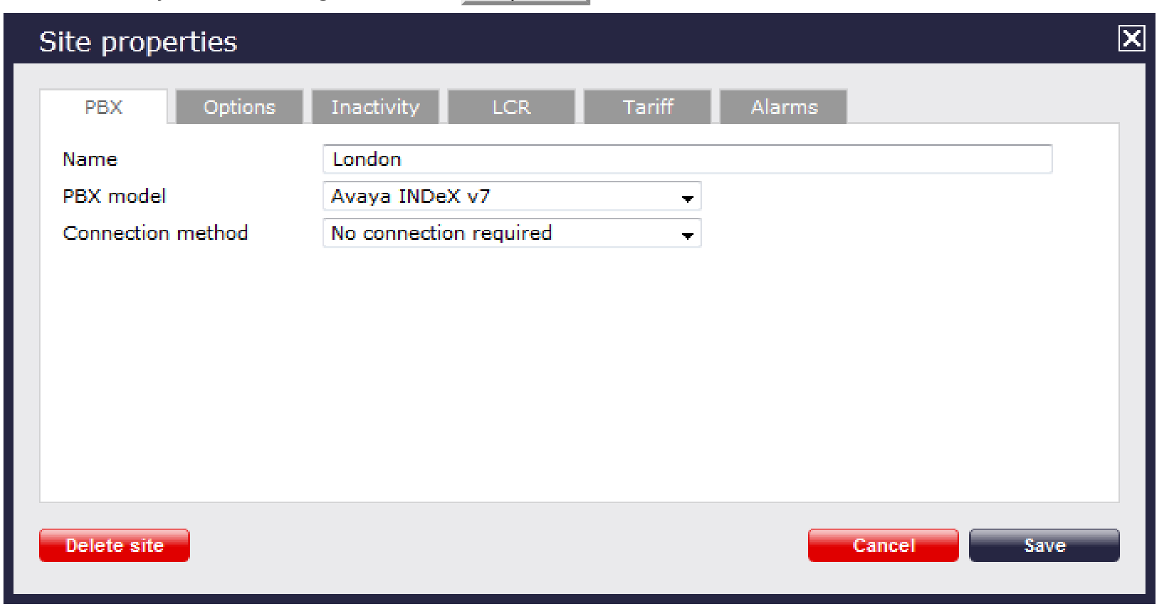
The Avaya INDeX phone system sends SMDR information via a serial connection. To collect the data from the serial port and send it to TIM Plus, you first need to install the NetPBX software. For setup instructions, click on the link below:

Install and configure NetPBX

### Configuring TIM Plus

Once NetPBX is configured and collecting data, log in to TIM Plus and perform the steps below:

1. Click on the Directory tab.
2. Choose the site you want to configure and click Properties .




3. In the **Site Properties** window, select **Avaya INDeX v7** from the **PBX model** drop-down list.
4. In the **Connection method** field, select **No connection required** from the drop-down list.
5. Click on the Save button to apply the settings.

## Avaya IP Office up to v5

These instructions help you configure your Avaya IP Office up to v5 phone system to work with TIM Plus. Contact your system maintainer if you are not familiar with the configuration of your PBX.

Connection Type

TIM Plus establishes a TCP connection to this PBX.

Support Files

**`Avaya IP Office.TDT`**

**`Avaya IP Office.TDS`**

Required Tasks

- Configure the SMDR output
- Configure Avaya Delta Server
- Configure TIM Plus

## Configuring your SMDR output

The Avaya IP Office version 5 or lower uses the Avaya Delta Server software to configure the SMDR output. If you don't have a copy of the Avaya Delta Server, you should be able to get this from your Avaya Administration CD; otherwise, contact your system maintainer to obtain a copy.

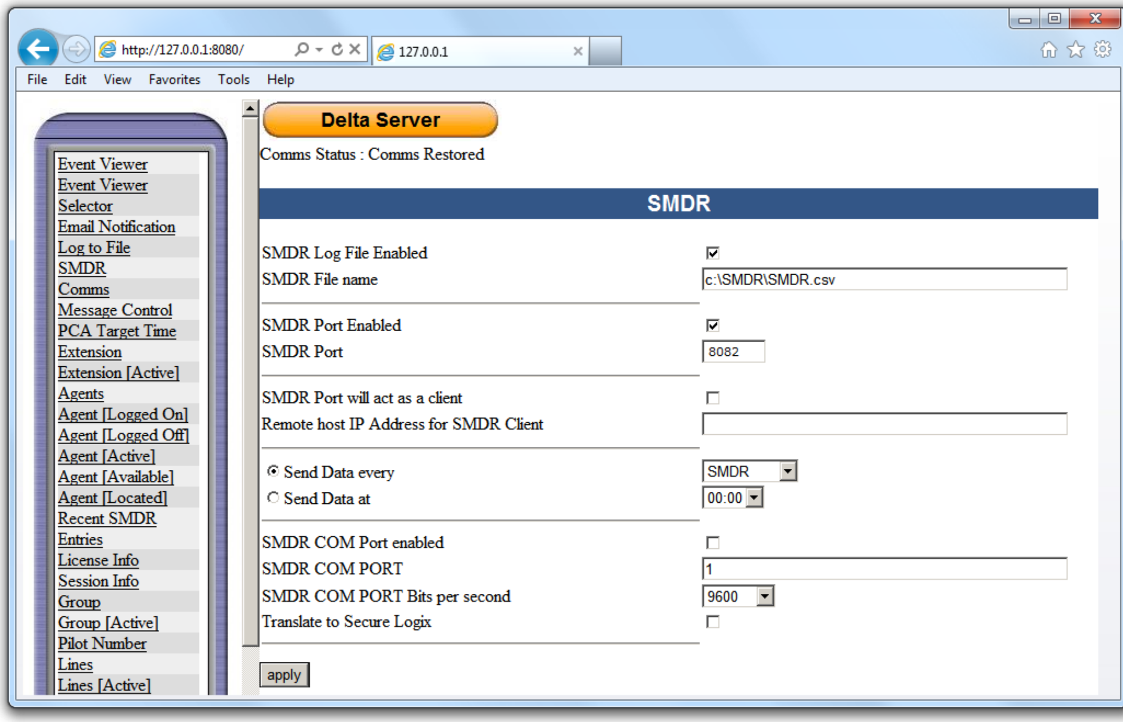
The Avaya Delta Server is known to be compatible with older versions of the Avaya IP Office as far back as v3.x.

### Configuring Avaya Delta Server

Ensure the CCC Delta Server service is started, then follow the instructions below to configure the Avaya Delta Server to work with TIM Plus:

1. On the computer running Delta Server, open a web browser and navigate to: **`http://127.0.0.1:8080`**.
2. Ensure that Delta Server is connected to your Avaya IP Office by verifying that **`Comms Status`** is displaying **`Comms Restored`**.

   Alternatively, select the Comms option from the left-hand side menu and click on the Search button. When the system finds your Avaya IP Office unit, select it from the **`Connection`** drop-down list and click Apply.
3. When connected, click on the SMDR option from the left-hand menu and configure each of the fields on the SMDR screen, as shown below:




4. Click on the Apply button for the changes to take effect.

### Configuring TIM Plus

Follow the steps below to configure TIM Plus to collect the SMDR data from the Delta Server::

1. Log in to TIM Plus and click on the Directory tab.
2. Choose the site you want to configure and click Properties .


3. In the **Site Properties** window, select **Avaya IP Office** from the **PBX model** drop-down list.
4. In the **Connection method** field, select **Actively connect to PBX** from the drop-down list.
5. In the **Host** field, enter the IP address of the Avaya Delta Server.

6. In the **Port** field, enter **8082**.
7. Leave the **Username** and **Password** fields blank.
8. In the **Connection script** field, select **Avaya IP Office** from the drop-down list.
9. Click on the Save button to apply the settings.

## Avaya IP Office v6+

The Avaya IP Office 6+ can be configured to send its SMDR data over an active or passive TCP connection. Click on one of the links below that relates to your preferred connection method.

### Avaya IP Office v6+ - Active connection

These instructions help you configure your Avaya IP Office v6+ phone system to work with TIM Plus. Contact your system maintainer if you are not familiar with the configuration of your PBX.

Connection Type

TIM Plus establishes a TCP connection to this PBX.

Support Files

**Avaya IP Office 6+.TDT**

**Avaya IP Office 6+.TDS**

Required Tasks

Configure the SMDR output

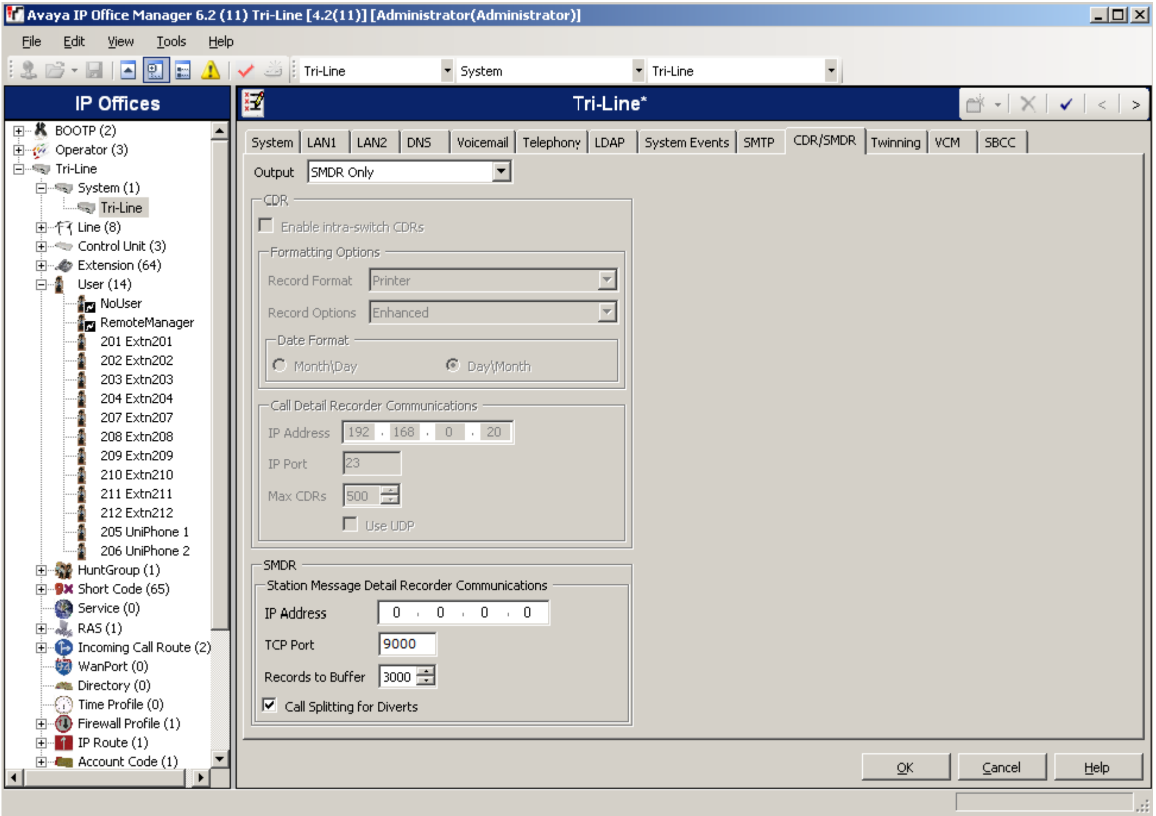
Configure TIM Plus

#### Configuring your SMDR output

The Avaya IP Office can be configured to accept an incoming TCP connection, in order to output its SMDR data. Using the Avaya IP Office Manager application, perform the following steps to enable the output:

1. Log in to your Avaya IP Office unit using the Avaya IP Office Manager.
2. Click on System from the left-hand menu and select your Avaya IP Office unit.
3. On the right-hand side, click on the CDR/SMDR tab.
4. From the **Output** drop-down menu, select **SMDR only**. The **SMDR** section will now become active at the bottom of the page.
5. In the **IP Address** field, enter **0.0.0.0**.
6. In the **TCP Port** field, enter the port number that you want your SMDR data to be sent to. You can use any free TCP port, but we would recommend one in the 9000 range.
7. In the **Records to Buffer** option, increase the value to the maximum available.
8. Check the **Call Splitting for Diverts** option.
9. Click on the OK button, then save and merge the configuration for the settings to take effect.

Here is an example of the SMDR screen and how it should be configured:




### Configuring TIM Plus

Follow the steps below to configure TIM Plus to collect SMDR data from your Avaya IP Office:

1. Click on the Directory tab.
2. Choose the site you want to configure and click Properties .


3. In the **Site Properties** window, select **Avaya IP Office v6+** from the **PBX model** drop-down list.
4. In the **Connection method** field, select **Actively connect to PBX** from the drop-down list.
5. In the **Host** field, enter the IP address of your Avaya IP Office.

6. In the **Port** field, enter the port number configured in the phone system.
7. Leave the **Username** and **Password** fields blank.
8. In the **Connection script** field, select **Avaya IP Office** from the drop-down list.
9. Click on the Save button to apply the settings.

## Avaya IP Office v6+ - Listening connection

These instructions help you configure your Avaya IP Office v6+ phone system to work with TIM Plus. Contact your system maintainer if you are not familiar with the configuration of your PBX.

Connection Type

TIM Plus listens for connections from this PBX.

Support Files

**Avaya IP Office 6+.TDT**

**Avaya IP Office 6+.TDS**

Required Tasks

Configure the SMDR output

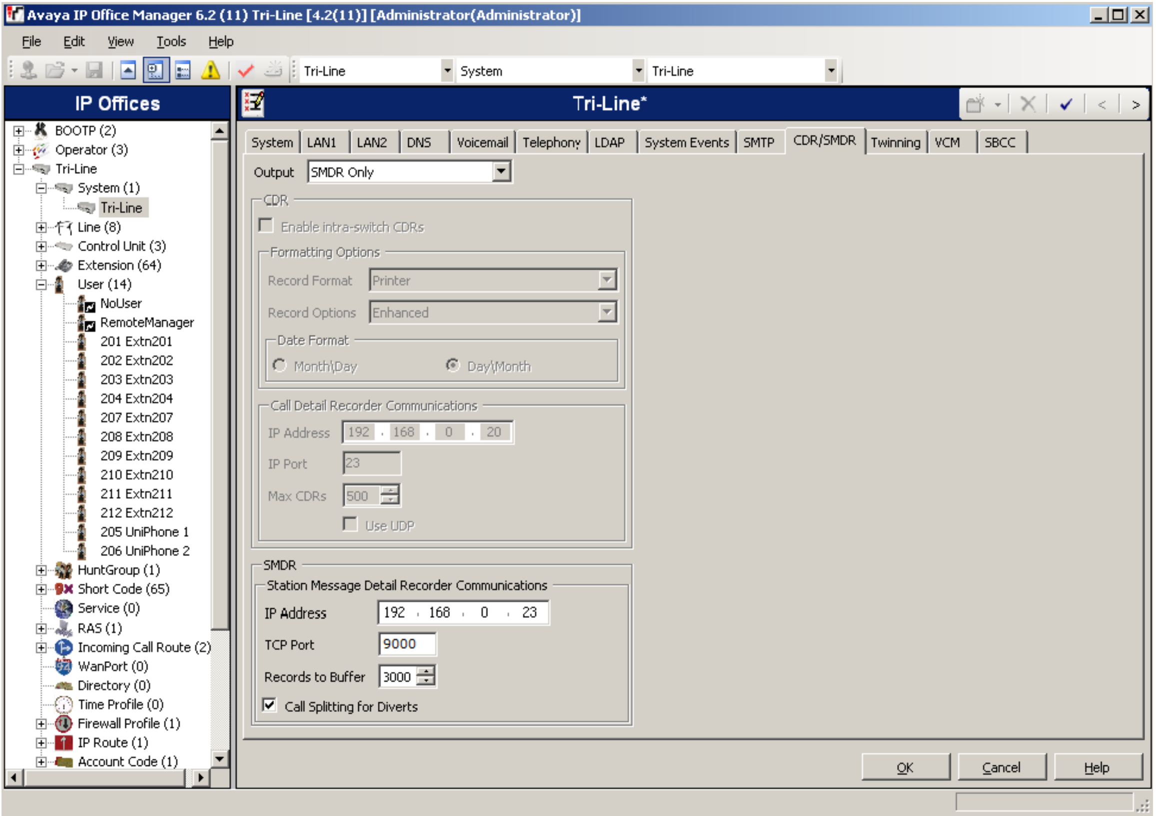
Configure TIM Plus

### Configuring your SMDR output

To configure the Avaya IP Office to output SMDR you must program the Avaya IP Office unit to send the SMDR data to the computer running TIM Plus. Using the Avaya IP Office Manager application, perform the following steps to configure the SMDR output:

1. Log in to your Avaya IP Office unit using the Avaya IP Office Manager.
2. Click on System from the left-hand menu and select your Avaya IP Office unit.
3. On the right-hand side, click on the CDR/SMDR tab.
4. From the **Output** drop-down menu, select **SMDR only**. The **SMDR** section will now become active at the bottom of the page.
5. In the **IP Address** field, enter the IP address of the machine that TIM Plus is installed on.
6. In the **TCP Port** field, enter the port number that you want your SMDR data to be sent to. You can use any free TCP port, but we would recommend one in the 9000 range.
7. In the **Records to Buffer** option, increase the value to the maximum available.
8. Check the **Call Splitting for Diverts** option.
9. Click on the OK button, then save and merge the configuration for the settings to take effect.

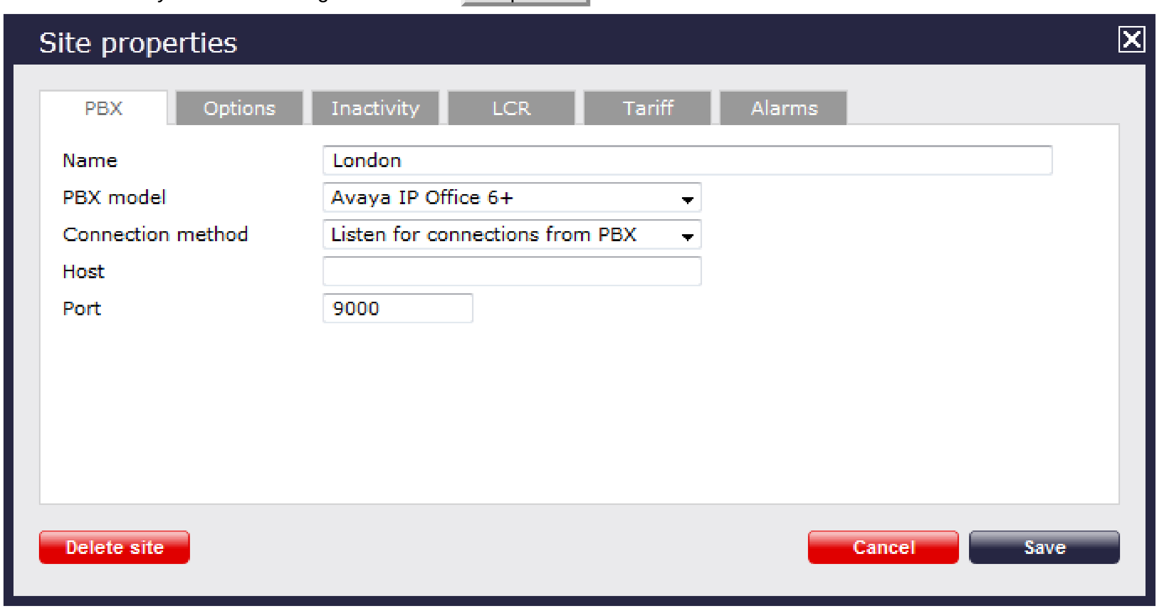
Here is an example of the SMDR screen and how it should be configured:



### Configuring TIM Plus

Follow the steps below to configure TIM Plus to listen for SMDR data from your Avaya IP Office v6+:

1. Click on the Directory tab.
2. Choose the site you want to configure and click Properties .



3. In the **Site Properties** window, select **Avaya IP Office 6+** from the **PBX model** drop-down list.
4. In the **Connection method** field, select **Listen for connections from PBX** from the drop-down list.
5. Leave the **Host** field blank.

6. In the **Port** field, enter **9000**.

7. Click on the Save button to apply the settings.

## Avaya Matra 65xx series

These instructions help you configure your Avaya Matra 65xx series to work with TIM Plus. Contact your system maintainer if you are not familiar with the configuration of your PBX.

Connection Type

TIM Plus establishes a serial connection with this PBX.

Support Files

**Avaya Matra 6500.TDT**

**Avaya Matra 6500.TDS**

Required Tasks

Configure the SMDR output

Install NetPBX

Configure TIM Plus

### Configuring your SMDR output

The Avaya Matra 65xx series is outputting the SMDR data via a serial connection. You need to connect a serial cable between your Avaya Matra 65xx phone system and the PC running NetPBX. For more information about the output and configuration of the SMDR data, please contact your system maintainer.

### Installing NetPBX

To collect the data from the serial port and send it to TIM Plus, you first need to install the NetPBX software. For setup instructions, click on the link below:

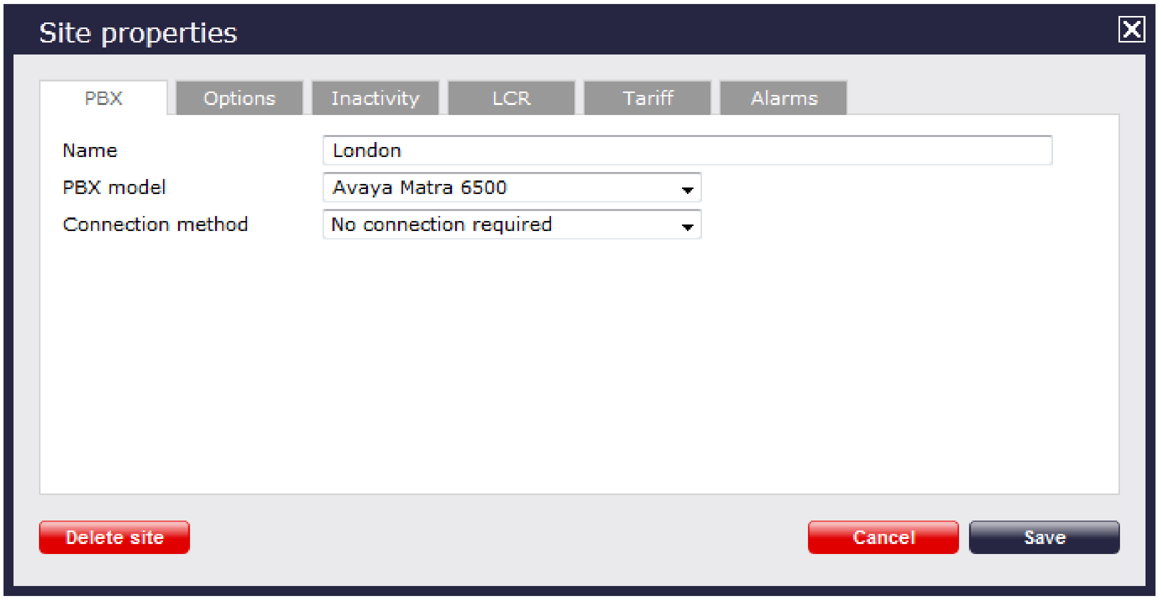
Install and configure NetPBX

### Configuring TIM Plus

Once NetPBX is configured and collecting data, log in to TIM Plus and perform the steps below:

1. Click on the Directory tab.

2. Choose the site you want to configure and click Properties .




3. In the **`Site Properties`** window, select **`Avaya Matra 6500`** from the **`PBX model`** drop-down list.

4. In the **`Connection method`** field, select **`No connection required`** from the drop-down list.

5. Click on the Save button to apply the settings.

## Avaya Meridian Option Series

These instructions help you configure your Avaya Meridian Option Series to work with TIM Plus. Contact your system maintainer if you are not familiar with the configuration of your PBX.

Connection Type

TIM Plus establishes a serial connection with this PBX.

Support Files

**`Avaya Meridian.TDT`**

**`Avaya Meridian.TDS`**

Required Tasks

- Configure the SMDR output
- Install NetPBX
- Configure TIM Plus

### Configuring your SMDR output

By default, the SMDR output in the Avaya Meridian Option Series is disabled. You need to speak to your system maintainer to have this enabled for incoming, outgoing and internal calls. Additionally, CLI, DNIS, response time and abandoned calls should be enabled for incoming calls.

You need to configure one of the **`TTY`** ports on the Meridian to output SMDR information and connect a serial cable between this port and the PC running NetPBX.

Using the following commands, configure each option as shown below:

#### 1. Enable CDR (command: LD 21)

```
>LD 21
PT1000

REQ: PRT
TYPE: CDR
TYPE CDR_DATA
CUST 0

TYPE CDR_DATA
CUST 00
CDR YES
  IMPH NO
  OMPH NO
  AXID YES
  TRCR YES
  CDPR NO
  ECDR YES
  PORT [TTY port used on PBX]
CHLN 0
FCAF NO
```

**2. Port Setup (command: LD 22)**

```
>LD 22

ADAN    TTY [TTY port used on PBX]
  CARD 00 [card it resides on]
  PORT  [port on that card]
  DES  [description]
  BPS  1200     ← baud rate
  BITL 8        ← bit length
  STOP 1        ← stop bit
  PARY NONE     ← parity
  FLOW NO       ← flow control
  USER CTY      ← type of TTY port for CDR
  XSM  NO
```

**3. CDR Format (commands: LD 22; LD 17)**

### CDR Format (commands: LD 22; LD 17)

***** the following is part System config. for CDR printed in* LD 22; *changed in* LD 17.

```
PARM
  LPIB 125
  HPIB 50
  500B 200
  NCR  300
  MGCR NULL
  CSQI 020
  CSQO 020
  NCPU 1
  CFWS NO
  PCML MU
  ALRM YES
  ERRM ERR BUG AUD
  DTRB 100
  TMRK 128
```

****** start CDR section*

```
  FCDR NEW
  PCDR NO
  TPO  NO
  TSO  NO
  CLID NO
  DUR5 NO
```

******** end CDR section*

**CDR output port values:**

**Baud** = 1200;

**Data bits** = 8;

**Parity** = None;

**Stop bits** = 1;

**Flow control** = DTR/RTS

**Use CDR format** #511 (Meridian / SL1-X11) or #526 (CS 1000 Rel 4+ / Meridian 1).

### Installing NetPBX

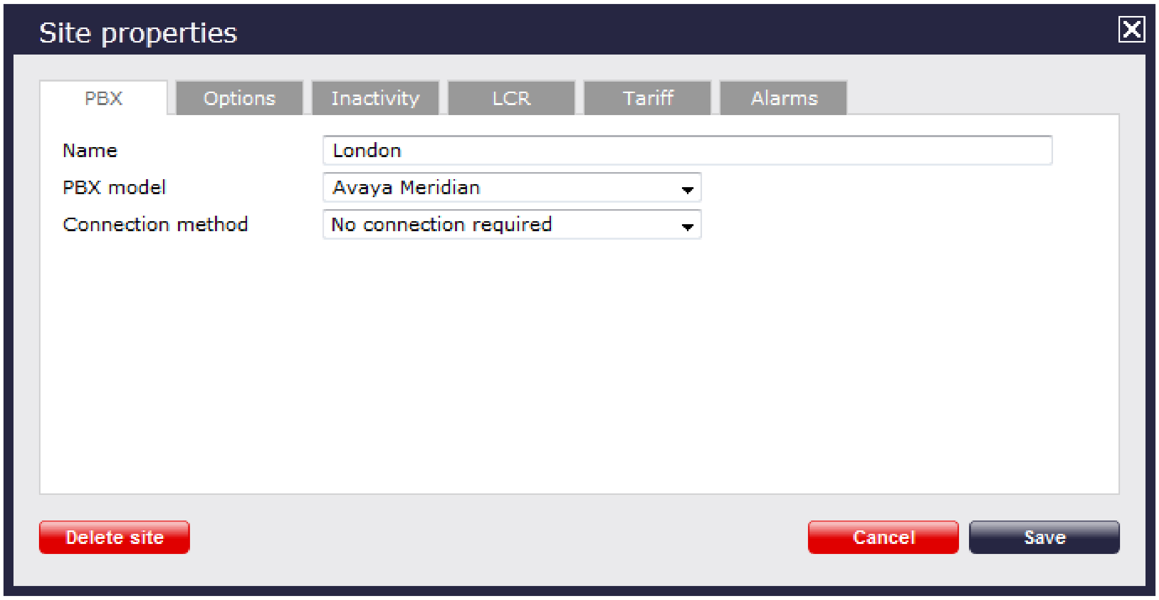
The Meridian sends SMDR information via a serial connection. To collect the data from the serial port and send it to TIM Plus, you first need to install the NetPBX software. For setup instructions, click on the link below:

Install and configure NetPBX

### Configuring TIM Plus

Once NetPBX is configured and collecting data, log in to TIM Plus and perform the steps below:

1. Click on the Directory tab.
2. Choose the site you want to configure and click Properties .




3. In the **Site Properties** window, select **Avaya Meridian** from the **PBX model** drop-down list.
4. In the **Connection method** field, select **No connection required** from the drop-down list.
5. Click on the Save button to apply the settings.

## Avaya Network Alchemy

These instructions help you configure your Avaya Network Alchemy to work with TIM Plus. Contact your system maintainer if you are not familiar with the configuration of your PBX.

Connection Type

The SMDR data is outputted to a file

Support Files

**Avaya Network Alchemy.TDT**

**Avaya Network Alchemy.TDS**

Required Tasks

Configure the SMDR output

Configure Avaya Call Log

Configure TIM Plus

### Configuring your SMDR output

The Avaya Network Alchemy uses the Avaya Call Log software to configure the SMDR data. As the application will be outputting the data to a file, the installation of the Avaya Call Log software needs to be performed on the same machine as TIM Plus. A copy of the Avaya Call Log application can be found on your Avaya Administration CD. Your system maintainer should be able to supply you with a copy of the software.

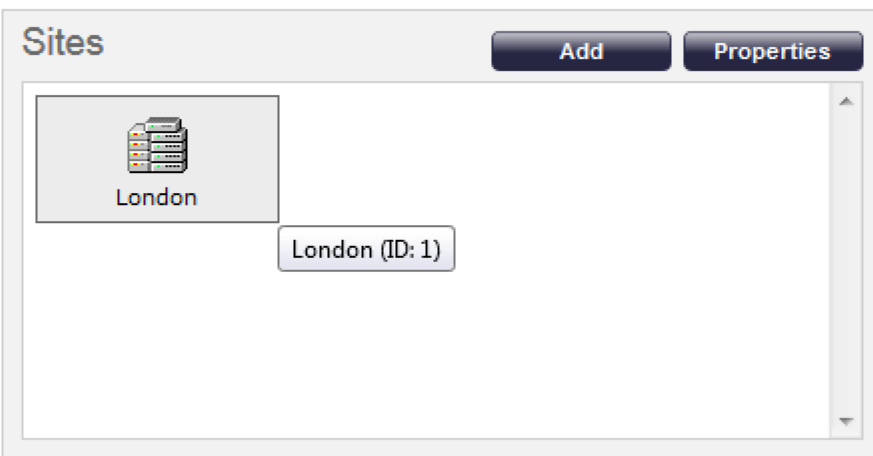
**NOTE**

The Avaya Call Log software does not run as a Windows Service; therefore, you must ensure that the application is never stopped because you may lose SMDR data.

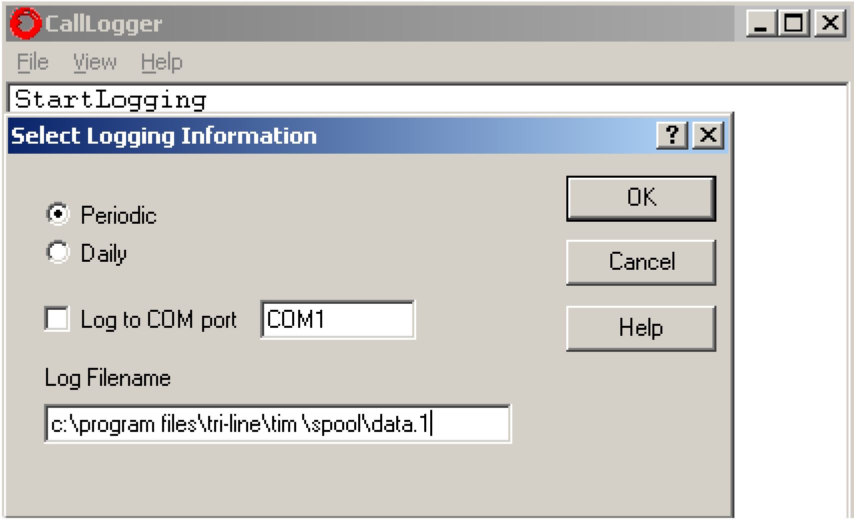
### Configuring Avaya Call Log

Follow the steps below to configure the Avaya Call Log software:

1. Start the Avaya Call Log application.
2. From the File menu, select Select Unit .
3. In the first field, enter the IP address of your Avaya Network Alchemy.
4. In the second field, enter the password for your Avaya Network Alchemy and click the OK button.
5. From the File menu, select Log Option .
6. From the **`Select Logging Information`** window, choose the **`Periodic`** option.
7. Type **`C:\Program Files\Tri-Line\TIM Plus\spool\data.{sitecode}`** in the **`Log Filename`** field, replacing **`{sitecode}`** with the ID of the site you are logging. To obtain the ID of a site, hover the mouse pointer over it on the Directory page in TIM Plus and it will be displayed as a tooltip as shown below:



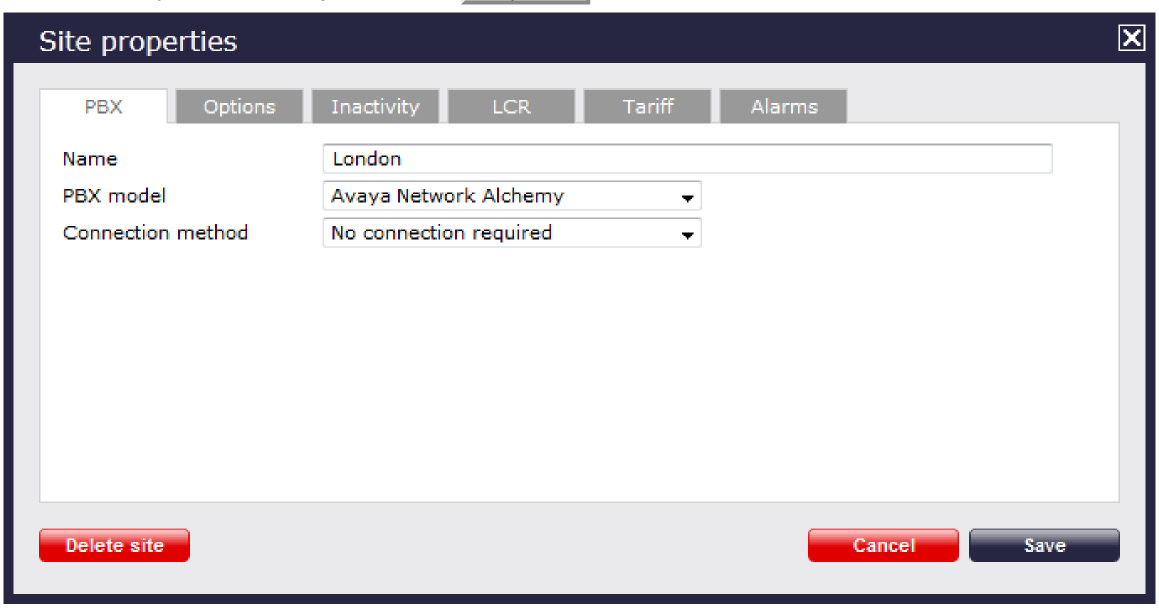

8. Click on the OK button to apply the settings.




### Configuring TIM Plus

Follow the steps below to configure TIM Plus to receive SMDR data from your Avaya Network Alchemy:

1. Click on the Directory tab.
2. Choose the site you want to configure and click Properties .




3. In the **Site Properties** window, select **Avaya Network Alchemy** from the **PBX model** drop-down list.
4. In the **Connection method** field, select **No connection required** from the drop-down list.
5. Click on the Save button to apply the changes.

## Avaya Norstar

These instructions help you configure your Avaya Norstar to work with TIM Plus. Contact your system maintainer if you are not familiar with the configuration of your PBX.

Connection Type

TIM Plus establishes a serial connection with this PBX.

Support Files

**Avaya BCM.TDT**

**Avaya BCM.TDS**

Required Tasks

Configure the SMDR output

Install NetPBX

Configure TIM Plus

To obtain the **Avaya Norstar.TDT and Avaya Norstar.TDS** support files, contact our Technical Support team.

### Configuring your SMDR output

Follow the steps below to configure your Avaya Norstar to output SMDR data to TIM Plus. You must perform these operations from a system programming phone:

1. On your programming phone, press the Feature key, followed by 9 * 2 to access the CLI menu.
2. Press Next to display the **Printer** settings showing the baud rate that the data is sent at. To change this value, select Change and choose a new baud rate.
3. Press Next to display the **Format** settings. Ensure this is set to **Norstar**.
4. Press Next to show **Report** settings. Ensure this is set to **All**.
5. Press the Rls button to complete the programming steps.

### Installing NetPBX

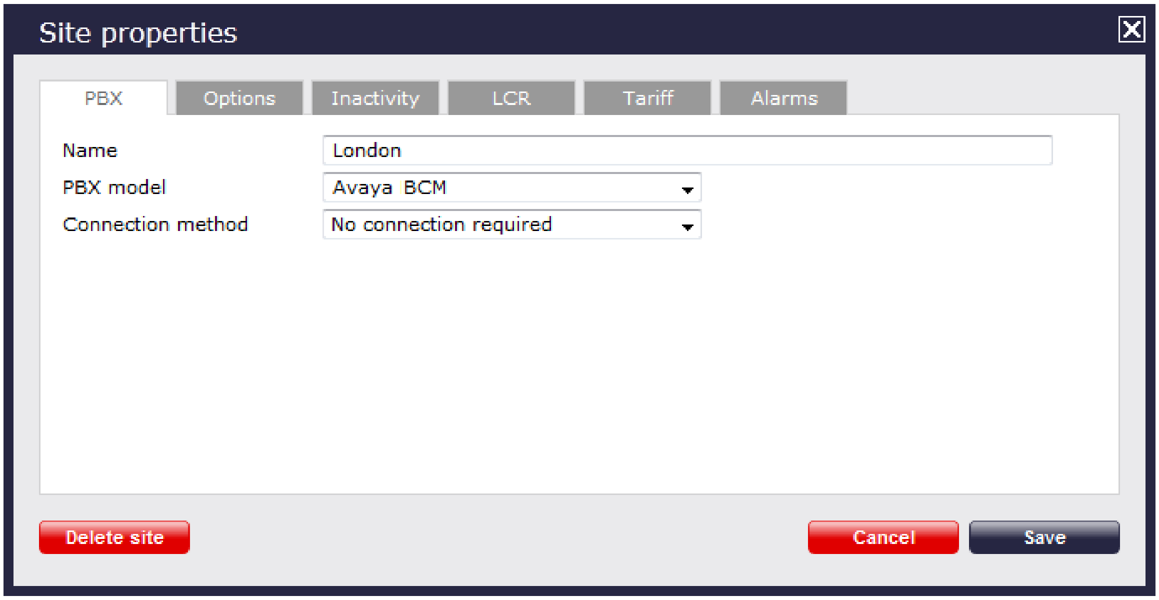
The Avaya Norstar phone system sends SMDR information via a serial connection to the computer running TIM Plus. To collect serial data, you first need to install the NetPBX software. For setup instructions, click on the link below:

Install and configure NetPBX

### Configuring TIM Plus

Once NetPBX is configured and collecting data, log in to TIM Plus and perform the following steps:

1. Click on the Directory tab.
2. Choose the site you want to configure and click Properties .




3. In the `Site Properties` window, select **`Avaya BCM`** from the `PBX model` drop-down list.
4. In the `Connection method` field, select **`No connection required`** from the drop-down list.
5. Click on the Save button to save settings.

## Avaya Tenovis

These instructions help you configure your Avaya Tenovis to work with TIM Plus. Contact your system maintainer if you are not familiar with the configuration of your PBX.

Connection Type

TIM Plus establishes a serial connection with this PBX.

Support Files

**`Avaya Tenovis i55.TDT`**

Required Tasks

- Configure the SMDR output
- Install NetPBX
- Configure TIM Plus

### Configuring your SMDR

For specific information about the output and configuration of the SMDR data of your Avaya Tenovis phone system, please contact your system maintainer.

### Installing NetPBX

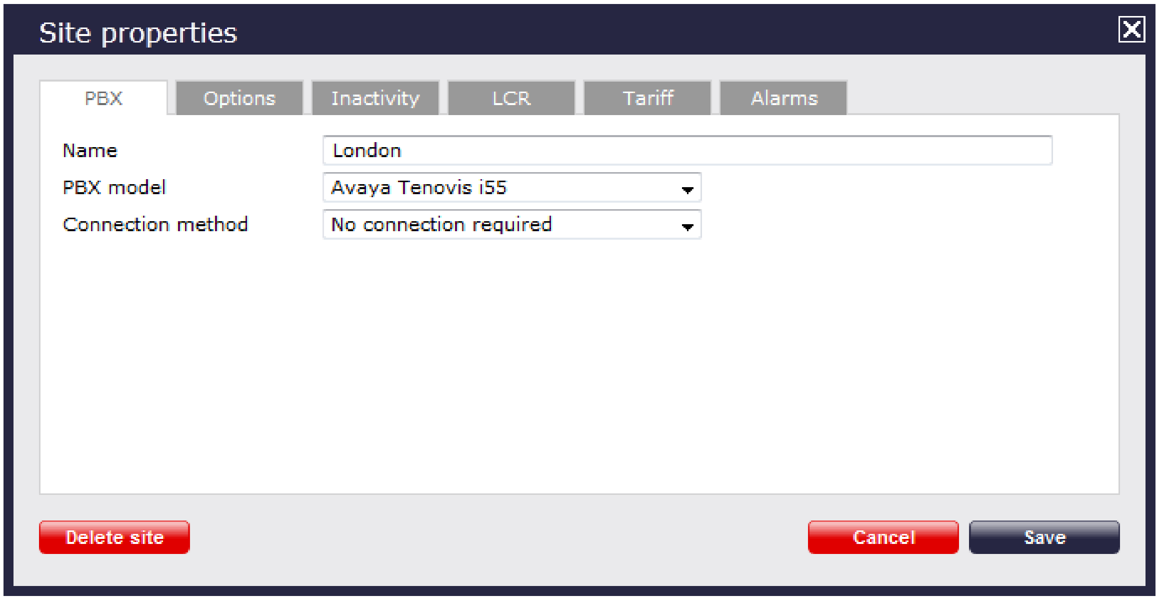
The Avaya Tenovis outputs its SMDR data via a serial connection. To collect the data from the serial port and send it to TIM Plus, you first need to install the NetPBX software. For setup instructions, click on the link below:

Install and configure NetPBX

### Configuring TIM Plus

Once NetPBX is configured and collecting data, log in to TIM Plus and follow the steps below:

1. Click on the Directory tab.
2. Choose the site you want to configure and click Properties .




3. In the **Site Properties** window, select **Avaya Tenovis i55** from the **PBX model** drop-down list.
4. In the **Connection method** field, select **No connection required** from the drop-down list.
5. Click on the Save button to save settings.

## AYCTelecom

### AYCTelecom IPcts

These instructions help you configure your AYCTelecom IPcts to work with TIM Plus. Contact your system maintainer if you are not familiar with the configuration of your PBX.

Connection Type

TIM Plus listens for connections from this PBX.

Support Files

**AYCTelecom IPCTS.TDT**

**AYCTelecom IPCTS.TDS**

Required Tasks

Configure the SMDR output

Configure TIM Plus

### Configuring your SMDR output

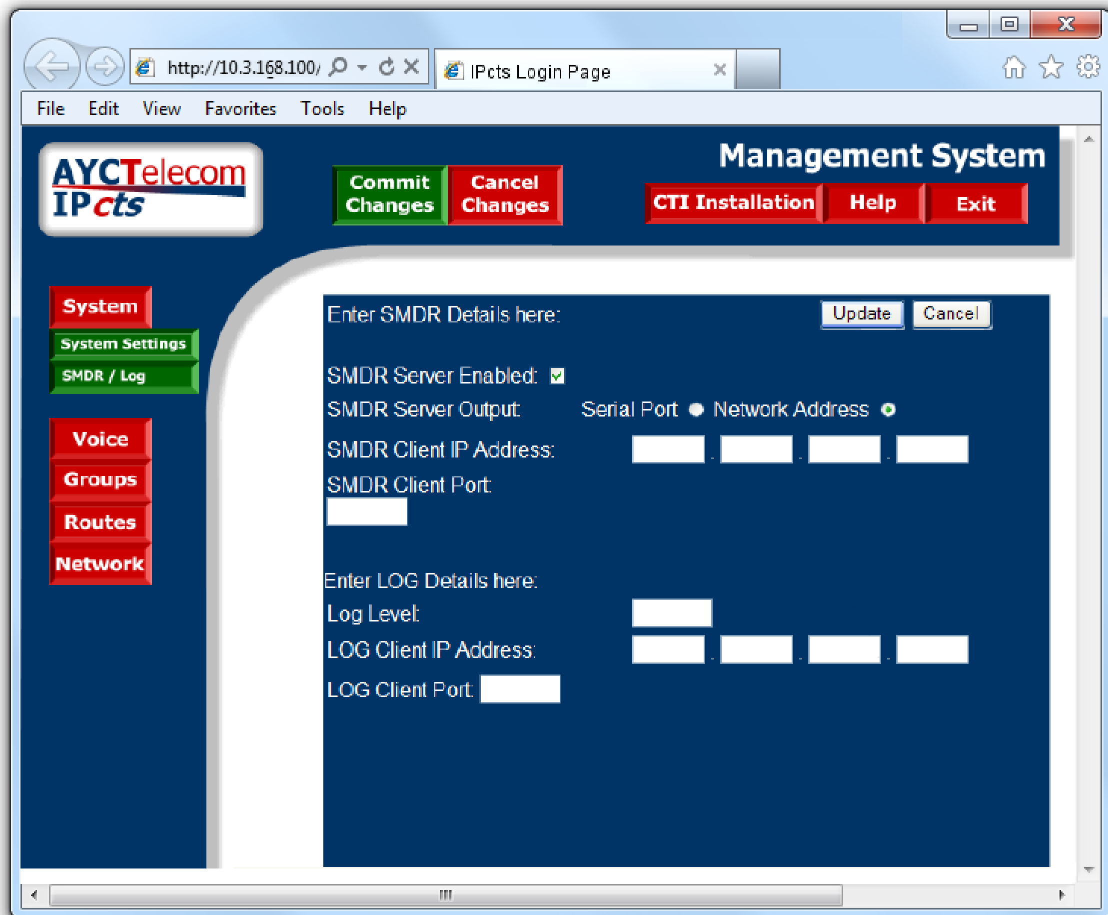
Follow the steps below to set up the SMDR output of your IPcts through its management web page:

1. Log in to your AYCTelecom IPcts management web page.
2. Select the System tab
3. Select the SMDR/Log tab and configure the fields on the page as below:

 - **SMDR Server Enabled:** Enable the check box.
 - **SMDR Server Output:** Choose `Network Address`.
 - **SMDR Client IP Address:** Enter the IP address of the computer running TIM Plus.
 - **SMDR Client Port:** Enter the TCP port number you want to send the SMDR data to. You can use any free TCP port, but we would recommend one in the 9000 range.

4. Click the Update button.
5. Click the Commit Changes button at the top of the page so save your settings.

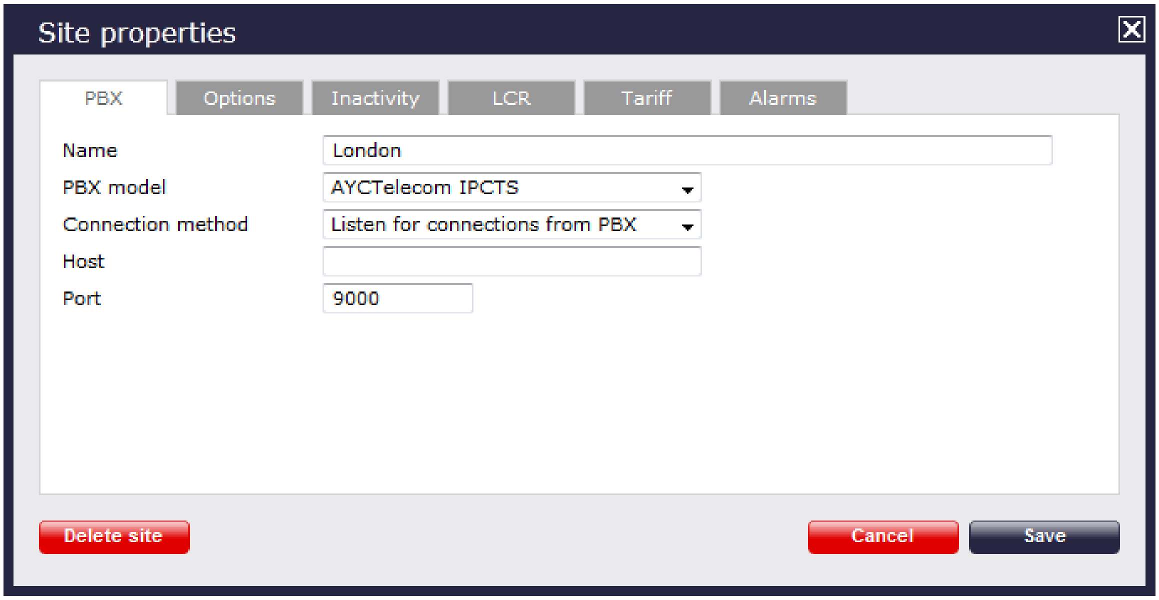
Here is an example screenshot of the SMDR configuration screen from the AYCTelecom IPcts management web page:




## Configuring TIM Plus

Follow the steps below to configure TIM Plus to listen for SMDR data from your AYCTelecom IPcts phone system:

1. Click on the Directory tab.
2. Choose the site you want to configure and click Properties .




3. In the **Site Properties** window, select **AYCTelecom IPCTS** from the **PBX model** drop-down list.
4. In the **Connection method** field, select **Listen for connections from PBX** from the drop-down list.
5. Leave the **Host** field blank.
6. In the **Port** field, enter the TCP port that was configured on your AYCTelecom IPcts (e.g. **9000**).
7. Click on the Save button to apply the changes.

# BT

## BT Inspiration

These instructions help you configure your BT Inspiration phone system to work with TIM Plus. Contact your system maintainer if you are not familiar with the configuration of your PBX.

Connection Type

TIM Plus establishes a serial connection with this PBX.

Support Files

**BT Inspiration.TDT**

Required Tasks

Configure the SMDR output

Install NetPBX

Configure TIM Plus

### Configuring your SMDR output

To configure SMDR settings on your BT Inspiration you need to have a BT System Phone and be familiar with how to use it for system programming purposes. To enable SMDR output, follow the steps below:

1. From the programming position, press the phone setup key P and select System programming .
2. Enter the PIN and select System .

3. Select Call logging and choose Call logging on .
4. Press HANDSFREE/MONITOR to finish configuring the system.

### Installing NetPBX

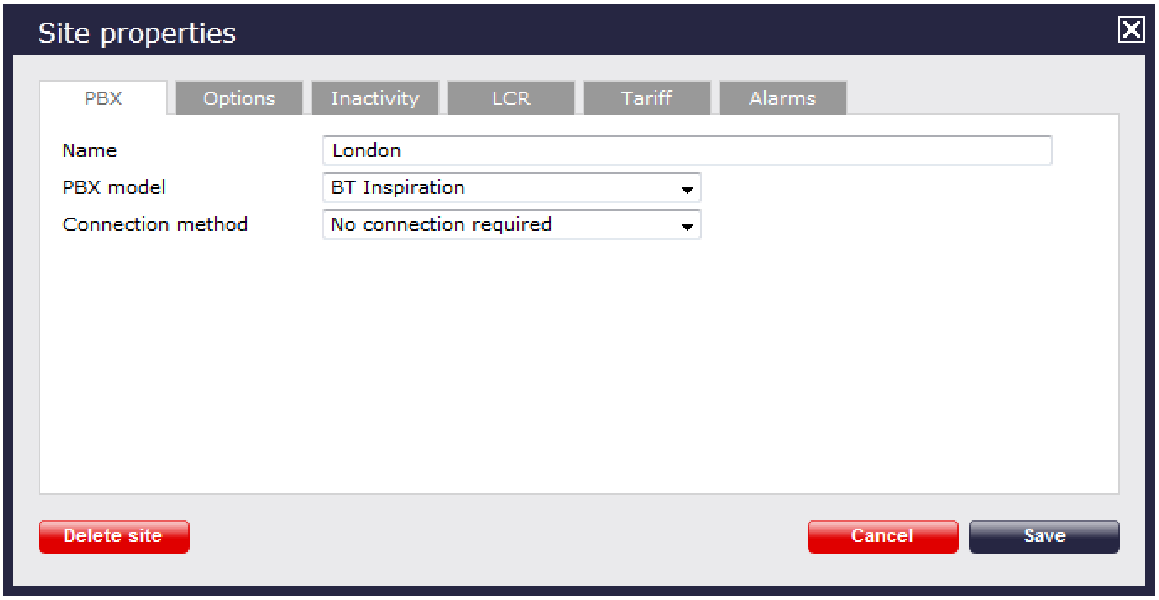
The BT Inspiration phone system sends SMDR information via a serial connection. To collect the data from the serial port and send it to TIM Plus, you first need to install the NetPBX software. For setup instructions, click on the link below:

Install and configure NetPBX

### Configuring TIM Plus

Once NetPBX is configured and collecting data, log in to TIM Plus and follow the steps below:

1. Click on the Directory tab.
2. Choose the site you want to configure and click Properties .




3. In the **Site Properties** window, select **BT Inspiration** from the **PBX model** drop-down list.
4. In the **Connection method** field, select **No connection required** from the drop-down list.
5. Click on the Save button to apply the settings.

## BT Monarch

These instructions help you configure your BT Monarch to work with TIM Plus. Contact your system maintainer if you are not familiar with the configuration of your PBX.

Connection Type

TIM Plus establishes a serial connection with this PBX.

Support Files

**BT Monarch.TDT**

Required Tasks

- Configure the SMDR output
- Install NetPBX
- Configure TIM Plus

### Configuring your SMDR output

Please contact your system maintainer for information about how to configure the SMDR output of your BT Monarch.

### Installing NetPBX

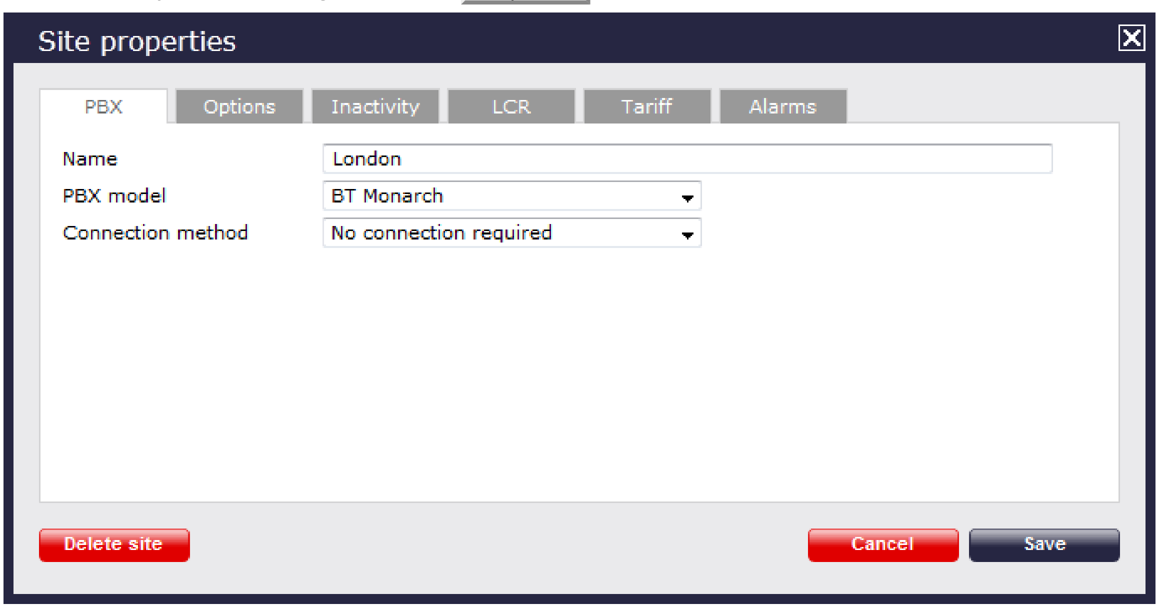
The BT Monarch phone system sends SMDR information via a serial connection. To collect the data from the serial port and send it to TIM Plus, you first need to install the NetPBX software. For setup instructions, click on the link below:

Install and configure NetPBX

### Configuring TIM Plus

Once NetPBX is configured and collecting data, log in to TIM Plus and follow the steps below:

1. Click on the Directory tab.
2. Choose the site you want to configure and click Properties .




3. In the **Site Properties** window, select **BT Monarch** from the **PBX model** drop-down list.
4. In the **Connection method** field, select **No connection required** from the drop-down list.

5. Click on the Save button to apply the settings.

## BT Pathway

These instructions help you configure your BT Pathway to work with TIM Plus. Contact your system maintainer if you are not familiar with the configuration of your PBX.

Connection Type

TIM Plus establishes a serial connection with this PBX.

Support Files

**BT Pathway.TDT**

Required Tasks

- Configure the SMDR output
- Install NetPBX
- Configure TIM Plus

To obtain the **BT Pathway.TDT** interface file, contact our Technical Support team.

### Configuring your SMDR output

To receive SMDR data from your BT Pathway you need to have a BT System Phone and be familiar with how to use it to perform system programming. To enable SMDR output, follow the steps below:

1. From the programming position, press the phone setup key P and select System programming .
2. Enter the PIN and select System .
3. Select Call logging and choose Call logging on .
4. Press HANDSFREE/MONITOR to finish.

### Installing NetPBX

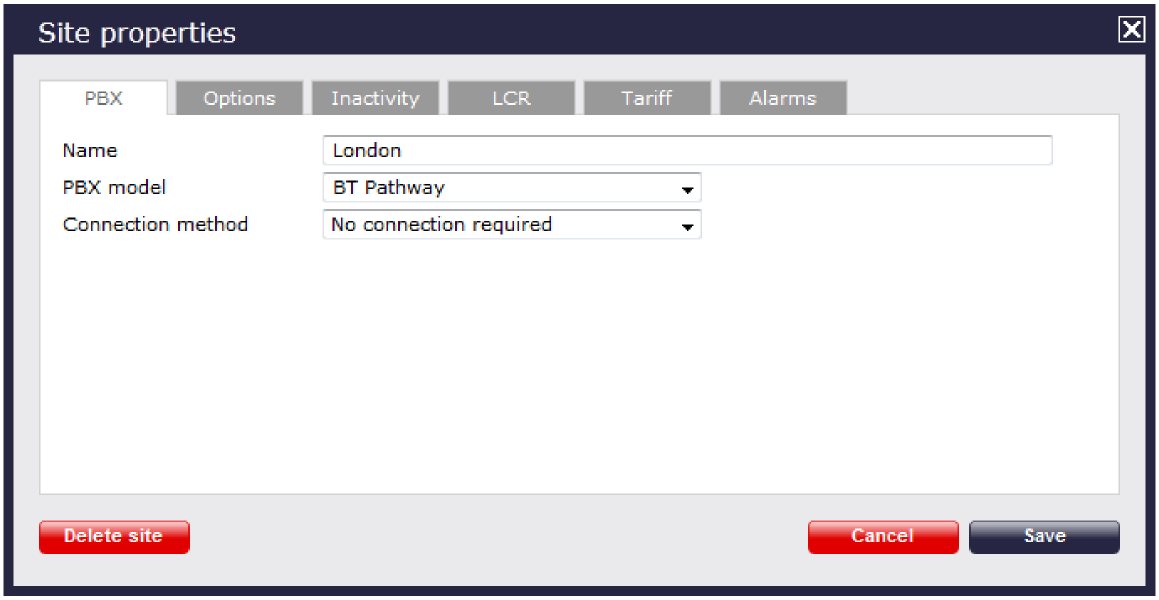
The BT Pathway phone system transmits SMDR information via a serial connection. To collect the data from the serial port and send it to TIM Plus, you first need to install the NetPBX software. For setup instructions, click on the link below:

Install and configure NetPBX

### Configuring TIM Plus

Once NetPBX is configured and collecting data, log in to TIM Plus and follow the steps below:

1. Click on the Directory tab.
2. Choose the site you want to configure and click Properties .




3. In the **Site Properties** window, select **BT Pathway** from the **PBX model** drop-down list.
4. In the **Connection method** field, select **No connection required** from the drop-down list.
5. Click on the Save button to apply the settings.

## BT Versatility

These instructions help you configure your BT Versatility to work with TIM Plus. Contact your system maintainer if you are not familiar with the configuration of your PBX.

Connection Type

TIM Plus establishes a serial connection with this PBX.

Support Files

**BT Versatility.TDT**

Required Tasks

- Configure the SMDR output
- Install NetPBX
- Configure TIM Plus

### Configuring your SMDR output

The BT Versatility outputs its SMDR data via a serial port. The default communication parameters for this serial connection are:

- Speed – 4800, 9600, 19200, 38400 or 115200 bps;
- Data - 8 bits;
- Parity - None.

The phone system has an in-built buffer to store the last 500 call records in case the receiving equipment becomes disconnected. This buffered data can be set to output to the serial port during system programming. An **X-ON/X-OFF** signal can be enabled to allow the Versatility to detect if a compatible device is receiving its SMDR data successfully. The Versatility can also be set to output SMDR data using **`restricted call logging`**, whereby the last four digits of any dialled number is masked out.

Follow the instructions below to configure your BT Versatility for use with TIM Plus:

Calls are printed out in the following format as they are completed:

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|---|---|---|---|---|---|---|---|---|---|
| O/G | 1234 | 10/01/99 | 12.00:01 | 00:00:30 | L01 | S21 | S21 | :000.00 | 1234567 |
| O/G | | 10/02/99 | 12.00:10 | 00:01:56 | L02 | S25 | S25 | :000.00 | 567890 |
| I/C | 5678 | 10/13/99 | 12.01:13 | 00:06:32 | L03 | S22 | S24 | :000.00 | |

The explanation of the data output is as follows:

| Column Number | Data Output Explanation |
|---|---|
| 1 | Incoming (I/C) or Outgoing (O/G) call |
| 2 | Account Codes |
| 3 | Date (day/month/year) |
| 4 | Start time |
| 5 | Duration of the call |
| 6 | Line used |
| 7 | Initiating Extension |
| 8 | Terminating Extension |
| 9 | Cost. (Not Available) |
| 10 | Digits entered (outgoing calls only) |

## To enable/disable Call Logging

Call Logging is disabled by default on power up.

- From the Programming Extension, press the PROGRAMME Key
- Press the Scroll Down Key (↘) until ‘System programming’ is displayed.
- Select ‘System programming’.
- Enter the System Programming Password and select ‘System’.
- Press the Scroll Down Key (↘) until ‘Call logging’ is displayed.
- Select ‘Call logging’.
- Select either ‘Call logging On’, ‘Call logging off’. 'Restricted call log ON', 'Enable Xon / Xoff' or 'Print Log'

Press the Hands-free Key to finish programming.

### To prevent calls from individual Extensions being logged

If Call Logging is enabled, then by default all calls from all extensions will be logged. However individual extensions can be programmed to prevent their calls being logged.

- From the Programming Extension, press the PROGRAMME Key
- Press the Scroll Down Key (➘) until 'System programming' is displayed.
- Select 'System programming'.
- Enter the System Programming Password and select 'Extensions'.
- Press the Scroll Down Key (➘) until 'No call logging' is displayed.
- Select 'No call logging'.
- Select the Extensions whose calls are not to be logged. The selected Extensions will be indicated with a ♦.

Press the Hands-free Key to finish programming.

### To set the call logging interface speed for connecting a Printer or PC

- From the Programming Extension, press the PROGRAMME Key
- Press the Scroll Down Key (➘) until 'System programming' is displayed.
- Select 'System programming'.
- Enter the System Programming Password and select 'System'.
- Press the Scroll Down Key (➘) until 'Set v24 baud rate' is displayed.
- Select 'Set v24 baud rate'.
- Select the speed you require – 4800, 9600,19,200, 38,400 or 115,200 bps.

Press the Hands-free Key to finish programming.

**Note**: To connect a printer or PC for call logging, use the call logging interface module and cable provided and connect one end to the V24 interface on the CCU and the other end to the serial device e.g. a PC or a printer.

## Installing NetPBX

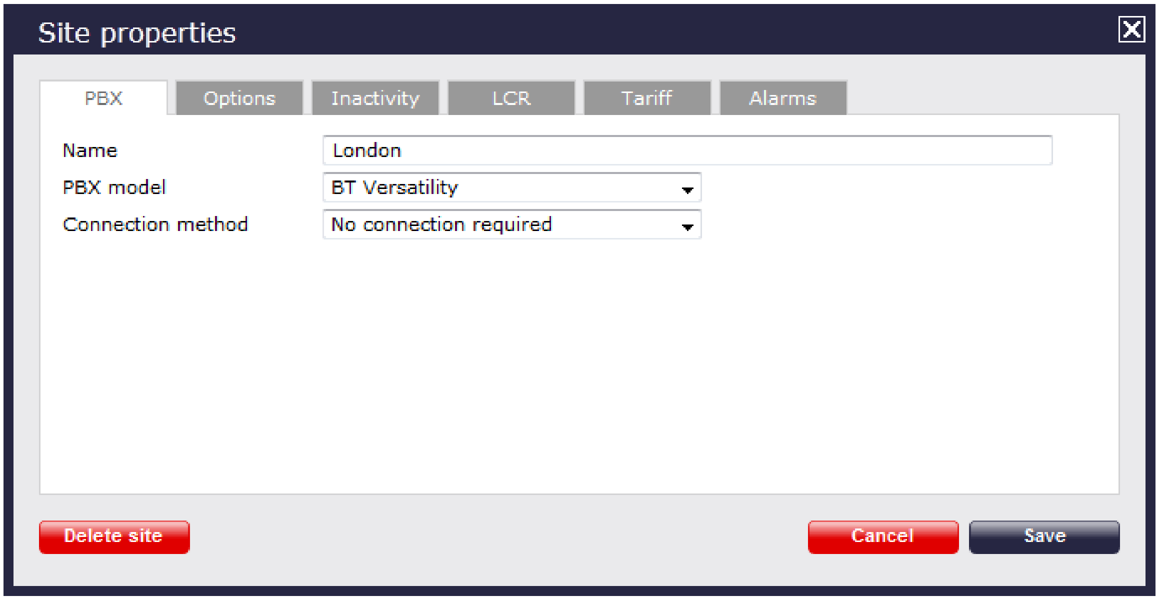
To collect the SMDR data from the serial port and send it to TIM Plus, you first need to install the NetPBX software. For setup instructions, click on the link below:

Install and configure NetPBX

## Configuring TIM Plus

Once NetPBX is configured and collecting data, log in to TIM Plus and follow the steps below:

1. Click on the Directory tab.
2. Choose the site you want to configure and click Properties .




3. In the **Site Properties** window, select **BT Versatility** from the **PBX model** drop-down list.

4. In the **Connection method** field, select **No connection required** from the drop-down list.

5. Click on the Save button to apply the settings.

# Cisco

## Cisco UCM (below v5)

These instructions help you configure your Cisco UCM to work with TIM Plus. Contact your system maintainer if you are not familiar with the configuration of your PBX.

Connection Type

TIM Plus establishes a DSN connection with this PBX.

Support Files

- **Cisco UCM v4 DSN.TDT**
- **Cisco UCM v4 DSN.TDS**
- **Cisco UCM 4.DBS**

Required Tasks

- Configure the SMDR output
- Set up a DSN connection
- Configure TIM Plus

### Configuring your SMDR output

This version of the Cisco UCM stores its call records in a Microsoft SQL Server database. However, by default, this functionality is not enabled. To enable it, the following settings must be configured on the **Publisher** using the **Service Parameters** configuration window:

- CDR Enabled
- CDR Log Calls With Zero Duration Flag

- Call Diagnostics Enabled

This version of the UCM outputs its call records to a table named **`CallDetailRecord`** in a database entitled **`CDR`**. Rather than have TIM Plus read and remove CDRs from the live **`CallDetailRecord`** table, we recommend you replicate this into a second table - leaving the original intact - so that it may be used by other applications that require it. Normally, there already exists a SQL User with the following credentials:

- **Username:** **`CiscoCCMCDR`**
- **Password:** **`dipsy`**

To set up replication you may need to speak to your database administrator or your Cisco UCM maintainer. Ensure that the SQL user described above has full access rights to this replicated table.

You need to know the following information in order for TIM Plus to be able to connect to the Cisco UCM CDR database:

- The IP address or hostname of the Microsoft SQL Server database located on the **`Publisher`** node.
- The username and password to connect to the **`CDR`** database.

### Setting up a DSN connection for TIM Plus

To enable TIM Plus to work with your Cisco UCM, you first need to set up a DSN connection. Follow the steps below to perform this task within Microsoft Windows:

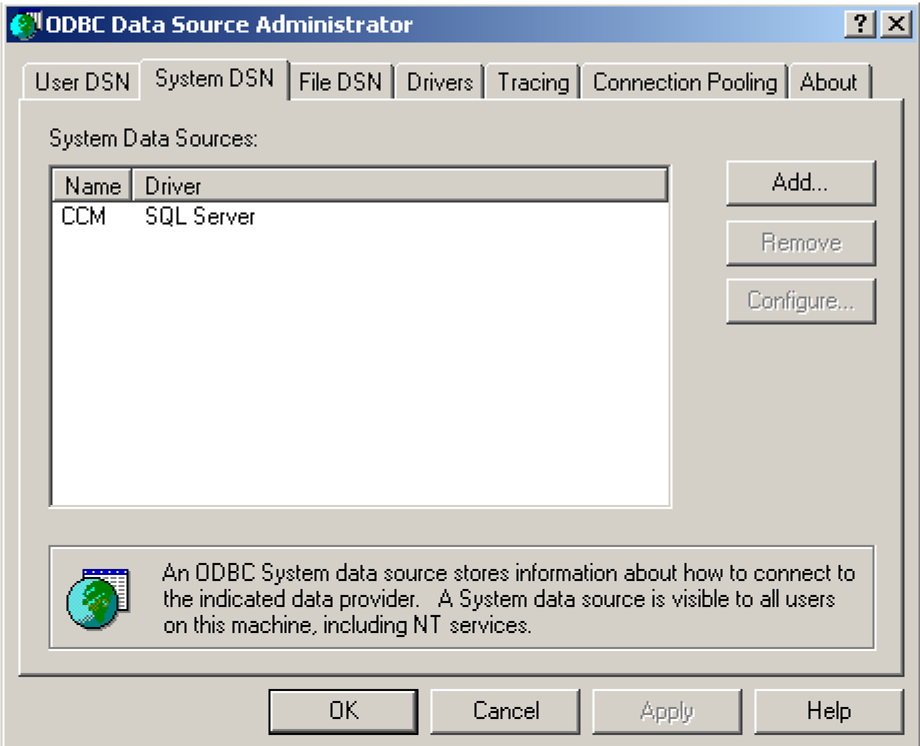
1. Open Windows **Control Panel**
2. Double click on the Administrative tools icon
3. Double click on the Data Sources (ODBC) icon to open the **`ODBC Data Source Administrator`** window

> For a 64 bit system, access the **`ODBC Data Source Administrator`** from the following location **`C:\Windows\SysWOW64\odbcad32.exe`**

4. Select the System DSN tab and click the Add button
5. Select **`SQL Server`** from the list of available drivers and click Finish
6. In the **`Name`** field, enter **`CCM`**
7. In the **`Description`** field enter the following: **`TIM Plus link to CCM`**
8. In the **`Database name`** field enter the database type e.g **`SQL`**, **`MySQL`** etc.
9. In the **`Server`** drop-down list select the Cisco UCM Publisher IP address or machine name
10. Click the Next button
11. Select the option **`With SQL Server authentication using a login ID and password entered by the user`**, then click Next
12. Enable the checkbox **`Change the default database to:`**, select **`CDR`**, then click the Next button
13. Click the Finish button
14. Click the Test Data Source button to verify your settings and, if the test is successful, click OK

15. Click the OK button to close the control panel applet

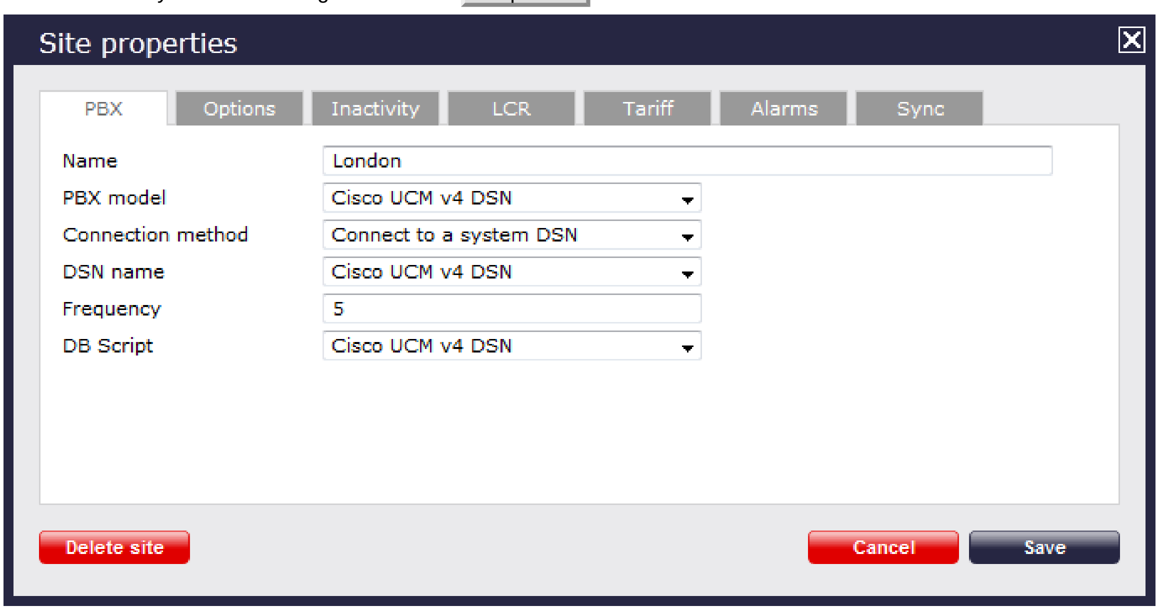
An example of an ODBC setup is shown below:




## Configuring TIM Plus

Once the DSN connection has been set up, log in to TIM Plus and perform the steps below:

1. Click on the Directory tab.
2. Choose the site you want to configure and click Properties .




3. In the **`Site Properties`** window, select **`Cisco UCM v4 DSN`** from the **`PBX model`** drop-down list.

4. Select **Connect to a system DSN** from the **Connection method** drop-down list.
5. Select **Cisco UCM v4 DSN** from the **DSN name** drop-down list.
6. Enter **5** in the **Frequency** field.
7. Select **Cisco UCM v4 DSN** from the **DB script** drop-down list.
8. Click the Save button to apply the settings.

## Cisco UCM / Business Edition (Call Manager) version 5+

These instructions help you configure your Cisco UCM version 5.0 - 8.6 to work with TIM Plus. Contact your system maintainer if you are not familiar with the configuration of your PBX.

Connection Type

TIM Plus receives FTP transfers from this PBX.

Support Files

**Cisco UCM 5+.TDT**

**Cisco UCM 5+.TDS**

Required Tasks

Create Cisco Application User for AXL sync

Configure Cisco AXL sync

Configure TIM Plus to receive data by FTP

Set up FTP/SFTP in Cisco UCM

### Create Cisco Application User for AXL sync

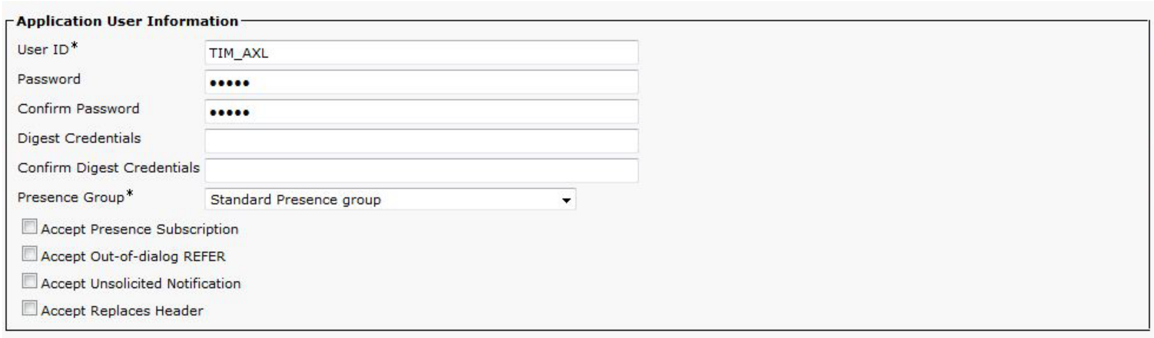
To enable TIM Plus to query the Cisco database, you need to create an **Application User** on your Cisco UCM. Follow the steps below to complete this task:

1. Connect to the web management interface of your UCM node and select **Cisco Unified CM Administration** from the **Navigation** drop-down list.
2. Log in to the system and click User Management from the main menu. Select Application User from the drop-down list.
3. Click Add New to create a new user:

**User ID: TIM_AXL**

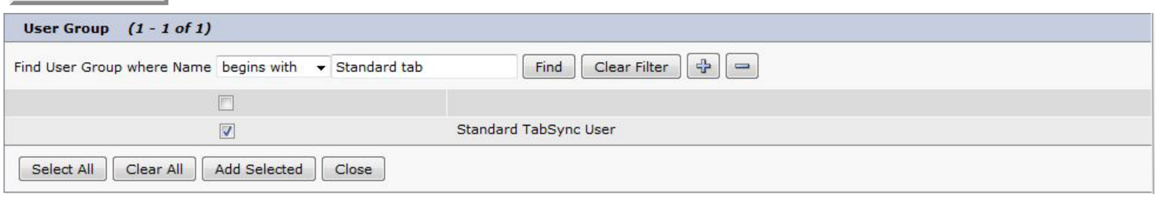
**Password: C1sco**

**Confirm Password: C1sco**




The credentials above are shown as an example. In the interests of security, you should choose your own values.

4. Scroll down to the **Permissions Information** section and click Add to User Group .
5. In the new window, enter **Standard Tab** and then click Find . Tick the **Standard TabSync User** box, and then click on the Add Selected tab.

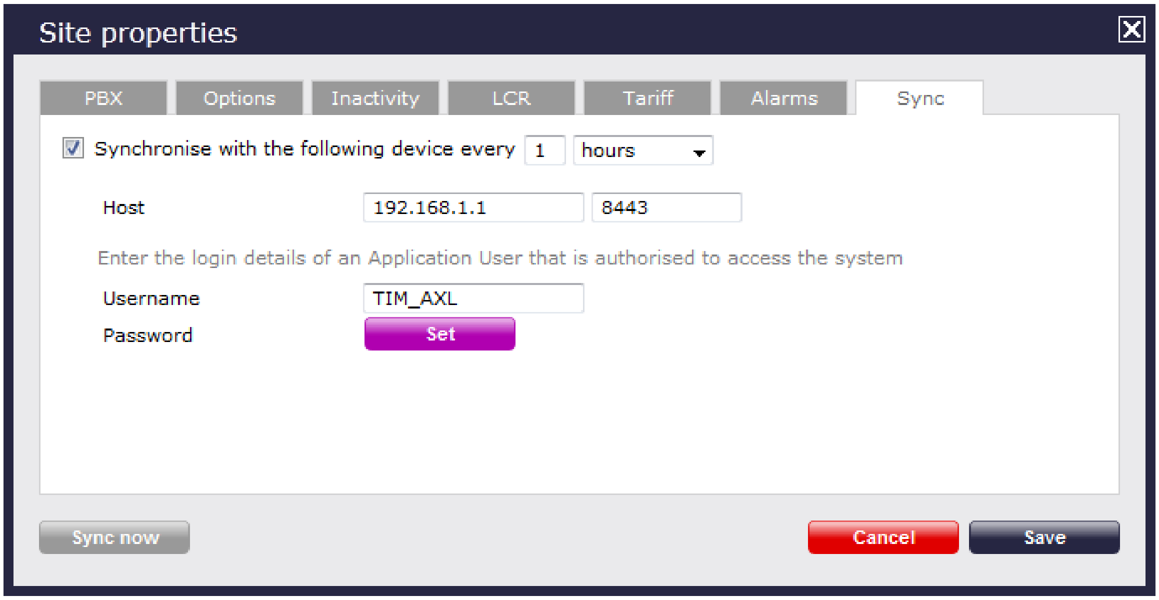



6. Click Save to apply the settings.

## Configuring Cisco AXL sync

Follow the steps below to configure TIM Plus to synchronise with the directory of your Cisco UCM:

1. Click on the Directory tab.
2. Choose the site you want to configure and click Properties .
3. In the **Site Properties** window, select the Sync tab.
4. Tick the **Synchronise with the following device** box, and enter your UCM details, as shown below:



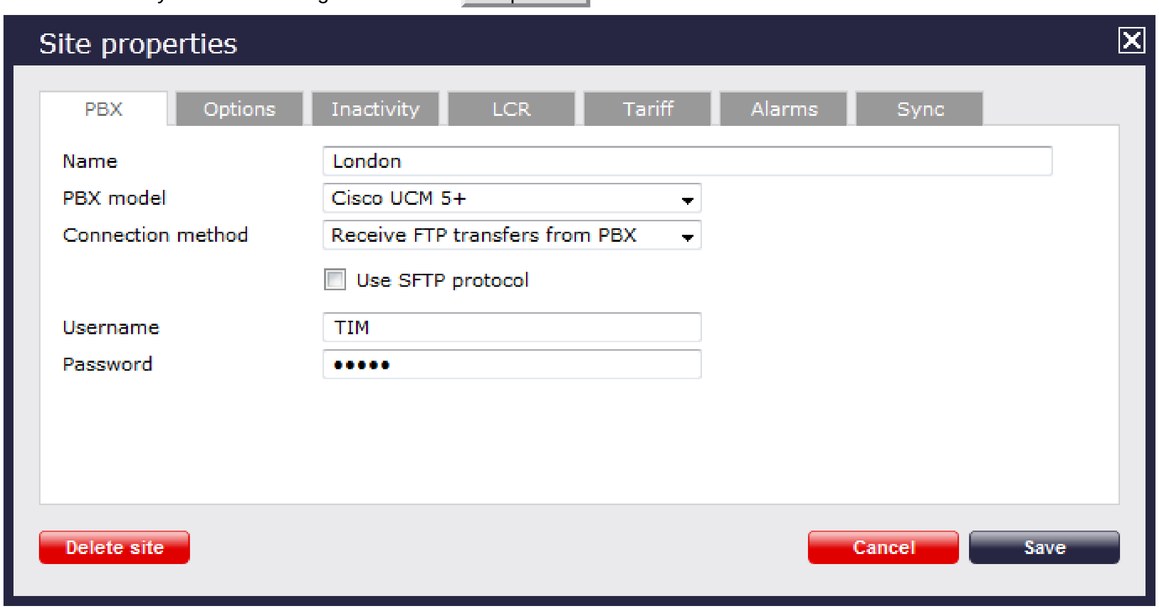

5. In the **Host** field, enter the IP address of the UCM Publisher node.
6. In the **Username** field, enter the username of the Cisco Application User you configured in the previous section, e.g. **TIM_AXL**.
7. Click on the Set button and enter the password of the Cisco Application User you configured in the previous section, e.g. **C1sco**, then click OK .
8. Click on the Save button to apply the settings.

TIM Plus will now connect to your Cisco UCM and synchronise with its directory.

### Configuring TIM Plus to receive data by FTP

Follow the steps below to configure TIM Plus to receive data from your Cisco UCM:

1. Click on the Directory tab.
2. Choose the site you want to configure and click Properties .



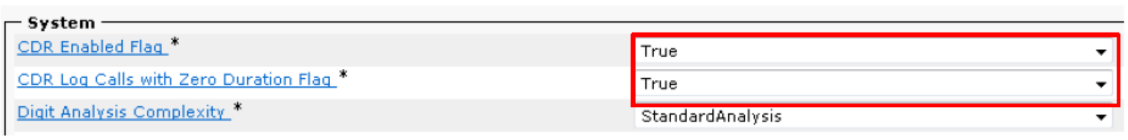

3. In the **Site Properties** window, select **Cisco UCM 5+** from the **PBX model** drop-down list.

4. In the **Connection method** field, select **Receive FTP transfers from PBX** from the drop-down list.
5. In the **Username** field, enter a user name for FTP/SFTP transfers, e.g. **TIM**
6. In the **Password** field, enter a password for the FTP account, e.g. **Ciscoftp**
7. Click on the Save button to apply the changes.

## Set up FTP/SFTP in Cisco UCM

You will need to configure your Cisco UCM to send the CDR data to TIM Plus. Note that the UCM can be configured with cluster wide or server specific settings, depending on how the system maintainer has installed it. Please note that, by default, CDR records are turned off.

1. Log in to **Cisco UCM Administration** and from the left-hand menu click on the System tab and select Service Parameters .
2. Choose your UCM node from the **Server** drop-down list.
3. Select **Cisco Call Manager** from the **Service** drop-down list.
4. In the **System** section, change the **CDR Enabled Flag** to **True**. Enable this parameter on all servers within the cluster you want to log calls for.




5. Change the **CDR Log Calls with Zero Duration Flag** to **True**. This parameter enables or disables the logging of CDRs for calls which did not connect.
6. Click on the Save button.
7. Click on the **Navigation** drop-down list from the top right-hand corner, and select **Cisco Unified Serviceability**. You may need to log in with a user account that has administrative permissions.

   Select Tools , then click on the CDR Management tab.

   Click the Add New button. You will now see the **Billing Application Server Parameters** window. Enter the following parameters:

   **Host Name / IP Address:** The IP address or hostname of the machine running TIM Plus.

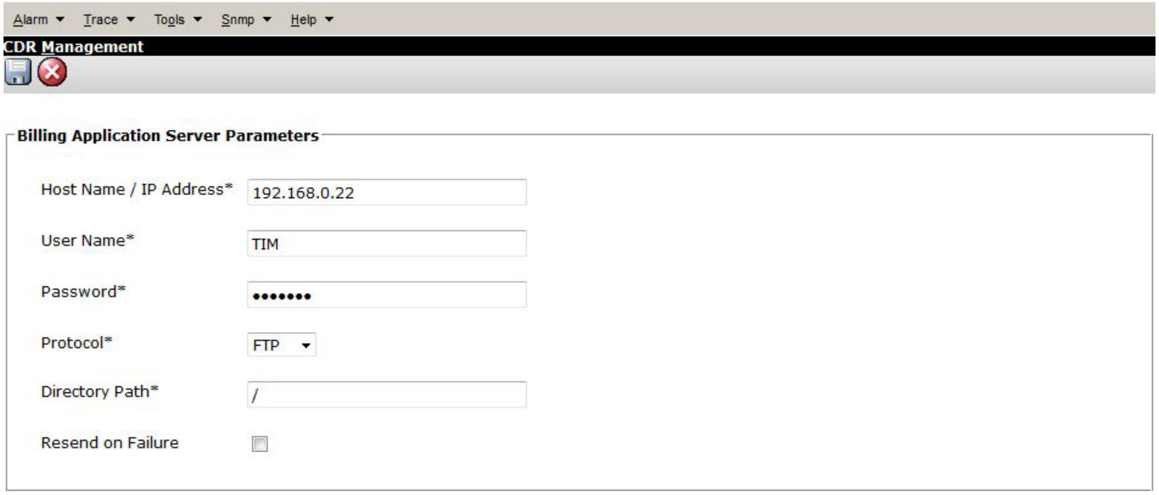
   **User Name:** Enter the user name for FTP/SFTP transfers you set up in TIM Plus, e.g. **TIM**

   **Password:** Enter the password for the FTP account you set up in TIM Plus, e.g. **Ciscoftp**

   **Protocol:** Select FTP or SFTP as desired.

   **Directory Path:** Enter a forward-slash character to indicate root (**/**).

Remove the tick from **`Resend on Failure`**.




8. Next, click on the Add button to complete the billing server configuration. The UCM node will check that the FTP/SFTP details are valid and will write a test file to the FTP/SFTP directory. If this fails, you should double-check the details you entered.

## Cisco UCME / UC500 (Call Manager Express)

The Cisco UCME / UC500 can be configured to send RADIUS or SysLog events. Click on one of the links below for your preferred connection method.

> Cisco recommends that you use RADIUS events because they provide more detailed call logging information.

### Cisco UCME / UC500 - RADIUS

These instructions help you configure your Cisco UCME / UC500 to work with TIM Plus. Contact your system maintainer if you are not familiar with the configuration of your PBX.

Connection Type

TIM Plus captures RADIUS packets from this PBX.

Support Files

**`Cisco UCME - RADIUS.TDT`**

**`Cisco UCME - RADIUS.TDS`**

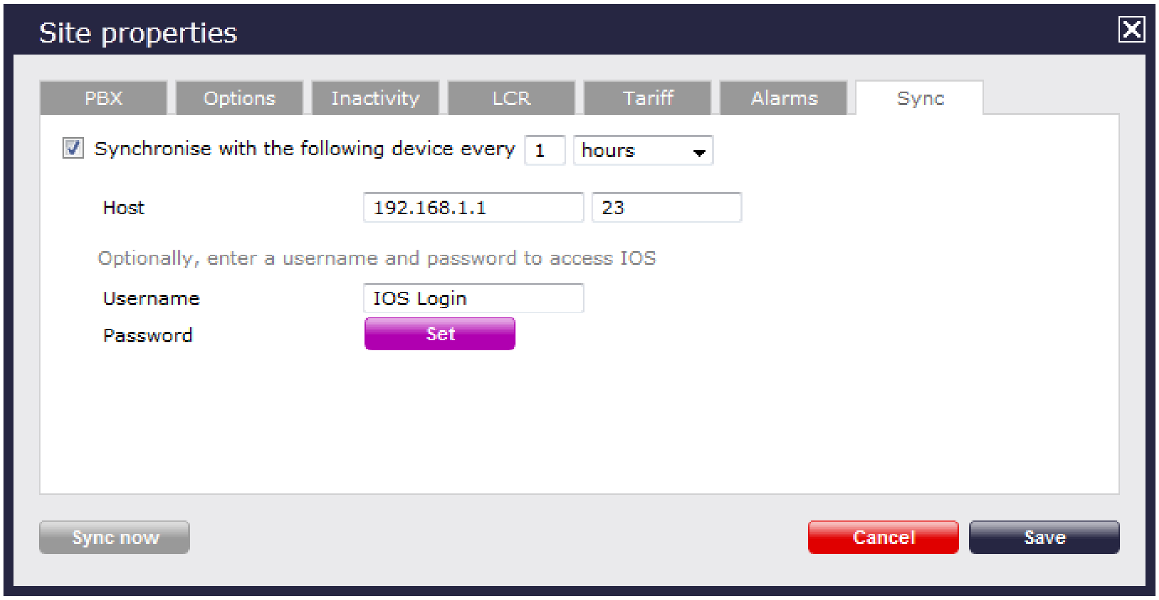
Required Tasks

- Configure Cisco AXL sync
- Configure UCME to send RADIUS events
- Configure TIM Plus to capture RADIUS packets

#### Configuring Cisco AXL sync

Follow the steps below to configure TIM Plus to perform directory synchronisation with your Cisco UCME:

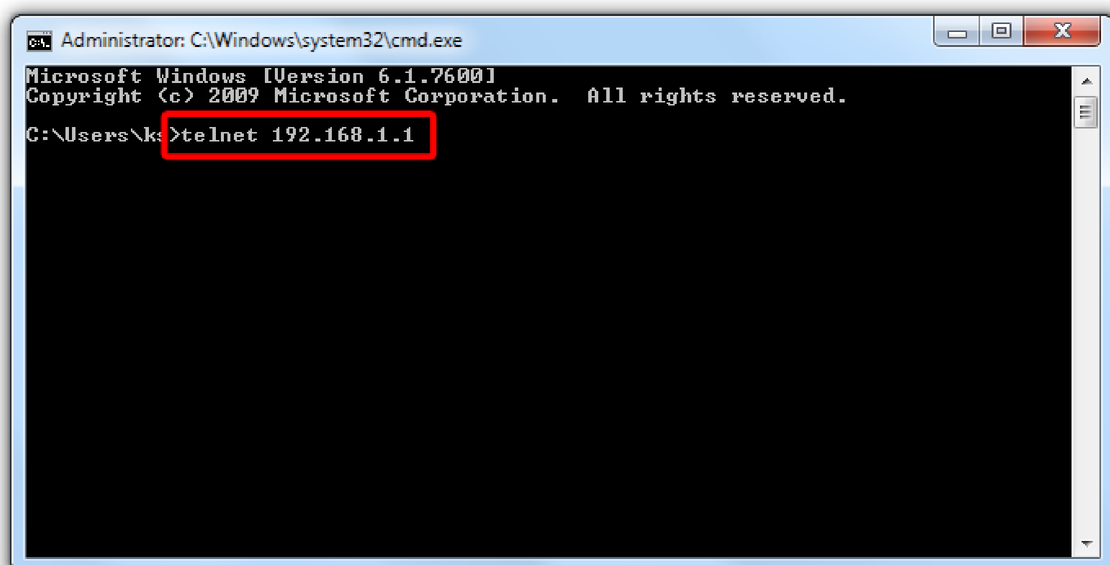
1. Click on the Directory tab.
2. Choose the site you want to configure and click Properties .
3. In the **Site Properties** window, select the Sync tab.
4. Tick the option entitled **Synchronise with the following device** .




5. In the **Host** field, enter the IP address of your UCME.
6. In the **Port** field, enter the port number of the IOS service, e.g. **23** .
7. In the **Username** field, enter the username of the IOS login that can perform synchronisation.
8. Click on the Set button and enter the password of the IOS login that can perform synchronisation.
9. Click on the Save button to apply the changes.

### Configuring UCME to send RADIUS events

Use Telnet to connect to the IP address of your UCME as shown below:



### Single site configuration

Enter the following commands to enable the UCME to send RADIUS events to TIM Plus:

| Step | IOS commands | Description |
|---|---|---|
| 1 | `enable` | Causes the UCME to enter EXEC mode. Type your EXEC password if requested |
| 2 | `conf t` | Enters the global configuration mode |
| 3 | `aaa new-model` | Enables aaa accounting mode |
| | `aaa accounting connection h323 start-stop group RADIUS` | |
| | `gw-accounting aaa` | |
| | `acct-template callhistory-detail` | |
| 4 | `RADIUS-server host 192.168.0.1 auth-port 0 acct-port 1612` | Specifies the IP address and port of TIM Plus's RADIUS, to which CDR data will be sent, e.g. `192.168.0.1:1612` |
| 5 | `RADIUS-server key C1sco` | Specifies a RADIUS authentication secret that will be used by TIM Plus (configured in the next section), e.g. `C1sco` |
| 6 | `RADIUS-server vsa send accounting` | Enables VSA events |
| 7 | `end` | Exits configuration mode |
| 8 | `wr` | Saves the changes |

### Multi-site configuration

If you need to send the data to more than one server, such as TIM Plus and UCC server for example, you can set up multiple RADIUS connections in the phone system. To configure a multi-site system, follow the steps below:

> Replace **SITE_NAME** with a unique name for the destination RADIUS information.
> Replace **SITE_IP** with the IP address of the RADIUS server.
> Replace **SITE_KEY** with the secret you want to assign to that specific site.

| Step | IOS Commands | Description |
|---|---|---|
| 1 | `enable` | Causes the UCME to enter EXEC mode. Type your EXEC password if requested |
| 2 | `conf t` | Enters the global configuration mode |
| 3 | `aaa new-model` | Enables `aaa` accounting mode |
| | | |

| | | |
|---|---|---|
| 4 | `aaa accounting update newinfo` | |
| 5 | `radius-server vsa send accounting` | Enables VSA events |
| 6 | `gw-accounting aaa` | Enables `aaa` accounting |
| | `acct-template callhistory-detail` | |
| | `exit` | |
| 7 | `radius server SITE_NAME` | Configures the call accounting for each separate site |
| | `address ipv4 SITE_IP acct-port 1612` | Specifies the IP address and port of TIM Plus's RADIUS, to which CDR data will be sent, e.g. `192.168.0.1:1612` |
| | `key SITE_KEY` | Specifies a RADIUS authentication secret that will be used by TIM Plus (configured in the next section), e.g. `C1sco` |
| | `exit` | Exits current site configuration |
| Repeat step 7 for each individual site | | |
| 8 | `aaa group server radius SITE_NAME` | Configures a specified `aaa` server group |
| | `server name SITE_NAME` | Specifies a RADIUS server to use for this aaa group |
| | `exit` | Exits current site configuration |
| Repeat step 8 for each individual site | | |
| 9 | `aaa accounting connection h323` | Configures the `aaa` connection information |
| | `action-type start-stop` | Setting the action type will send RADIUS information when the call starts and stops |

| | | |
|---|---|---|
| | **broadcast** | Enabling broadcast means that all the **aaa** groups will be sent RADIUS data |
| 10 | **group SITE_NAME** | Specifies the **aaa** group(s) that the accounting system will send RADIUS data to |
| Repeat step 10 for each system | | |
| 11 | **end** | Exits configuration mode |
| 12 | **wr** | Saves the changes |

For a system with five or more RADIUS servers, it is recommended to amend the server retransmit options in the UCME, in order to reduce the stress on the phone system.

#### IP radius source-interface

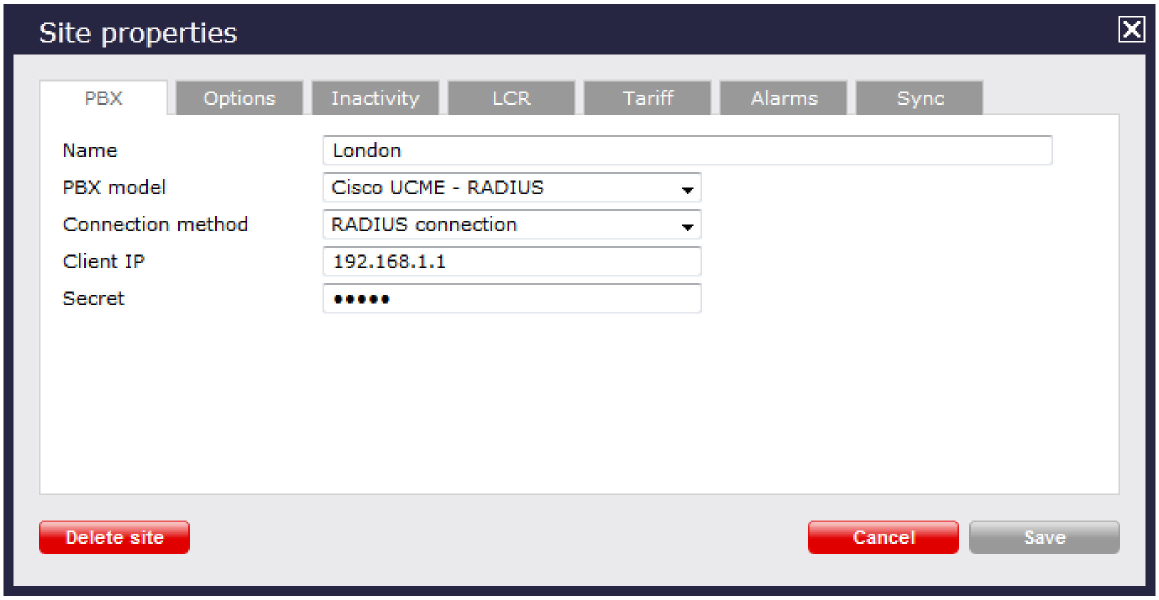
To force RADIUS to use the IP address of a specified interface for all outgoing RADIUS packets, use the **ip radius source-interface** com mand in global configuration mode.  If you don't wish to use the IP address of a specified interface, use the **no** form of this command.

| Step | IOS Command |
|---|---|
| 1 | **ip radius source-interface** SUBINTERFACE_NAME |
| 2 | **no ip radius source-interface** |

#### Configuring TIM Plus to capture RADIUS packets

Follow the steps below to configure TIM Plus to receive RADIUS data from your UCME:

1. Click on the Directory tab.
2. Choose the site you want to configure and click Properties .




3. In the **Site Properties** window, select **Cisco UCME - RADIUS** from the **PBX model** drop-down list.
4. In the **Connection method** field, select **RADIUS connection** from the drop-down list.
5. In the **Client IP** field, enter the IP address of your UCME.
6. In the **Secret** field, enter the RADIUS-server key you configured on your UCME in the section above, e.g. **C1sco**.
7. Click on the Save button to apply the settings.

## Cisco UCME / UC500 - SysLog

These instructions help you configure your Cisco UCME / UC500 to work with TIM Plus. Contact your system maintainer if you are not familiar with the configuration of your PBX.

Connection Type

TIM Plus captures SysLog packets from this PBX.

Support Files

**Cisco UCME - SysLog.TDT**

**Cisco UCME - SysLog.TDS**

Required Tasks

Configure Cisco AXL sync

Configure UCME to send SysLog events

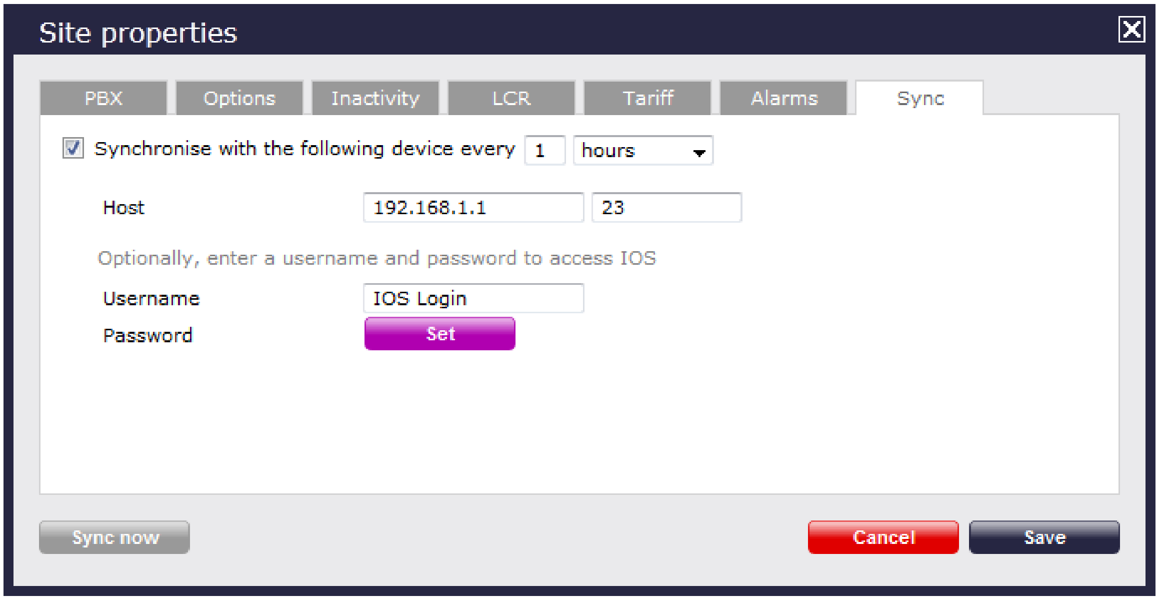
Configure TIM Plus to capture SysLog packets

### Configuring Cisco AXL sync

Follow the steps below to configure TIM Plus to perform directory synchronisation with your Cisco UCME:

1. Click on the Directory tab.
2. Choose the site you want to configure and click Properties .
3. In the **Site Properties** window, select the Sync tab.

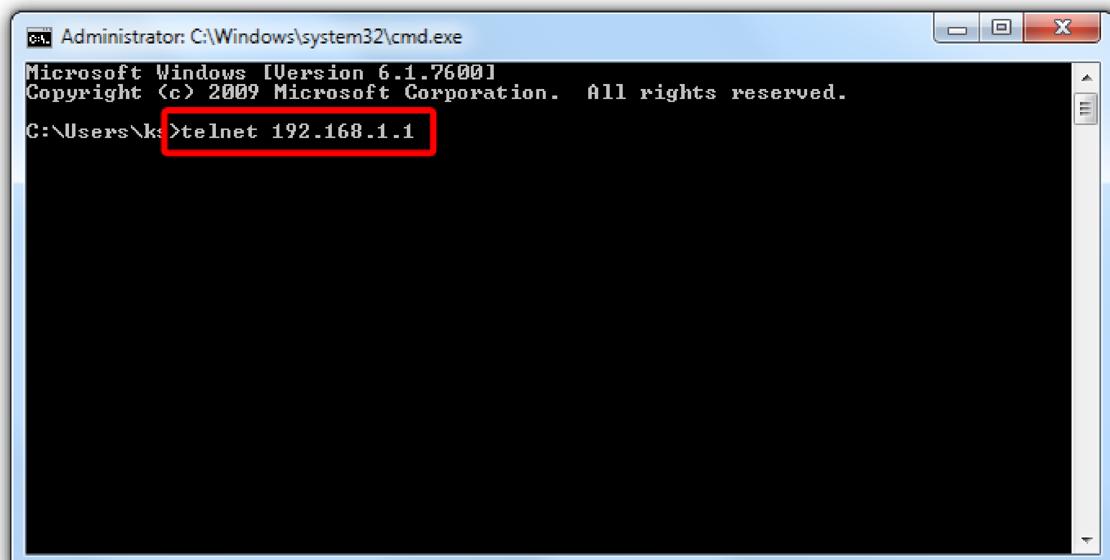
4. Tick the option entitled **Synchronise with the following device** .




5. In the **Host** field, enter the IP address of your UCME.
6. In the **Port** field, enter the port number of the IOS service, e.g. **23** .
7. In the **Username** field, enter the username of the IOS login that can perform synchronisation.
8. Click on the Set button and enter the password of the IOS login that can perform synchronisation.
9. Click on the Save button to apply the changes.

### Configuring UCME to send SysLog events

Use Telnet to connect to the IP address of your UCME as shown below:




Once connected, enter the following commands to enable the UCME to send SysLog events to TIM Plus:

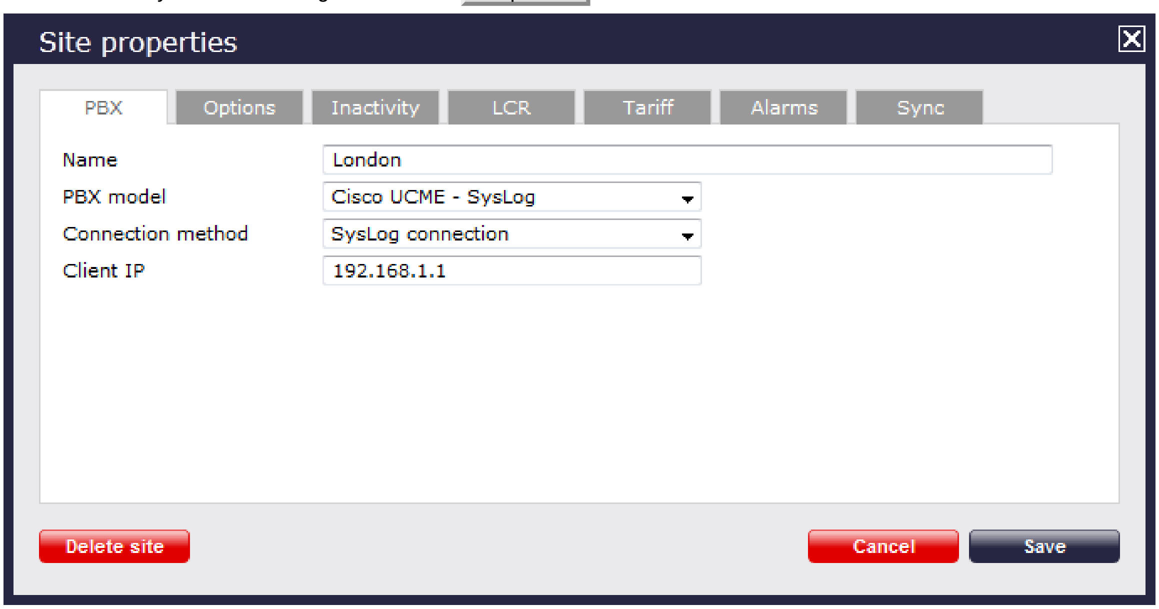
| Step | IOS commands | Description |
|---|---|---|

| | | |
|---|---|---|
| **1** | `enable` | Causes the UCME to enter EXEC mode. Type your EXEC password if requested |
| **2** | `conf t` | Enters the global configuration mode |
| **3** | `aaa new-model` | Enables aaa accounting mode |
| | `aaa accounting connection h323 start-stop group SysLog` | |
| | `gw-accounting syslog` | |
| | `acct-template callhistory-detail` | |
| **4** | `logging 192.168.0.1` | Specifies the IP address of TIM Plus's SysLog server, to which CDR data will be sent, e.g. `192.168.0.1` |
| **5** | `end` | Exits configuration mode |
| **6** | `wr` | Saves changes |

### Configuring TIM Plus to capture SysLog packets

Follow the steps below to configure TIM Plus to receive SysLog data from your Cisco UCME:

1. Click on the Directory tab.
2. Choose the site you want to configure and click Properties .




3. In the `Site Properties` window, select **`Cisco UCME - SysLog`** from the `PBX model` drop-down list.
4. In the `Connection method` field, select **`SysLog connection`** from the drop-down list.
5. In the `Client IP` field, enter the IP address of the UCME.
6. Click on the Save button to apply the settings.

## DrayTek

## DrayTek UG-Vigour

These instructions help you configure your Draytek phone system to work with TIM Plus. Contact your system maintainer if you are not familiar with the configuration of your PBX.

Connection Type

TIM Plus captures SysLog packets from this PBX.

Support Files

**Draytek.TDT**

**Draytek.TDS**

Required Tasks

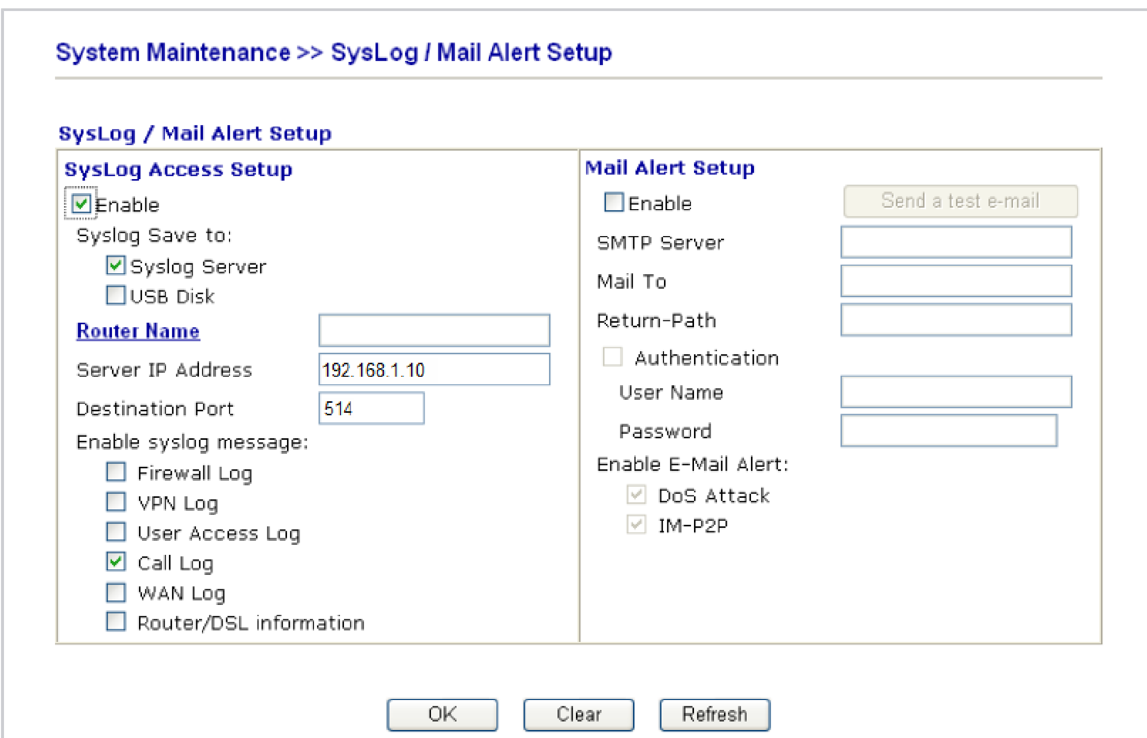
Configure your router

Configure TIM Plus

### Configuring your router

Follow the steps below to enable SysLog events on your DrayTek phone system:

1. Access the web interface of your DrayTek router and navigate to `System Maintenance` >> `SysLog/Mail Alert Setup` , as shown below:



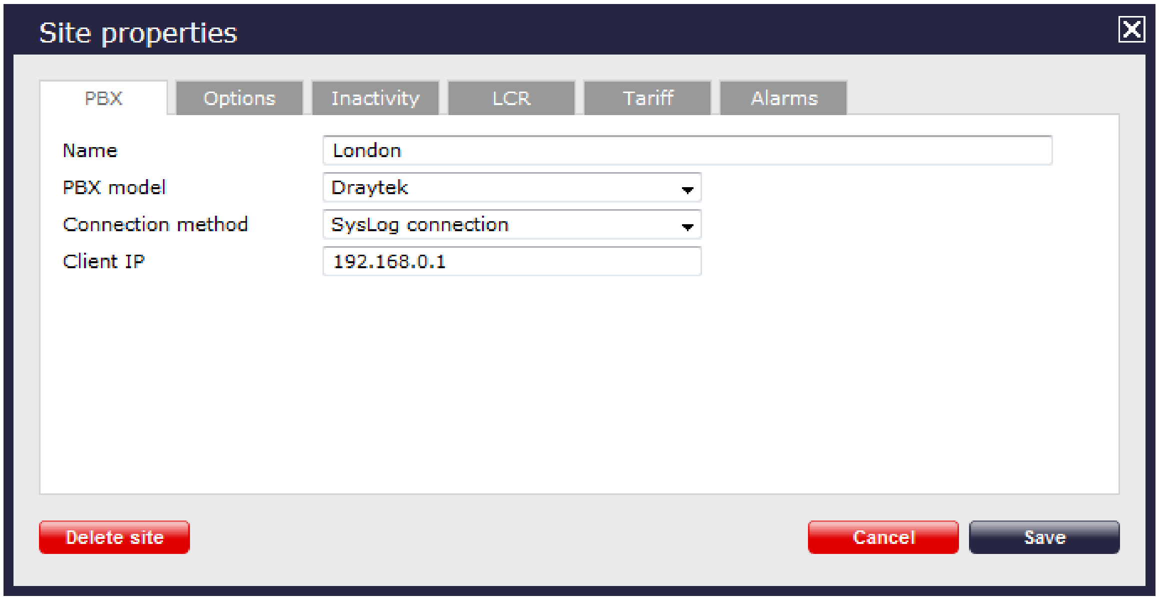

2. Check the `Enable` box to activate the SysLog fuction.
3. Check the `Syslog Server` box to save the logs directly to the server.
4. Enter the IP address of TIM Plus's SysLog server, to which CDR data will be sent.
5. Check the `Call Log` box to enable the output of call logging data.

6. Click on the OK button to save the settings.

### Configuring TIM Plus

Follow the steps below to configure TIM Plus to receive SysLog data from your DrayTek phone system:

1. Log in to TIM Plus and click on the Directory tab.
2. Choose the site you want to configure and click Properties.




3. In the **Site Properties** window, select **Draytek** from the **PBX model** drop-down list.
4. In the **Connection method** field, select **SysLog connection** from the drop-down list.
5. In the **Client IP** field, enter the IP address of your DrayTek router.
6. Click on the Save button to apply the settings.

## Ericsson

### Ericsson BP

Please refer to Aastra BP.

## Fujitsu

### Fujitsu Rhapsody Rio

These instructions help you configure your Fujitsu Rhapsody Rio phone system to work with TIM Plus. Contact your system maintainer if you are not familiar with the configuration of your PBX.

Connection Type

TIM Plus establishes a serial connection with this PBX.

Support Files

**`Fujitsu Rhapsody Rio.TDT`**

Required Tasks

- Configure the SMDR output
- Install NetPBX
- Configure TIM Plus

### Configuring your SMDR output

The Fujitsu Rhapsody Rio phone system sends SMDR information via a serial connection. You need to directly connect a serial cable from the Fujitsu Rhapsody Rio phone system to the PC that NetPBX is installed and running on. For more information about the output and configuration of your SMDR data, please contact your system maintainer.

### Installing NetPBX

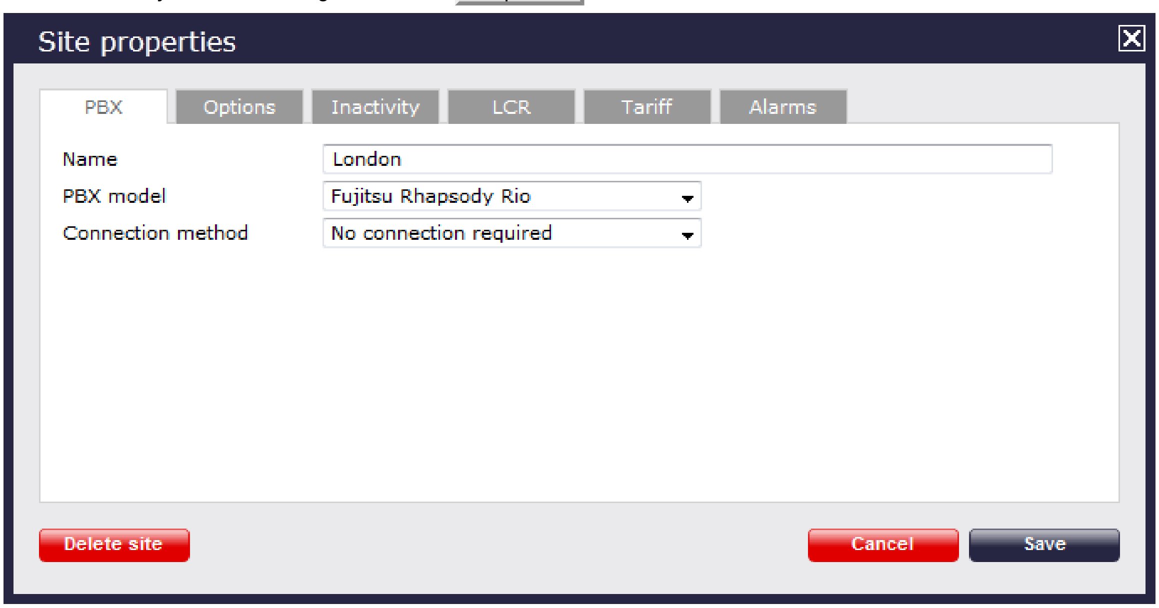
To collect call logging data from the serial port and send it to TIM Plus, you first need to install the NetPBX software. For setup instructions, click on the link below:

Install and configure NetPBX

### Configuring TIM Plus

Once NetPBX is configured and collecting data, log in to TIM Plus and perform the following steps:

1. Click on the Directory tab.
2. Choose the site you want to configure and click Properties .




3. In the **`Site Properties`** window, select **`Fujitsu Rhapsody Rio`** from the **`PBX model`** drop-down list.
4. In the **`Connection method`** field, select **`No connection required`** from the drop-down list.

5. Click on the Save button to apply the settings.

# GEC

## GEC BTEX

These instructions help you configure your GEC BTEX phone system to work with TIM Plus. Contact your system maintainer if you are not familiar with the configuration of your PBX.

Connection Type

TIM Plus establishes a serial connection with this PBX.

Support Files

**GEC BTEX 600S.TDT**

Required Tasks

- Configure the SMDR output
- Install NetPBX
- Configure TIM Plus

### Configuring your SMDR output

Note that the GEC BTEX can output SMDR information in multiple formats. You should select the **600S** format for use with TIM Plus.

The GEC BTEX phone system sends SMDR information via a serial connection. You need to directly connect a serial cable from the GEC BTEX phone system to the PC that NetPBX is installed and running on.

For more information about the output and configuration of your SMDR data, please contact your system maintainer.

### Installing NetPBX

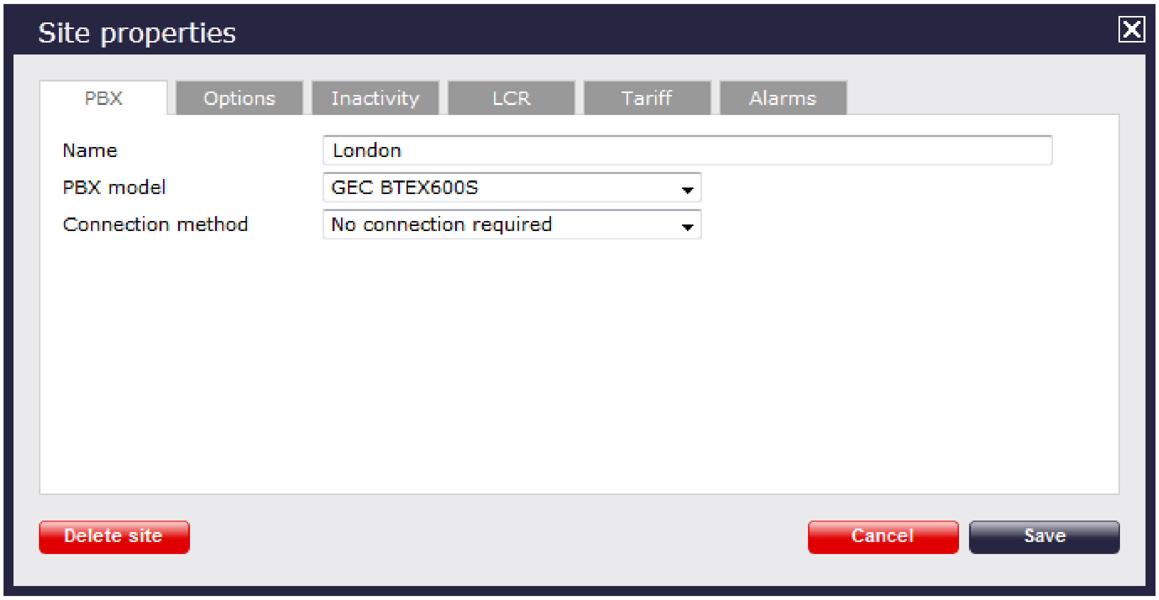
To collect the call logging data from the serial port and send it to TIM Plus, you first need to install the NetPBX software. For setup instructions, click on the link below:

Install and configure NetPBX

### Configuring TIM Plus

Once NetPBX is configured and collecting data, log in to TIM Plus and perform the steps below:

1. Click on the Directory tab.
2. Choose the site you want to configure and click Properties .




3. In the **`Site Properties`** window, select **`GEC BTEX 600S`** from the **`PBX model`** drop-down list.
4. In the **`Connection method`** field, select **`No connection required`** from the drop-down list.
5. Click on the Save button to apply the settings.

## Inter-Tel

### Inter-Tel Axxess up to V7.x

Please refer to Mitel MiVoice Office (Mitel 5000-7000).

### Inter-Tel Axxess V8 plus

Please refer to Mitel MiVoice Office (Mitel 5000-7000).

## IPCortex

### VoIPCortex

These instructions help you configure your VoIPCortex phone system to work with TIM Plus. Contact your system maintainer if you are not familiar with the configuration of your PBX.

Connection Type

TIM Plus establishes a TCP connection to this PBX.

Support Files

**`VoIPCortex.TDT`**

**`VoIPCortex.TDS`**

Required Tasks

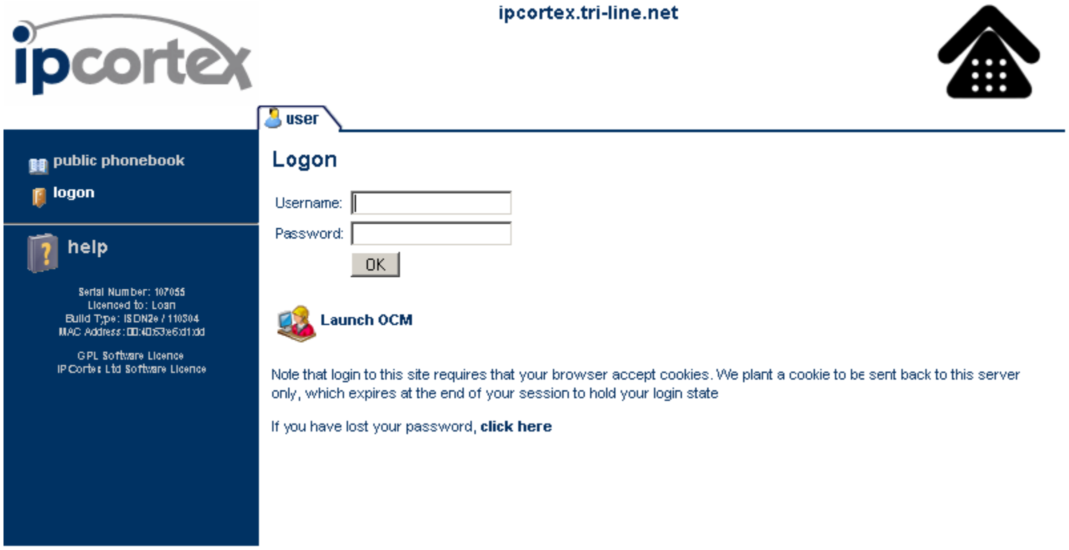
Configure the SMDR output

Configure TIM Plus

### Configuring your SMDR output

Follow the steps below to enable the SMDR output on your VoIPCortex phone system:

1. Log in to the VoIPCortex phone system using your admin username and password.



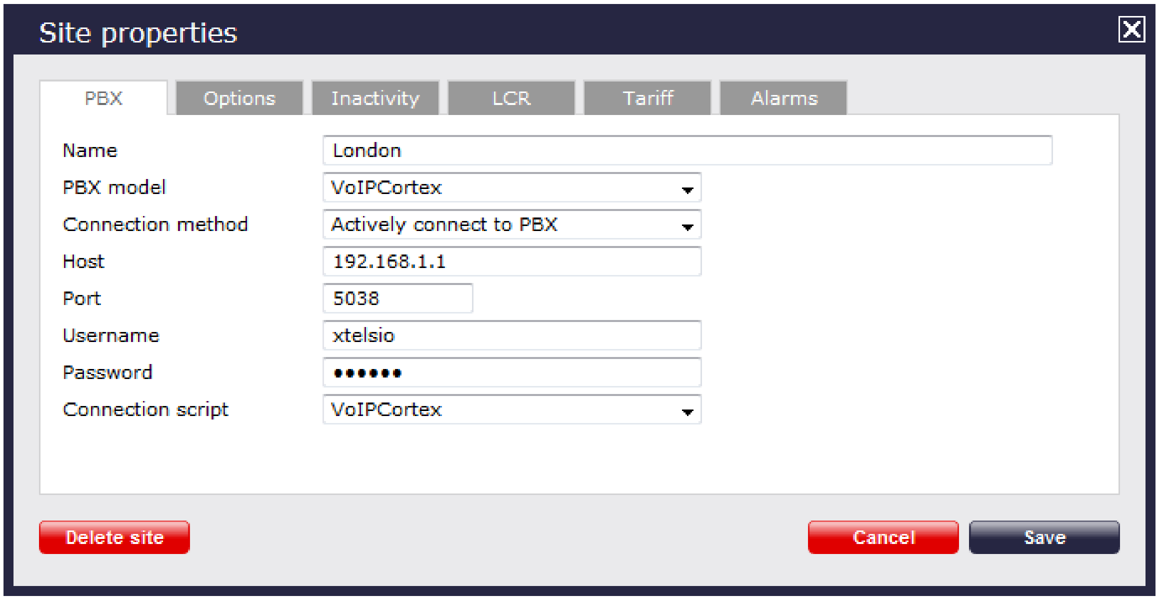

2. Click on the System tab and from the left-hand side menu expand the **`Global`** tree node.
3. In the **`Passwords`** section, create a password for **`xtelsio`** and **`Call Data Collection`** fields to allow events to be retrieved by TIM Plus, as shown below:


4. Once you have completed the configuration, restart the phone system for the changes to take affect.

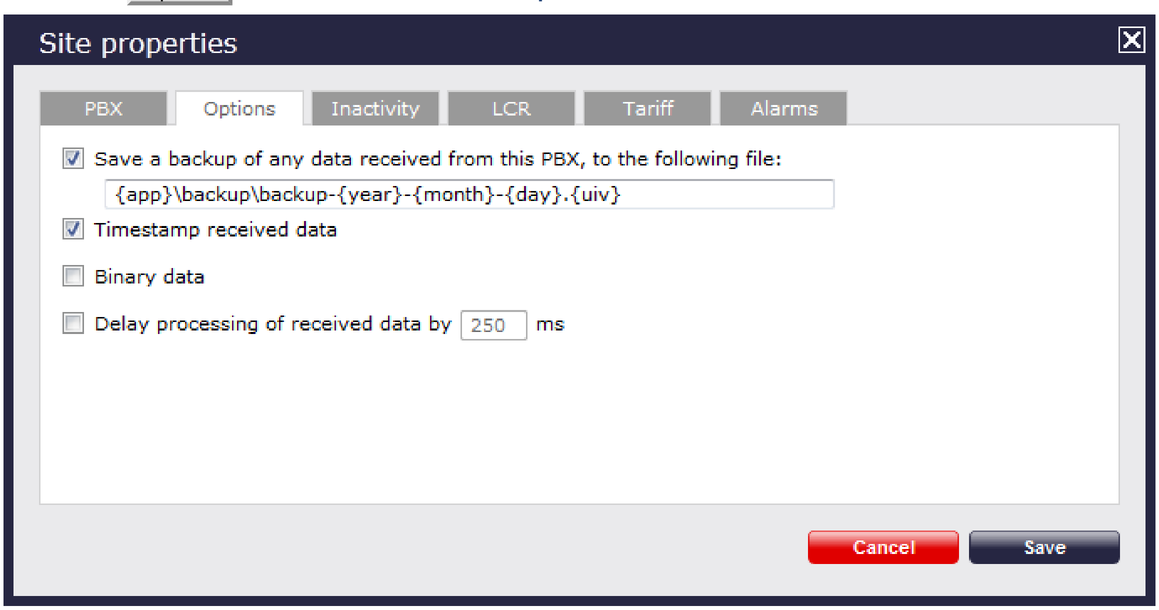
## Configuring TIM Plus

Follow the steps below to configure TIM Plus to collect SMDR data from your VoIPCortex phone system:

1. Click on the **Directory** tab.
2. Choose the site you want to configure and click **Properties**.




3. In the **Site Properties** window, select **VoIPCortex** from the **PBX model** drop-down list.
4. In the **Connection method** field, select **Actively connect to PBX** from the drop-down list.
5. In the **Host** field, enter the IP address of your VoIPCortex.
6. In the **Port** field, enter **5038**.
7. In the **Username** field, enter **xtelsio.**
8. In the **Password** field, enter the password you configured in the phone system..
9. In the **Connection script** field, select **VoIPCortex** from the drop-down list.
10. Click on the Options tab and tick the box **Timestamp received data**.




11. Click on the Save button to apply the settings.

## Iridiacom

### Iridiacom Telrad

These instructions help you configure your Iridiacom Telrad phone system to work with TIM Plus. Contact your system maintainer if you are not familiar with the configuration of your PBX.

Connection Type

TIM Plus establishes a serial connection with this PBX.

Support Files

**Iridiacom Telrad IS.TDT**

Required Tasks

- Configure the SMDR output
- Install NetPBX
- Configure TIM Plus

## Configuring your SMDR output

The Iridiacom Telrad phone system sends SMDR information via a serial connection. You need to directly connect a serial cable from the Iridiacom Telrad phone system to the PC that NetPBX is installed and running on.

For more information about the output and configuration of your SMDR data, please contact your system maintainer.

## Installing NetPBX

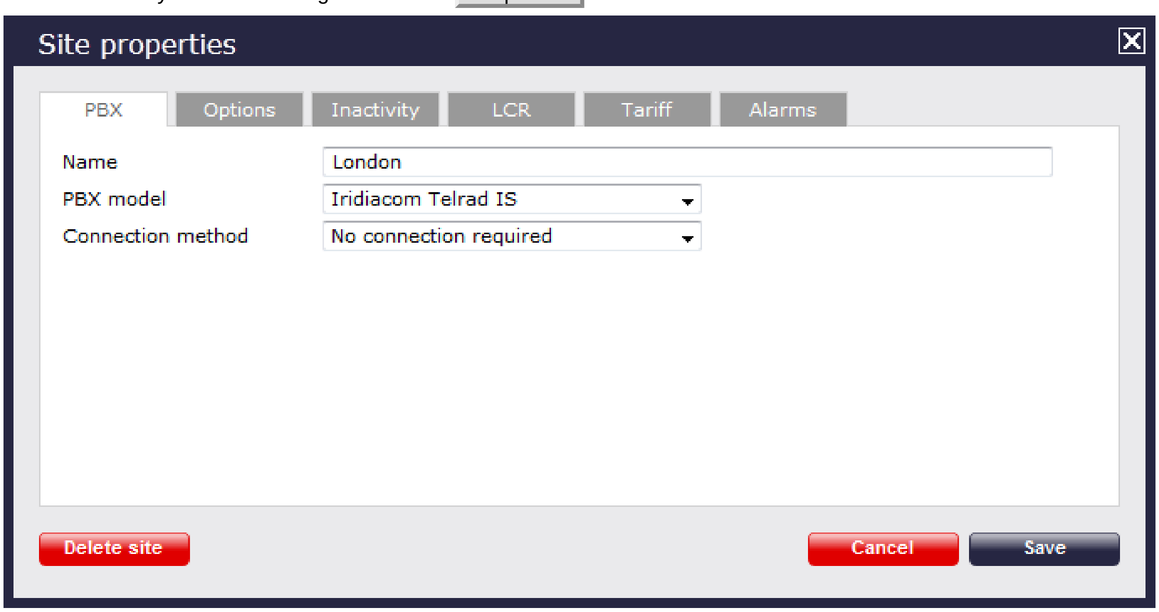
To collect call logging data from the serial port and send it to TIM Plus, you first need to install the NetPBX software. For setup instructions, click on the link below:

Install and configure NetPBX

## Configuring TIM Plus

Once NetPBX is configured and collecting data, log in to TIM Plus and perform the following steps:

1. Click on the Directory tab.
2. Choose the site you want to configure and click Properties .



3. In the `Site Properties` window, select **`Iridiacom Telrad IS`** from the `PBX model` drop-down list.
4. In the `Connection method` field, select **`No connection required`** from the drop-down list.
5. Click on the Save button to apply the settings

# LG

## LG GDK

These instructions help you configure your LG GDK phone system to work with TIM Plus. Contact your system maintainer if you are not familiar with the configuration of your PBX.

Connection Type

TIM Plus establishes a serial connection with this PBX.

Support Files

`LG GDK.TDT`

`LG.TDS`

Required Tasks

Configure the SMDR output

Install NetPBX

Configure TIM Plus

### Configuring your SMDR output

The LG GDK phone system sends SMDR information via a serial connection. You need to directly connect a serial cable from the LG GDK phone system to the PC that NetPBX is installed and running on.

Since the LG GDK doesn't have the SMDR output enabled by default, you need to ask your system maintainer to enable SMDR logging for outgoing, incoming and abandoned calls.

### Installing NetPBX

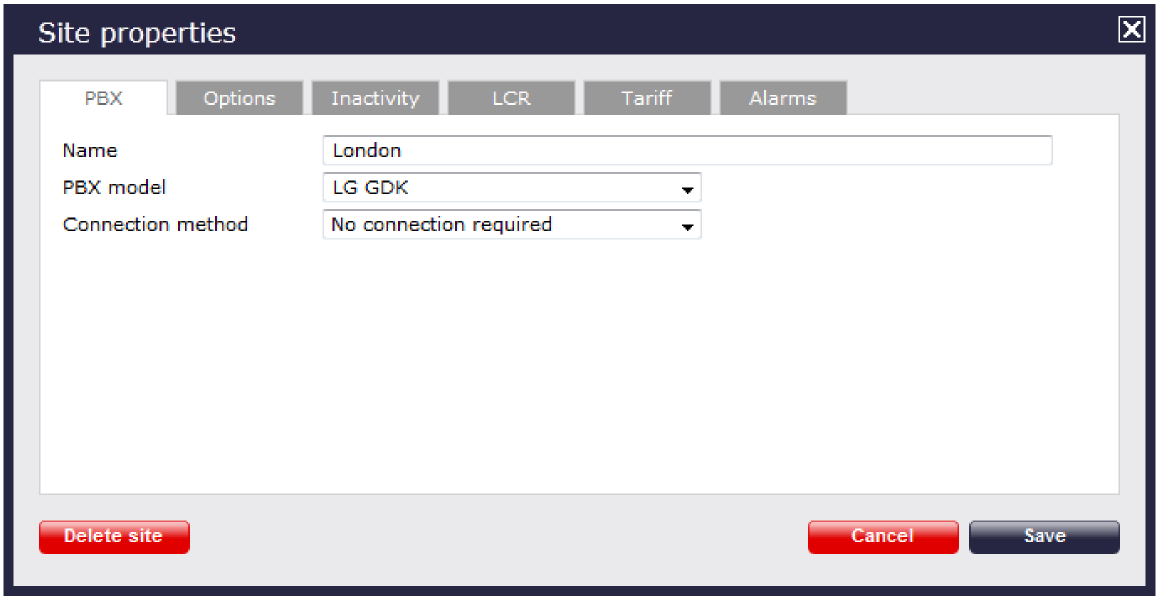
To collect call logging data from the serial port and send it to TIM Plus, you first need to install the NetPBX software. For setup instructions, click on the link below:

Install and configure NetPBX

### Configuring TIM Plus

Once NetPBX is configured and collecting data, log in to TIM Plus and perform the following steps:

1. Click on the Directory tab.
2. Choose the site you want to configure and click Properties .




3. In the **`Site Properties`** window, select **`LG GDK`** from the **`PBX model`** drop-down list.
4. In the **`Connection method`** field, select **`No connection required`** from the drop-down list.
5. Click on the Save button to apply the settings.

## LG iPECS

The LG iPECS can be configured to send its SMDR data over a serial (RS232) or an IP connection. Click on one of the links below that relates to your preferred connection method.

### LG iPECS - Serial connection

These instructions help you configure your LG iPECS phone system to work with TIM Plus. Contact your system maintainer if you are not familiar with the configuration of your PBX.

Connection Type

TIM Plus establishes a serial connection with this PBX.

Support Files

**`LG iPECS.TDT`**

**`LG.TDS`**

Required Tasks

Configure the SMDR output

Install NetPBX

Configure TIM Plus

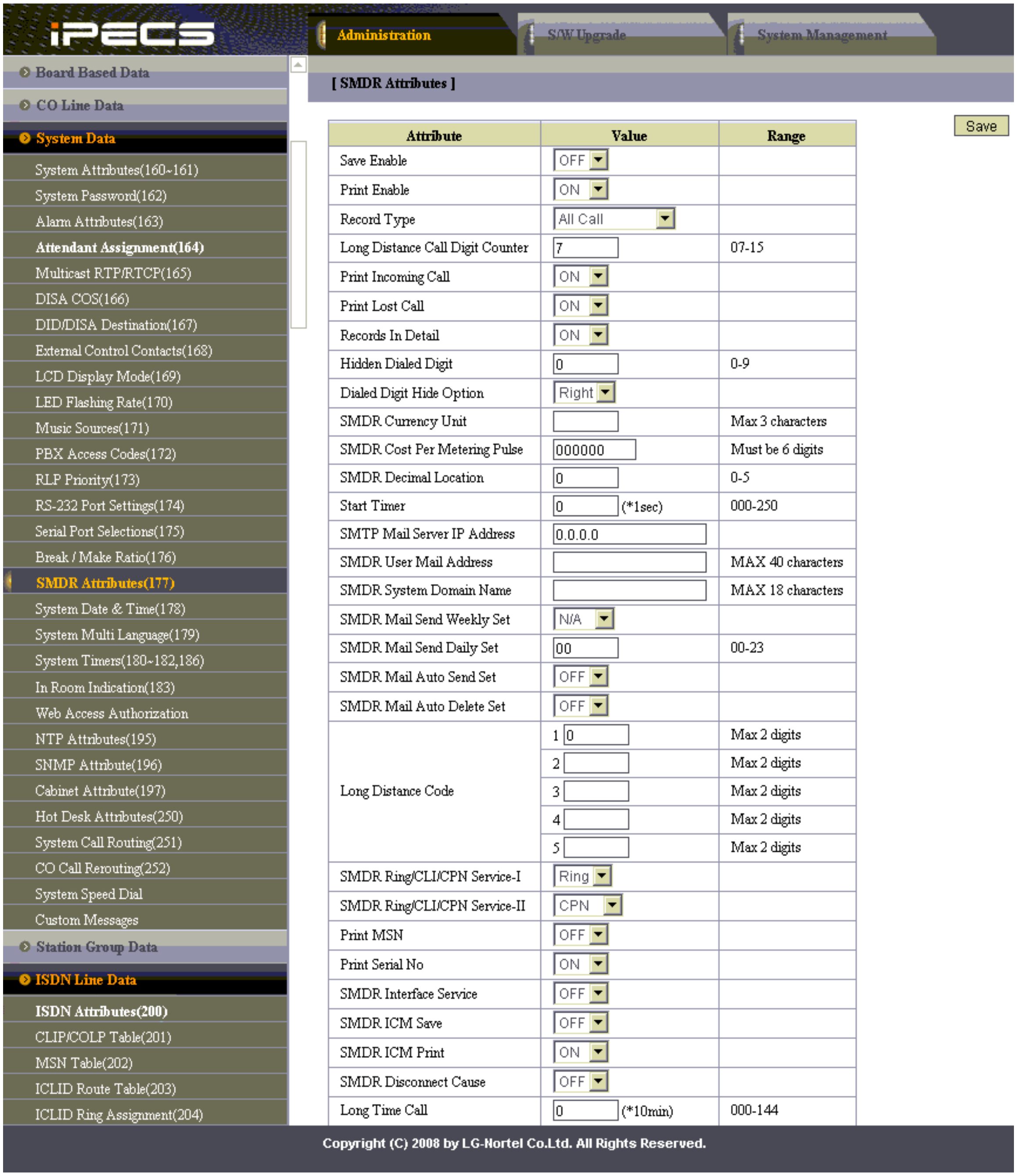
#### Configure the SMDR output

The SMDR output in LG iPECS is disabled by default. To enable the output, you need to amend the following settings in the programming sections below:

SMDR Attributes (PGM 177)

| Field | Description |
|---|---|
| **Save Enable** | Leave this as the default which is unticked |
| **Print Enable** | This needs to be enabled by clicking on the check box |
| **SMDR Record Call Type** | This needs to be set to 'All Calls', you will need to select this from the drop-down list |
| **Records In Detail** | This needs to be enabled by clicking on the check box |
| **Print Incoming Call** | This needs to be enabled by clicking on the check box |
| **Print Lost Call** | This needs to be enabled by clicking on the check box |
| **SMDR Dial Digit Hidden** | Leave this as the default which is '0' |
| **SMDR Currency Unit** | Leave this as the default which is blank |
| **SMDR Cost Per Metering Pulse** | Leave this as the default which is blank |
| **SMDR Fraction** | Leave this as the default which is '0' |
| **SMDR Start Time** | Leave this as the default which is '0' |
| **SMDR Hidden Digit** | Leave this as the default which is 'Right' |
| **Long Distance Call Digit Counter** | Leave this as the default which is '0' |
| **Long Distance Code (Max 2 Digits)** | Leave this as the default |
| **MSN Print on SMDR** | Leave this is the default which is unticked |
| **Print Caller Number** | This needs to be enabled by clicking on the check box |

Here is an example of a populated `SMDR Attributes` screen:




| Attribute | Value | Range |
|---|---|---|
| Save Enable | OFF | |
| Print Enable | ON | |
| Record Type | All Call | |
| Long Distance Call Digit Counter | 7 | 07-15 |
| Print Incoming Call | ON | |
| Print Lost Call | ON | |
| Records In Detail | ON | |
| Hidden Dialed Digit | 0 | 0-9 |
| Dialed Digit Hide Option | Right | |
| SMDR Currency Unit | | Max 3 characters |
| SMDR Cost Per Metering Pulse | 000000 | Must be 6 digits |
| SMDR Decimal Location | 0 | 0-5 |
| Start Timer | 0 (*1sec) | 000-250 |
| SMTP Mail Server IP Address | 0.0.0.0 | |
| SMDR User Mail Address | | MAX 40 characters |
| SMDR System Domain Name | | MAX 18 characters |
| SMDR Mail Send Weekly Set | N/A | |
| SMDR Mail Send Daily Set | 00 | 00-23 |
| SMDR Mail Auto Send Set | OFF | |
| SMDR Mail Auto Delete Set | OFF | |
| Long Distance Code | 1 0 | Max 2 digits |
| | 2 | Max 2 digits |
| | 3 | Max 2 digits |
| | 4 | Max 2 digits |
| | 5 | Max 2 digits |
| SMDR Ring/CLI/CPN Service-I | Ring | |
| SMDR Ring/CLI/CPN Service-II | CPN | |
| Print MSN | OFF | |
| Print Serial No | ON | |
| SMDR Interface Service | OFF | |
| SMDR ICM Save | OFF | |
| SMDR ICM Print | ON | |
| SMDR Disconnect Cause | OFF | |
| Long Time Call | 0 (*10min) | 000-144 |

## Printer Port Selection (PGM 175)

In the **Printer Port Selection (PGM 175)** window, set **Info/On-line SMDR** to **COM1/COM2** to send call logging data by serial port.

## ISDN Attributes (PGM 200)

To enable CLI information in the call records produced by your LG iPECS, you need to set the **CLI Print To Serial** to **ON**, as shown below:


### Installing NetPBX

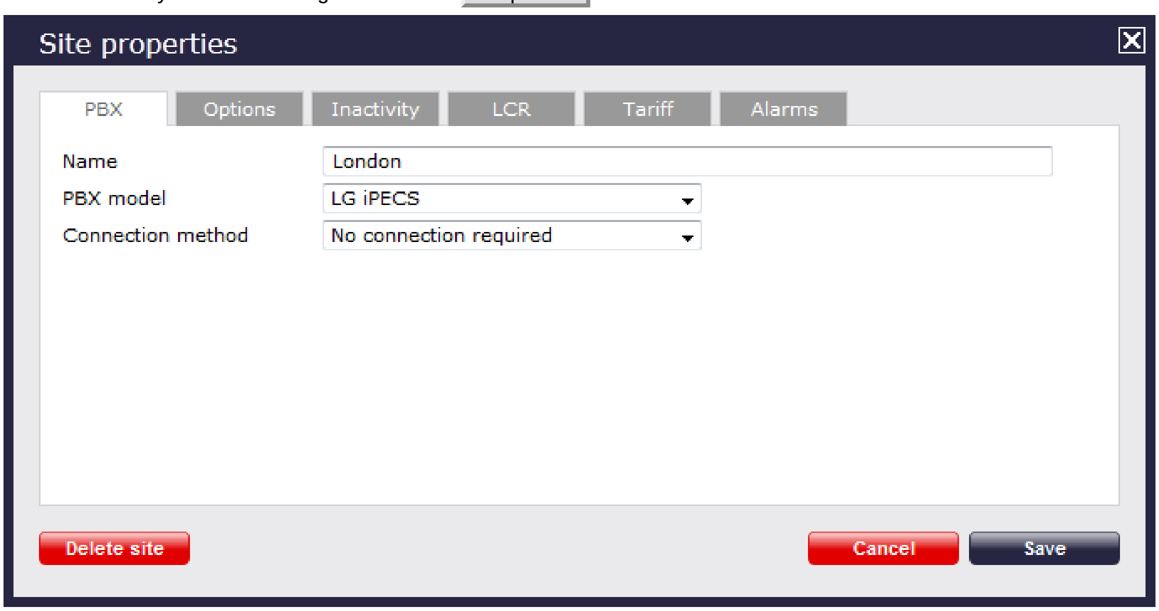
If your LG iPECS has been configured to send SMDR data via a serial connection, you first need to install the NetPBX software to collect data from the serial port and send it to TIM Plus. For setup instructions, click on the link below:

Install and configure NetPBX

### Configuring TIM Plus

Once NetPBX is configured and collecting data, log in to TIM Plus and perform the following steps:

1. Click on the Directory tab.
2. Choose the site you want to configure and click Properties .



3. In the `Site Properties` window, select **`LG iPECS`** from the `PBX model` drop-down list.
4. In the `Connection method` field, select **`No connection required`** from the drop-down list.
5. Click on the Save button to apply the settings.

## LG iPECS - IP connection

These instructions help you configure your LG iPECS phone system to work with TIM Plus. Contact your system maintainer if you are not familiar with the configuration of your PBX.

Connection Type

TIM Plus establishes a TCP connection to this PBX.

Support Files

**`LG iPECS.TDT`**

**`LG.TDS`**

Required Tasks

Configure the SMDR output

Configure TIM Plus

### Configuring the SMDR output

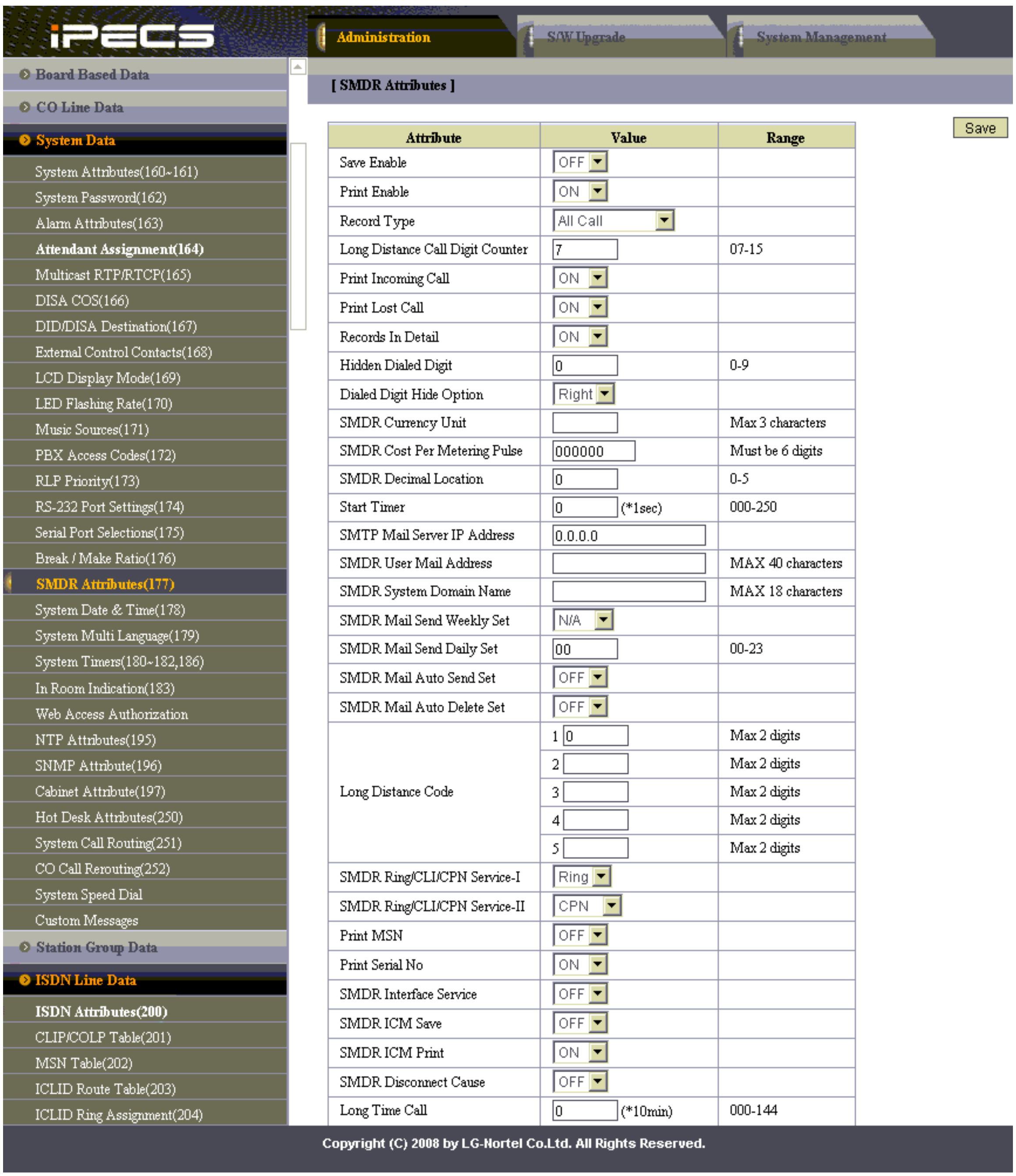
The SMDR output in LG iPECS is disabled by default. To enable the output, you need to amend the following settings in the programming sections below:

SMDR Attributes (PGM 177)

| Field | Description |
|---|---|
| **Save Enable** | Leave this as the default, which is unticked |
| **Print Enable** | This needs to be enabled by clicking on the check box |
| **SMDR Record Call Type** | This needs to be set to 'All Calls', you will need to select this from the drop-down list |
| **Records In Detail** | This needs to be enabled by clicking on the check box |
| **Print Incoming Call** | This needs to be enabled by clicking on the check box |
| **Print Lost Call** | This needs to be enabled by clicking on the check box |
| **SMDR Dial Digit Hidden** | Leave this as the default which is '0' |
| **SMDR Currency Unit** | Leave this as the default which is blank |
| **SMDR Cost Per Metering Pulse** | Leave this as the default which is blank |
| **SMDR Fraction** | Leave this as the default which is '0' |

| | |
|---|---|
| **SMDR Start Time** | Leave this as the default which is '0' |
| **SMDR Hidden Digit** | Leave this as the default which is 'Right' |
| **Long Distance Call Digit Counter** | Leave this as the default which is '0' |
| **Long Distance Code (Max 2 Digits)** | Leave this as the default |
| **MSN Print on SMDR** | Leave this is the default which is unticked |
| **Print Caller Number** | This needs to be enabled by clicking on the check box |

Here is an example of a populated **`SMDR Attributes`** screen:



### Printer Port Selection (PGM 175)

In the **Printer Port Selection (PGM 175)** window, set **Info/On-line SMDR** to **Telnet 1** to send call logging data to TIM Plus over TCP to port 23.

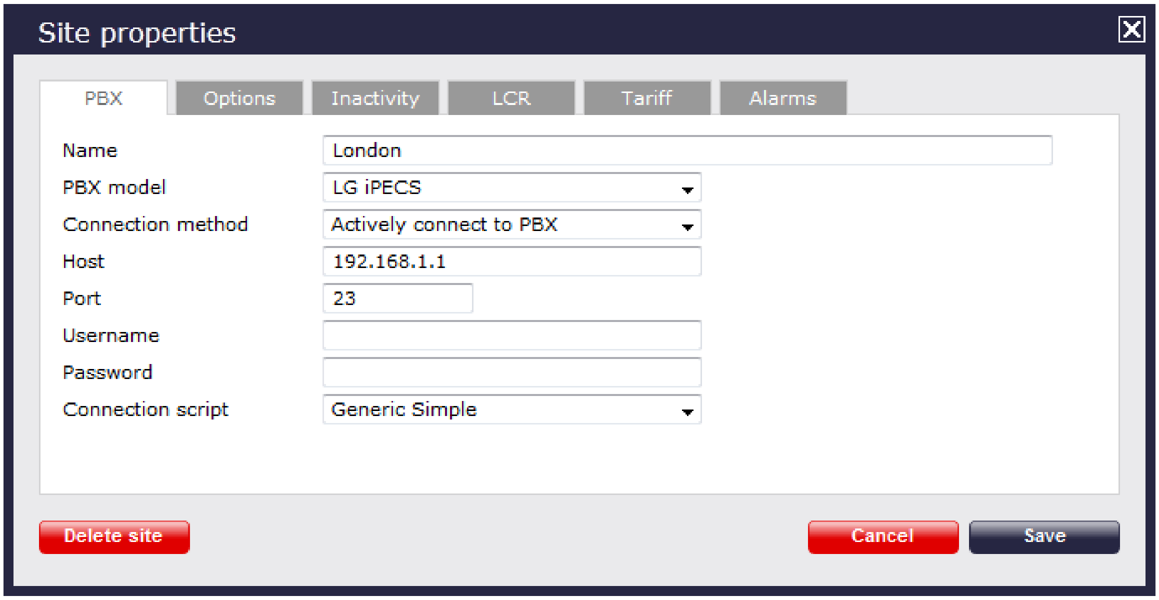
### ISDN Attributes (PGM 200)

To enable CLI information in the call records produced by your LG iPECS, you need to set the **CLI Print To Serial** to **ON**, as shown below:


### Configuring TIM Plus

If your LG iPECS has been configured to send its call logging data via TCP/IP, follow the steps below to configure TIM Plus:

1. Click on the Directory tab.
2. Choose the site you want to configure and click Properties .




3. In the **Site Properties** window, select **LG iPECS** from the **PBX model** drop-down list.
4. In the **Connection method** field, select **Actively connect to PBX** from the drop-down list.
5. In the **Host** field, enter the IP address of your LG iPECS.
6. In the **Port** field, enter **23**.
7. Leave the **Username** and **Password** fields blank.
8. In the **Connection script** field, select **Generic Simple** from the drop-down list.
9. Click on the Save button to apply the settings.

## LG IPLDK

The LG IPLDK can be configured to send its SMDR data via a serial (RS232) or an IP connection. Click on one of the links below that relates to your preferred connection method.

### LG IPLDK - Serial connection

These instructions help you configure your LG IPLDK phone system to work with TIM Plus. Contact your system maintainer if you are not familiar with the configuration of your PBX.

Connection Type

TIM Plus establishes a serial connection with this PBX.

Support Files

**LG IPLDK.TDT**

**LG.TDS**

Required Tasks

Configure the SMDR output

Install NetPBX

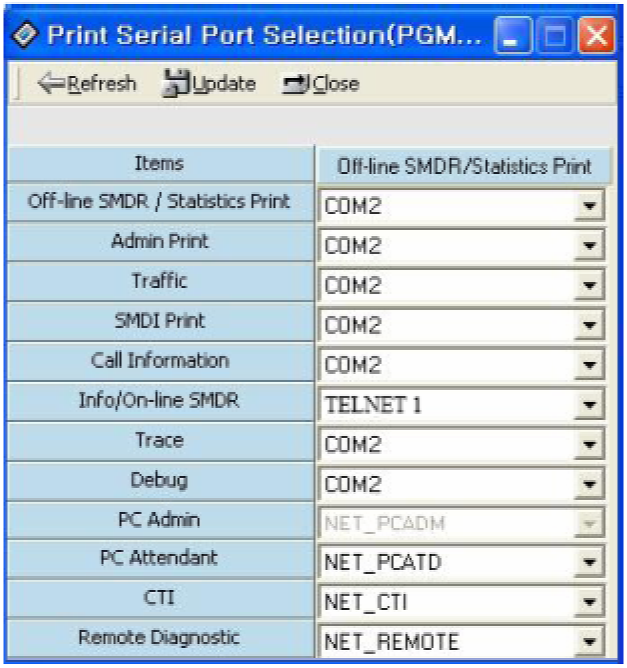
Configure TIM Plus

**Configuring your SMDR output**

The SMDR output on the LG IPLDK is disabled by default. To enable the output, you need to amend the following settings in the programming sections below:

### Print Serial Port Selection (PGM 175)

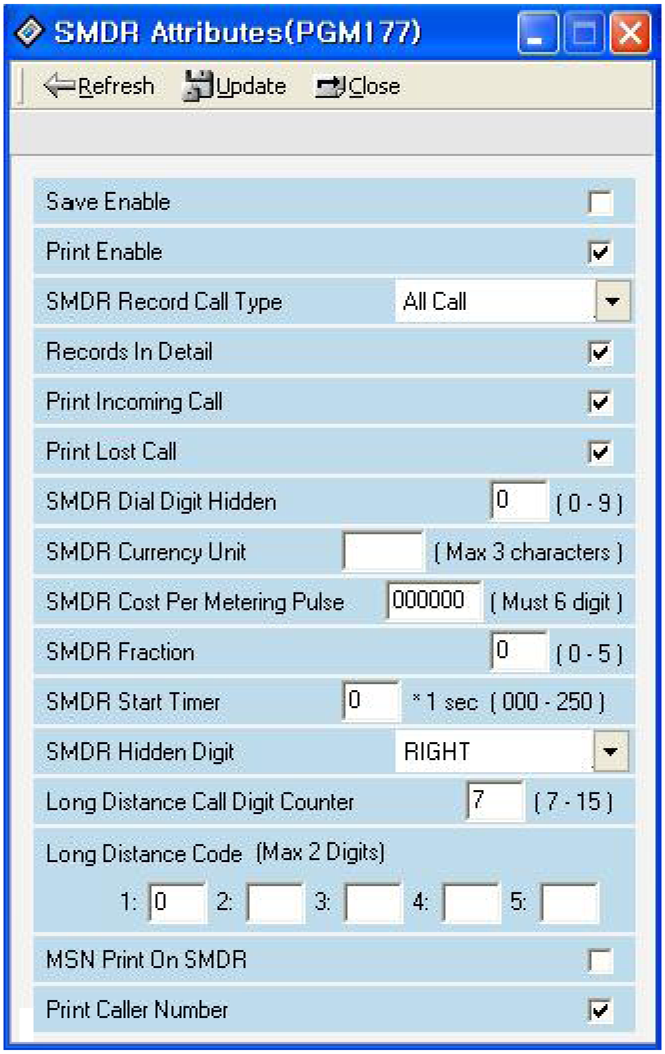
In the `Print Serial Port Selection (PGM 175)` window, set `Info/On-line SMDR` to **`COM1/COM2`** to send call logging data to the serial port.




### SMDR Attributes (PGM 177)

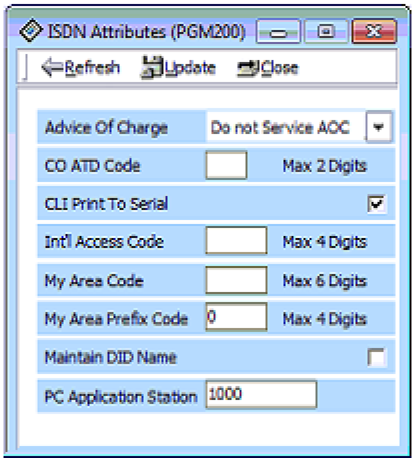
| Field | Description |
|---|---|
| **Save Enable** | Leave this as the default, which is unticked |
| **Print Enable** | This needs to be enabled by clicking on the check box |
| **SMDR Record Call Type** | This needs to be set to 'All Calls', you will need to select this from the drop-down list |
| **Records In Detail** | This needs to be enabled by clicking on the check box |
| **Print Incoming Call** | This needs to be enabled |
| **Print Lost Call** | This needs to be enabled |
| **SMDR Dial Digit Hidden** | Leave this as the default which is '0' |
| **SMDR Currency Unit** | Leave this as the default which is blank |
| **SMDR Cost Per Metering Pulse** | Leave this as the default which is blank |
| **SMDR Fraction** | Leave this as the default which is '0' |
| **SMDR Start Time** | Leave this as the default which is '0' |

| | |
|---|---|
| **SMDR Hidden Digit** | Leave this as the default which is 'Right' |
| **Long Distance Call Digit Counter** | Leave this as the default which is '0' |
| **Long Distance Code (Max 2 Digits)** | Leave this as the default |
| **MSN Print on SMDR** | This needs to be disabled |
| **Print Caller Number** | This needs to be disabled |




ISDN Attributes (PGM 200)

Enable the **`CLI Print to serial`** field, as shown the **`ISDN Attributes`** window below:




### Installing NetPBX

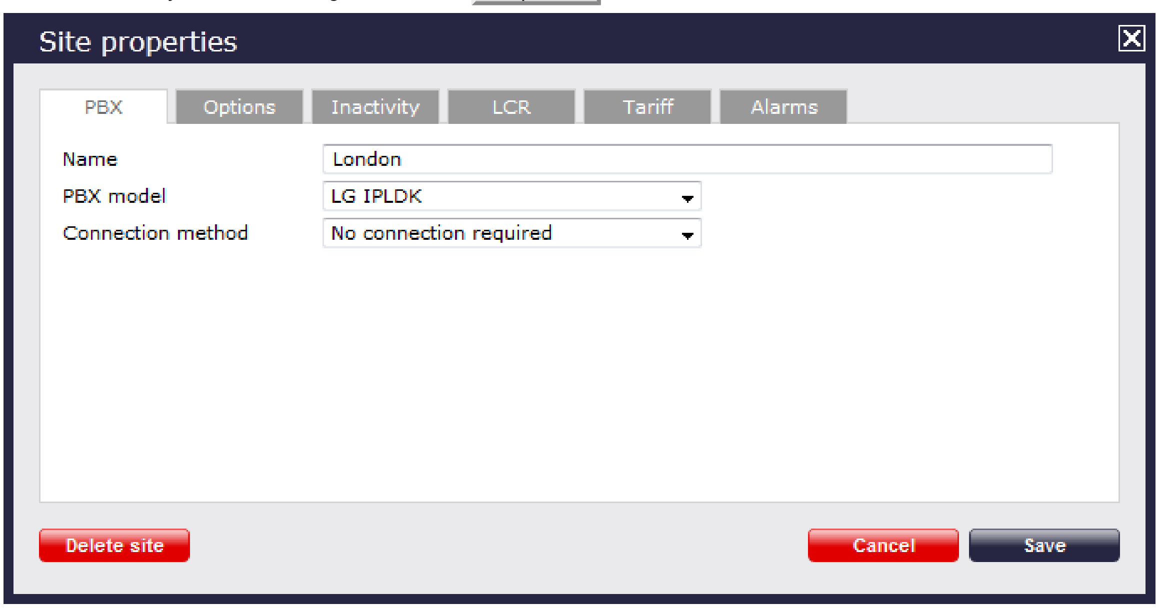
If your LG IPLDK has been configured to send SMDR data via a serial connection, you first need to install the NetPBX software to collect the data from the serial port and send it to TIM Plus. For setup instructions, click on the link below:

Install and configure NetPBX

### Configuring TIM Plus

Once NetPBX is configured and collecting data, log in to TIM Plus and perform the following steps:

1. Click on the Directory tab.
2. Choose the sites you want to configure and click Properties .




3. In the `Site Properties` window, select **`LG IPLDK`** from the `PBX model` drop-down list.
4. In the `Connection method` field, select **`No connection required`** from the drop-down list.
5. Click on the Save button to apply the settings.

## LG IPLDK - IP connection

These instructions help you configure your LG IPLDK phone system to work with TIM Plus. Contact your system maintainer if you are not familiar with the configuration of your PBX.

Connection Type

TIM Plus establishes a TCP connection to this PBX.

Support Files

**`LG IPLDK.TDT`**

**`LG.TDS`**

Required Tasks

Configure the SMDR output

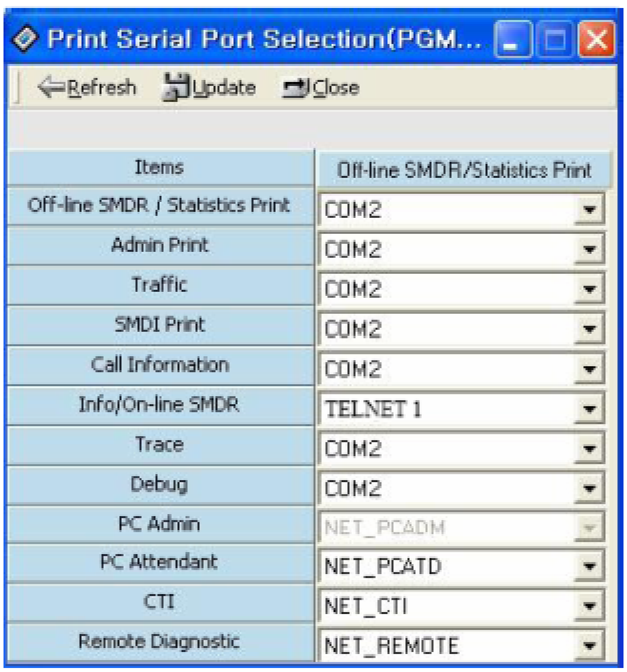
Configure TIM Plus

**Configuring your SMDR output**

The SMDR output on the LG IPLDK is disabled by default. To enable the output, you need to amend the following settings in the programming sections below:

Print Serial Port Selection (PGM 175)

In this window, set **`Info/On-line SMDR`** to **`Telnet 1`** to send call logging data to TIM Plus over TCP to port 23.

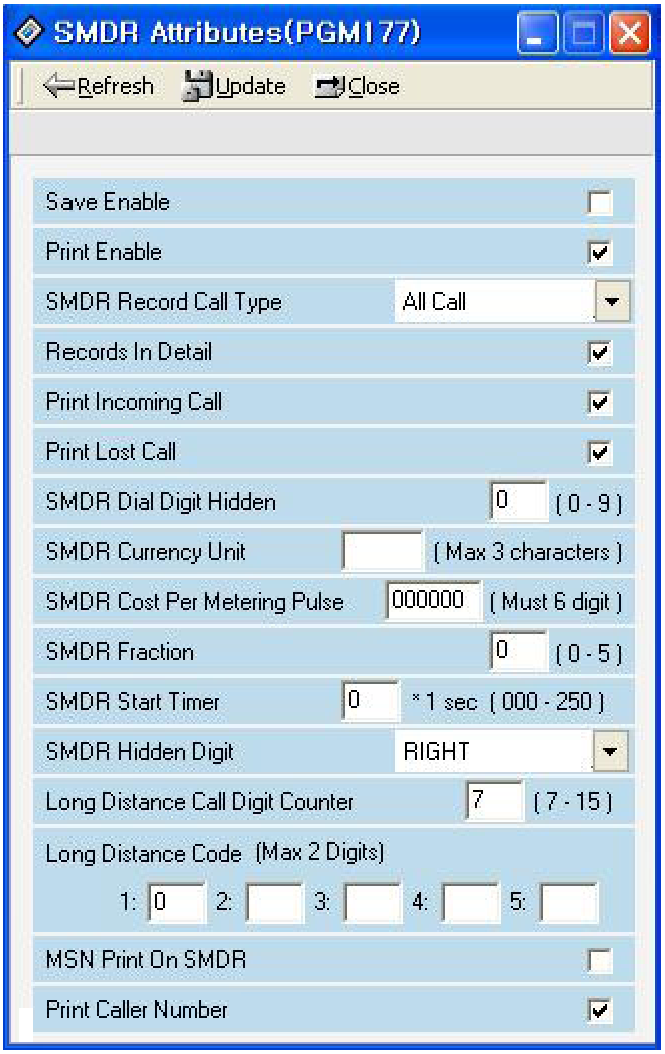

Print Serial Port Selection(PGM...

Refresh Update Close

| Items | Off-line SMDR/Statistics Print |
|---|---|
| Off-line SMDR / Statistics Print | COM2 |
| Admin Print | COM2 |
| Traffic | COM2 |
| SMDI Print | COM2 |
| Call Information | COM2 |
| Info/On-line SMDR | TELNET 1 |
| Trace | COM2 |
| Debug | COM2 |
| PC Admin | NET_PCADM |
| PC Attendant | NET_PCATD |
| CTI | NET_CTI |
| Remote Diagnostic | NET_REMOTE |

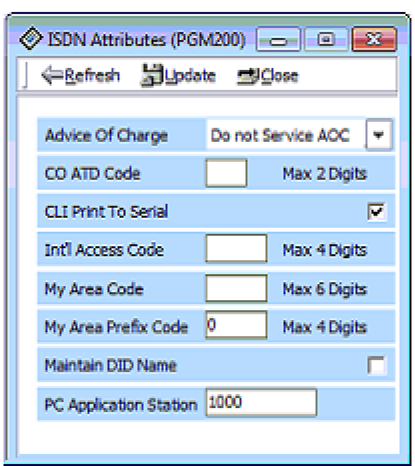
SMDR Attributes (PGM 177)

Set the **`SMDR Attributes`** as shown below:




ISDN Attributes (PGM 200)

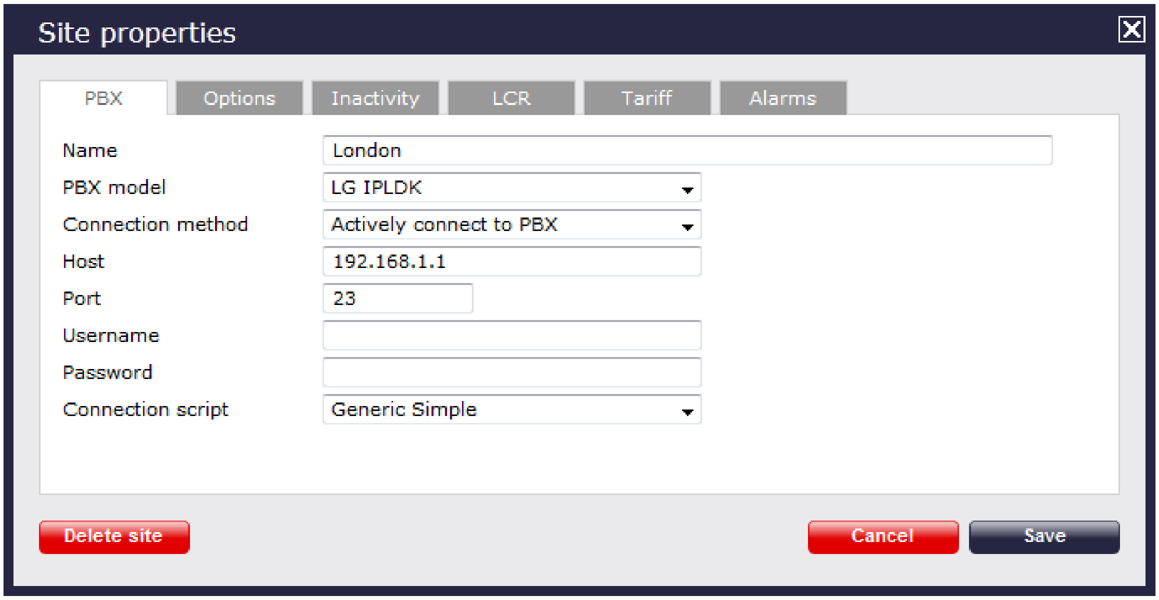
Set the `ISDN Attributes` as shown below, ensuring that the `CLI Print to serial` field is enabled:




**Configuring TIM Plus**

If your LG IPLDK has been configured to send its call logging data via TCP/IP, follow the steps below to configure TIM Plus:

1. Click on the Directory tab.
2. Choose the site your want to configure and click Properties.




3. In the **Site Properties** window, select **LG IPLDK** from the **PBX model** drop-down list.
4. In the **Connection method** field, select **Actively connect to PBX** from the drop-down list.
5. In the **Host** field, enter the IP address of your LG IPLDK.
6. In the **Port** field, enter **23**.
7. Leave the **Username** and **Password** fields blank.
8. In the **Connection script** field, select **Generic Simple** from the drop-down list.
9. Click on the Save button to apply the settings.

# Lucent

## Lucent EuroGeneris

Please refer to Avaya EuroGeneris.

# Matracom

## Matracom Matra 65xx series

Please refer to Avaya Matra 65xx series.

# Microsoft

## Skype for Business (Microsoft Lync)

These instructions help you configure your Skype for Business phone system to work with TIM Plus. Contact your system maintainer if you are not familiar with the configuration of your PBX.

Connection Type

TIM Plus establishes a DSN connection with this PBX.

Support Files

**Skype for Business.TDT**

**Skype for Business.TDS**

**Skype for Business.DBS**

Required Tasks

Configure the SMDR output

Set up a DSN connection

Configure TIM Plus

## Configuring the SMDR output

The Skype for Business phone system writes its CDR data to a MSSQL database called **LcsCDR** on the **Monitoring Server**. In order for TIM Plus to connect to the database and collect the call logging data, a Windows or SQL authenticated login will have to be created to allow access. Contact your system maintainer if you are not familiar with this procedure.

The following information is required for TIM Plus to connect to the **LcsCDR** database:

- IP address or hostname of the **Monitoring Server** where the **LcsCDR** database resides.
- Username and Password of the **LcsCDR** database.

## Setting up a DSN connection

To enable TIM Plus to work with your Skype for Business phone system, you first need to set up a DSN connection by following the steps below:

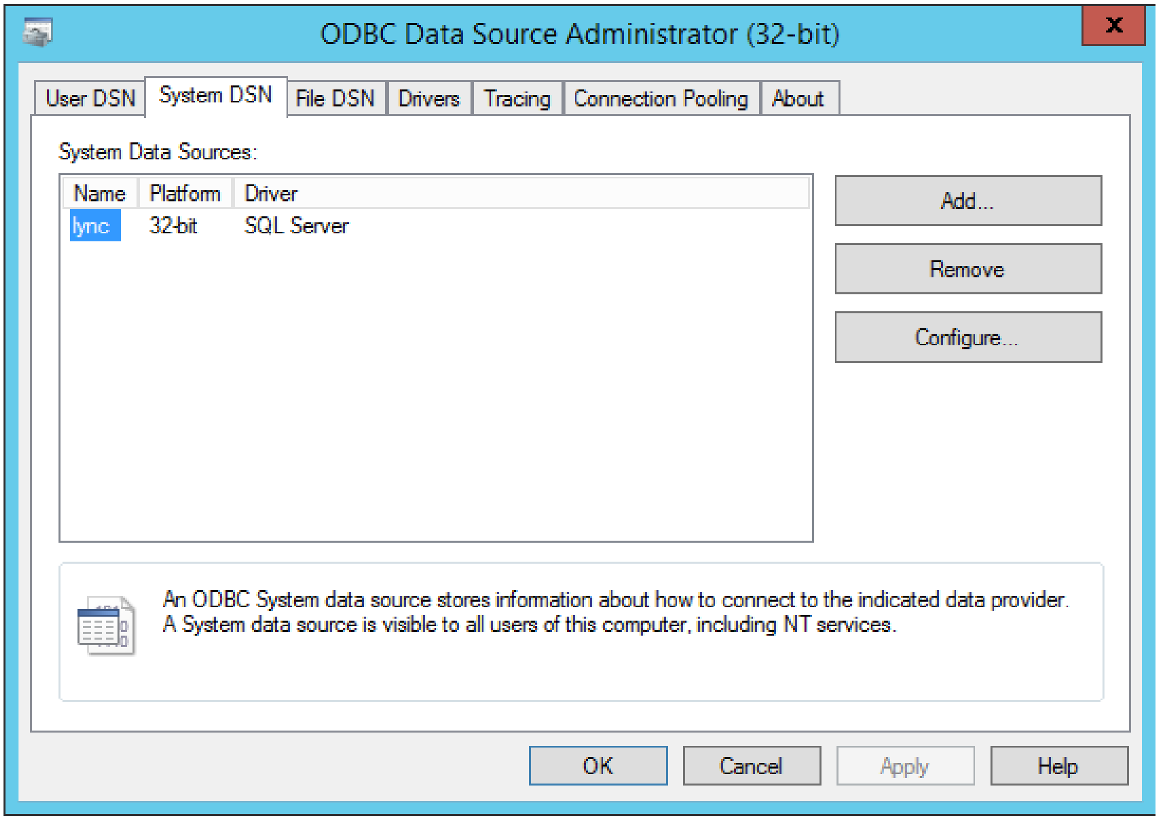
1. Open Windows Control Panel and select the Administrative Tools icon
2. Double-click on the Data Sources (ODBC) icon to open the **ODBC Data Source Administrator** window

> For a 64 bit system, access the **ODBC Data Source Administrator** from the following location **C:\Windows\SysWOW64\odbcad32.exe**

3. Click on the System DSN tab.
4. Click on the Add button.
5. Select **SQL Native Client** from the driver list and click Finish .
6. In the **Name** field, enter **lync.**
7. In the **Description** field, enter **TIM Plus link to LcsCDR.**
8. In the **Server** field, enter the IP address or hostname of your **Monitoring Server.**
9. In the **Username** field, enter the username for your **LcsCDR** database.

10. In the **`Password`** field, enter the password for your **`LcsCDR`** database.
11. In the **`Database`** drop-down list, select **`LcsCDR`**.
12. Click on the Test button to confirm the information you entered is correct and that the connection is successful.
13. Click on the OK button to close the window.

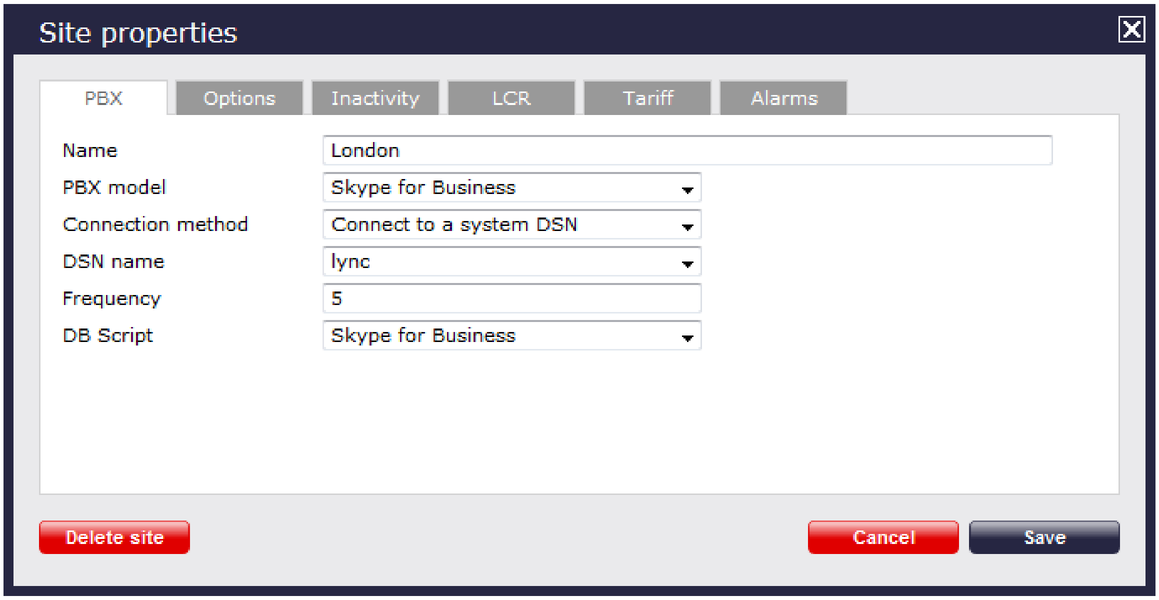
An example of an ODBC entry is shown below:




### Configuring TIM Plus

Once the DSN connection has been set up, log in to TIM Plus and perform the steps below:

1. Click on the Directory tab.
2. Choose the site you want to configure and click Properties .




3. In the **Site Properties** window, select **Skype for Business** from the **PBX model** drop-down list.
4. In the **Connection method** field, select **Connect to a system DSN** from the drop-down list.
5. In the **DSN name** field, select **lync** from the drop-down list.
6. In the **Frequency** field, enter **5**.
7. In the **DB script** field, select **Skype for Business** from the drop-down list.
8. Click on the Save button to apply the settings.

# Mitel

## Mitel 3100

These instructions help you configure your Mitel 3100 phone system to work with TIM Plus. Contact your system maintainer if you are not familiar with the configuration of your PBX.

Connection Type

TIM Plus establishes a serial connection with this PBX.

Support Files

**Mitel 3100.TDT**

Required Tasks

- Configure the SMDR output
- Install NetPBX
- Configure TIM Plus

### Configuring your SMDR output

Follow the steps below to configure your Mitel 3100 to output SMDR data via a serial connection:

1. Using an RS-232 cable, connect the PC running TIM Plus to the serial port of the Mitel 3100.
2. Launch the Mitel System Tool.

3. Choose Voice from the selection menu.
4. Click on the Management tab, select Call Logging .
5. Click Change to set the following parameters:

   - Set the **Cost per minute** to **00**. (This functionality is not supported in NA systems)
   - Set the **Minimum call duration to be recorded** option to **00:00:00**.
   - Set the **Type of calls** option to **All**.
   - Set the **Minimum page length** to **1**.
   - Enable call logging.

6. Click Save and commit the changes.

### Installing NetPBX

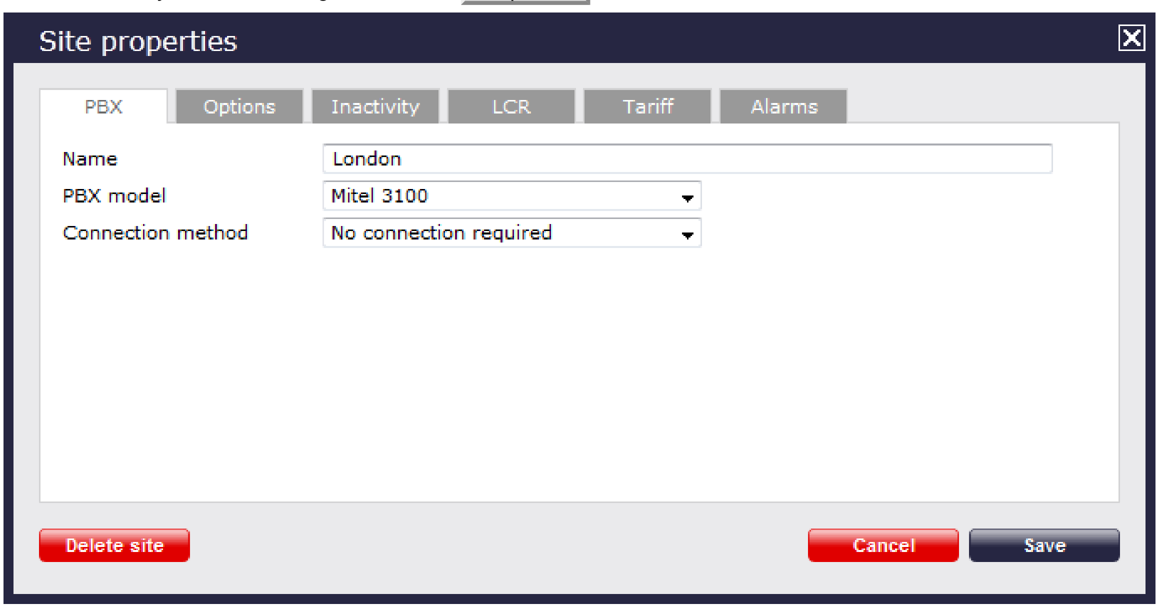
The Mitel 3100 phone system sends SMDR information via a serial connection. To collect the data from the serial port and send it to TIM Plus, you first need to install the NetPBX software. For setup instructions, click on the link below:

Install and configure NetPBX

### Configuring TIM Plus

Once NetPBX is configured and collecting data, log in to TIM Plus and perform the steps below:

1. Click on the Directory tab.
2. Choose the site you want to configure and click Properties .




3. In the **Site Properties** window, select **Mitel 3100** from the **PBX model** drop-down list.
4. In the **Connection method** field, select **No connection required** from the drop-down list.
5. Click on the Save button to apply the settings.

## Mitel Imagination

These instructions help you configure your Mitel Imagination phone system to work with TIM Plus. Contact your system maintainer if you are not familiar with the configuration of your PBX.

Connection Type

TIM Plus establishes a serial connection with this PBX.

Support Files

`Mitel Imagination.TDT`

Required Tasks

- Configure the SMDR output
- Install NetPBX
- Configure TIM Plus

### Configuring your SMDR output

The Mitel Imagination phone system sends SMDR information via a serial connection. You need to directly connect a serial cable from your Mitel to the PC that NetPBX is installed and running on.

For more information about the output and configuration of your SMDR data, please contact your system maintainer.

### Installing NetPBX

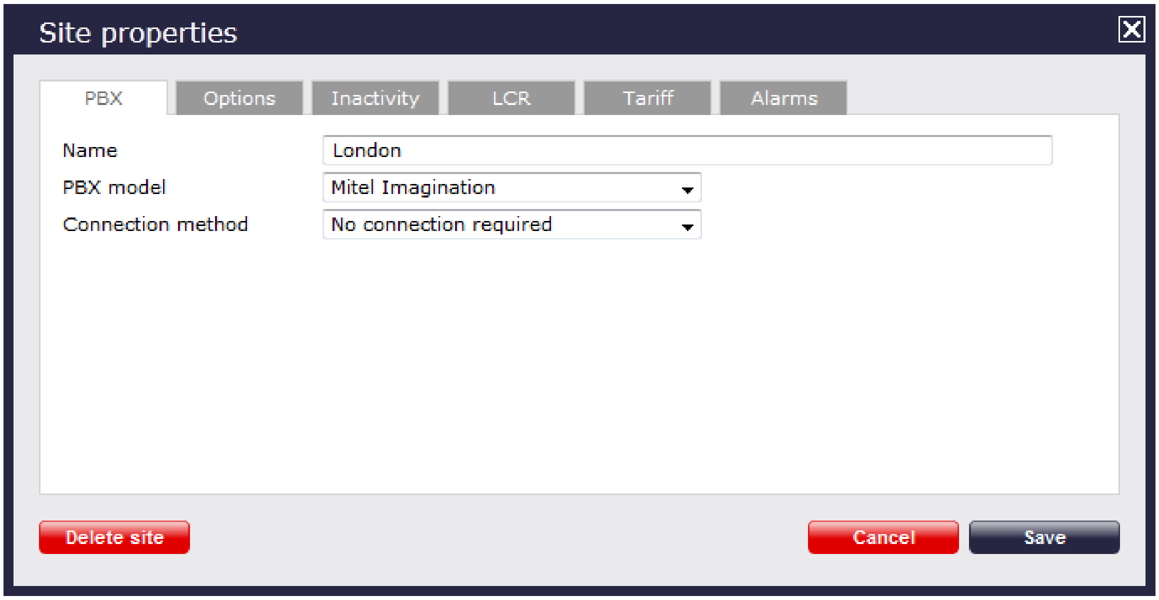
To collect the data from the serial port and send it to TIM Plus, you first need to install the NetPBX software. For setup instructions, click on the link below:

Install and configure NetPBX

### Configuring TIM Plus

Once NetPBX is configured and collecting data, log in to TIM Plus and perform the steps below:

1. Click on the **Directory** tab.
2. Choose the site you want to configure and click **Properties** .




3. In the **Site Properties** window, select **Mitel Imagination** from the **PBX model** drop-down list.
4. In the **Connection method** field, select **No connection required** from the drop-down list.
5. Click on the Save button to apply the settings.

## Mitel MiVoice Business (Mitel 3300)

These instructions help you configure your Mitel 3300 phone system to work with TIM Plus. Contact your system maintainer if you are not familiar with the configuration of your PBX.

Connection Type

TIM Plus establishes a TCP connection to this PBX.

Support Files

**Mitel 3300.TDT**

**Mitel 3300.TDS**

Required Tasks

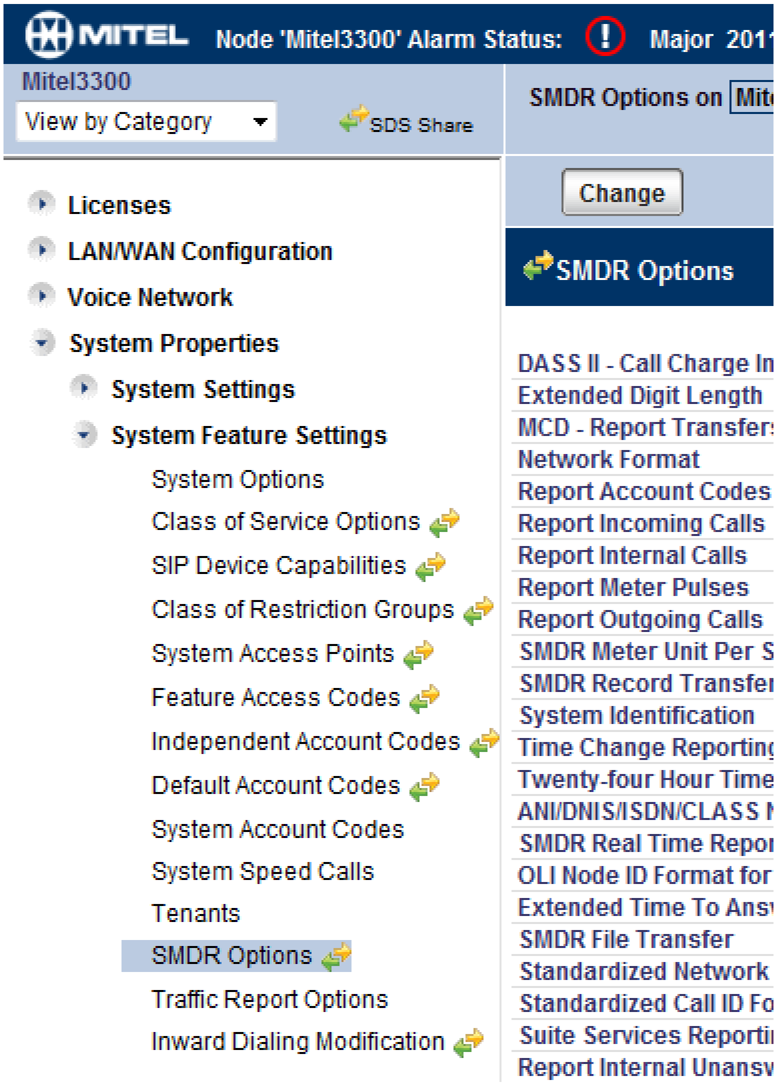
Configure the SMDR output

Configure TIM Plus

### Configuring your SMDR output

Follow the steps below to configure the SMDR options of your Mitel 3300:

1. Log in to the Mitel Communication Director software
2. Click on System Properties
3. Click on System Feature Settings
4. Click on SMDR Options




Set the SMDR options as shown below:

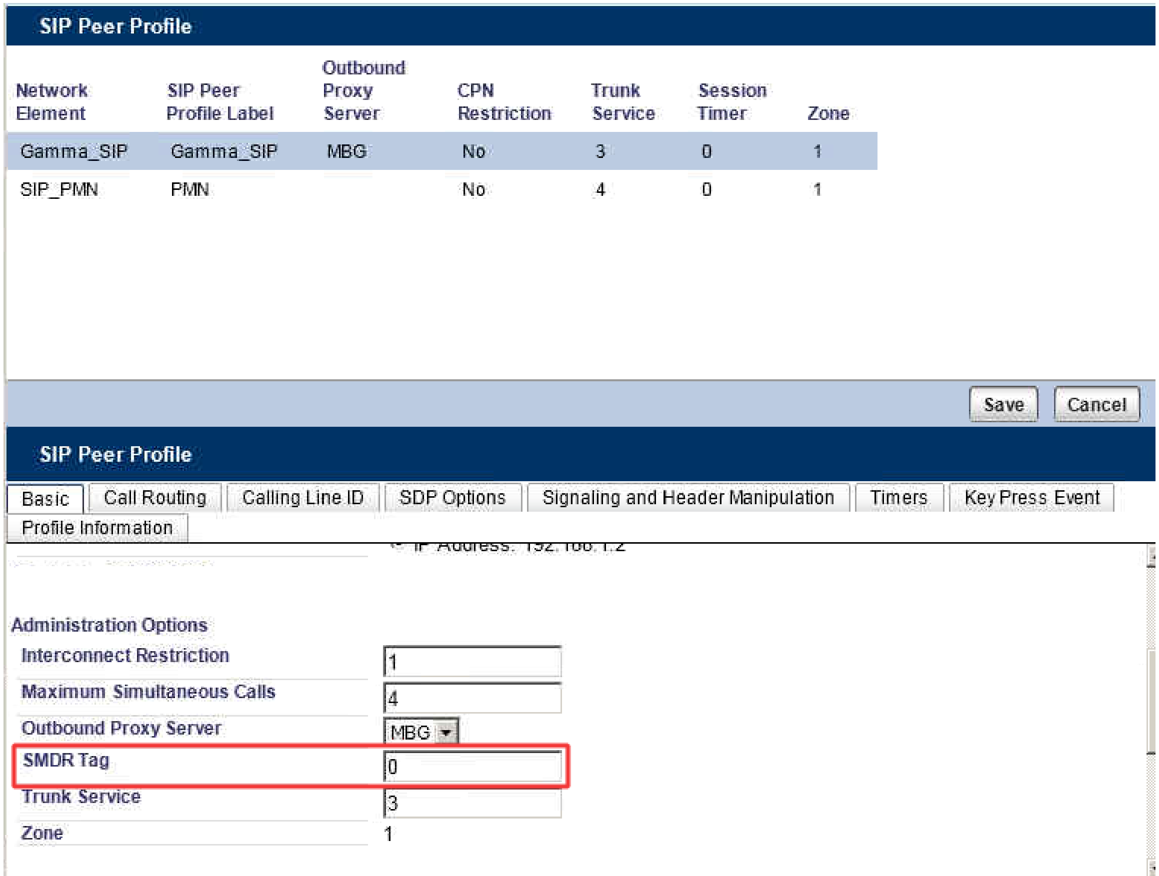
**SMDR Options**

| | |
|---|---|
| DASS II - Call Charge Information Provided | (•) No ( ) Yes |
| Extended Digit Length | ( ) No (•) Yes |
| MCD - Report Transfers | All |
| Network Format | (•) No ( ) Yes |
| Report Account Codes | ( ) No (•) Yes |
| Report Incoming Calls | ( ) No (•) Yes |
| Report Internal Calls | ( ) No (•) Yes |
| Report Meter Pulses | (•) No ( ) Yes |
| Report Outgoing Calls | ( ) No (•) Yes |
| SMDR Meter Unit Per Station | (•) No ( ) Yes |
| SMDR Record Transfer | ( ) No (•) Yes |
| System Identification | 10 |
| Time Change Reporting | (•) No ( ) Yes |
| Twenty-four Hour Time Reporting | ( ) No (•) Yes |
| ANI/DNIS/ISDN/CLASS Number Delivery Reporting | ( ) No (•) Yes |
| SMDR Real Time Reporting | (•) No ( ) Yes |
| OLI Node ID Format for Incoming Trunk Calls | (•) No ( ) Yes |
| Extended Time To Answer | ( ) No (•) Yes |
| SMDR File Transfer | (•) No ( ) Yes |
| Standardized Network OLI | ( ) No (•) Yes |
| Standardized Call ID Format | ( ) No (•) Yes |
| Suite Services Reporting | (•) No ( ) Yes |
| Report Internal Unanswered Calls | ( ) No (•) Yes |
| SMDR Extended Reporting Level 1 | ( ) No (•) Yes |
| Report Attendant Name | (•) No ( ) Yes |
| Account Code Reporting for Internal Calls | ( ) No (•) Yes |
| Tag Call Reporting | (•) No ( ) Yes |
| Tag Call Identifier | |
| Path Reporting for Internal ACD2 Calls | (•) No ( ) Yes |
| Number of destination address digits to mask | 0 |
| SMDR Extended Reporting Level 2 | ( ) No (•) Yes |
| Two B-Channel Transfer Reporting | (•) No ( ) Yes |
| External Hot Desk User Reporting | (•) No ( ) Yes |
| Suppress Initial SMDR Record with Account Code Entered Timer | 5 |
| Location Information Reporting | (•) No ( ) Yes |

Save Cancel

The `System Identification` option needs to be configured for each of your Mitel switches to be able to uniquely identify them on the network.

If you are using SIP trunks, you need to add an SMDR tag with a unique ID to each of your SIP trunks for this to be identified in the CDR data.

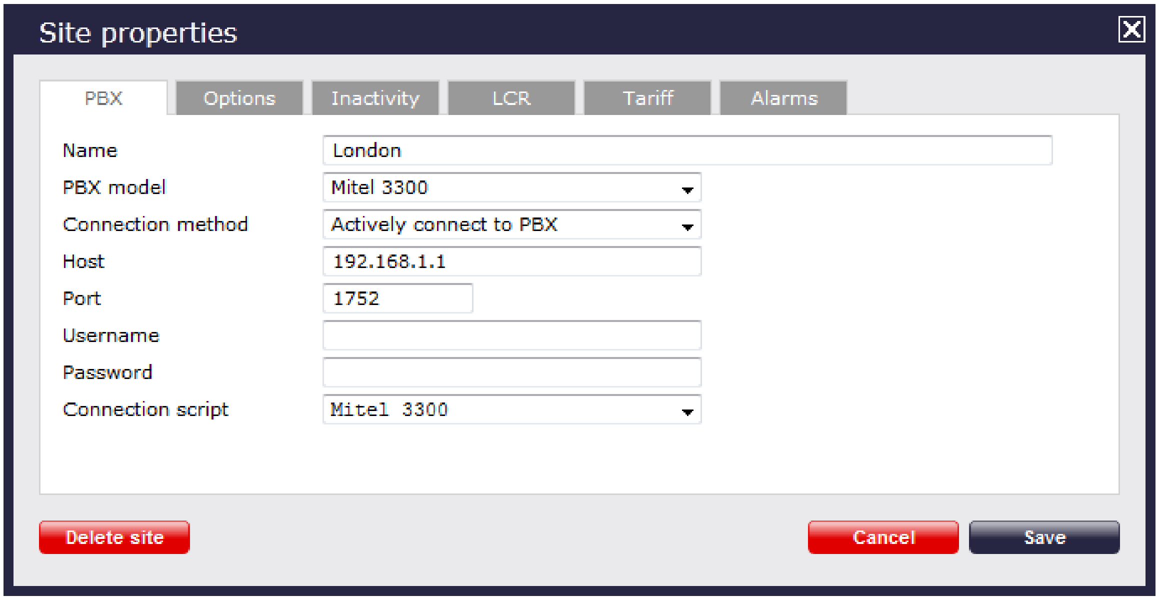



In addition to these settings, ensure the `Class of Service` options have been configured to output SMDR.

## Configuring TIM Plus

Follow the steps below to configure TIM Plus to collect SMDR data from your Mitel 3300:

1. Click on the Directory tab.
2. Choose the site you want to configure and click Properties .




3. In the **Site Properties** window, select **Mitel 3300** from the **PBX model** drop-down list.
4. In the **Connection method** field, select **Actively connect to PBX** from the drop-down list.
5. In the **Host** field, enter the IP address of your Mitel 3300.
6. In the **Port** field, enter **1752**.
7. Leave the **Username** and **Password** fields blank.
8. In the **Connection script** field, select **Mitel 3300** from the drop-down list.
9. Click on the Save button to apply the settings.

## Mitel MiVoice Office (Mitel 5000-7000)

These instructions help you configure your Mitel 5000-7000 phone system to work with TIM Plus. Contact your system maintainer if you are not familiar with the configuration of your PBX.

Connection Type

TIM Plus establishes a TCP connection to this PBX.

Support Files

**Mitel 5000-7000.TDT**

**Mitel 5000-7000.TDS**

Required Tasks

Configure the SMDR output

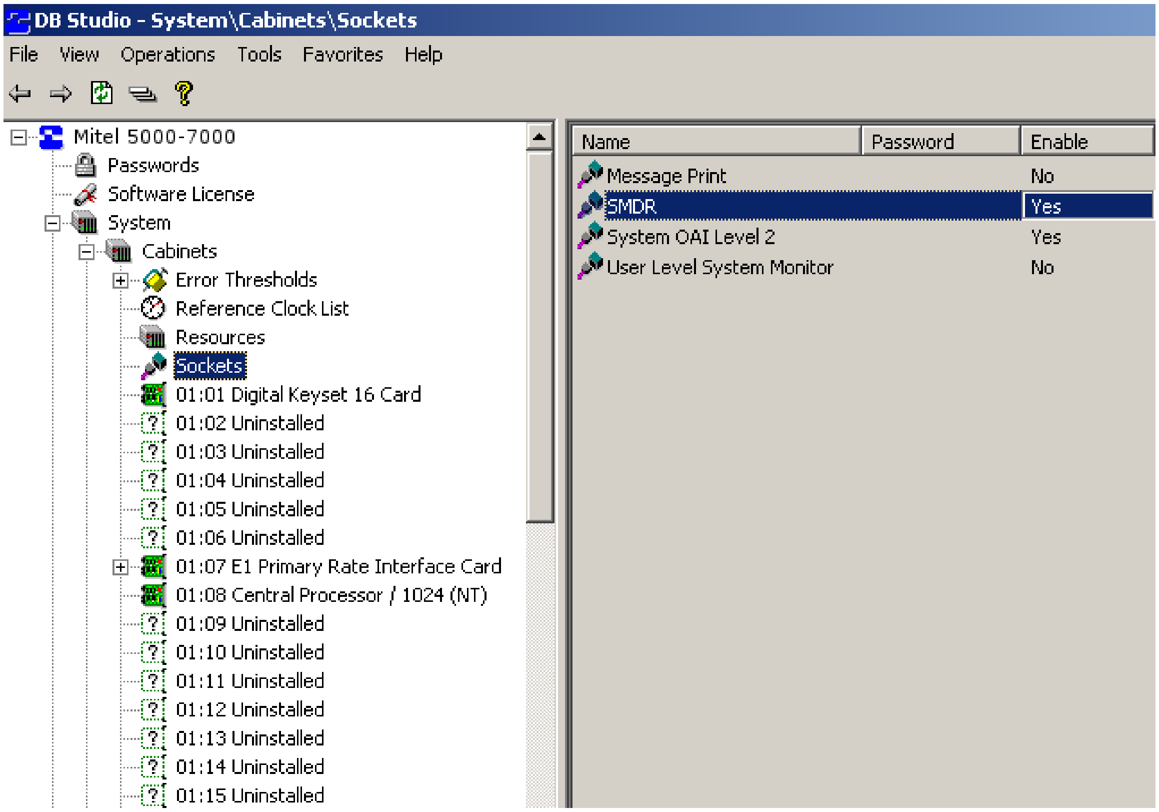
Configure TIM Plus

### Configuring your SMDR output

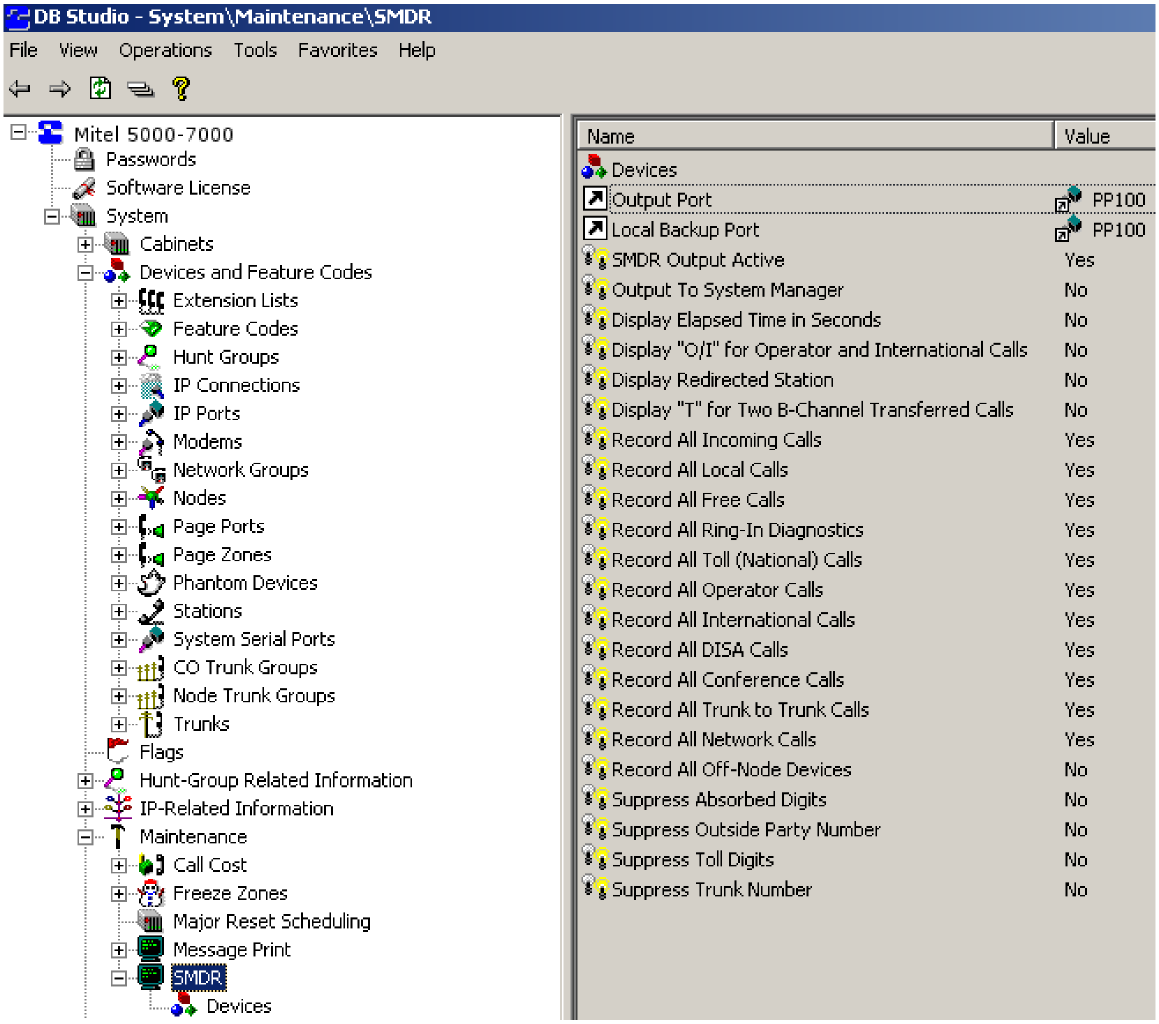
By default, the Mitel 5000-7000 has its SMDR output disabled. Follow the steps below to enable it:

1. Log in to the Mitel DB Studio software.

2. Click and expand the System node.
3. Click and expand the Cabinet node.
4. Select the Sockets node.
5. In the right-hand window, click on the **SMDR** parameter to set its enabled state to **Yes**.



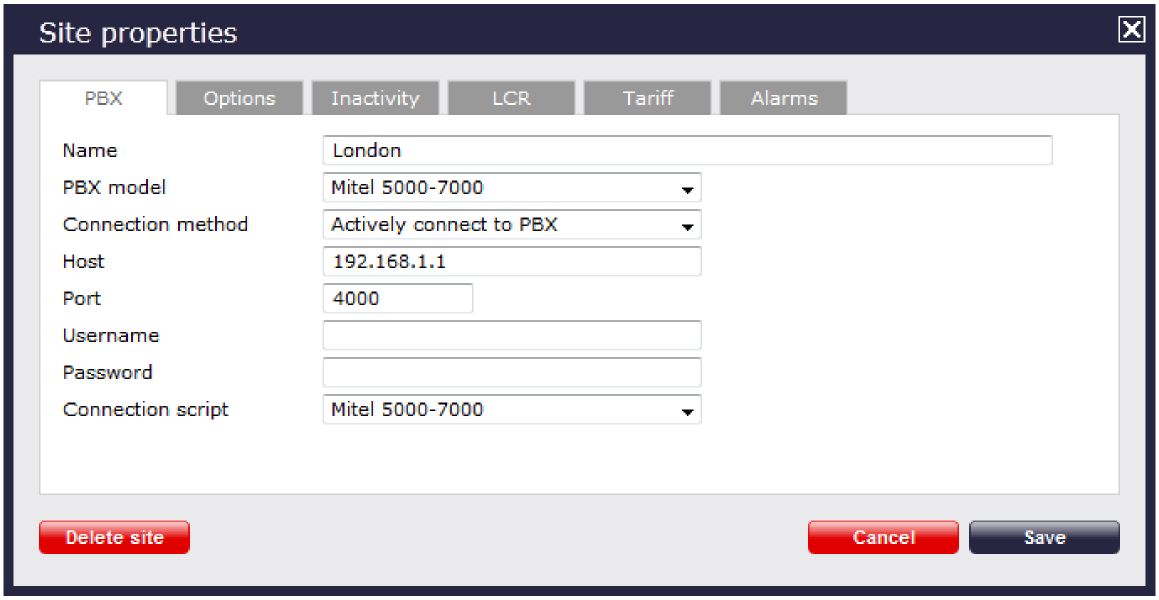

6. Click and expand the System icon.
7. Click and expand the Maintenance icon.
8. Click on the SMDR icon.
9. On the right-hand side you will have the SMDR fields that need to be configured, as shown below:




## Configuring TIM Plus

Follow the steps below to configure TIM Plus to collect the SMDR data from your Mitel 5000-7000:

1. Click on the Directory tab.
2. Choose the site you want to configure and click Properties .




3. In the **Site Properties** window, select **Mitel 5000-7000** from the **PBX model** drop-down list.

4. In the **Connection method** field, select **Actively connect to PBX** from the drop-down list.

5. In the **Host** field, enter the IP address of your Mitel 5000-7000.

6. In the **Port** field, enter **4000**.

7. Leave the **Username** and **Password** fields blank.

8. In the **Connection script** field, select **Mitel 5000-7000** from the drop-down list.

9. Click on the Save button to apply the settings.

## Mitel SX50

These instructions help you configure your Mitel SX50 phone system to work with TIM Plus. Contact your system maintainer if you are not familiar with the configuration of your PBX.

Connection Type

TIM Plus establishes a serial connection with this PBX.

Support Files

**Mitel SX50.TDT**

**Mitel SX50.TDS**

Required Tasks

Configure the SMDR output

Install NetPBX

Configure TIM Plus

### Configuring your SMDR output

By default, the SMDR output of your Mitel is not enabled. To enable it, perform the steps below:

1. Within the PBX programming interface choose Systems Options Programming .

2. Access **Command 100**, **register 14** .

3. Set the **Enabled for both incoming and outgoing trunk calls** option.

4. Ensure SMDR is enabled in all of your **Class of Services (Commands 121-129)** and **Trunk Groups (Commands 151-156)**.

### Installing NetPBX

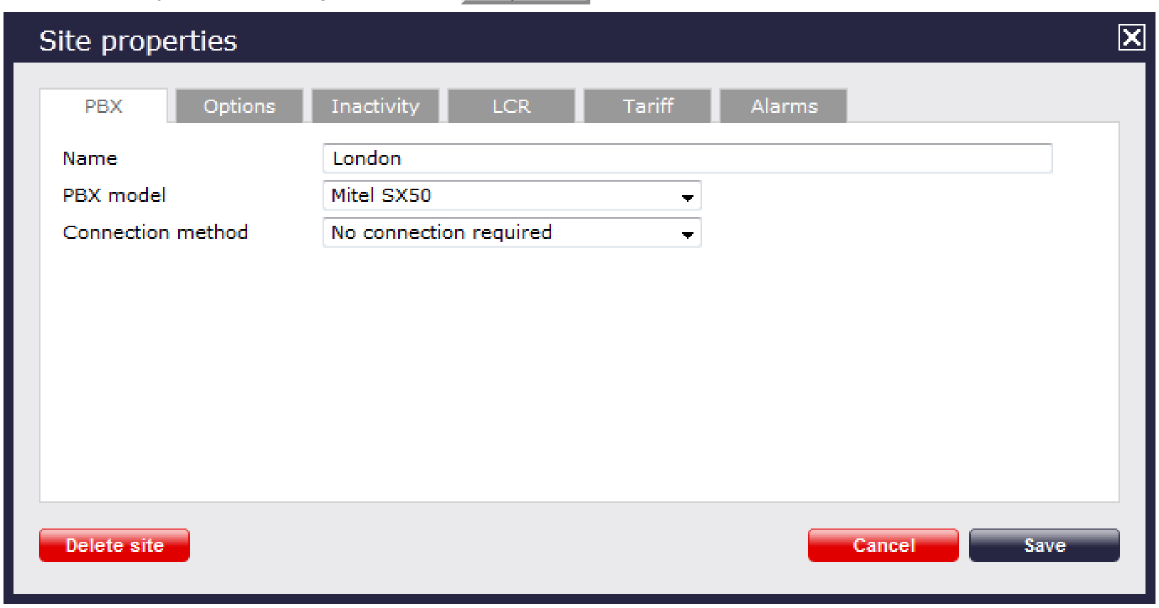
The Mitel SX50 phone system sends SMDR information via a serial connection. To collect the data from the serial port and send it to TIM Plus, you first need to install the NetPBX software. For setup instructions, click on the link below:

Install and configure NetPBX

### Configuring TIM Plus

Once NetPBX is configured and collecting data, log in to TIM Plus and perform the following steps:

1. Click on the Directory tab.
2. Choose the site you want to configure and click Properties .




3. In the **Site Properties** window, select **Mitel SX50** from the **PBX model** drop-down list.
4. In the **Connection method** field, select **No connection required** from the drop-down list.
5. Click on the Save button to apply the settings.

## Mitel SX2000

These instructions help you configure your Mitel SX2000 phone system to work with TIM Plus. Contact your system maintainer if you are not familiar with the configuration of your PBX.

Connection Type

TIM Plus establishes a serial connection with this PBX.

Support Files

**Mitel SX2000.TDT**

**Mitel SX2000.TDS**

Required Tasks

- Configure the SMDR output
- Install NetPBX
- Configure TIM Plus

## Configuring your SMDR output

The Mitel SX2000 phone system sends SMDR information via a serial connection. You need to directly connect a serial cable from your Mitel to the PC that NetPBX is installed and running on. By default, the SMDR output of your Mitel is not enabled. For more information about enabling and configuring the SMDR output, you should speak to your system maintainer.

## Installing NetPBX

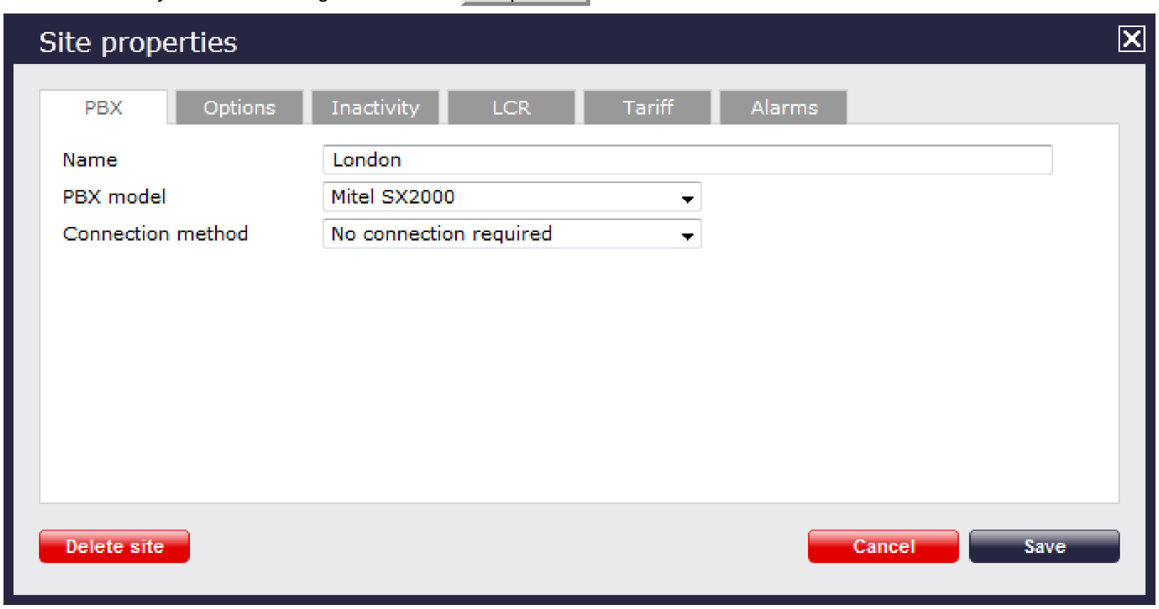
To collect call logging data from the serial port of your Mitel and send it to TIM Plus, you first need to install the NetPBX software. For setup instructions, click on the link below:

Install and configure NetPBX

## Configuring TIM Plus

Once NetPBX is configured and collecting data, log in to TIM Plus and perform the steps below:

1. Click on the Directory tab.
2. Choose the site you want to configure and click Properties .




3. In the **Site Properties** window, select **Mitel SX2000** from the **PBX model** drop-down list.

4. In the `Connection method` field, select `No connection required` from the drop-down list.
5. Click on the Save button to apply the settings.

# NEC

## NEC Aspire

The NEC Aspire can be configured to send its SMDR data over a serial (RS232) or an IP connection. Click on one of the links below that relates to your preferred connection method.

### NEC Aspire - Serial connection

These instructions help you configure your NEC Aspire phone system to work with TIM Plus. Contact your system maintainer if you are not familiar with the configuration of your PBX.

Connection Type

TIM Plus establishes a serial connection with this PBX.

Support Files

**NEC Aspire.TDT**

**NEC Aspire.TDS**

Required Tasks

Configure the SMDR output

Install NetPBX

Configure TIM Plus

#### Configuring your SMDR output

Follow the steps below to configure the SMDR output on your NEC Aspire:

1. Log in to your PC Pro/Web Pro software.
2. To configure SMDR output by serial port, apply the following settings for each system adapter:

| Adapter | Programming code | Value | Description |
|---|---|---|---|
| NTCPU - Serial | **10-21-02** | 1 | NTCPU Hardware Setup - Baud Rate for COM Port. Choose the baud rate from the three available options: 0 = 4800, 1 = 9600, and 2 = 38400 |
| | **35-01-01** | 1 | SMDR Options - Output Port Type |

| | | | |
|---|---|---|---|
| **CTA/CTU - Serial** | **15-02-19** | `1` | Multi-Line Telephone Basic Data Setup - CTA/CTU Data Communication Module |
| | **15-02-20** | `1` | Multi-Line Telephone Basic Data Setup - Baud Rate for CTA/CTU port. Choose from the three available options: 0 = 4800, 1 = 9600, and 2 = 38400 |
| | **35-01-01** | `4` | SMDR Options - Output Port Type |
| | **35-01-02** | Extension number that the CTA/CTU adaptor is attached to. | SMDR Options - Output Destination Number |

3. Apply the following settings in the programming sections below:

| **Programming code** | **Value** | **Description** |
|---|---|---|
| **14-01-06** | `1` | Basic Trunk Data Setup - SMDR Print. |
| **15-01-03** | `1` | Basic Extension Data Setup - SMDR Print. |
| **35-01-03** | `0` | SMDR Options - Header Language. |
| **35-01-04** | `0` | SMDR Options - Omit (Mask) Digits. |
| **35-01-05** | `0` | SMDR Options - Minimum Number of SMDR Digits. |
| **35-01-06** | `0` | SMDR Options - Minimum Call Duration. |
| **35-01-07** | `0` | SMDR Options - Minimum Ringing Time. |
| **35-01-08** | Default | SMDR Options - SMDR Format. |
| **35-02-01** | `0` | SMDR Output Options - Toll Restricted Call. |
| **35-02-02** | `1` | SMDR Output Options - PBX Calls. |
| **35-02-03** | `1` | SMDR Output Options - Display Trunk Name or Numbers. |

| | | |
|---|---|---|
| **35-02-04** | 0 | SMDR Output Options - Daily Summary. |
| **35-02-05** | 0 | SMDR Output Options - Weekly Summary. |
| **35-02-06** | 0 | SMDR Output Options - Monthly Summary. |
| **35-02-08** | 1 | SMDR Output Options - Incoming calls. |
| **35-02-09** | 0 | SMDR Output Options - Print Name or Numbers. |
| **35-02-10** | 0 | SMDR Output Options - All Lines Busy (ALB) Output. |
| **35-02-12** | 0 | SMDR Output Options - DID Table Name Output. |
| **35-02-13** | 1 | SMDR Output Options - CLI Output when DID to Trunk. |
| **35-02-14** | 1 | SMDR Output Options - Date. |
| **35-02-15** | 1 | SMDR Output Options - CLI/DID Number Switching. |
| **35-02-16** | 1 | SMDR Output Options - Print Trunk Name or Received Dialled Number. |
| **35-02-17** | 0 | SMDR Output Options - Print Account Code or Caller ID Name. |
| **35-02-18** | Default | SMDR Output Options - Caller ID Name Output Method. |
| **80-05-01** | 1 | Date Format for SMDR and System Reports. |

### Installing NetPBX

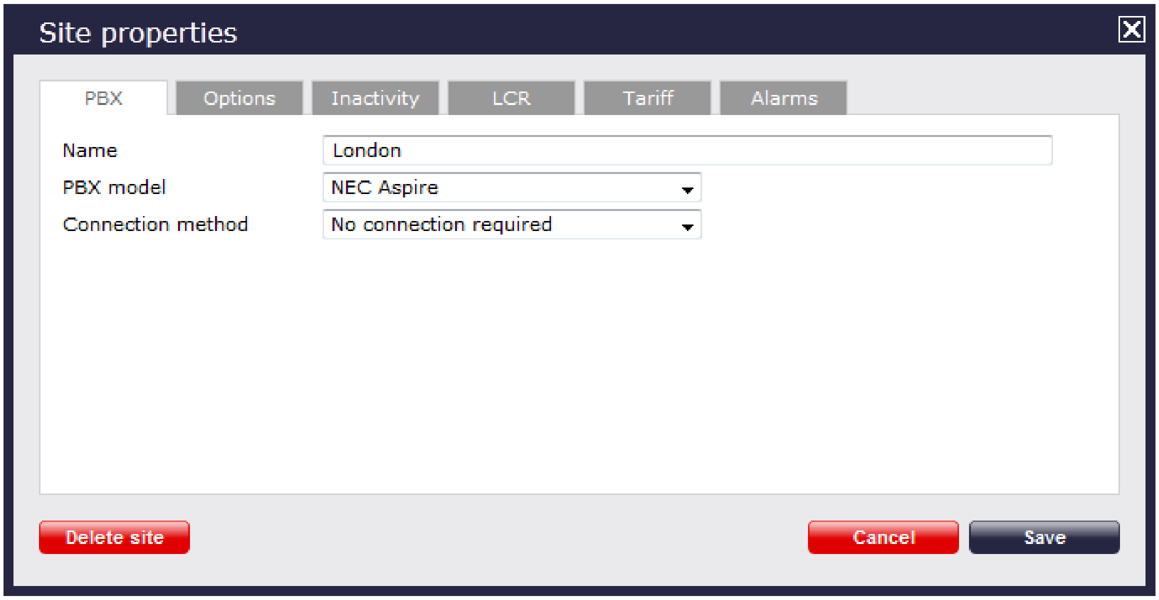
To capture SMDR data from your NEC Aspire using a serial connection, you first need to install the NetPBX software to collect the data from the serial port and send it to TIM Plus. For setup instructions, click on the link below:

Install and configure NetPBX

### Configuring TIM Plus

Once NetPBX is configured and collecting data, log in to TIM Plus and perfrom the steps below:

1. Click on the Directory tab.
2. Choose the site you want to configure and click Properties .




3. In the **Site Properties** window, select **NEC Aspire** from the **PBX model** drop-down list.
4. In the **Connection method** field, select **No connection required** from the drop-down list.
5. Click on the Save button to apply the settings.

## NEC Aspire - IP connection

These instructions help you configure your NEC Aspire to work with TIM Plus. Contact your system maintainer if you are not familiar with the configuration of your PBX.

Connection Type

TIM Plus establishes a TCP connection to this PBX.

Support Files

**NEC Aspire.TDT**

**NEC Aspire.TDS**

Required Tasks

Configure the SMDR output

Configure TIM Plus

### Configuring your SMDR output

Follow the steps below to configure the SMDR output on your NEC Aspire:

1. Log in to your PC Pro/Web Pro software.
2. To configure SMDR output using an IP connection, apply the following settings for each system adapter:

| Adapter | Programming code | Value | Description |
|---|---|---|---|

| | | | |
|---|---|---|---|
| **NTCPU - IP** | **10-12-01** | IP address that TIM Plus will connect to. | NTUCPU Network Setup - IP Address. |
| | **10-20-01** | TCP port that TIM Plus will connect to. We recommend using `9000` and incrementing it for each NEC Aspire you configure. | LAN Setup for External Equipment. |

3. Apply the following settings in the programming sections below:

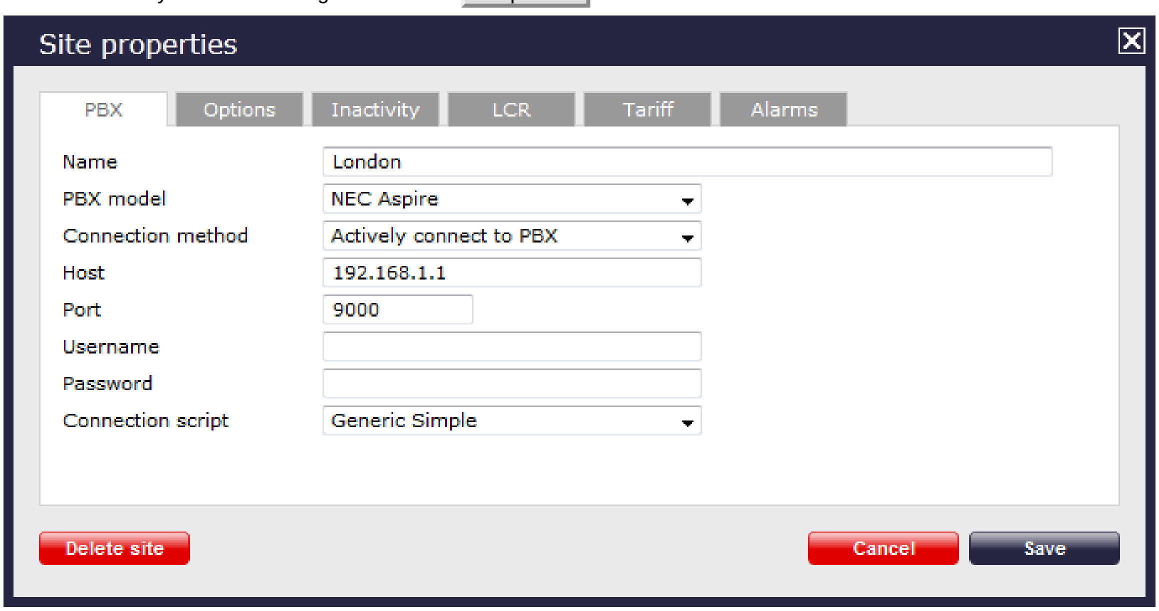
| Programming code | Value | Description |
|---|---|---|
| **14-01-06** | `1` | Basic Trunk Data Setup - SMDR Print. |
| **15-01-03** | `1` | Basic Extension Data Setup - SMDR Print. |
| **35-01-03** | `0` | SMDR Options - Header Language. |
| **35-01-04** | `0` | SMDR Options - Omit (Mask) Digits. |
| **35-01-05** | `0` | SMDR Options - Minimum Number of SMDR Digits. |
| **35-01-06** | `0` | SMDR Options - Minimum Call Duration. |
| **35-01-07** | `0` | SMDR Options - Minimum Ringing Time. |
| **35-01-08** | Default | SMDR Options - SMDR Format. |
| **35-02-01** | `0` | SMDR Output Options - Toll Restricted Call. |
| **35-02-02** | `1` | SMDR Output Options - PBX Calls. |
| **35-02-03** | `1` | SMDR Output Options - Display Trunk Name or Numbers. |
| **35-02-04** | `0` | SMDR Output Options - Daily Summary. |
| **35-02-05** | `0` | SMDR Output Options - Weekly Summary. |
| **35-02-06** | `0` | SMDR Output Options - Monthly Summary. |
| **35-02-08** | `1` | SMDR Output Options - Incoming calls. |

| | | |
|---|---|---|
| **35-02-09** | 0 | SMDR Output Options - Print Name or Numbers. |
| **35-02-10** | 0 | SMDR Output Options - All Lines Busy (ALB) Output. |
| **35-02-12** | 0 | SMDR Output Options - DID Table Name Output. |
| **35-02-13** | 1 | SMDR Output Options - CLI Output when DID to Trunk. |
| **35-02-14** | 1 | SMDR Output Options - Date. |
| **35-02-15** | 1 | SMDR Output Options - CLI/DID Number Switching. |
| **35-02-16** | 1 | SMDR Output Options - Print Trunk Name or Received Dialled Number. |
| **35-02-17** | 0 | SMDR Output Options - Print Account Code or Caller ID Name. |
| **35-02-18** | Default | SMDR Output Options - Caller ID Name Output Method. |
| **80-05-01** | 1 | Date Format for SMDR and System Reports |

### Configuring TIM Plus

If your NEC Aspire has been configured to send its SMDR data using an IP connection, follow the steps below to configure TIM Plus:

1. Click on the Directory tab.
2. Choose the site you want to configure and click Properties .




3. In the **Site Properties** window, select **NEC Aspire** from the **PBX model** drop-down list.

4. In the **Connection method** field, select **Actively connect to PBX** from the drop-down list.
5. In the **Host** field, enter the IP address of your NEC Aspire.
6. In the **Port** field, enter the port number you configured whilst programming code **10-20-01** (above).
7. Leave the **Username** and **Password** fields blank.
8. In the **Connection script** field, select **Generic Simple** from the drop-down list.
9. Click on the Save button to apply the settings.

## NEC DXE

These instructions help you configure your NEC DXE phone system to work with TIM Plus. Contact your system maintainer if you are not familiar with the configuration of your PBX.

Connection Type

TIM Plus establishes a serial connection with this PBX.

Support Files

**NEC DXE.TDT**

**NEC DXE.TDS**

Required Tasks

Configure the SMDR output

Install NetPBX

Configure TIM Plus

### Configure your SMDR output

The NEC DXE phone system sends SMDR information via a serial connection. You need to directly connect a serial cable from your NEC DXE to the PC that NetPBX is installed and running on. By default, the SMDR output of your NEC DXE is not enabled. For more information about enabling and configuring the SMDR output, contact your system maintainer.

### Installing NetPBX

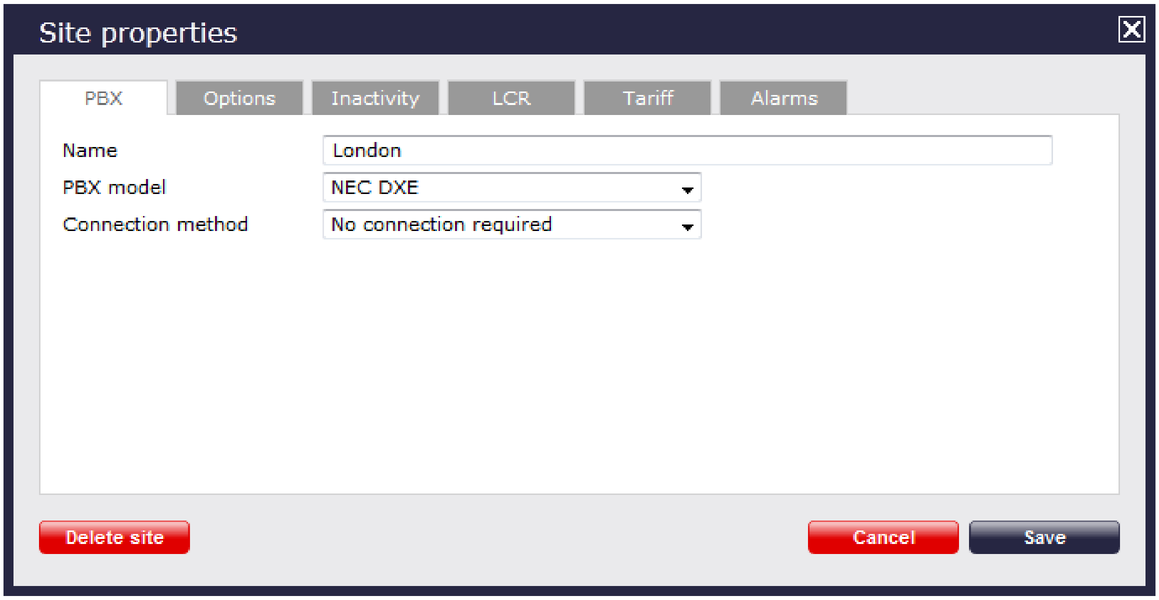
To collect call logging data from the serial port of your NEC DXE and send it to TIM Plus, you first need to install the NetPBX software. For setup instructions, click on the link below:

Install and configure NetPBX

### Configuring TIM Plus

Once NetPBX is configured and collecting data, log in to TIM Plus and perform the following steps:

1. Click on the Directory tab.
2. Choose the site you want to configure and click Properties .




3. In the **Site Properties** window, select **NEC DXE** from the **PBX model** drop-down list.
4. In the **Connection method** field, select **No connection required** from the drop-down list.
5. Click on the Save button to apply the changes.

## NEC NEAX

The NEC NEAX can be configured to send its SMDR data over a serial (RS232) or an IP connection. Click on one of the links below that relates to your preferred connection method.

### NEC NEAX - Serial connection

These instructions help you configure your NEC NEAX phone system to work with TIM Plus. Contact your system maintainer if you are not familiar with the configuration of your PBX.

Connection Type

TIM Plus establishes a serial connection with this PBX.

Support Files

**NEC NEAX.TDT**

**NEC NEAX.TDS**

Required Tasks

Configure the SMDR output

Install NetPBX

Configure TIM Plus

#### Configuring your SMDR output

Using the Customer Administration Terminal (CAT), enter the following settings in the system-programming mode:

| Field name | Details |
| --- | --- |

| | |
|---|---|
| **CM40** | Default output port and attributes: **9600 baud, 8 data bits, no parity, 2 stop bits, DTR/RTS flow control.** |
| **CM13+05** | Enable SMDR for incoming calls to required stations. |
| **CM13+06** | Enable SMDR for outgoing calls to required stations. |
| **CM35+14** | Enable SMDR for outgoing calls to required trunk routes. |
| **CM35+49** | Enable SMDR for incoming calls to required trunk routes. |
| **CM08** | If SMDR for incoming calls is enabled, specify whether the setting applies to all incoming calls or only to those that use account codes. Also, include `ANI/Caller ID` for incoming calls.<br><br>**NOTE 1:** The `ANI/Caller ID` is required to provide SMDR data for incoming calls, even if this feature is enabled by **CM13+05** and **CM35+49**.<br><br>**NOTE 2:** Use CDR formats **#501** (2400 IMS), **#505** (2000 IPS), **#506** (2000 IVS). |

#### Installing NetPBX

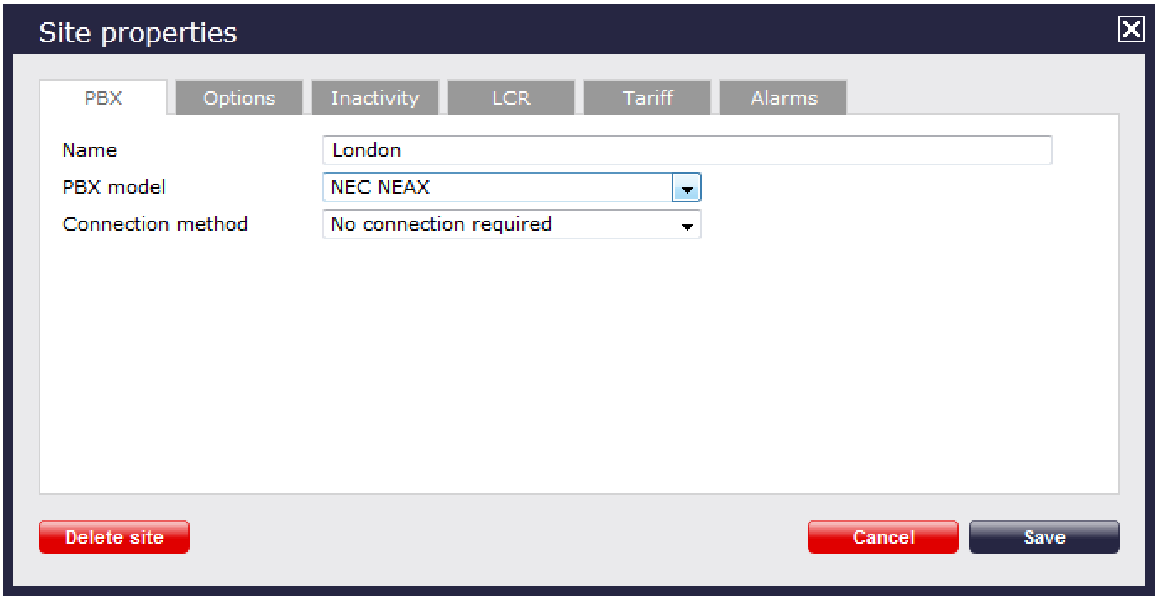
To capture SMDR data from your NEC NEAX using a serial connection, you first need to install the NetPBX software to collect the data from the serial port and send it to TIM Plus. For setup instructions, click on the link below:

Install and configure NetPBX

#### Configuring TIM Plus

Once NetPBX is configured and collecting data, log in to TIM Plus and perform the steps below:

1. Click on the Directory tab.
2. Choose the site you want to configure and click Properties .




3. In the **Site Properties** window, select **NEC NEAX** from the **PBX model** drop-down list.
4. In the **Connection method** field, select **No connection required** from the drop-down list.
5. Click on the Save button to apply the settings.

## NEC NEAX - IP connection

These instructions help you configure your NEC NEAX phone system to work with TIM Plus. Contact your system maintainer if you are not familiar with the configuration of your PBX.

Connection Type

TIM Plus establishes a TCP connection to this PBX.

Support Files

**NEC NEAX.TDT**

**NEC NEAX.TDS**

Required Tasks

Configure the SMDR output

Configure TIM Plus

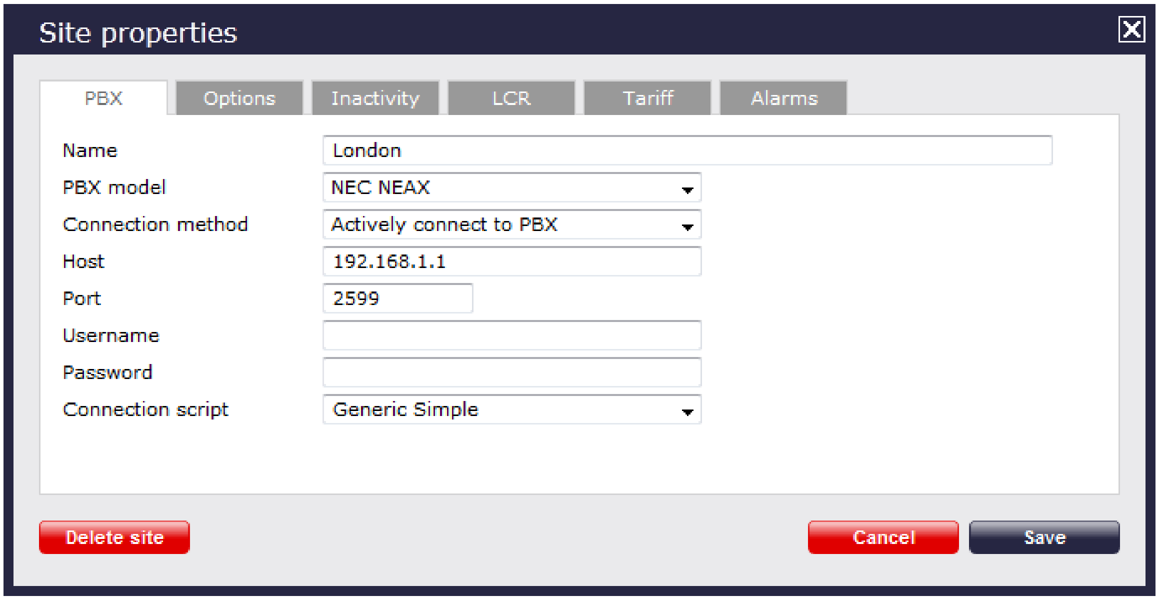
### Configure the SMDR output

By default, the SMDR output of your NEC NEAX is not enabled. For more information about enabling and configuring the SMDR output, contact your system maintainer.

### Configuring TIM Plus

If your NEC NEAX has been configured to send its SMDR data using an IP connection, follow the steps below to configure TIM Plus:

1. Click on the Directory tab.
2. Choose the site you want to configure and click Properties .




3. In the **Site Properties** window, select **NEC NEAX** from the **PBX model** drop-down list.

4. In the **Connection method** field, select **Actively connect to PBX** from the drop-down list.

5. In the **Host** field, enter the IP address of your NEC NEAX.

6. In the **Port** field, enter **2599**.

7. Leave the **Username** and **Password** fields blank.

8. In the **Connection script** field, select **Generic Simple** from the drop-down list.

9. Click on the Save button to apply the settings.

## NEC XN120

The NEC XN120 can be configured to send its SMDR data over a serial (RS232) or an IP connection. Click on one of the links below that relates to your preferred connection method.

### NEC XN120 - Serial connection

These instructions help you configure your NEC XN120 phone system to work with TIM Plus. Contact your system maintainer if you are not familiar with the configuration of your PBX.

Connection Type

TIM Plus establishes a serial connection with this PBX.

Support Files

**NEC DXE.TDT**

**NEC DXE.TDS**

Required Tasks

Configure the SMDR output

Install NetPBX

Configure TIM Plus

### Configuring your SMDR output

Follow the steps below to configure the SMDR output on your NEC XN120:

1. Log in to your PC Pro/Web Pro software.

2. To configure SMDR output by serial port, apply the following settings:

| Adapter | Programming code | Value | Description |
|---|---|---|---|
| **NTCPU - Serial** | **10-21-02** | 1 | NTCPU Hardware Setup - Baud Rate for Com Port. Choose from the three available options: 0(4800), 1(9600) and 2(38400). |
| | **35-01-01** | 1 | SMDR Options - Output Port Type. |

3. Apply the following settings in the programming sections below:

| Programming code | Value | Description |
|---|---|---|
| **14-01-06** | 1 | Basic Trunk Data Setup - SMDR Print. |
| **15-01-03** | 1 | Basic Extension Data Setup - SMDR Print. |
| **35-01-03** | 0 | SMDR Options - Header Language. |
| **35-01-04** | 0 | SMDR Options - Omit (Mask) Digits. |
| **35-01-05** | 0 | SMDR Options - Minimum Number of SMDR Digits. |
| **35-01-06** | 0 | SMDR Options - Minimum Call Duration. |
| **35-01-07** | 0 | SMDR Options - Minimum Ringing Time. |
| **35-01-08** | Default | SMDR Options - SMDR Format. |
| **35-02-01** | 0 | SMDR Output Options - Toll Restricted Call. |
| **35-02-02** | 1 | SMDR Output Options - PBX Calls. |
| **35-02-03** | 1 | SMDR Output Options - Display Trunk Name or Numbers. |

| | | |
|---|---|---|
| **35-02-04** | 0 | SMDR Output Options - Daily Summary. |
| **35-02-05** | 0 | SMDR Output Options - Weekly Summary. |
| **35-02-06** | 0 | SMDR Output Options - Monthly Summary. |
| **35-02-08** | 1 | SMDR Output Options - Incoming calls. |
| **35-02-09** | 0 | SMDR Output Options - Print Name or Numbers. |
| **35-02-10** | 0 | SMDR Output Options - All Lines Busy (ALB) Output. |
| **35-02-12** | 0 | SMDR Output Options - DID Table Name Output. |
| **35-02-13** | 1 | SMDR Output Options - CLI Output when DID to Trunk. |
| **35-02-14** | 1 | SMDR Output Options - Date. |
| **35-02-15** | 1 | SMDR Output Options - CLI/DID Number Switching. |
| **35-02-16** | 1 | SMDR Output Options - Print Trunk Name or Received Dialled Number. |
| **35-02-17** | 0 | SMDR Output Options - Print Account Code or Caller ID Name. |
| **35-02-18** | Default | SMDR Output Options - Caller ID Name Output Method. |
| **80-05-01** | 1 | Date Format for SMDR and System Reports. |

### Installing NetPBX

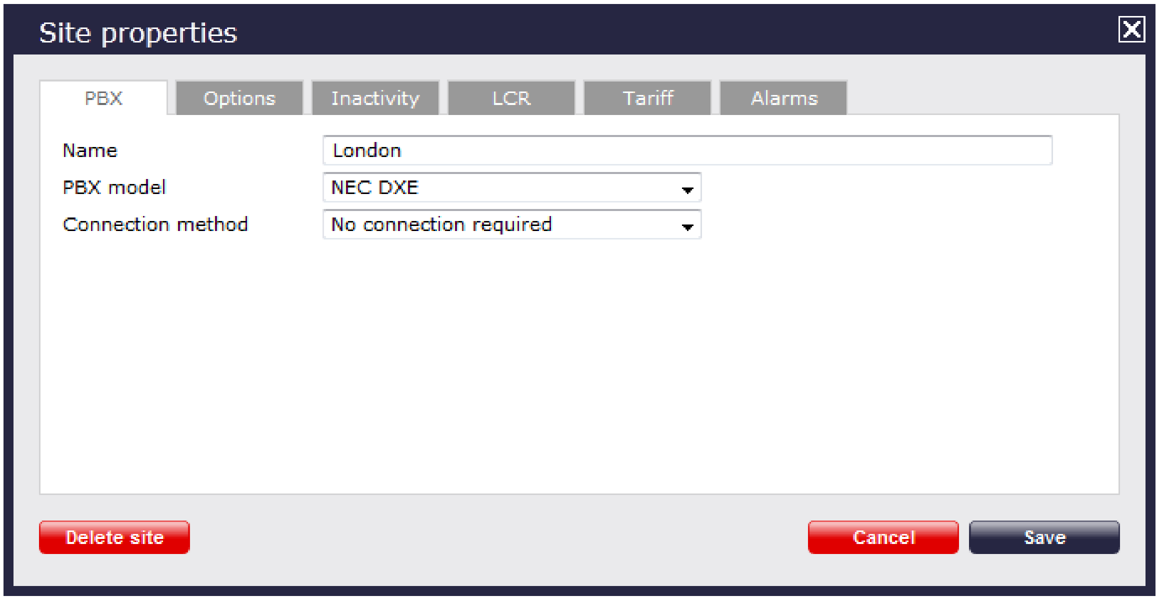
To capture SMDR data from your NEC XN120 using a serial connection, you first need to install the NetPBX software to collect the data from the serial port and send it to TIM Plus. For setup instructions, click on the link below:

Install and configure NetPBX

### Configuring TIM Plus

Once NetPBX is configured and collecting data, log in to TIM Plus and perform the steps below:

1. Click on the Directory tab.
2. Choose the site you want to configure and click Properties .




3. In the **`Site Properties`** window, select **`NEC DXE`** from the **`PBX model`** drop-down list.
4. In the **`Connection method`** field, select **`No connection required`** from the drop-down list.
5. Click on the Save button to apply the settings.

## NEC XN120 - IP connection

These instructions help you configure your NEC XN120 phone system to work with TIM Plus. Contact your system maintainer if you are not familiar with the configuration of your PBX.

Connection Type

TIM Plus establishes a TCP connection to this PBX.

Support Files

**`NEC DXE.TDT`**

**`NEC DXE.TDS`**

Required Tasks

Configure the SMDR output

Configure TIM Plus

### Configuring your SMDR output

Follow the steps below to configure the SMDR output on your NEC XN120:

1. Log in to your PC Pro/Web Pro software.
2. To configure SMDR output using an IP connection, apply the following settings:

| Adapter | Programming code | Value | Description |
|---|---|---|---|

| | | | |
|---|---|---|---|
| **NTCPU - IP** | **10-12-01** | IP address that TIM Plus will connect to. | NTUCPU Network Setup - IP Address. |
| | **10-20-01** | TCP port that TIM Plus will connect to. We recommend using `9000` and incrementing it for each NEC XN120 you configure. | LAN Setup for External Equipment. |

3. Apply the following settings in the programming sections below:

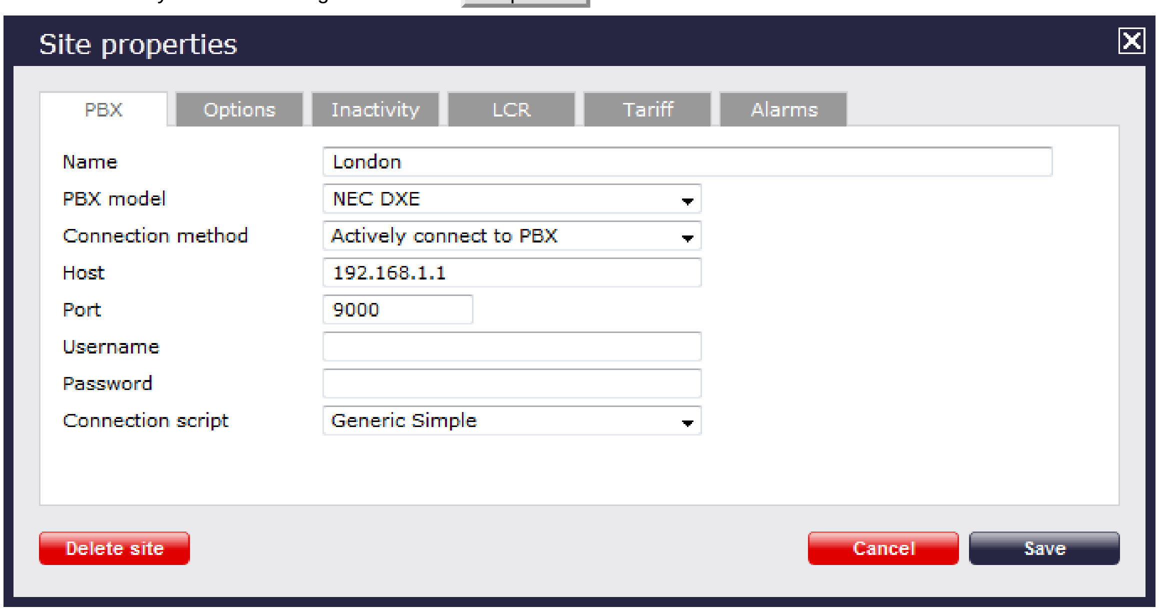
| Programming code | Value | Description |
|---|---|---|
| **14-01-06** | `1` | Basic Trunk Data Setup - SMDR Print. |
| **15-01-03** | `1` | Basic Extension Data Setup - SMDR Print. |
| **35-01-03** | `0` | SMDR Options - Header Language. |
| **35-01-04** | `0` | SMDR Options - Omit (Mask) Digits. |
| **35-01-05** | `0` | SMDR Options - Minimum Number of SMDR Digits. |
| **35-01-06** | `0` | SMDR Options - Minimum Call Duration. |
| **35-01-07** | `0` | SMDR Options - Minimum Ringing Time. |
| **35-01-08** | Default | SMDR Options - SMDR Format. |
| **35-02-01** | `0` | SMDR Output Options - Toll Restricted Call. |
| **35-02-02** | `1` | SMDR Output Options - PBX Calls. |
| **35-02-03** | `1` | SMDR Output Options - Display Trunk Name or Numbers. |
| **35-02-04** | `0` | SMDR Output Options - Daily Summary. |
| **35-02-05** | `0` | SMDR Output Options - Weekly Summary. |
| **35-02-06** | `0` | SMDR Output Options - Monthly Summary. |
| **35-02-08** | `1` | SMDR Output Options - Incoming calls. |

| | | |
|---|---|---|
| **35-02-09** | `0` | SMDR Output Options - Print Name or Numbers. |
| **35-02-10** | `0` | SMDR Output Options - All Lines Busy (ALB) Output. |
| **35-02-12** | `0` | SMDR Output Options - DID Table Name Output. |
| **35-02-13** | `1` | SMDR Output Options - CLI Output when DID to Trunk. |
| **35-02-14** | `1` | SMDR Output Options - Date. |
| **35-02-15** | `1` | SMDR Output Options - CLI/DID Number Switching. |
| **35-02-16** | `1` | SMDR Output Options - Print Trunk Name or Received Dialled Number. |
| **35-02-17** | `0` | SMDR Output Options - Print Account Code or Caller ID Name. |
| **35-02-18** | Default | SMDR Output Options - Caller ID Name Output Method. |
| **80-05-01** | `1` | Date Format for SMDR and System Reports. |

### Configuring TIM Plus

If your NEC XN120 has been configured to send its SMDR data using an IP connection, follow the steps below to configure TIM Plus:

1. Click on the Directory tab.
2. Choose the site you want to configure and click Properties .




3. In the **`Site Properties`** window, select **`NEC DXE`** from the **`PBX model`** drop-down list.

4. In the **Connection method** field, select **Actively connect to PBX** from the drop-down list.
5. In the **Host** field, enter the IP address of your NEC XN120.
6. In the **Port** field, enter the port number you configured whilst programming code **10-20-01**.
7. Leave the **Username** and **Password** fields blank.
8. In the **Connection script** field, select **Generic Simple** from the drop-down list.
9. Click on the Save button to apply the settings.

## NEC SV8100

These instructions help you configure your NEC SV8100 phone system to work with TIM Plus. Contact your system maintainer if you are not familiar with the configuration of your PBX.

Connection Type

TIM Plus establishes a TCP connection to this PBX.

Support Files

**NEC DXE.TDT**

**NEC DXE.TDS**

Required Tasks

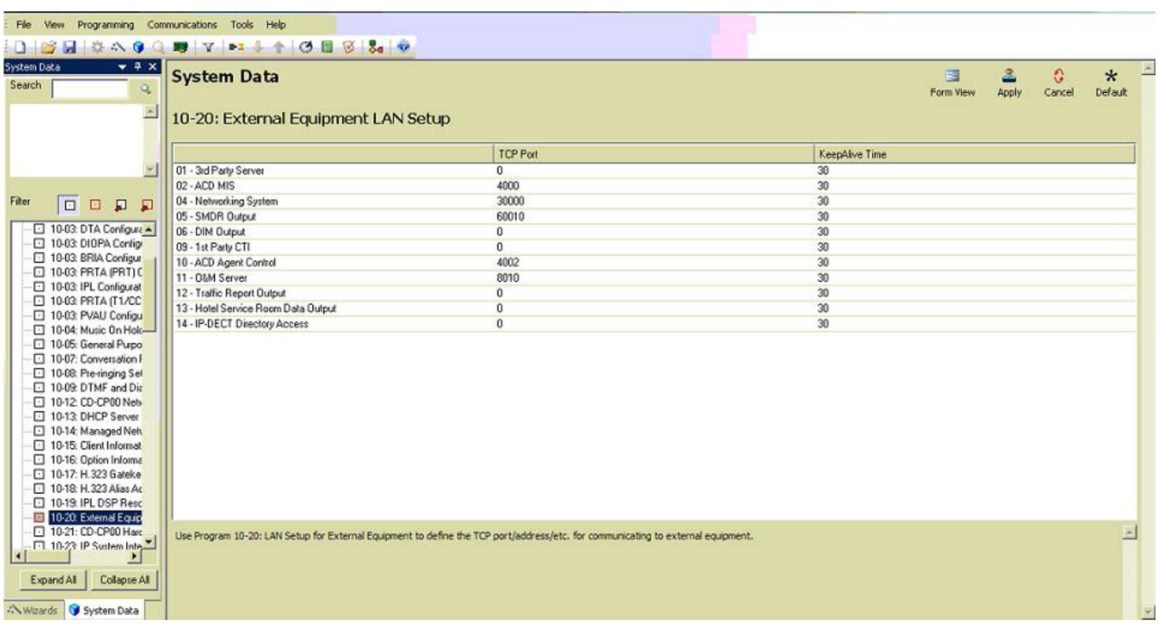
Configure the SMDR output

Configure TIM Plus

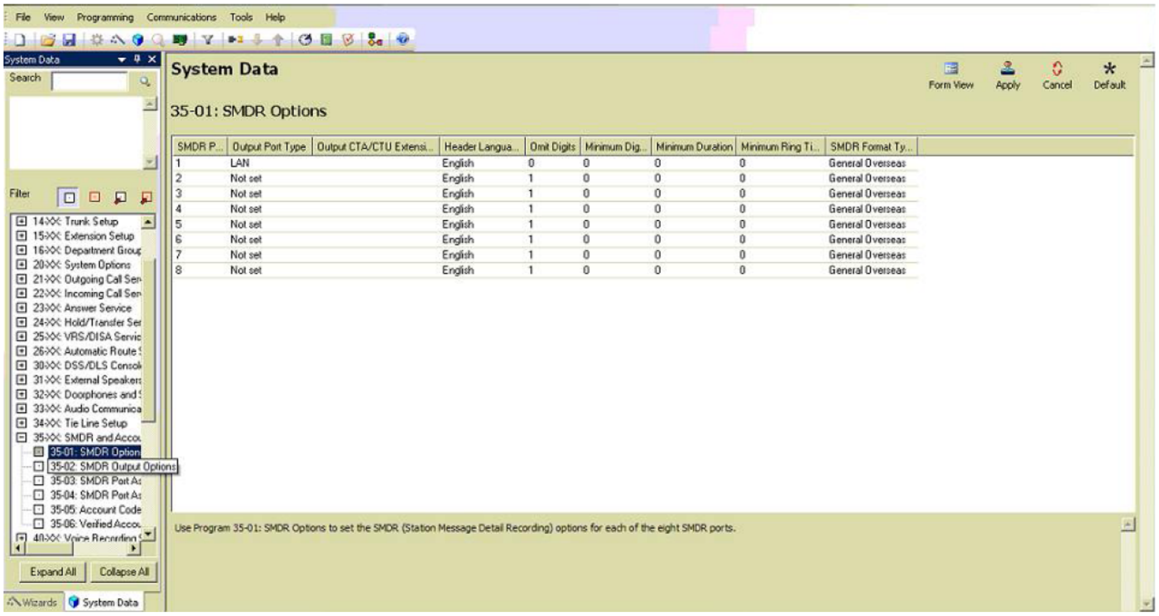
### Configuring the SMDR output

Follow the instructions below to configure your NEC SV8100 for use with TIM Plus:

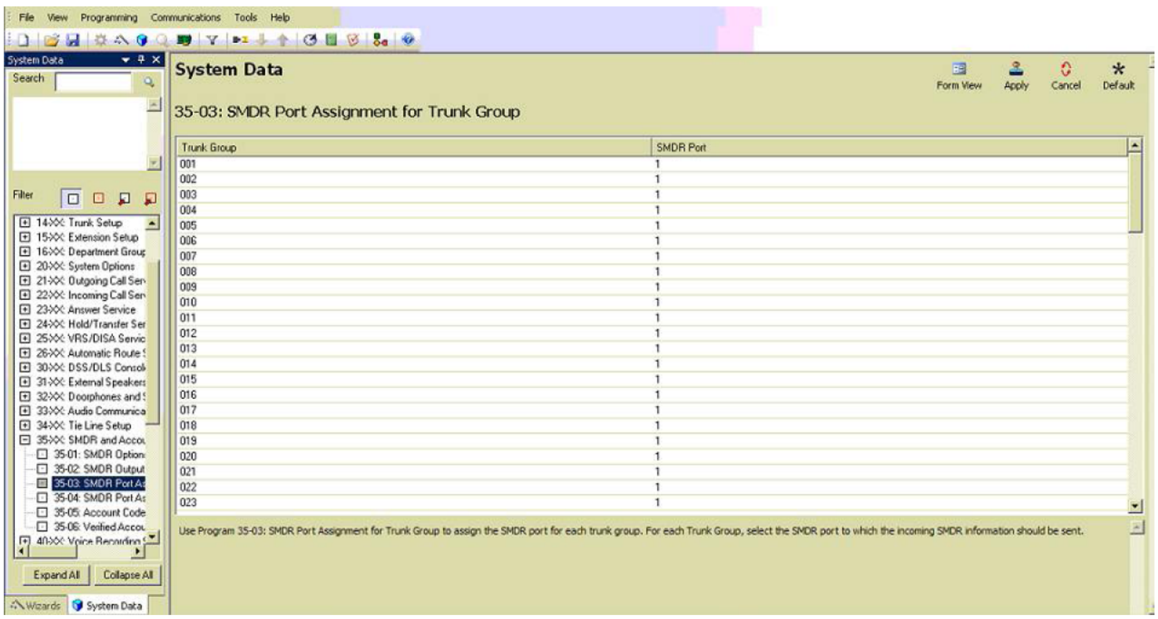
External equipment LAN setup



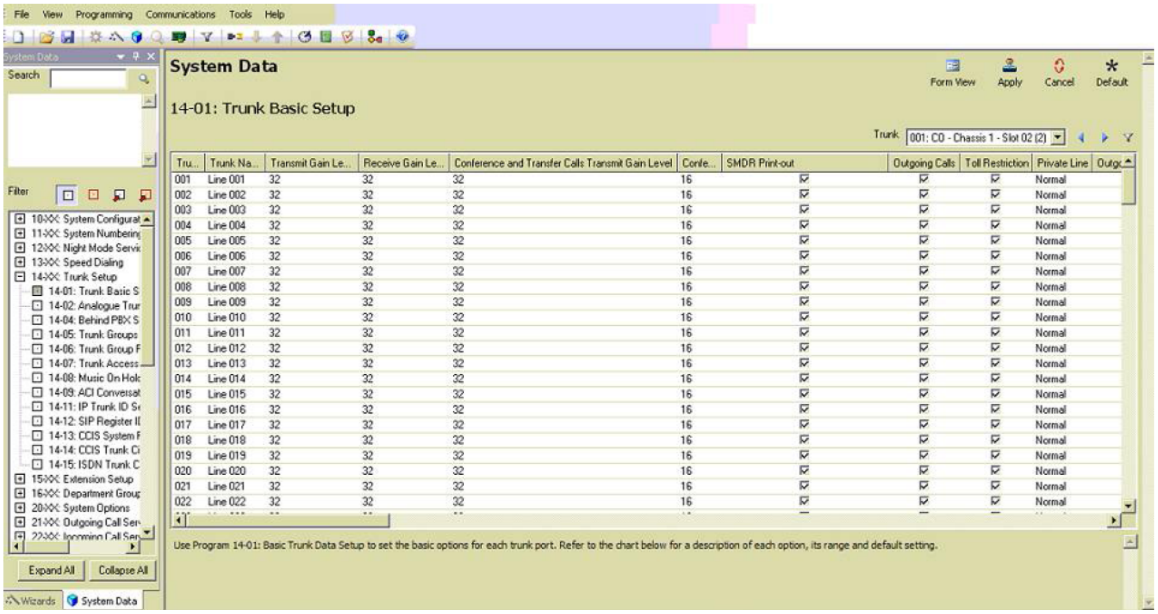
SMDR options



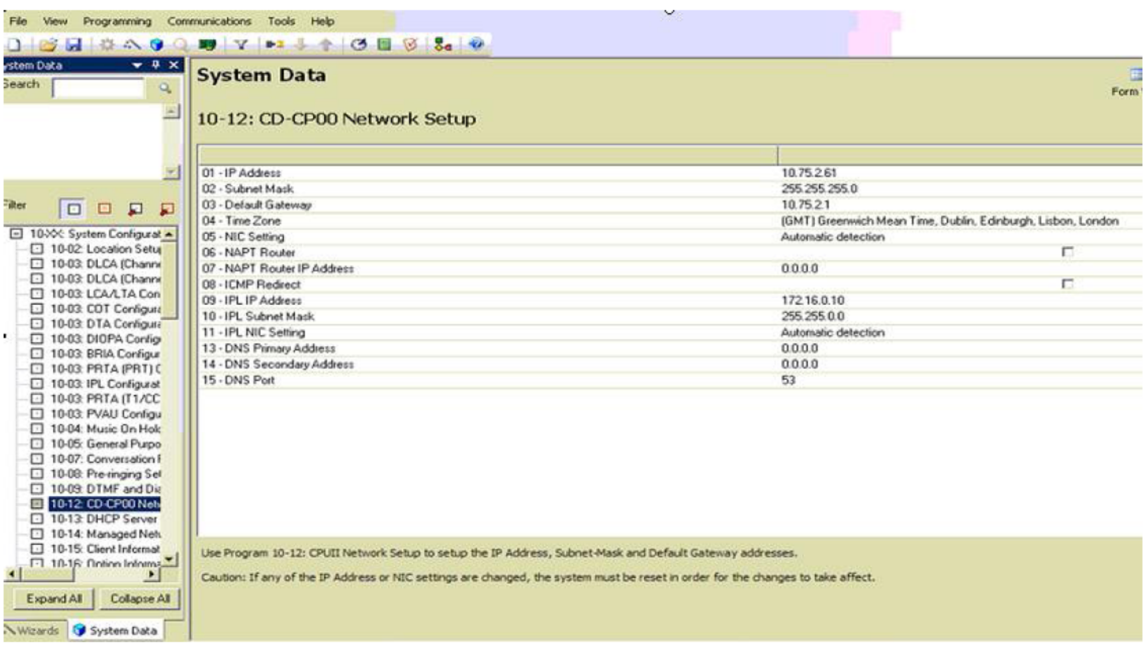
SMDR port assignment for trunk groups



Trunk Basic setup



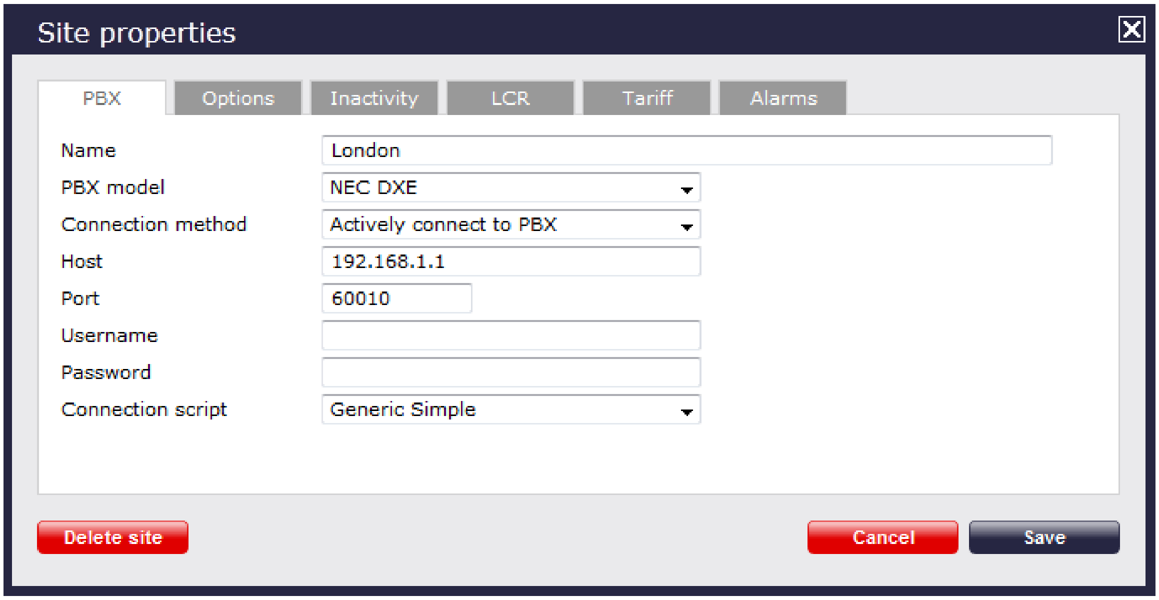

CD DP00 Network setup




## Configuring TIM Plus

Follow the steps below to configure TIM Plus to collect the SMDR data from your NEC SV8100:

1. Click on the **Directory** tab.
2. Choose the site you want to configure and click **Properties** .




3. In the **`Site Properties`** window, select **`NEC DXE`** from the **`PBX model`** drop-down list.
4. In the **`Connection method`** field, select **`Actively connect to PBX`** from the drop-down list.
5. In the **`Host`** field, enter the IP address of your NEC SV8100.
6. In the **`Port`** field, enter **`60010`**.
7. Leave the **`Username`** and **`Password`** fields blank.
8. In the **`Connection script`** field, select **`Generic Simple`** from the drop-down list.
9. Click on the Save button to apply the settings.

# Nortel

## Nortel BCM up to v3.x

Please refer to Avaya BCM up to v3.x.

## Nortel BCM v4.x+

Please refer to Avaya BCM v4.x+ .

## Nortel Meridian Option Series

Please refer to Avaya Meridian Option Series.

## Nortel Norstar

Please refer to Avaya Norstar.

# Panasonic

## Panasonic DBS Series

These instructions help you configure your Panasonic DBS Series phone system to work with TIM Plus. Contact your system maintainer if you are not familiar with the configuration of your PBX.

Connection Type

TIM Plus establishes a serial connection with this PBX.

Support Files

**Panasonic DBS Series.TDT**

Required Tasks

- Configure the SMDR output
- Install NetPBX
- Configure TIM Plus

### Configuring your SMDR output

Follow the steps below to configure your Panasonic DBS Series to output SMDR data to TIM Plus. The configuration needs to be performed from the Operator phone:

1. Press the ON/OFF key.
2. Press the RECALL key.
3. Press # # to enter the **Programming mode**.
4. Navigate to **Call logging/Remote programming** parameters.
5. Go to **Call logging - Parity check** and select **1**, then press the # key.
6. Go to **Call logging - Even/Odd parity** and select **1**, then press the # key.
7. Go to **Call logging - Baud rate (SMDR)** and select **4**, then press the # key.
8. Go to **Call logging - Stop bit** and select **1**, then press the # key.
9. Go to **Call logging - Data length** and select **4**, then press the # key.
10. Go to **Call logging - Printing selection out/in** and select **1** for incoming and outgoing calls.
11. Go to **Call logging - Printing selection local/long distance calls** and select **1** to print all outgoing calls, then press the # key.
12. Press the ON/OFF key to save the settings.

### Installing NetPBX

The Panasonic DBS Series phone system sends SMDR information via a serial connection. To collect the call logging data from the serial port and send it to TIM Plus, you first need to install the NetPBX software. For setup instructions, click on the link below:

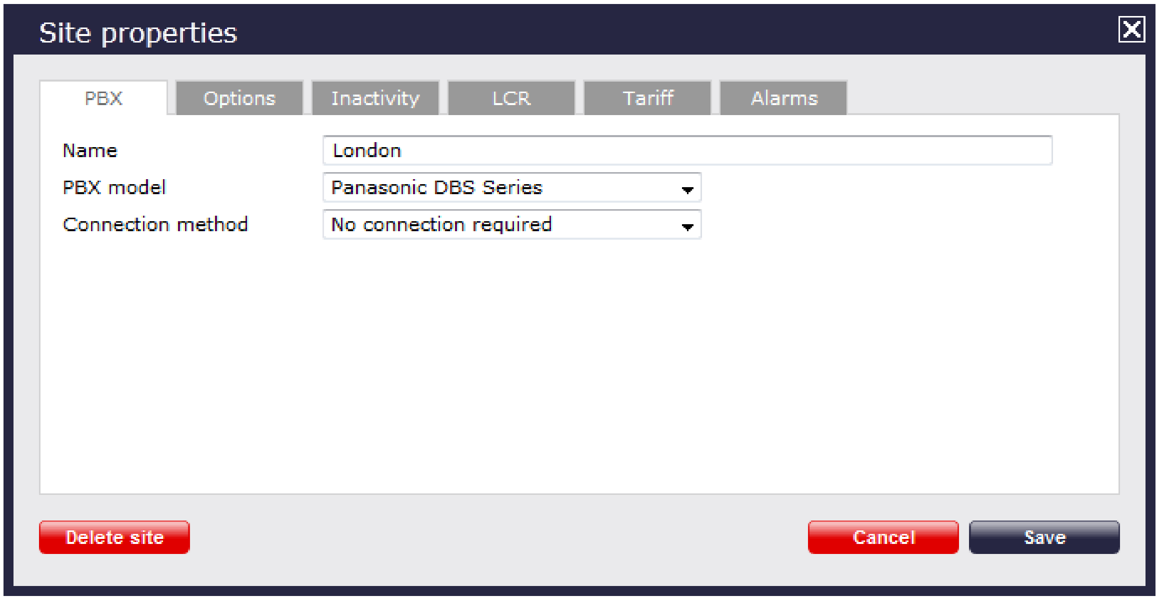
Install and configure NetPBX

### Configuring TIM Plus

Once NetPBX is configured and collecting call logging data, log in to TIM Plus and perform the steps below:

1. Click on the Directory tab.

2. Choose the site you want to configure and click Properties .




3. In the **Site Properties** window, select **Panasonic DBS Series** from the **PBX model** drop-down list.
4. In the **Connection method** field, select **No connection required** from the drop-down list.
5. Click on the Save button to apply the settings.

## Panasonic ICX/S-ICX

These instructions help you configure your Panasonic ICX/S-ICX phone system to work with TIM Plus. Contact your system maintainer if you are not familiar with the configuration of your PBX.

Connection Type

TIM Plus establishes a serial connection with this PBX.

Support Files

**Panasonic ICX S-ICX.TDT**

Required Tasks

- Configure the SMDR output
- Install NetPBX
- Configure TIM Plus

### Configuring the SMDR output

The Panasonic ICX/S-ICX phone system sends SMDR information via a serial connection. You need to directly connect a serial cable from the Panasonic ICX/S-ICX phone system to the PC that NetPBX is installed and running on. For more information about the output and configuration of your SMDR data, please contact your system maintainer.

### Installing NetPBX

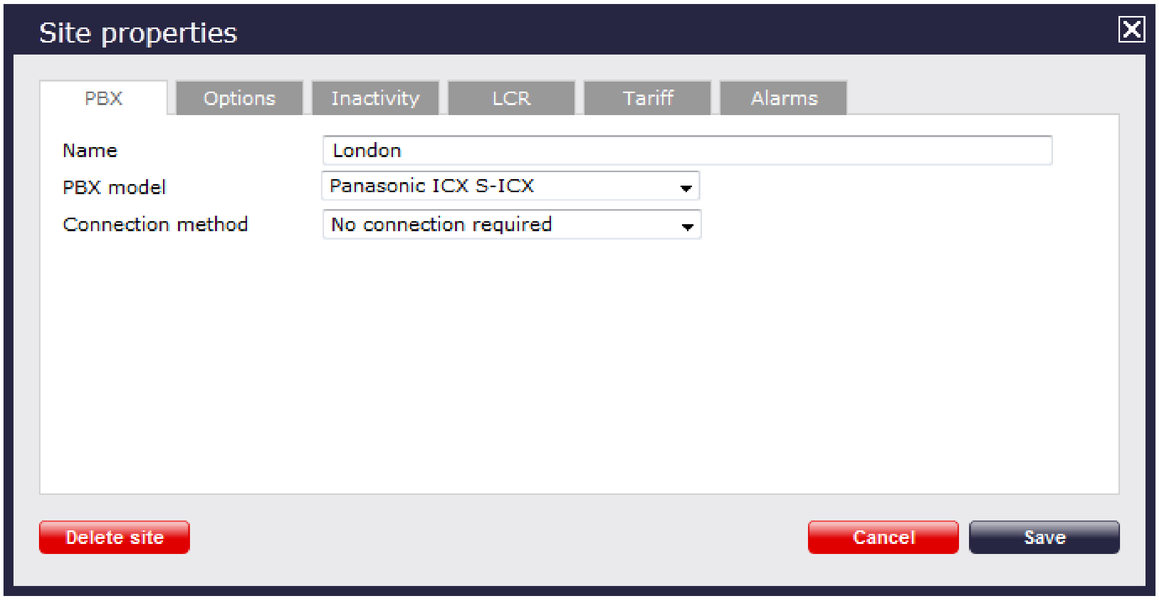
The Panasonic ICX/S-ICX phone system sends SMDR information via a serial connection. To collect the call logging data from the serial port and send it to TIM Plus, you first need to install the NetPBX software. For setup instructions, click on the link below:

Install and configure NetPBX

### Configuring TIM Plus

Once NetPBX is configured and collecting data, log in to TIM Plus and perform the steps below:

1. Click on the Directory tab.
2. Choose the site you want to configure and click Properties .




3. In the **Site Properties** window, select **Panasonic ICX S-ICX** from the **PBX model** drop-down list.
4. In the **Connection method** field, select **No connection required** from the drop-down list.
5. Click on the Save button to apply the settings.

## Panasonic KX-TA/TE

These instructions help you configure your Panasonic KX-TA/TE phone system to work with TIM Plus. Contact your system maintainer if you are not familiar with the configuration of your PBX.

Connection Type

TIM Plus establishes a serial connection with this PBX.

Support Files

**Panasonic KX-TD Series.TDT**

**Panasonic KX-TD Series.TDS**

Required Tasks

Configure the SMDR output

Install NetPBX

Configure TIM Plus

### Configuring the SMDR output

Follow the steps below to configure your Panasonic KX-TA/TE to output SMDR data to TIM Plus. The configuration needs to be performed from a Panasonic KX-T7130 phone:

1. Set the System Program Switch on the EMSS Control Unit to the Programming position.
2. Press - * followed by the # key, then enter your system password.
3. Press # # to enter the `Programming mode`.
4. Go to programming code **800** and set each of the fields as shown below. Press Store and then Next after each entry in order to move to the next field:

| SMDR field | Value |
|---|---|
| **NL-Code** | `CR+LF` |
| **Baud Rate** | `9600` |
| **Word Length** | `8 bits` |
| **Parity** | `None` |
| **Stop Bit** | `1 bit` |

5. Go to programming code **801** and set each of the fields as shown below. Press Store and then Next after each entry in order to move to the next field:

| SMDR field | Value |
|---|---|
| **Page Length** | Leave as default |
| **Skip Perf** | Leave as default |

6. Go to programming code **802** and set each of the fields as shown below. Press Store and then Next after each entry in order to move to the next field:

| SMDR field | Value |
|---|---|
| **Outgoing** | `On` |
| **Incoming** | `On` |

7. Set the System Program Switch back to Store position.

### Installing NetPBX

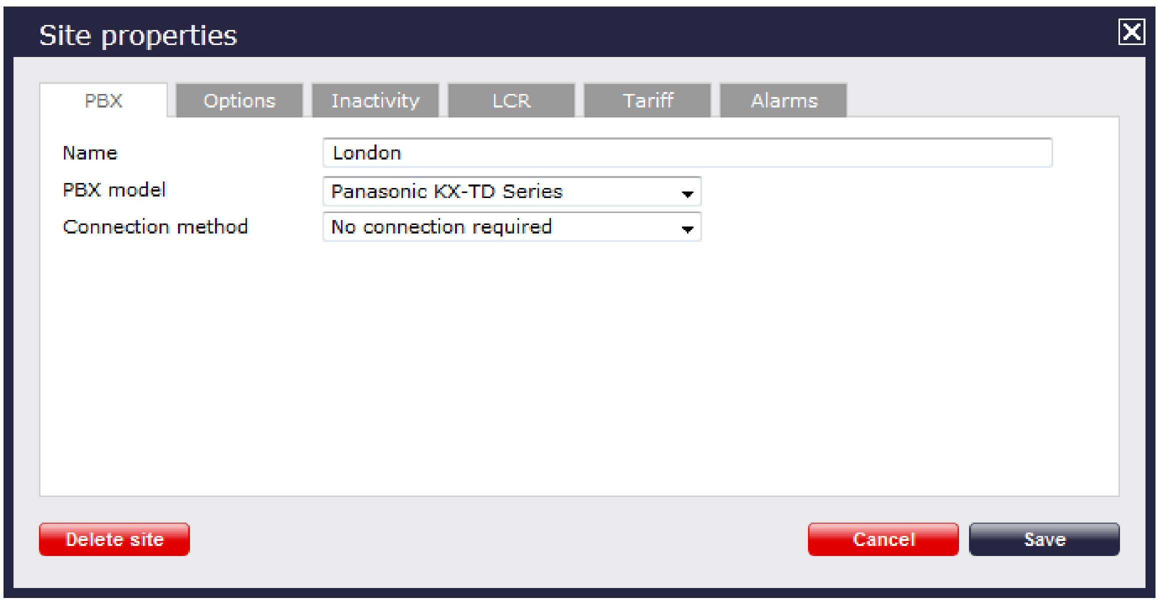
The Panasonic KX-TA/TE phone system sends SMDR information via a serial connection. To collect the call logging data from the serial port and send it to TIM Plus, you first need to install the NetPBX software. For setup instructions, click on the link below:

Install and configure NetPBX

### Configuring TIM Plus

Once NetPBX is configured and collecting data, log in to TIM Plus and perform the steps below:

1. Click on the Directory tab.
2. Choose the site you want to configure and click Properties .




3. In the **Site Properties** window, select **Panasonic KX-TD Series** from the **PBX model** drop-down list.
4. In the **Connection method** field, select **No connection required** from the drop-down list.
5. Click on the Save button to apply the settings

## Panasonic KX-TDA/E/NCP500-1000/NS1000

The Panasonic KX-TDA/E/NCP500/1000 can be configured to send its SMDR data over a serial (RS232) or an IP connection. Click on one of the links below that relates to your preferred connection method.

### Panasonic KX-TDA/E/NCP500-1000/NS1000 - Serial connection

These instructions help you configure your Panasonic KX-TDA/E/NCP500/1000 phone system to work with TIM Plus. Contact your system maintainer if you are not familiar with the configuration of your PBX.

Connection Type

TIM Plus establishes a serial connection with this PBX.

Support Files

**Panasonic KX-TD Series.TDT**

**Panasonic KX-TD Series.TDS**

Required Tasks

Configure the SMDR output

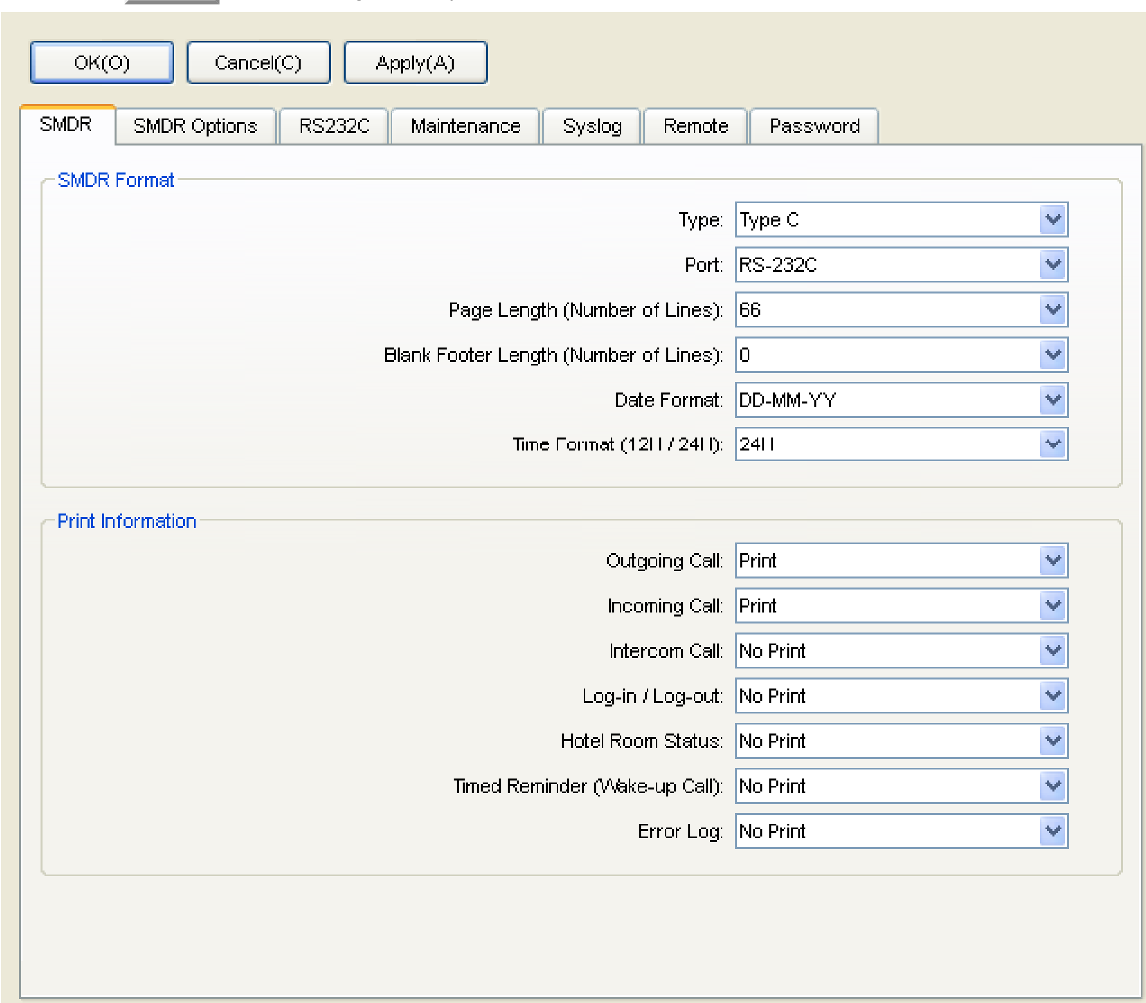
Install NetPBX

Configure TIM Plus

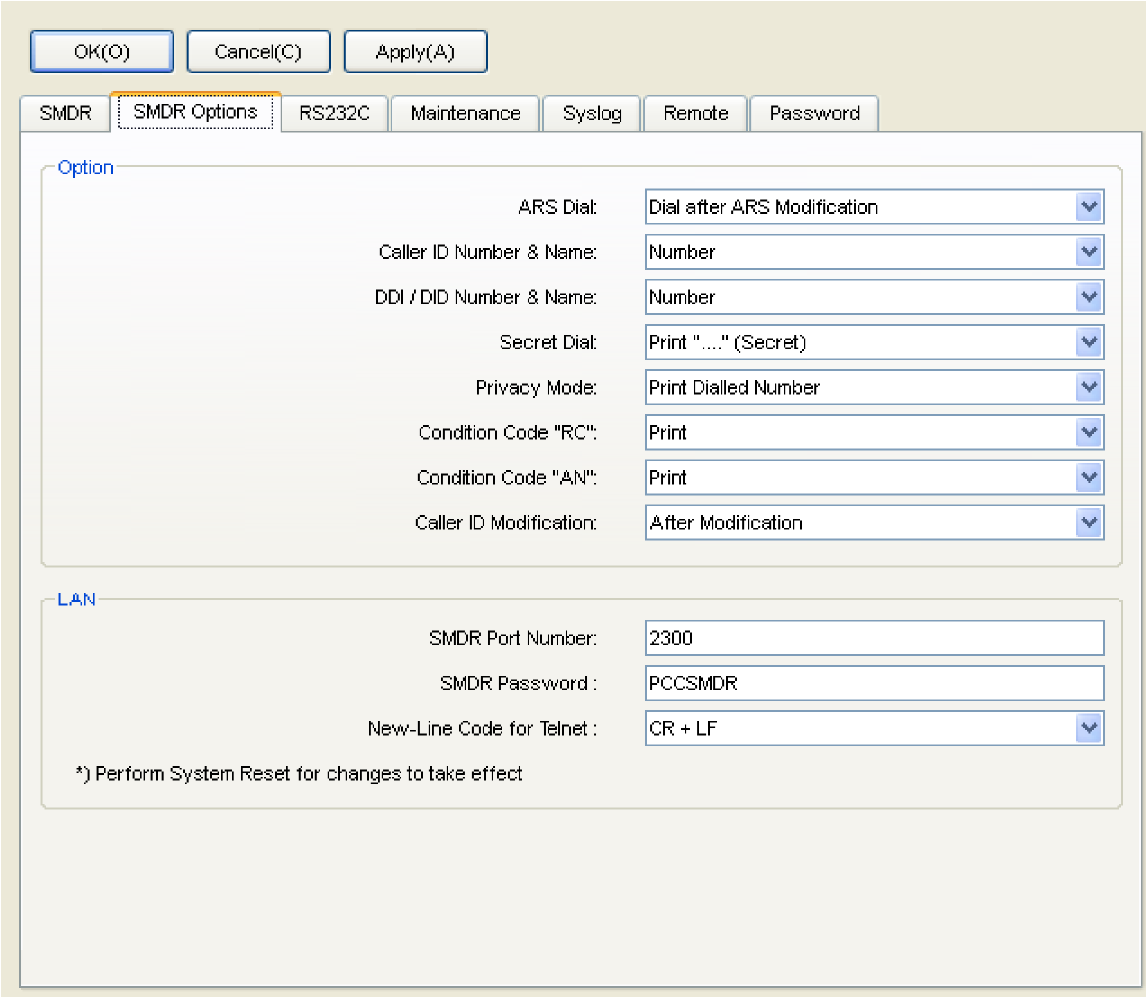
### Configuring the SMDR output

Follow the steps below to configure your Panasonic phone system to output SMDR to TIM Plus.

1. Log in to the Panasonic Maintenance Console program.
2. Click on the 11. Maintenance tab from the left-hand menu.
3. Click on the SMDR tab and configure the options as shown below:




4. Click on the SMDR Options tab and configure the options as shown below:




5. Click on the Apply button to save the changes.

### Installing NetPBX

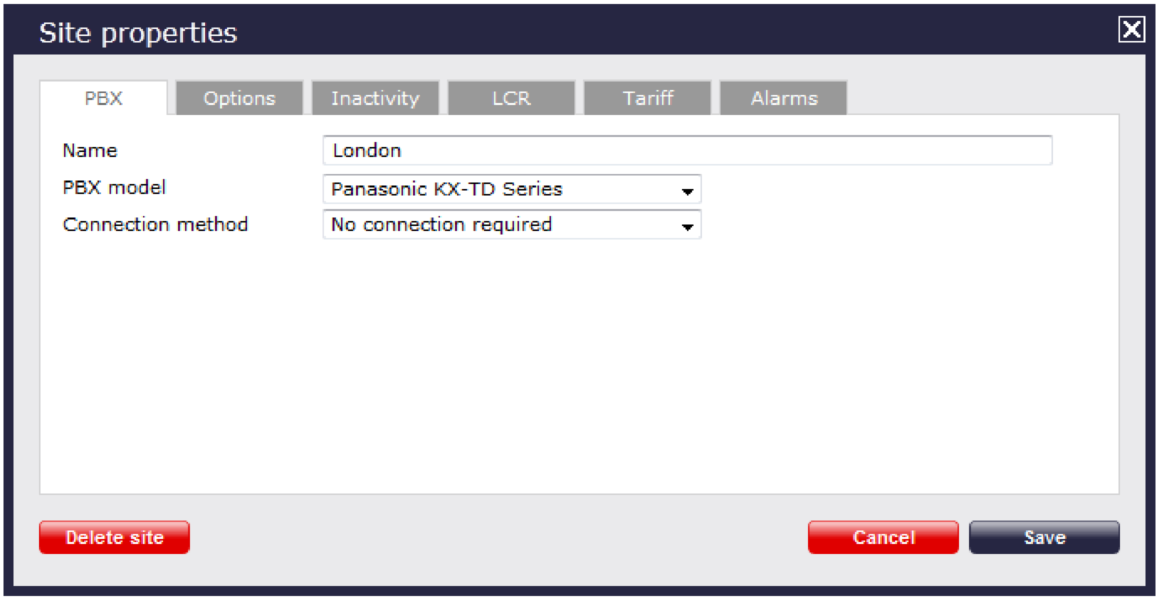
The Panasonic KX-TDA/E/NCP500/1000 phone systems can send SMDR information via a serial connection. To collect the call logging data from the serial port and send it to TIM Plus, you first need to install the NetPBX software. For setup instructions, click on the link below:

Install and configure NetPBX

### Configuring TIM Plus

Once NetPBX is configured and collecting data, log in to TIM Plus and perform the steps below:

1. Click on the Directory tab.
2. Choose the site you want to configure and click Properties .




3. In the **Site Properties** window, select **Panasonic KX-TD Series** from the **PBX model** drop-down list.
4. In the **Connection method** field, select **No connection required** from the drop-down list.
5. Click on the Save button to apply the settings.

## Panasonic KX-TDA/E/NCP500-1000/NS1000 - IP connection

These instructions help you configure your Panasonic KX-TDA/E/NCP500/1000 phone system to work with TIM Plus. Contact your system maintainer if you are not familiar with the configuration of your PBX.

Connection Type

TIM Plus establishes a TCP connection to this PBX.

Support Files

**Panasonic KX-TD Series.TDT**

**Panasonic KX-TD Series.TDS**

Required Tasks

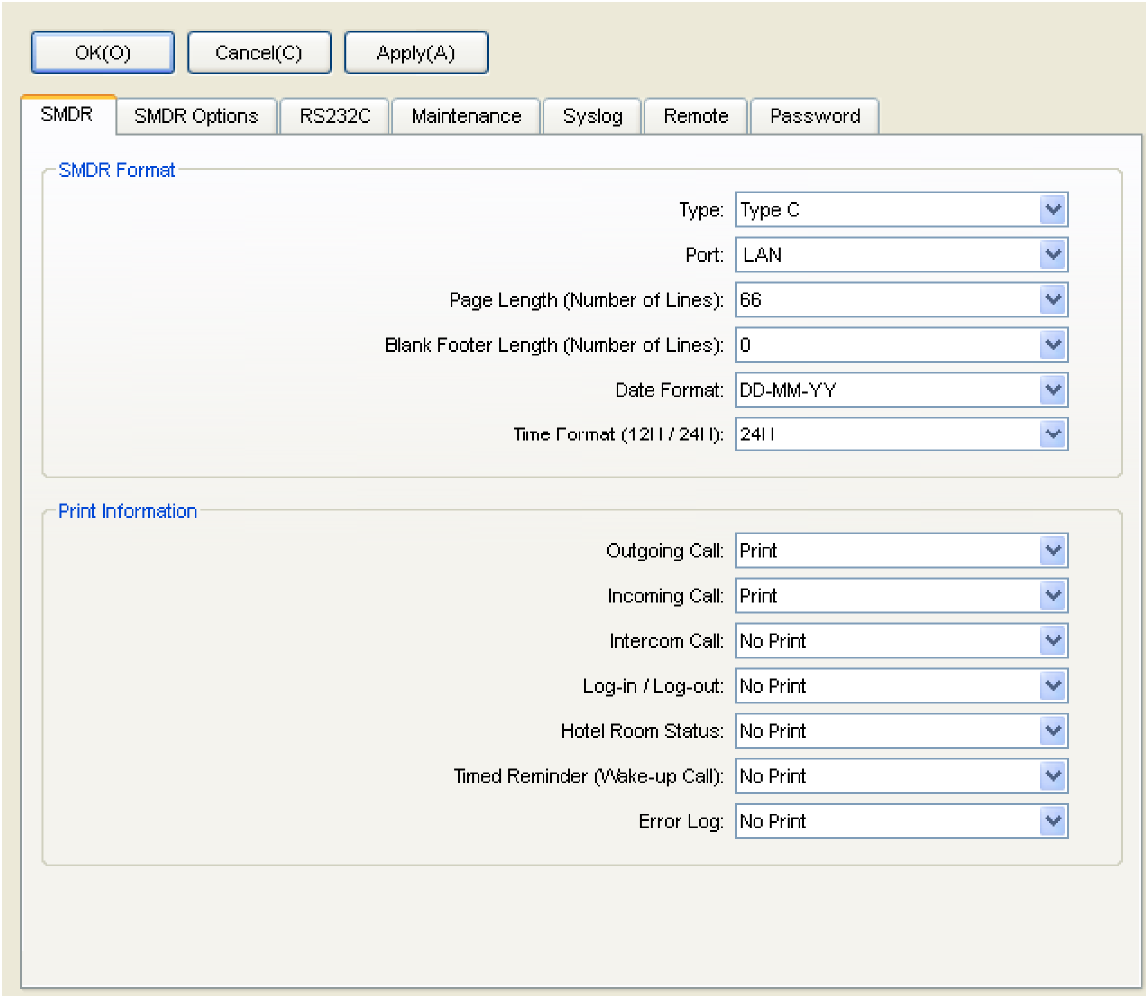
Configure the SMDR output

Configure TIM Plus

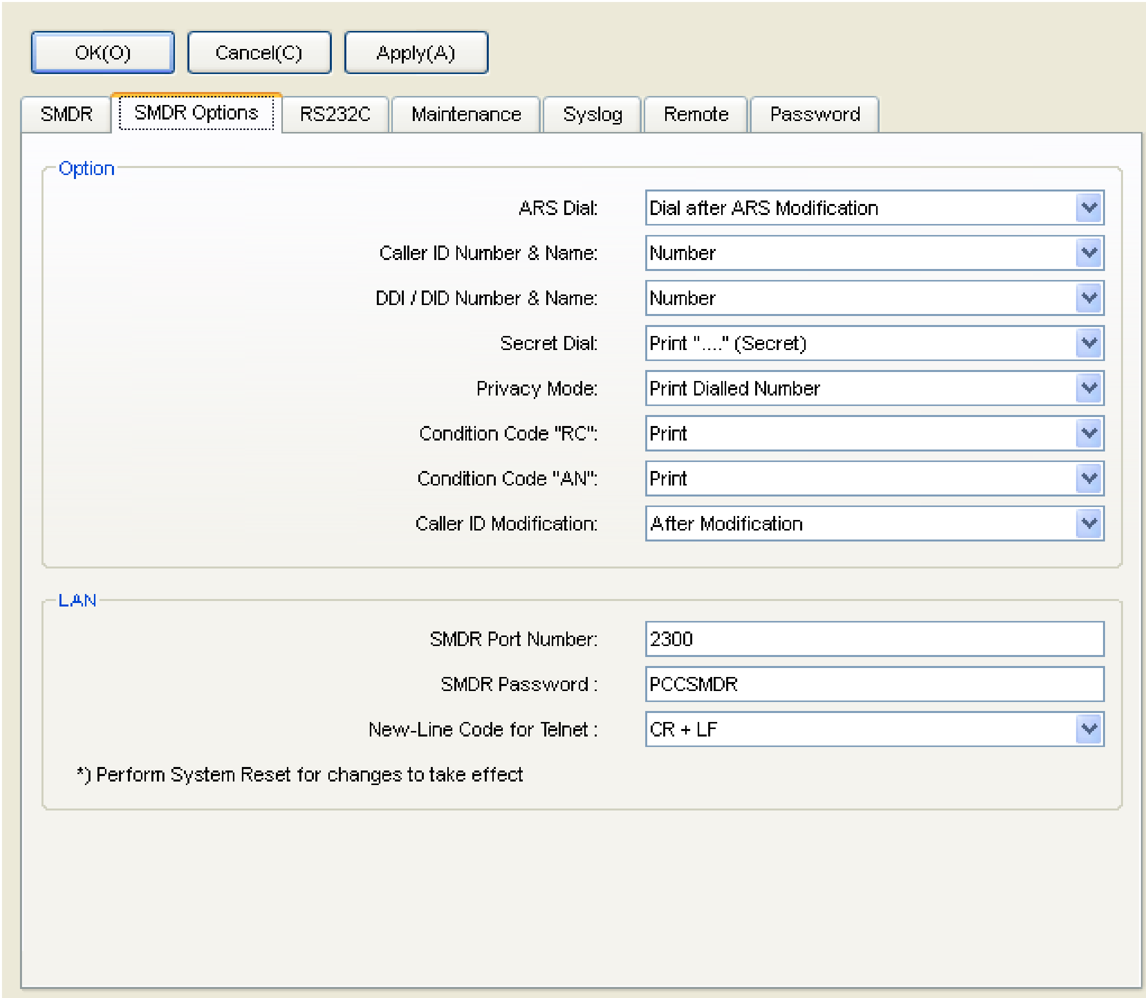
### Configuring your SMDR

Follow the instructions below to configure your Panasonic to output SMDR data to TIM Plus via an IP connection:

1. Log in to the Panasonic Maintenance Console program.
2. Click on the 11. Maintenance tab from the left-hand menu.
3. Click on the SMDR tab and configure the options as shown below:




4. Click on the SMDR Options tab and configure the options as shown below:

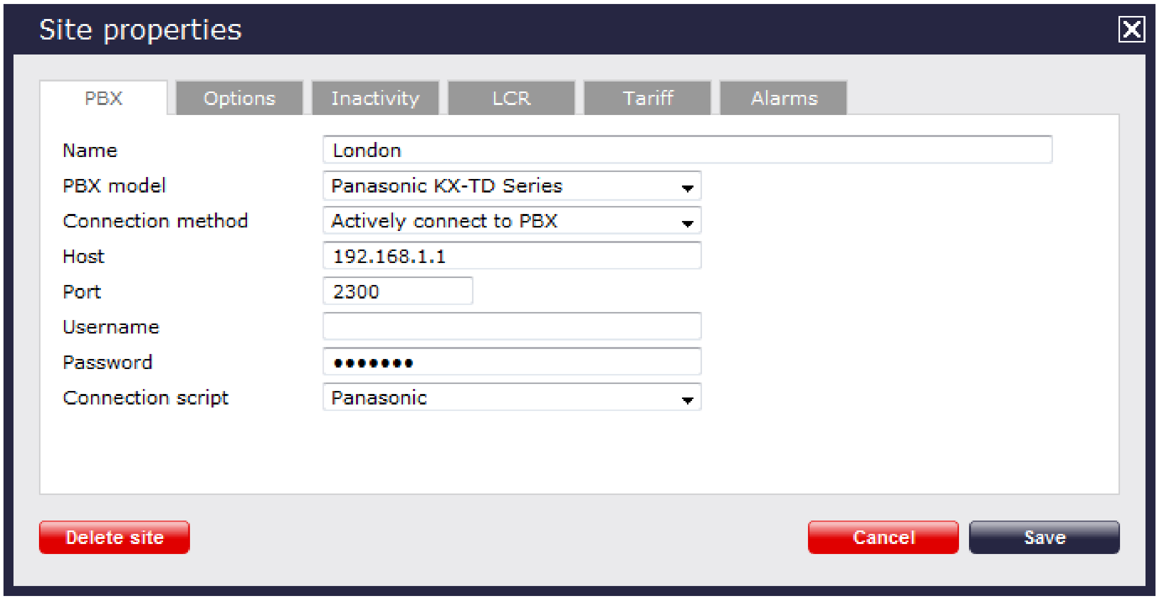



5. Click on the Apply button to save the changes.

### Configuring TIM Plus

Follow the steps below to configure TIM Plus to connect to your Panasonic phone system:

1. Click on the Directory tab.
2. Choose the site you want to configure and click Properties .




3. In the **Site Properties** window, select **Panasonic KX-TD Series** from the **PBX model** drop-down list.
4. In the **Connection method** field, select **Actively connect to PBX** from the drop-down list.
5. In the **Host** field, enter the IP address of your phone system.
6. In the **Port** field, enter **2300**.
7. Leave the **Username** field blank.
8. In the **Password** field, enter the password required to connect to your phone system, by default **PCCSMDR**.
9. In the **Connection script** field, select **Panasonic** from the drop-down list.
10. Click on the Save button to apply the settings.

## Panasonic KX-TD Series

These instructions help you configure your Panasonic KX-TD Series phone system to work with TIM Plus. Contact your system maintainer if you are not familiar with the configuration of your PBX.

Connection Type

TIM Plus establishes a serial connection with this PBX.

Support Files

**Panasonic KX-TD Series.TDT**

**Panasonic KX-TD Series.TDS**

Required Tasks

Configure the SMDR output

Install NetPBX

Configure TIM Plus

### Configuring your SMDR output

Follow the instructions below to configure your Panasonic KX-TD phone system to output SMDR data to TIM Plus. The configuration needs to be performed from a Digital Proprietary Telephone (DPT) such as the KX-T7431, KX-T7433, KX-T7436, KX-T7230, KX-T7235.

1. Press the PROG + * + # buttons simultaneously, then enter your system password.
2. Enter programming mode **800** and press the Next button.
3. Press the Select button to set the **Outgoing** option to **All**, then click on the Store button. Click Next .
4. Press the Select button to set the **Incoming** option to **All**, then press the Store button.
5. Press the End button to complete the configuration.

### Installing NetPBX

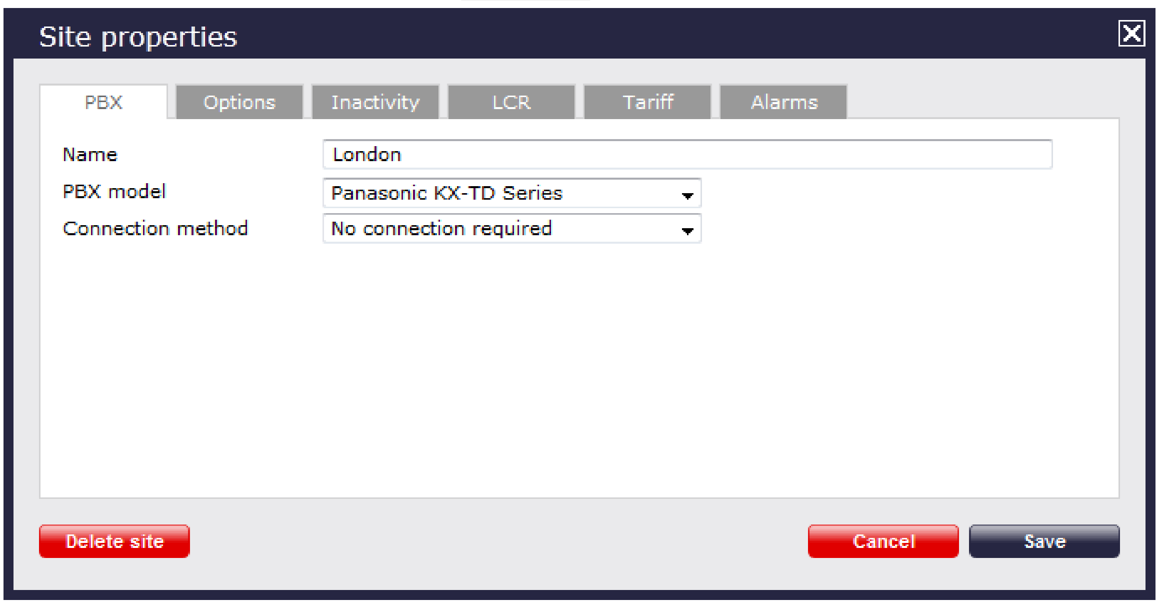
The Panasonic KX-TD Series phone system sends SMDR information via a serial connection. To collect the call logging data from the serial port and send it to TIM Plus, you first need to install the NetPBX software. For setup instructions, click on the link below:

Install and configure NetPBX

### Configuring TIM Plus

Once NetPBX is configured and collecting call logging data, log in to TIM Plus and perform the steps below:

1. Click on the Directory tab.
2. Choose the site you want to configure and click Properties .




3. In the **Site Properties** window, select **Panasonic KX-TD Series** from the **PBX model** drop-down list.
4. In the **Connection method** field, select **No connection required** from the drop-down list.
5. Click on the Save button to apply the settings.

## Samsung

### Samsung DCS

These instructions help you configure your Samsung DCS phone system to work with TIM Plus. Contact your system maintainer if you are not familiar with the configuration of your PBX.

Connection Type

TIM Plus establishes a serial connection with this PBX.

Support Files

`Samsung DCS.TDT`

`Samsung DCS.TDS`

Required Tasks

Configure the SMDR output

Install NetPBX

Configure TIM Plus

## Configuring your SMDR output

Follow the instructions below to configure your Samsung DCS to output SMDR data to TIM Plus. The configuration needs to be performed from an LCD handset.

1. Open `Programming` and select `725`.

2. Program each option as presented below:

| SMDR field | Value |
|---|---|
| **Page Header** | `Yes` |
| **Lines per page** | `1` |
| **Incoming Call** | `Yes` |
| **Outgoing Call** | `Yes` |
| **Authorise Code** | `Yes` |
| **SMDR Start Time** | `Yes` |
| **In/Out Group** | `No` |
| **DND Calls** | `No` |
| **Wake-Up Calls** | `No` |
| **Directory Names** | `None` |

| | |
|---|---|
| **Caller ID Data** | `Yes` |
| **Abandoned Call** | `Yes` |
| **No of Dial Mask** | `00` |
| **DID Num/Name** | `Yes` |

3. Next, press the SPKR key and select **`804`**.
4. Dial **`0`** and use the arrow keys to select **`SMDR`**.
5. Press the TRSF key to complete the configuration.

### Installing NetPBX

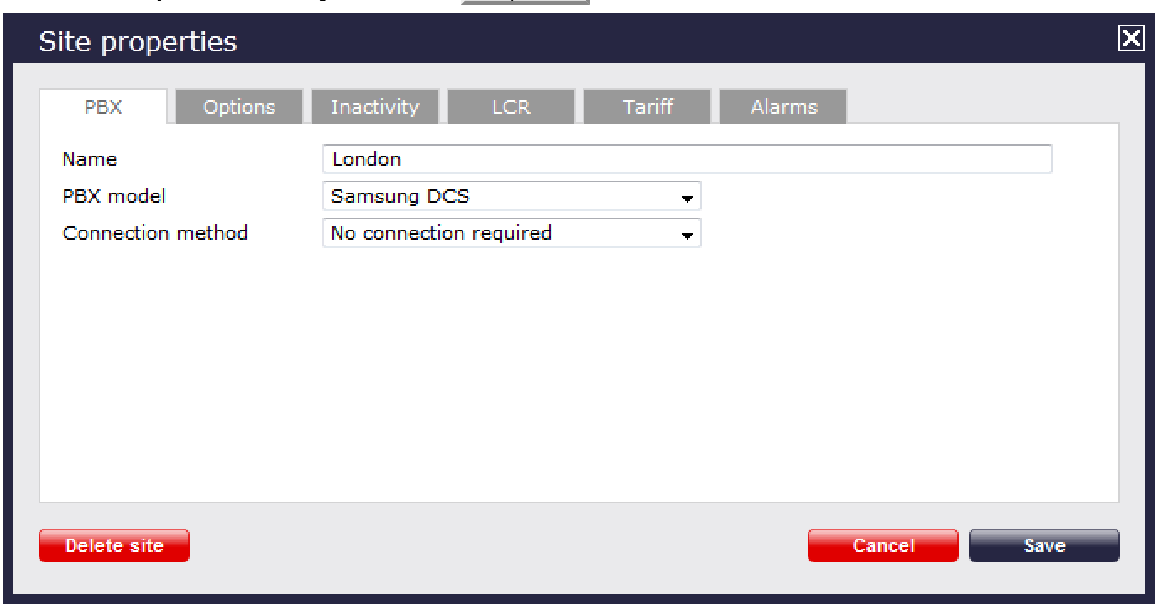
The Samsung DCS phone system sends SMDR data via a serial connection. To collect the data from the serial port and send it to TIM Plus, you first need to install the NetPBX software. For setup instructions, click on the link below:

Install and configure NetPBX

### Configuring TIM Plus

Once NetPBX is configured and collecting data, log in to TIM Plus and perform the steps below:

1. Click on the Directory tab.
2. Choose the site you want to configure and click Properties .




3. In the **`Site Properties`** window, select **`Samsung DCS`** from the **`PBX model`** drop-down list.
4. In the **`Connection method`** field, select **`No connection required`** from the drop-down list.
5. Click on the Save button to apply the settings.

## Samsung iDCS

The Samsung iDCS can be configured to send its SMDR data over a serial (RS232) or an IP connection. Click on one of the links below that relates to your preferred connection method.

### Samsung iDCS - Serial connection

These instructions help you configure your Samsung iDCS phone system to work with TIM Plus. Contact your system maintainer if you are not familiar with the configuration of your PBX.

Connection Type

TIM Plus establishes a serial connection with this PBX.

Support Files

**`Samsung DCS.TDT`**

**`Samsung DCS.TDS`**

Required Tasks

Configure the SMDR output

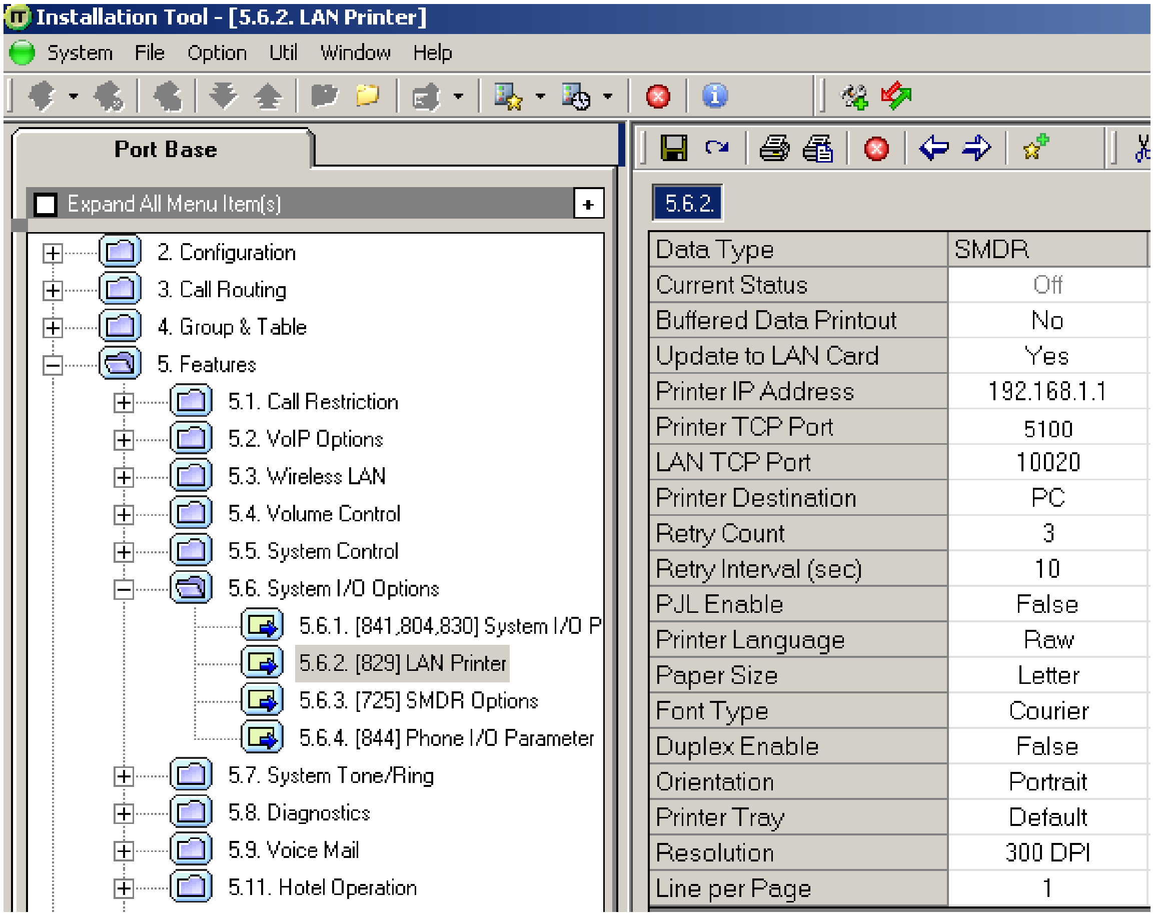
Install NetPBX

Configure TIM Plus

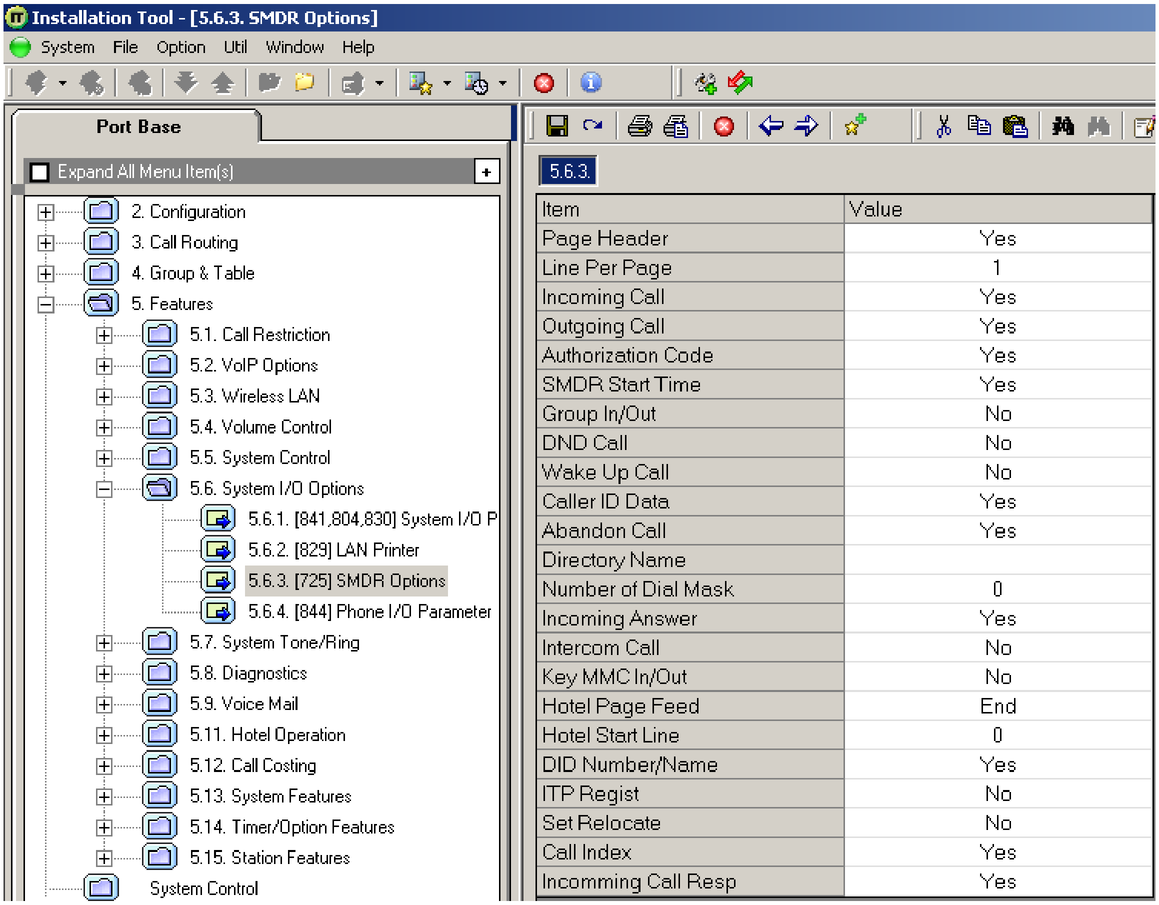
#### Configuring your SMDR output

Follow the instructions below to configure your Samsung iDCS to output SMDR data to TIM Plus.

1. Log in to the Samsung Installation Tool software.
2. Click on the 5. Features option from the left-hand menu.
3. Click on the 5.6 System I/O Options tab and select 5.6.2. LAN Printer .
4. In the **`LAN Printer`** options configure the entries in the **`SMDR`** column, as shown below:




5. Click on the Save icon to save the settings.
6. Click on the 5.6.3. SMDR Options tab and configure the following settings:




7. Click on the **Save** icon at the top of the window to save the settings.

### Installing NetPBX

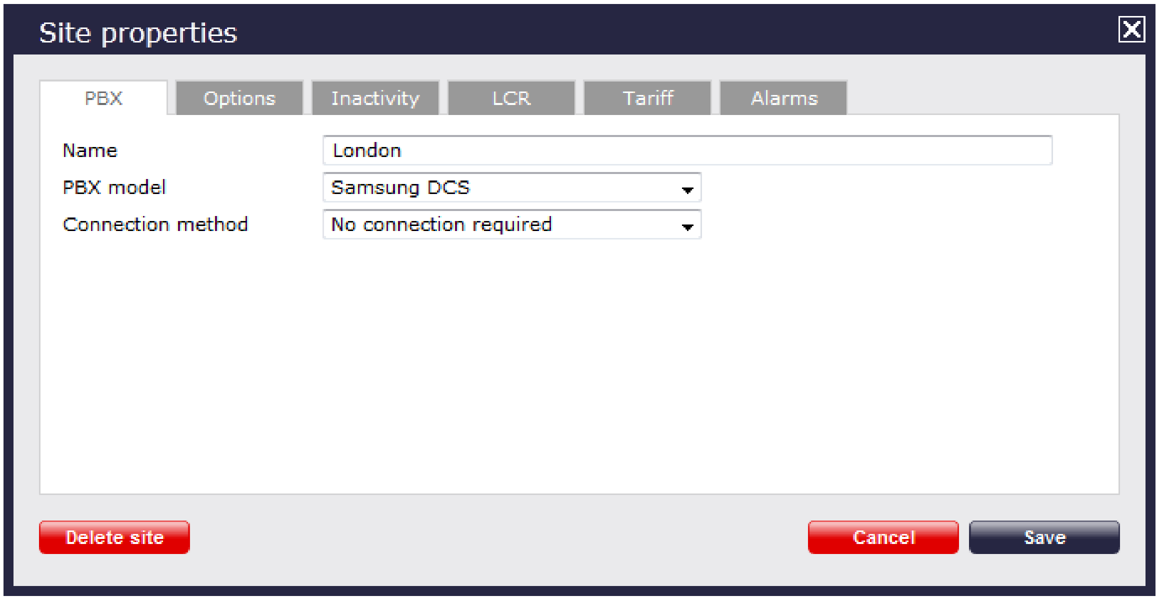
The Samsung iDCS phone system can send its SMDR data via a serial connection. To collect the data from the serial port and send it to TIM Plus, you first need to install the NetPBX software. For setup instructions, click on the link below:

Install and configure NetPBX

### Configuring TIM Plus

Once NetPBX is configured and collecting data, log in to TIM Plus and perform the following steps:

1. Click on the **Directory** tab.
2. Choose the site you want to configure and click **Properties** .




3. In the **Site Properties** window, select **Samsung DCS** from the **PBX model** drop-down list.
4. In the **Connection method** field select **No connection required** from the drop-down list.
5. Click on the Save button to apply the settings.

## Samsung iDCS - IP connection

These instructions help you configure your Samsung iDCS phone system to work with TIM Plus. Contact your system maintainer if you are not familiar with the configuration of your PBX.

Connection Type

TIM Plus establishes a TCP connection to this PBX.

Support Files

**Samsung DCS.TDT**

**Samsung DCS.TDS**

Required Tasks

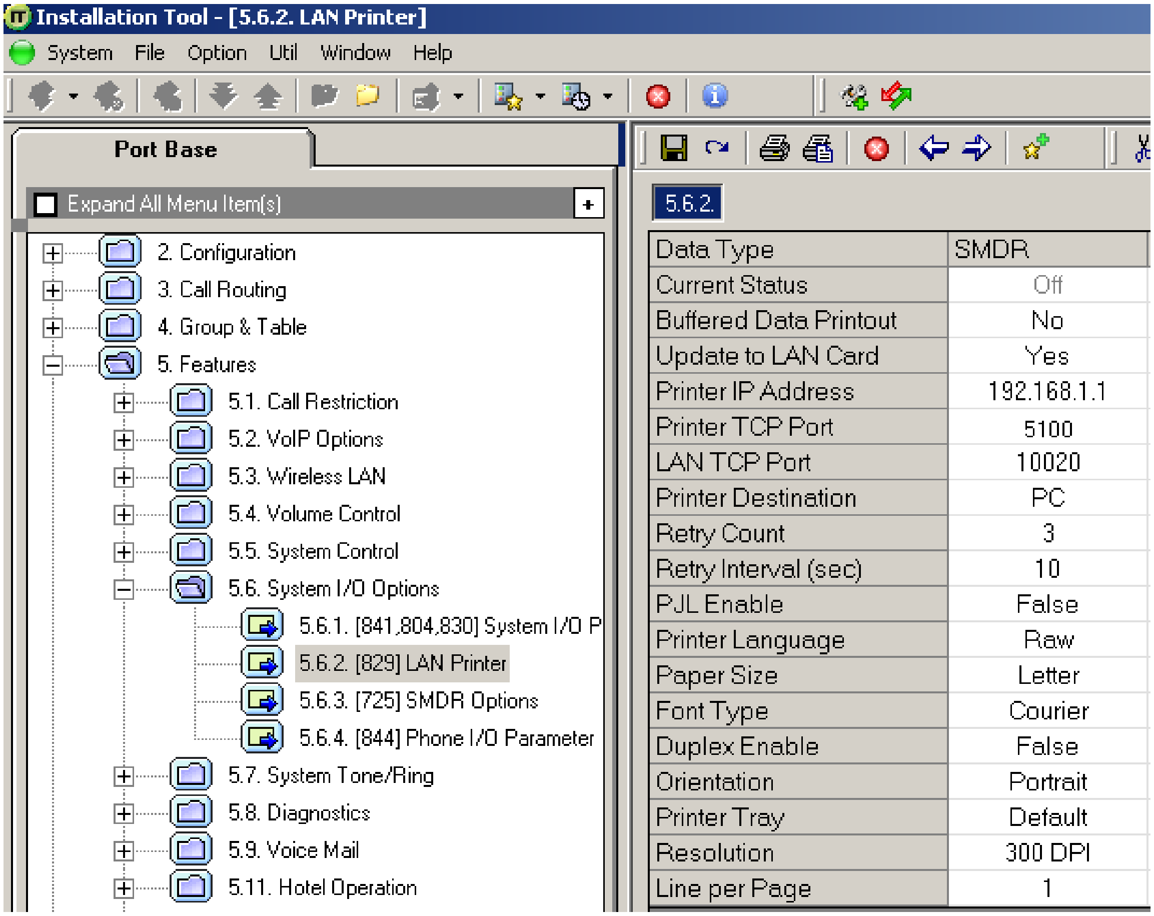
Configure the SMDR output

Configure TIM Plus

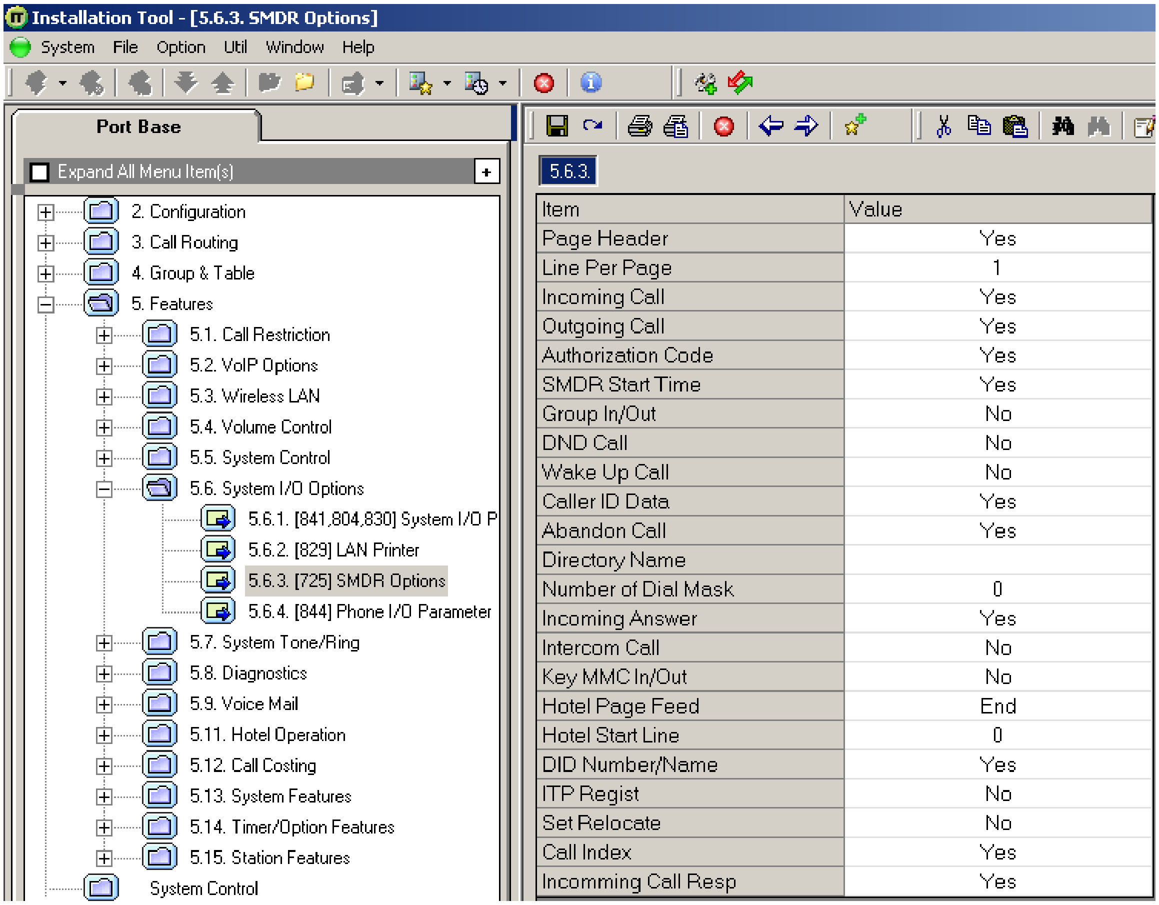
### Configuring your SMDR output

Follow the instructions below to configure your Samsung iDCS phone system to output SMDR data to TIM Plus.

1. Log in to the Samsung Installation Tool software.
2. Click on the 5. Features option from the left-hand menu.
3. Click on the 5.6 System I/O Options tab and select 5.6.2. LAN Printer .
4. In the **LAN Printer** options, configure the entries in the **SMDR** column, as shown below:




5. Click on the Save icon to save the settings.
6. Click on the 5.6.3. SMDR Options tab and configure the following settings:

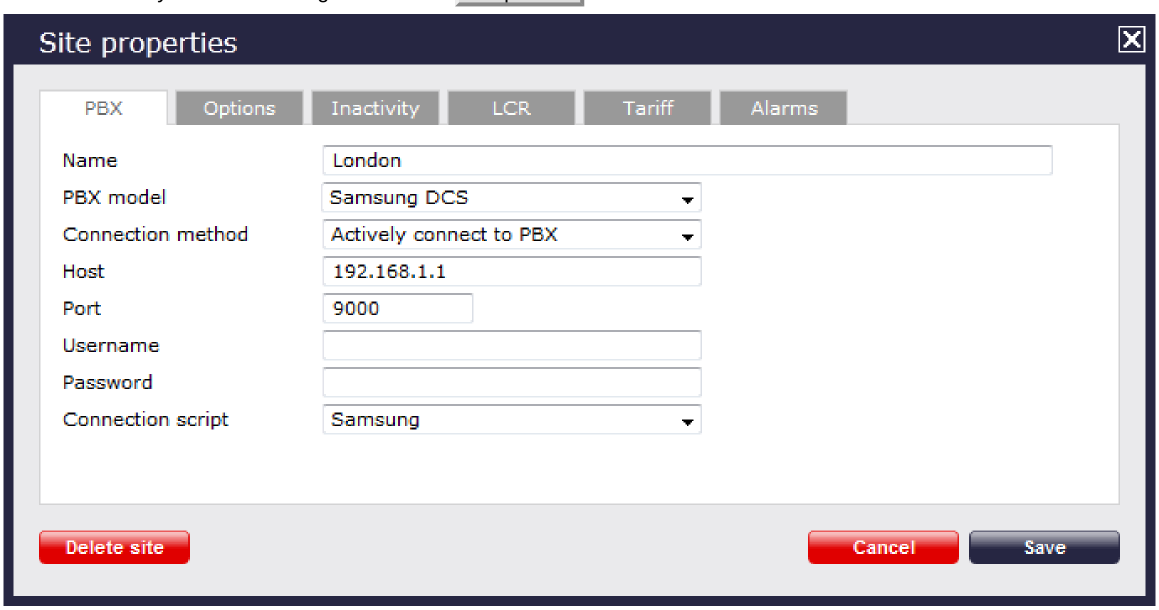



7. Click on the Save icon at the top to save the settings.

### Configuring TIM Plus

Follow the steps below to configure TIM Plus to collect the SMDR data from your Samsung iDCS:

1. Click on the Directory tab.
2. Choose the site you want to configure and click Properties .



3. In the **Site Properties** window, select **Samsung DCS** from the **PBX model** drop-down list.
4. In the **Connection method** field, select **Actively connect to PBX** from the drop-down list.
5. In the **Host** field, enter the IP address of your Samsung iDCS.
6. In the **Port** field, enter **9000**.
7. Leave the **Username** and **Password** fields blank.
8. In the **Connection script** field, select **Samsung** from the drop-down list.
9. Click on the Save button to apply the settings.

## Samsung OfficeServ

These instructions help you configure your Samsung OfficeServ phone system to work with TIM Plus. Contact your system maintainer if you are not familiar with the configuration of your PBX.

Connection Type

TIM Plus establishes a TCP connection to this PBX.

Support Files

**Samsung DCS.TDT**

**Samsung DCS.TDS**

Required Tasks

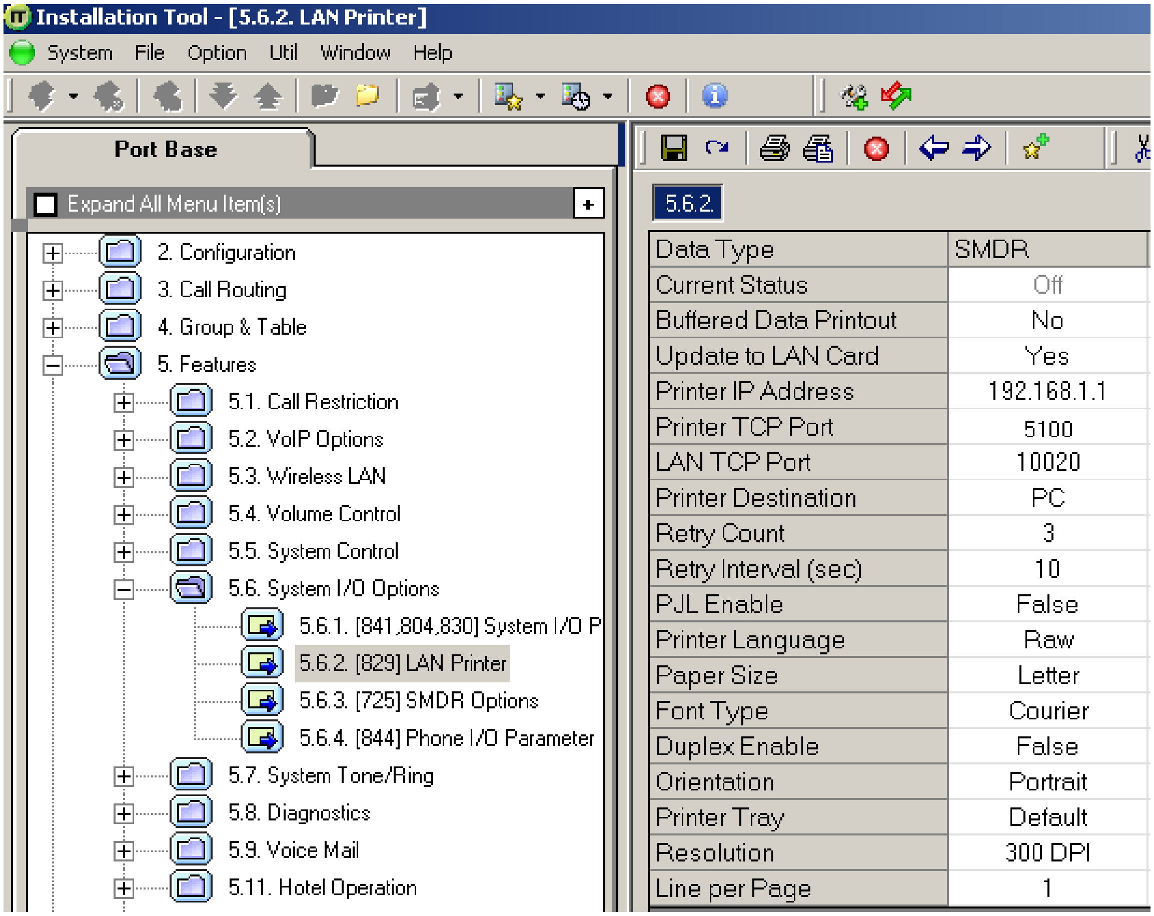
Configure the SMDR output

Configure TIM Plus

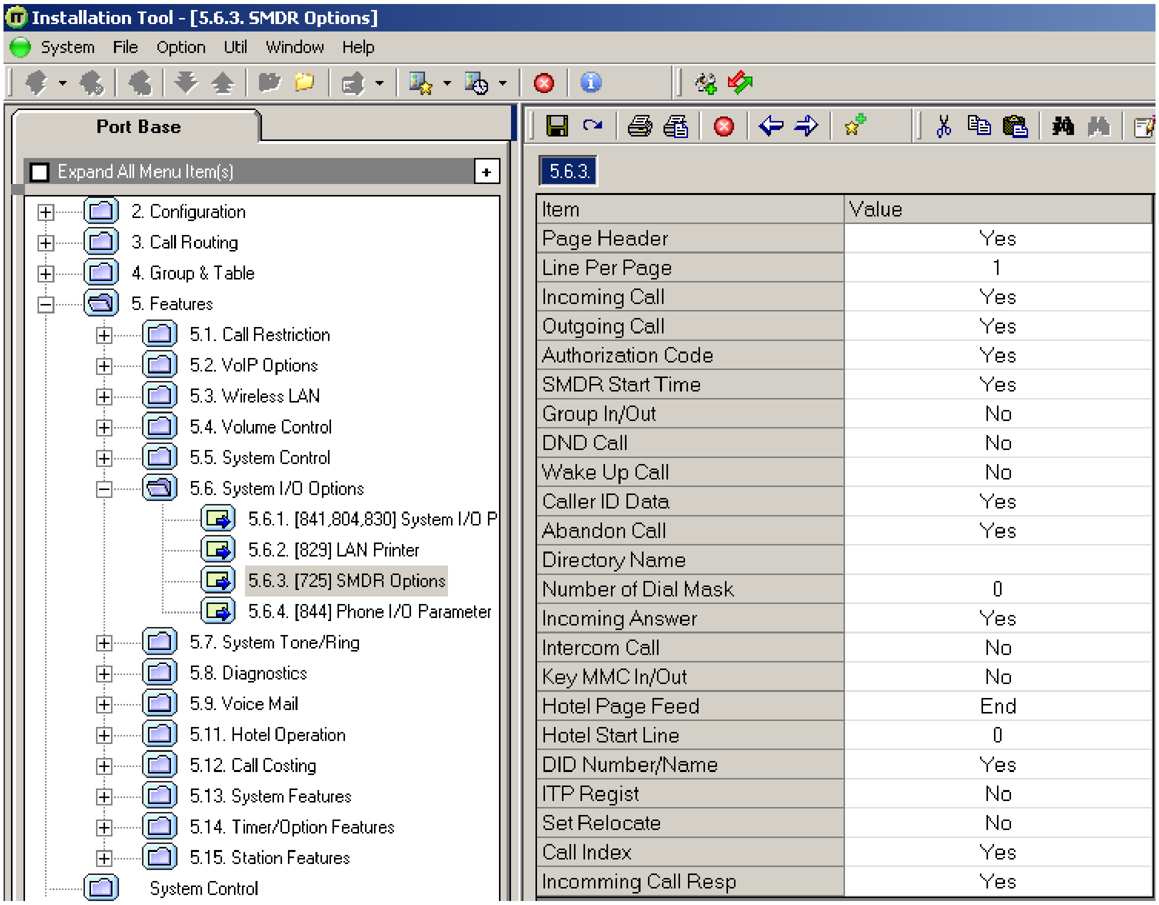
### Configuring your SMDR output

Follow the instructions below to configure your Samsung OfficeServ phone system to output SMDR data to TIM Plus.

1. Log in to the Samsung Installation Tool software.
2. Click on the 5. Features option from the left-hand menu.
3. Click on the 5.6 System I/O Options tab and select 5.6.2. LAN Printer .
4. In the **LAN Printer** options, configure the entries in the **SMDR** column, as shown in the screenshot below, modifying the value of the **Printer IP Address** field accordingly, in order to match the IP address of the computer running TIM Plus.




5. Click on the Save icon to save the settings.
6. Click on the 5.6.3. SMDR Options tab and configure the following settings:

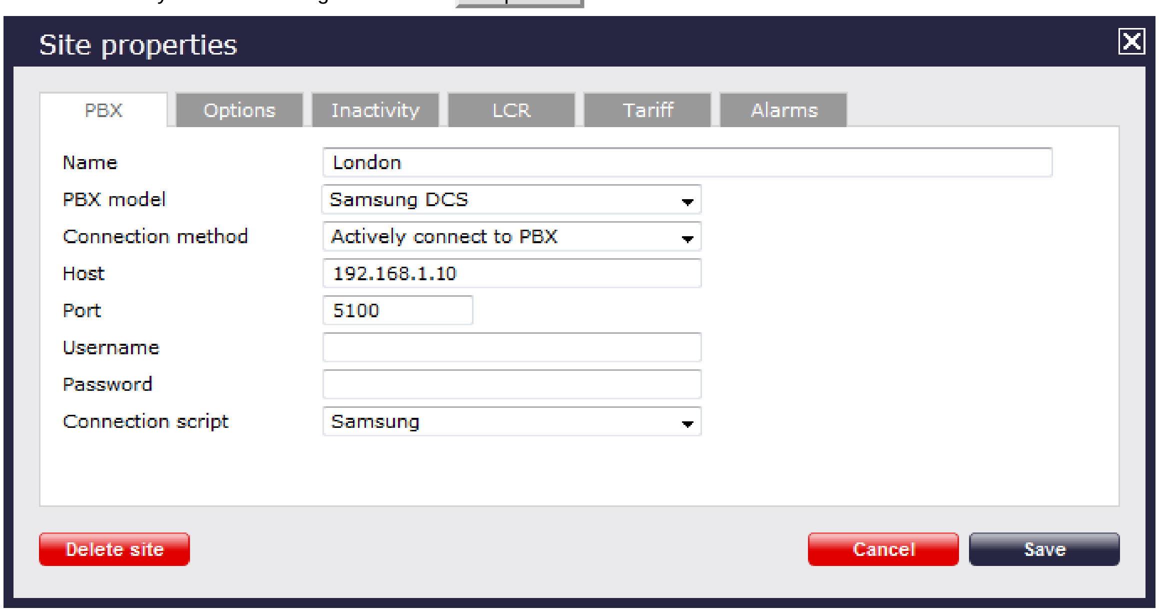



7. Click on the Save icon at the top to save the settings.

## Configuring TIM Plus

Follow the instructions below to configure TIM Plus to collect the SMDR data from your Samsung OfficeServ:

1. Click on the Directory tab.
2. Choose the site you want to configure and click Properties .



3. In the **Site Properties** window, select **Samsung DCS** from the **PBX model** drop-down list.
4. In the **Connection method** field, select **Actively connect to PBX** from the drop-down list.
5. In the **Host** field, enter the IP address of your Samsung OfficeServ.
6. In the **Port** field, enter **5100**.
7. Leave the **Username** and **Password** fields blank.
8. In the **Connection script** field, select **Samsung** from the drop-down list.
9. Click on the Save button to apply the settings.

# ShoreTel

## ShoreTel PBX

These instructions help you configure your ShoreTel phone system to work with TIM Plus. Contact your system maintainer if you are not familiar with the configuration of your PBX.

Connection Type

TIM Plus establishes a DSN connection with this PBX.

Support Files

**ShoreTel.TDT**

**ShoreTel.TDS**

**ShoreTel.DBS**

Required Tasks

Configure the SMDR output

Set up a DSN connection

Configure TIM Plus

### Configuring your SMDR output

By default, the ShoreTel phone system writes its CDR data to a MySQL database called **ShoreWareCDR**. In order for TIM Plus to connect to the database and collect the call logging data, you need to create a username and password in the MySQL database on the ShoreWare Server. Contact your system maintainer if you are not familiar with this procedure.

The following information is required for TIM Plus to connect to the Shoretel ShoreWareCDR database:

- IP address or hostname of the ShoreWare Server where the MySQL database resides.
- Username and Password of the **ShoreWareCDR** database.

The default credentials for the ShoreWareCDR database are shown below:

Username: st_cdrreport
Password: passwordcdrreport

### Setting up a DSN connection

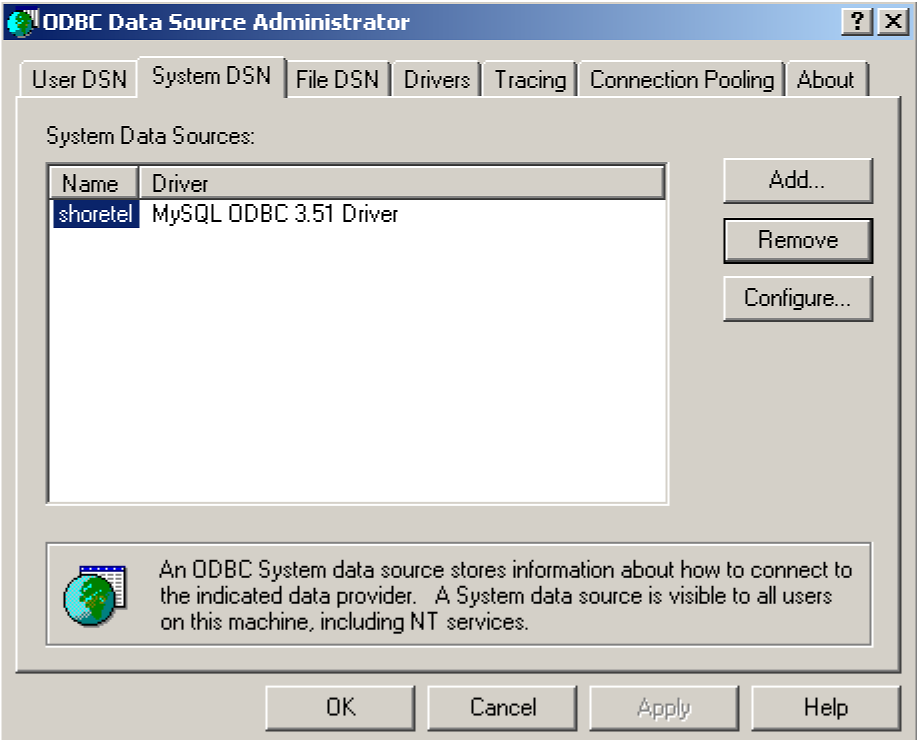
To enable TIM Plus to work with your ShoreTel phone system, you first need to set up a DSN connection by following the steps below:

1. Open Windows Control Panel and select the **Administrative Tools** icon
2. Double-click on the **Data Sources (ODBC)** icon to open the `ODBC Data Source Administrator` window

> For a 64 bit system, access the `ODBC Data Source Administrator` from the following location `C:\Windows\SysWOW64\odbcad32.exe`

3. Click on the **System DSN** tab
4. Click on the **Add** button
5. Select `MySQL ODBC 3.51 Driver` from the driver list and click **Finish**. If you cannot see the `MySQL ODBC 3.51 Driver` option in the drop-down list, you can download it from http://www.mysql.com
6. In the `Name` field, enter `shoretel`
7. In the `Description` field, enter `TIM Plus link to ShoreTel`
8. In the `Server` field, enter the IP address or hostname of your ShoreWare Server
9. In the `Username` field, enter the username for your ShoreWareCDR database
10. In the `Password` field, enter the password for your ShoreWareCDR database
11. In the `Database` drop-down list, select `ShoreWareCDR`
12. Click on the **Test** button to confirm the information you entered is correct and that the connection is successful
13. Click on the **OK** button to close the window

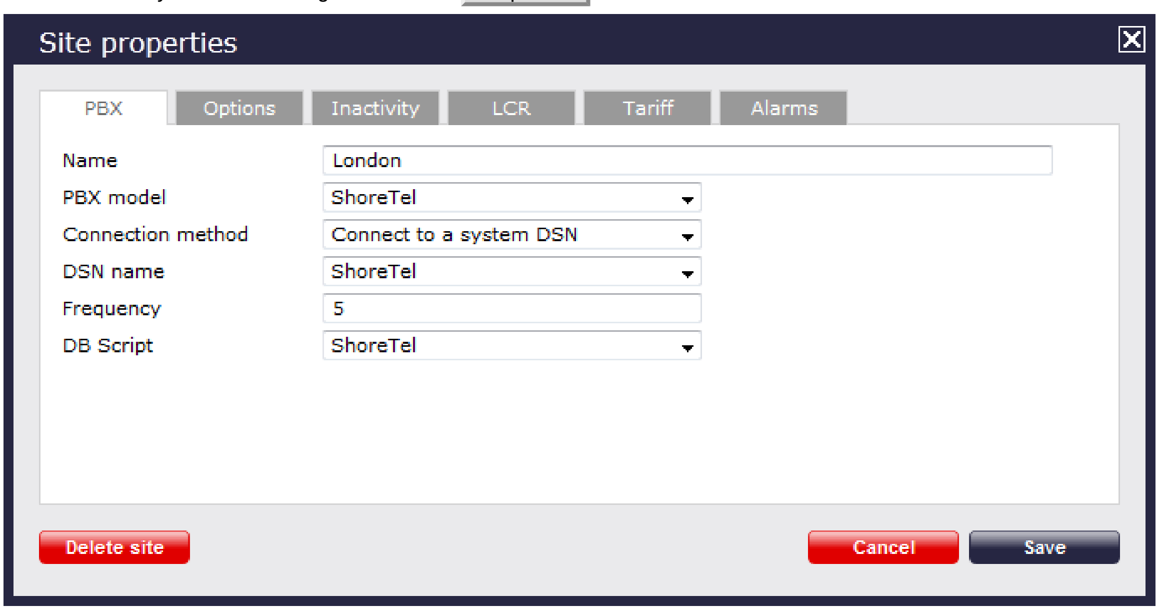
An example of an ODBC entry is shown below:




### Configuring TIM Plus

Once the DSN connection has been set up, log in to TIM Plus and perform the steps below:

1. Click on the Directory tab.
2. Choose the site you want to configure and click Properties .




3. In the `Site Properties` window, select **`ShoreTel`** from the `PBX model` drop-down list.
4. In the `Connection method` field, select **`Connect to a system DSN`** from the drop-down list.
5. In the `DSN name` field, select **`ShoreTel`** from the drop-down list.
6. In the `Frequency` field, enter **`5`**.

7. In the **DB script** field, select **ShoreTel** from the drop-down list.

8. Click on the Save button to apply the settings.

# SnomONE

## SnomONE PBX

These instructions help you configure your SnomONE phone system to work with TIM Plus. Contact your system maintainer if you are not familiar with the configuration of your PBX.

Connection Type

TIM Plus listens for connections from this PBX.

Support Files

**SnomONE.TDS**

**SnomONE.TDT**

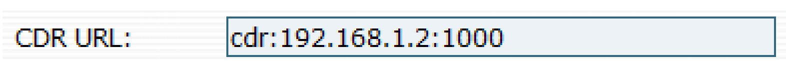
Required Tasks

Configure the SMDR output

Configure TIM Plus

### Configuring the SMDR output

The Snom telephone system can be configured to send its CDR records via a TCP/IP connection. To configure the output, enter the IP address of the PC running TIM Plus and the port number you want to use for the data output in the **CDR URL** settings of the phone system, as shown below:




The CDR string must to configured in the **Long** format, using the variables presented in the table below:

| Short | Long | Description | Value |
|---|---|---|---|
| $$ | $$ | A dollar sign | $ |
| $i | $(call_id) | Caller-ID of call, as seen in the SIP packet | |
| $v | $(call_type) | Type of call. Default is attendant* | attendant |
| $m | $(domain) | Domain name of the call | domain.com |
| $l | $(lang) | Language of the call | en |
| $f | $(sip_from) | The From header, as seen in SIP packet | |
| $t | $(sip_to) | The To header, as seen in the SIP packet | |
| $F | $(calling) | Extension number of the caller | 123 |
| $T | $(called) | Extension number of the called party | 123 |
| $x | $(orig_trunk) | Name of originating trunk, if present | Trunk 1 |
| $y | $(dest_trunk) | Name of destination trunk, if present | Trunk 1 |
| $R | $(account) | Account that is charged for redirected call | |
| $r | $(redirect_dest) | Destination for a redirected call (used only if call is redirected) | |
| $S | $(start_time) | Start time in seconds | |
| $C | $(talk_duration) | Connected duration of the call | |
| $A | $(ring_duration) | Answered duration of call (useful if the call is ringing/answered through queue) | |
| $E | $(hold_duration) | Hold duration for the call | |
| $W | $(wait_duration) | IVR duration for the call | |
| $w | $(start_date_time) | Start time (YYYYMMDDHHMMSS) | 20071023123224 |
| $b | $(date) | Date (YYYYMMDD) (version 2.1.9) | 20071023 |
| $B | $(time) | Time (HHMMSS) (version 2.1.9) | |
| $e | $(extension) | Extension number of call (originating or receiving) | |
| $o | $(direction) | Direction of call (i for inbound; o for out) | i or o |
| $c | $(remote_call_id) | Caller-ID of remote party | |
| $d | $(duration) | Duration of call in seconds (inc. hold time) | |
| $s | $(extn_duration) | Speaking duration (does not inc. hold time) | |
| $M | $(cmc) | Client matter code (CMC) | 781299 |
| $(record_location) | | The location of recorded files | |

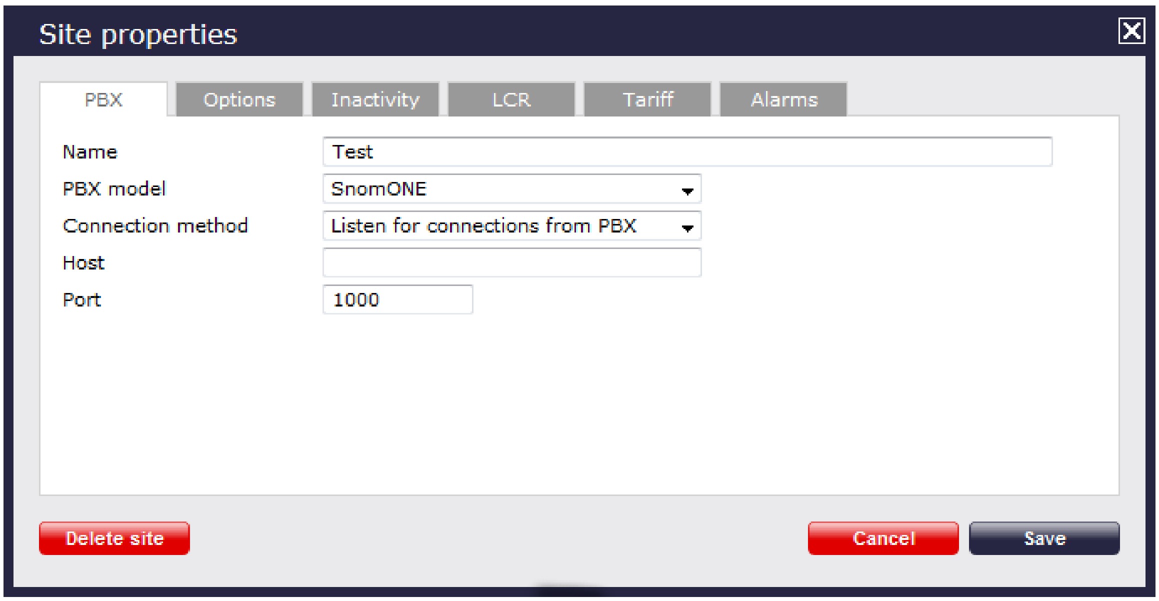
An example of a CDR string configured in the **Long** format is presented below:

```
$$(start_date_time);$(wait_duration);$(ring_duration);$(duration);$(direct
ion);$(orig_trunk);$(calling);$(extension);$(called);$(dest_trunk);$(redir
ect_dest);$(account);$(lang);$(domain);$(call_id);$(primary_call_id);$(rem
ote_call_id)
```

### Configuring TIM Plus

Follow the steps below to configure TIM Plus to listen for SMDR data from your telephone system:

1. Click on the Directory tab.
2. Choose the site you want to configure and click Properties .




3. In the **Site Properties** window, select **SnomOne** from the **PBX model** drop-down list.
4. In the **Connection method** field, select **Listen for connections from PBX** from the drop-down list.
5. Leave the **Host** field blank.
6. In the **Port** field, enter the port number configured in the phone system.
7. Click on the Save button to apply the settings.

## SpliceCom

### Splicecom Maximiser

These instructions help you configure your Splicecom Maximiser phone system to work with TIM Plus. Contact your system maintainer if you are not familiar with the configuration of your PBX.

Connection Type

TIM Plus establishes a TCP connection to this PBX.

Support Files

**SpliceCom Maximiser.TDT**

**SpliceCom Maximiser.TDS**

Required Tasks

Configure the SMDR output

Configure TIM Plus

#### Configuring the SMDR output

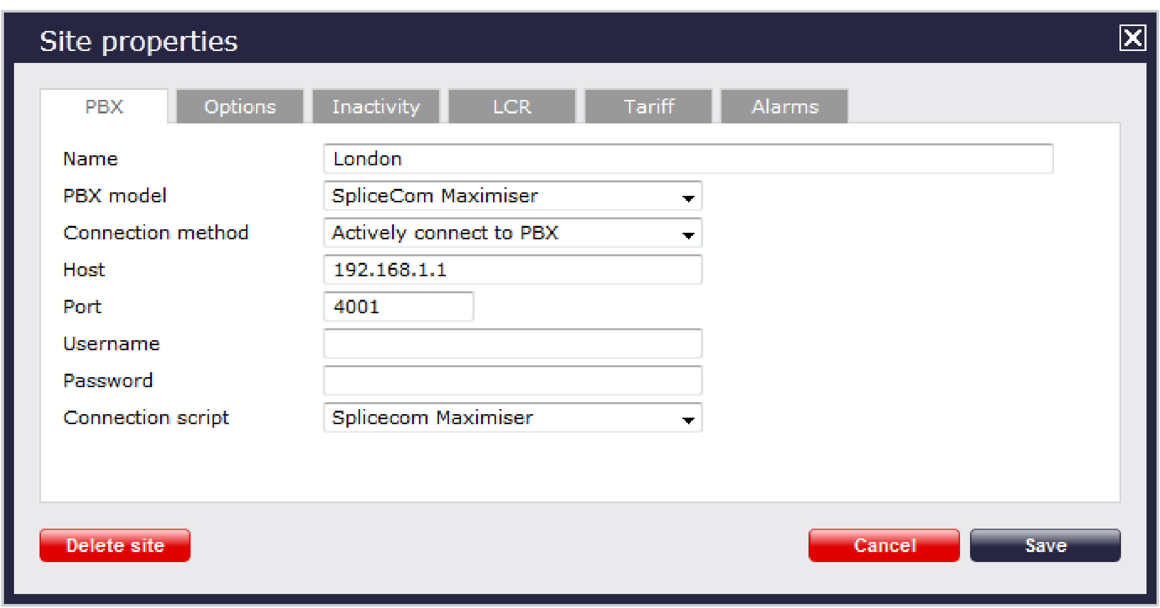
By default, the call logging output of the Splicecom Maximiser is enabled and you do not normally require a password to obtain it. To protect your call logging data, you can set a **Call Logging Password** in the **System Details** screen of your Maximiser's web management interface. If you decide to set a password, you need to enter this when configuring TIM Plus (below).

Your system maintainer may have already set a call logging password for you.

### Configuring TIM Plus

Follow the steps below to configure TIM Plus to collect call logging data from your Splicecom Maximiser:

1. Click on the Directory tab.
2. Choose the site you want to configure and click Properties .




3. In the **Site Properties** window, select **Splicecom Maximiser** from the **PBX model** drop-down list.

4. In the **Connection method** field, select **Actively connect to PBX** from the drop-down list.
5. In the **Host** field, enter the IP address of your Splicecom Maximiser.
6. In the **Port** field, enter **4001**.
7. Leave the **Username** field blank.
8. If your Maximiser has a **call logging password** set, enter it in the **Password** field; if not, leave it blank.
9. In the **Connection script** field, select **Splicecom Maximiser** from the drop-down list.
10. Click on the Save button to apply the changes.

## Swyx

The Swyx telephone system can be configured to send its SMDR over a database connection or it can be outputted to a file. Click on one of the links below that relates to your preferred connection method.

## SwyxWare - File output

These instructions help you configure your SwyxWare phone system to work with TIM Plus. Contact your system maintainer if you are not familiar with the configuration of your PBX.

Connection Type

The SMDR data is outputted to a file

Support Files

**SWYX V8.TDT**

**SWYX V8.TDS**

Required Tasks

Configure the SMDR output

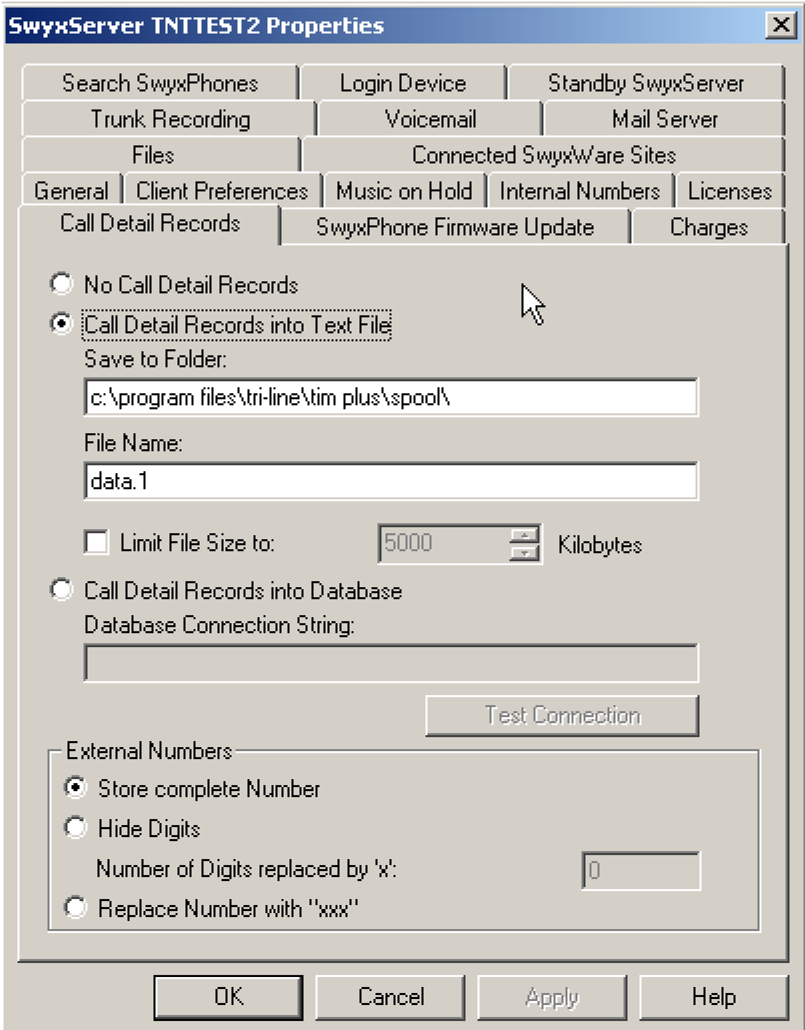
Configure TIM Plus

### Configuring your SMDR output

Follow the steps below to configure the SwyxWare to output SMDR data to a file in a specific location:

1. Log in to your SwyxWare Administration Tool.
2. Right-click on the Swyx server you want to configure and click on the Properties button.
3. In the **Properties** window, click on the Call Detail Records tab.
4. Click on the **Call Detail Records into Text File** radio button.
5. In the **Save to Folder** field, enter **\program files\tri-line\tim plus\spool**. If you are using a mapped drive enter the driver letter.
6. In the **File Name** field, enter **data.{sitecode}**, replacing **{sitecode}** with the ID of the site you are logging. To obtain the ID of a site, hover the mouse pointer over it on the Directory page in TIM Plus and it will be displayed as a tooltip.
7. Click on the OK button and close the SwyxWare Administration Tool.

Here is an example of the SwyxWare Administration properties window:




### Configuring TIM Plus

Follow the steps below to configure TIM Plus to receive SMDR data from your SwyxWare:

1. Click on the Directory tab.
2. Choose the site you want to configure and click Properties .


3. In the **Site Properties** window, select **SWYX V8** from the **PBX model** drop-down list.
4. In the **Connection method** field, select **No connection required** from the drop-down list.
5. Click on the Save button to apply the settings.

## SwyxWare - DSN connection

These instructions help you configure your SwyxWare phone system to work with TIM Plus. Contact your system maintainer if you are not familiar with the configuration of your PBX.

Connection Type

TIM Plus establishes a DSN connection with this PBX.

Support Files

**SWYX V8.TDT**

**SWYX V8.TDS**

**SWYX V8.DBS**

Required Tasks

Configure the SMDR output

Configure the DSN connection

Configure TIM Plus

### Configuring your SMDR output

By default, the Swyx telephone system writes its CDR data to a MSSQL database. In order for TIM Enterprise to connect to the database and collect the call logging data, you need to create a username and password in the MSSQL database on the Swyx server. Contact your system maintainer if you are not familiar with this procedure.

The following information is required for TIM Enterprise to connect to the Swyx database:

- IP address or hostname of the Swyx server where the MSSQL database resides.

- Username and Password of the Swyx database.

The default credentials for the Swyx  database are shown below:

> Username: Swyxcdr
> Password: Swyxcdr

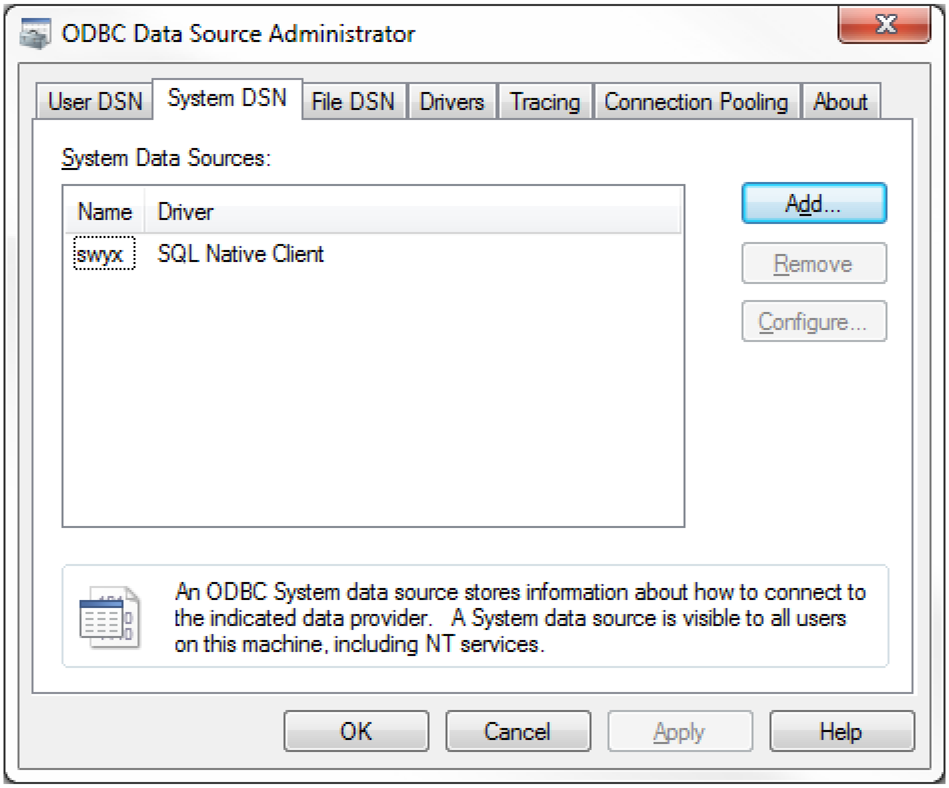
### Setting up a DSN connection

To enable TIM Plus to work with your Skype for Business phone system, you first need to set up a DSN connection by following the steps below:

1. Open Windows Control Panel and select the **Administrative Tools** icon
2. Double-click on the **Data Sources (ODBC)** icon to open the `ODBC Data Source Administrator` window.

> For a 64 bit system, access the `ODBC Data Source Administrator` from the following location `C:\Windows\SysWOW64\odbcad32.exe`

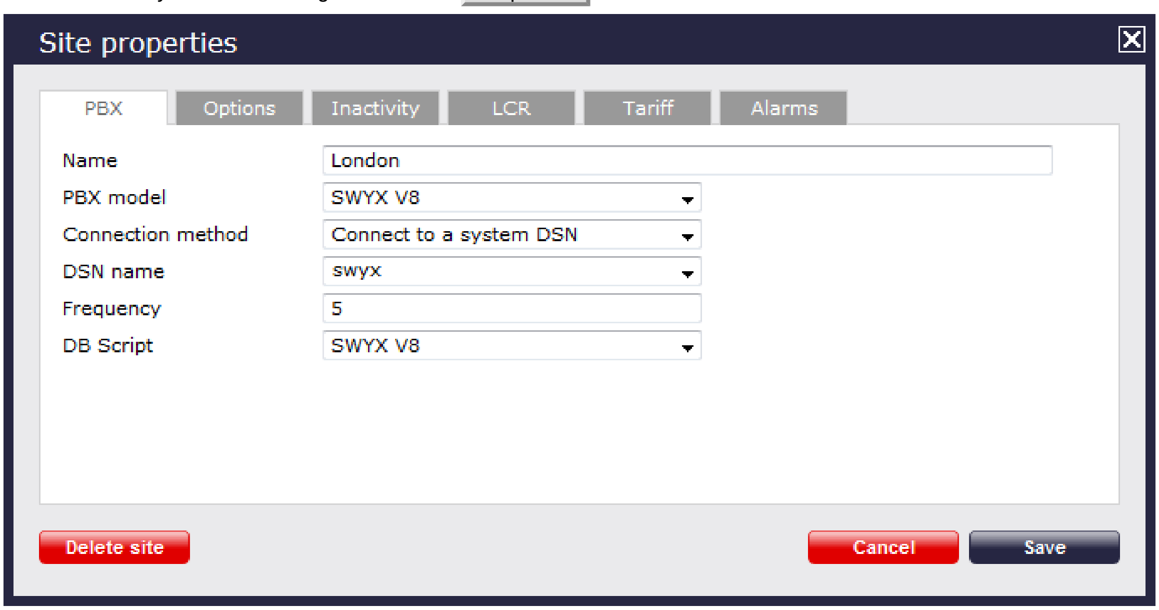
3. Click on the **System DSN** tab.
4. Click on the **Add** button.
5. Select `SQL Native Client` from the driver list and click **Finish**.
6. In the `Name` field, enter `swyx.`
7. In the `Description` field, enter `TIM Plus link to swyx.`
8. In the `Server` field, enter the IP address or hostname of your Swyx server.
9. In the `Username` field, enter the username for your Swyx database.
10. In the `Password` field, enter the password for your Swyx database.
11. In the `Database` drop-down list, select `swyx.`
12. Click on the **Test** button to confirm the information you entered is correct and that the connection is successful.
13. Click on the **OK** button to close the window.




### Configuring TIM Plus

Once the DSN connection has been set up, log in to TIM Plus and perform the steps below:

1. Click on the Directory tab.
2. Choose the site you want to configure and click Properties .




3. In the `Site Properties` window, select `SWYX V8` from the `PBX model` drop-down list.
4. In the `Connection method` field, select `Connect to a system DSN` from the drop-down list.
5. In the `DSN name` field, select `swyx` from the drop-down list.

6. In the **Frequency** field, enter **5**.
7. In the **DB script** field, select **SWYX V8** from the drop-down list.
8. Click on the Save button to apply the settings.

# Tadiran

## Coral Flexicom

These instructions help you configure your Coral Flexicom phone system to work with TIM Plus. Contact your system maintainer if you are not familiar with the configuration of your PBX.

Connection Type

TIM Plus establishes a serial connection with this PBX.

Support Files

**Coral Flexicom 200.TDT**

Required Tasks

- Configure the SMDR output
- Install NetPBX
- Configure TIM Plus

### Configuring your SMDR output

The Coral Flexicom phone system sends its SMDR data via a serial connection. You need to directly connect a serial cable from the phone system to the PC that NetPBX is installed and running on.

For more information about the output and configuration of your SMDR data, contact your system maintainer.

### Installing NetPBX

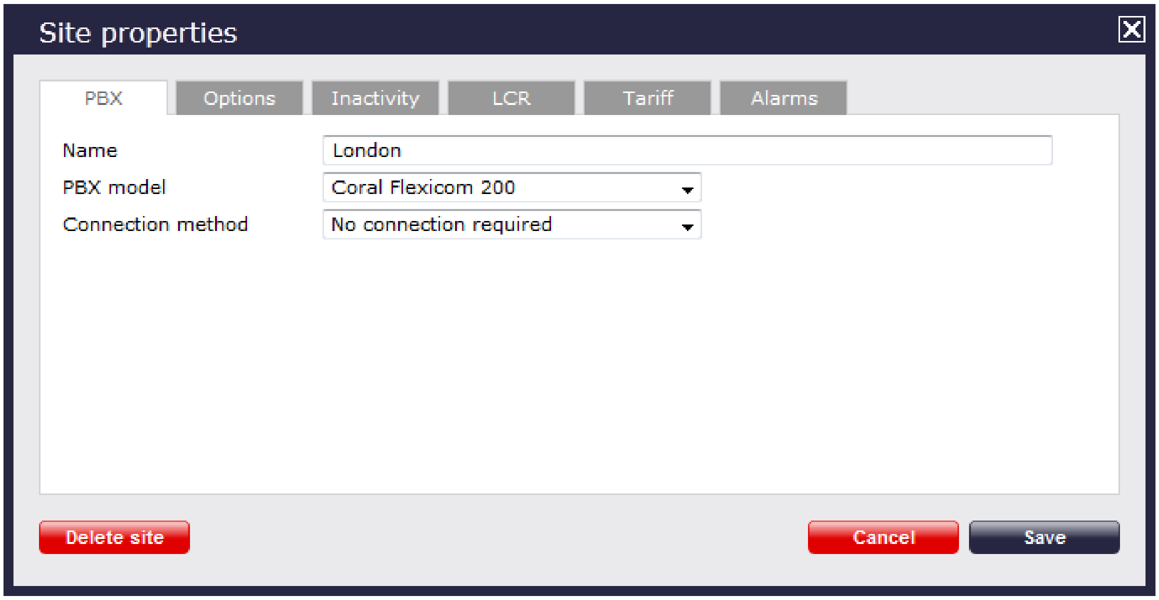
To collect call logging data from the serial port and send it to TIM Plus, you need to install the NetPBX software. For setup instructions, click on the link below:

Install and configure NetPBX

### Configuring TIM Plus

Once NetPBX is configured and collecting data, log in to TIM Plus and perform the steps below:

1. Click on the Directory tab.
2. Choose the site you want to configure and click Properties .




3. In the **Site Properties** window, select **Coral Flexicom 200** from the **PBX model** drop-down list.
4. In the **Connection method** field, select **No connection required** from the drop-down list.
5. Click on the Save button to apply the settings.

# Toshiba

## Toshiba CIX/CTX

The Toshiba CIX/CTX can be configured to send its SMDR data over a serial (RS232) or an IP connection. Click on one of the links below that relates to your preferred connection method.

### Toshiba CIX/CTX - Serial connection

These instructions help you configure your Toshiba CIX/CTX phone system to work with TIM Plus. Contact your system maintainer if you are not familiar with the configuration of your PBX.

Connection Type

TIM Plus establishes a serial connection with this PBX.

Support Files

**Toshiba CIX-CTX.TDT**

**Toshiba CIX-CTX.TDS**

Required Tasks

Configure the SMDR output

Install NetPBX

Configure TIM Plus

#### Configuring your SMDR output

When configuring your Toshiba CIX/CTX phone system to output its SMDR data via a serial connection, you need to directly connect a serial cable from the phone system to the PC running NetPBX.

For more information about the output and configuration of your SMDR data, contact your system maintainer.

### Installing NetPBX

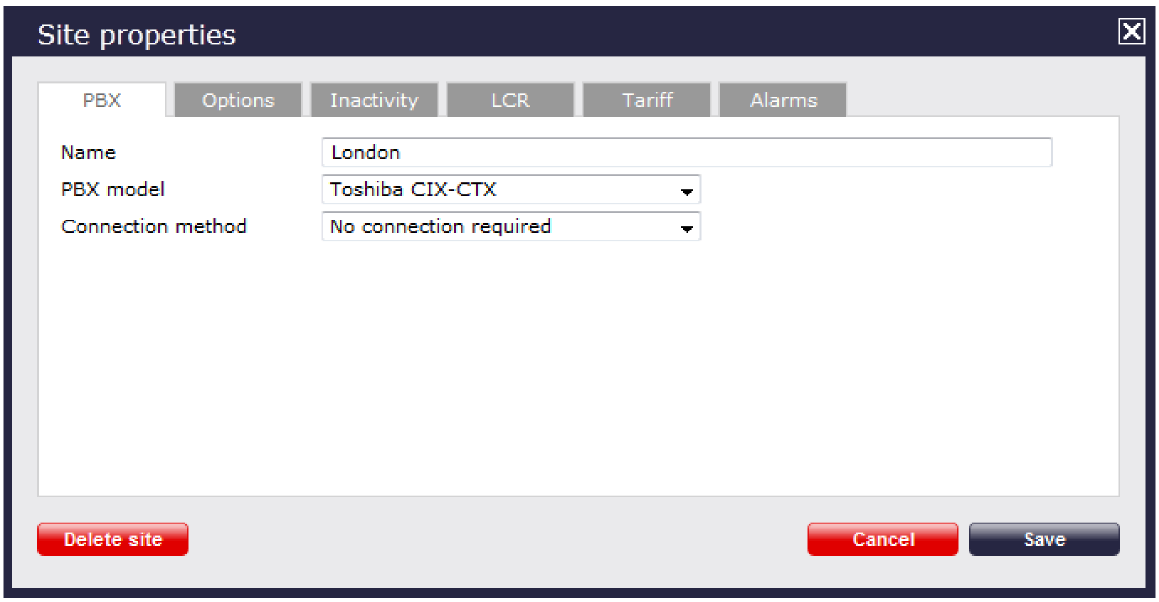
To collect call logging data from the serial port and send it to TIM Plus, you first need to install the NetPBX software. For setup instructions, click on the link below:

Install and configure NetPBX

### Configuring TIM Plus

Once NetPBX is configured and collecting data, log in to TIM Plus and perform the steps below:

1. Click on the Directory tab.
2. Choose the site you want to configure and click Properties .




3. In the **Site Properties** window, select **Toshiba CIX-CTX** from the **PBX model** drop-down list.
4. In the **Connection method** field, select **No connection required** from the drop-down list.
5. Click on the Save button to apply the settings.

## Toshiba CIX/CTX - IP Connection

These instructions help you configure your Toshiba CIX/CTX phone system to work with TIM Plus. Contact your system maintainer if you are not familiar with the configuration of your PBX.

Connection Type

TIM Plus listens for connections from this PBX.

Support Files

**Toshiba CIX-CTX.TDT**

**Toshiba CIX-CTX.TDS**

Required Tasks

Configure the SMDR output

Configure TIM Plus

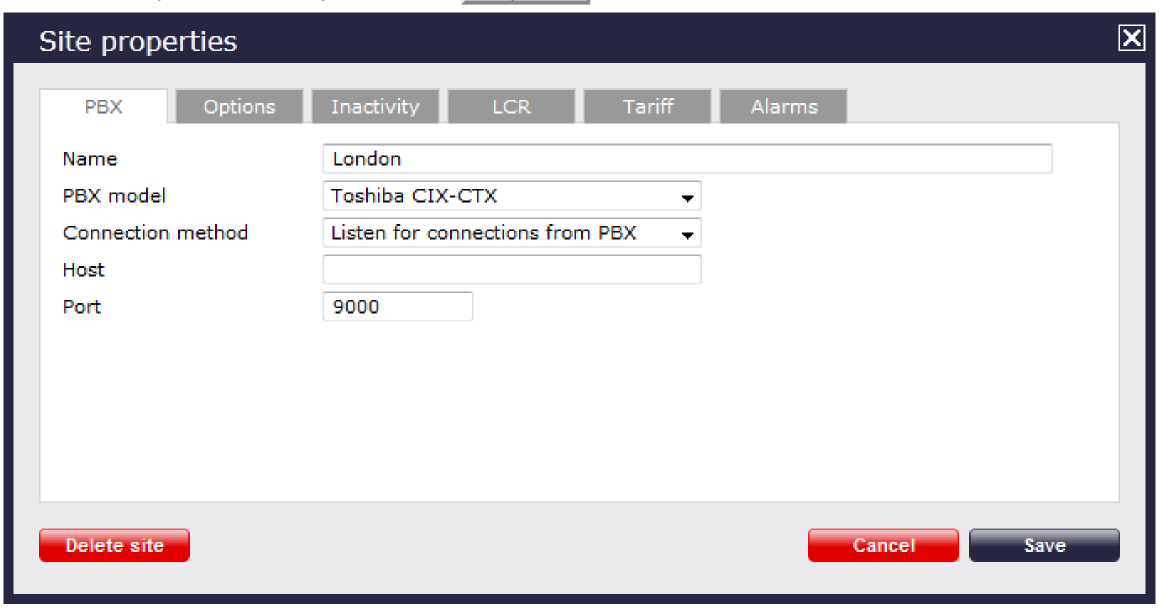
### Configuring your SMDR output

By default, the SMDR output of your Toshiba CIX/CTX is not enabled. Contact your system maintainer to enable call logging output for incoming, outgoing and internal calls.

### Configuring TIM Plus

Follow the steps below to configure TIM Plus to listen for SMDR data from your Toshiba CIX/CTX:

1. Click on the Directory tab.
2. Choose the site you want to configure and click Properties .




3. In the **Site Properties** window, select **Toshiba CIX-CTX** from the **PBX model** drop-down list.
4. In the **Connection method** field, select **Listen for connections from PBX** from the drop-down list.
5. Leave the **Host** field blank.
6. In the **Port** field enter **9000**.
7. Click on the Save button to apply the settings.

## Toshiba Strata DK

These instructions help you configure your Toshiba Strata DK phone system to work with TIM Plus. Contact your system maintainer if you are not familiar with the configuration of your PBX.

Connection Type

TIM Plus establishes a serial connection with this PBX.

Support Files

**Toshiba Strata DK.TDT**

**Toshiba Strata DK.TDS**

Required Tasks

- Configure the SMDR output
- Install NetPBX
- Configure TIM Plus

### Configuring your SMDR output

The Toshiba Strata DK phone system sends SMDR information via a serial connection when it is fitted with a Small Options Card. You need to directly connect a serial cable from the phone system to the PC that NetPBX is installed and running on.

For more information about the output and configuration of your SMDR data, contact your system maintainer.

### Installing NetPBX

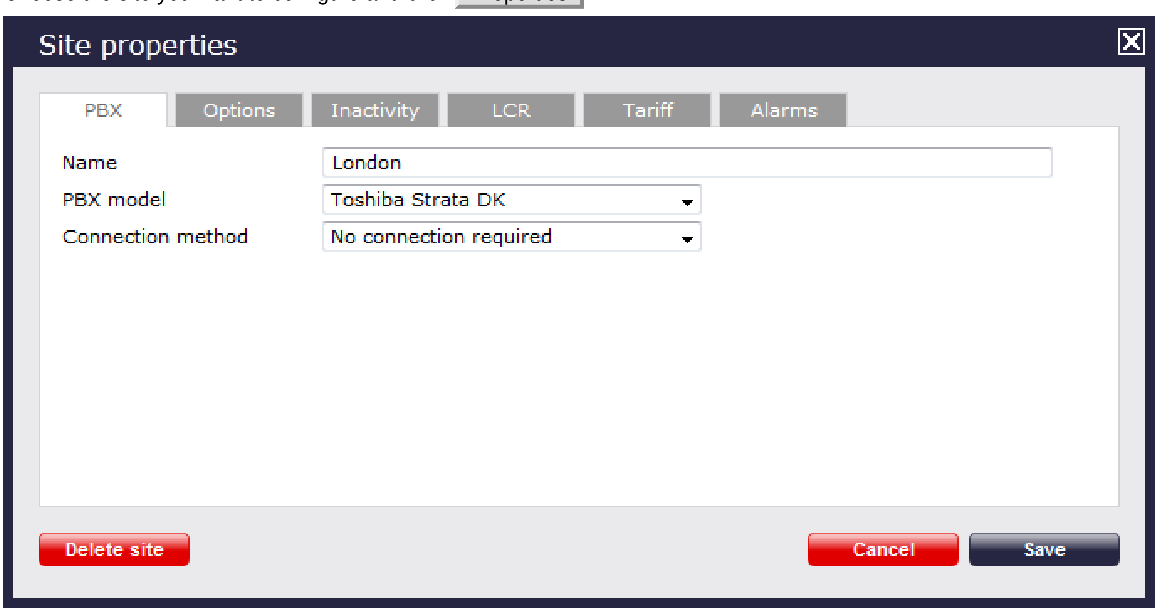
To collect call logging data from the serial port and send it to TIM Plus, you first need to install the NetPBX software. For setup instructions, click on the link below:

Install and configure NetPBX

### Configuring TIM Plus

Once NetPBX is configured and collecting data, log in to TIM Plus and perform the steps below:

1. Click on the Directory tab.
2. Choose the site you want to configure and click Properties .



3. In the **Site Properties** window, select **Toshiba Strata DK** from the **PBX model** drop-down list.
4. In the **Connection method** field, select **No connection required** from the drop-down list.
5. Click on the Save button to apply the settings.

# Unify (Siemens)

## Unify (Siemens) HiCom-HiPath

The Siemens HiCom/HiPath can be configured to send its SMDR data over a serial (RS232) or an IP connection. Click on one of the links below that relates to your preferred connection method.

### Unify (Siemens) HiCom-HiPath - Serial connection

These instructions help you configure your Siemens HiCom/HiPath phone system to work with TIM Plus. Contact your system maintainer if you are not familiar with the configuration of your PBX.

Connection Type

TIM Plus establishes a serial connection with this PBX.

Support Files

**Siemens HiCom-HiPath.TDT**

**Siemens.TDS**

Required Tasks

Configure the SMDR output

Install NetPBX

Configure TIM Plus

#### Configuring your SMDR output

When configuring your Siemens HiCom/HiPath phone system to send SMDR data via a serial connection, you need to directly connect a serial cable from the Siemens HiCom/HiPath phone system to the PC that NetPBX is installed and running on.

For more information about the output and configuration of your SMDR data, please contact your system maintainer.

#### Installing NetPBX

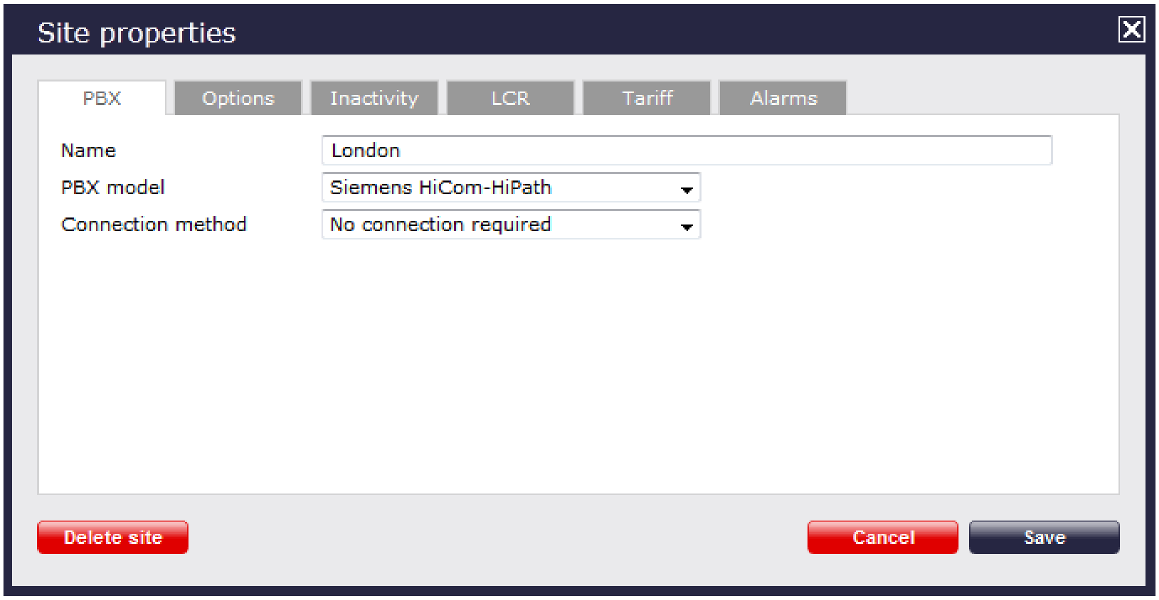
To collect call logging data from the serial port and send it to TIM Plus, you first need to install the NetPBX software. For setup instructions, click on the link below:

Install and configure NetPBX

#### Configuring TIM Plus

Once NetPBX is configured and collecting data, log in to TIM Plus and perform the steps below:

1. Click on the Directory tab.
2. Choose the site you want to configure and click Properties .




3. In the **Site Properties** window, select **Siemens HiCom-HiPath** from the **PBX model** drop-down list.
4. In the **Connection method** field select **No connection required** from the drop-down list.
5. Click on the Save button to apply the settings.

### Unify (Siemens) HiCom-HiPath - IP connection

These instructions help you configure your Siemens HiCom/HiPath phone system to work with TIM Plus. Contact your system maintainer if you are not familiar with the configuration of your PBX.

Connection Type

TIM Plus listens for connections from this PBX.

Support Files

**Siemens HiCom-HiPath.TDT**

**Siemens.TDS**

Required Tasks

Configure the SMDR output

Configure TIM Plus

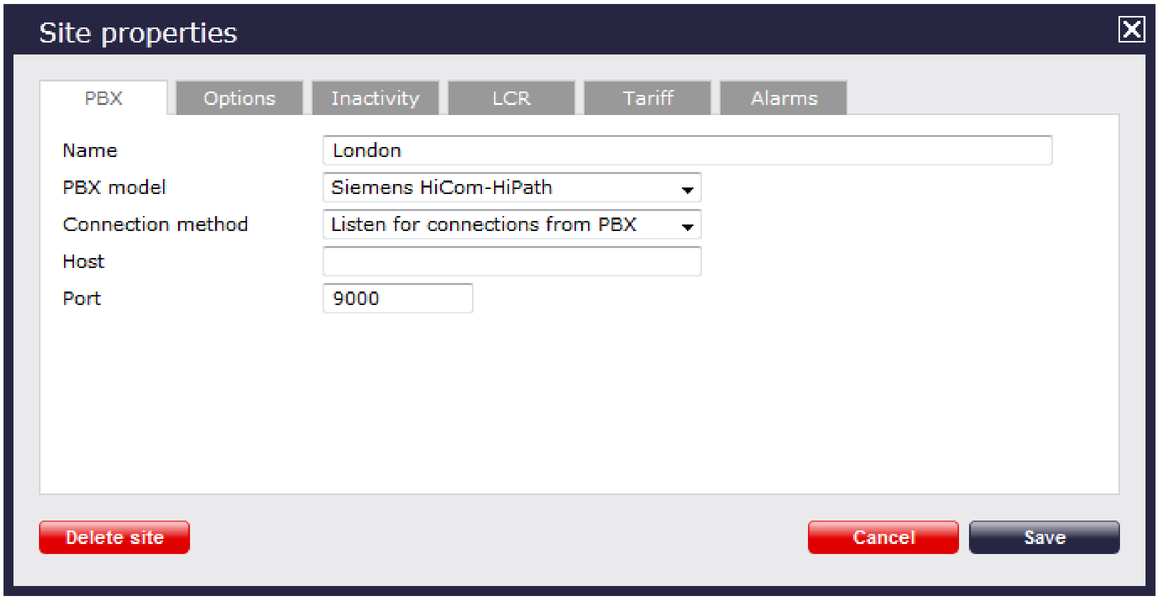
#### Configuring your SMDR output

By default, the SMDR output of a Siemens HiCom/HiPath phone system is not enabled. Contact your system maintainer to enable it for incoming, outgoing and internal calls.

#### Configuring TIM Plus

Once NetPBX is configured and collecting data, log in to TIM Plus and perform the steps below:

1. Click on the Directory tab.
2. Choose the site you want to configure and click Properties .




3. In the **Site Properties** window, select **Siemens HiCom-HiPath** from the **PBX model** drop-down list.
4. In the **Connection method** field, select **Listen for connections from PBX** from the drop-down list.
5. Leave the **Host** field blank.
6. In the **Port** field, enter **9000**.
7. Click on the Save button to apply the settings.

## Unify (Siemens) HiPath 4000

These instructions help you configure your Siemens HiPath 4000 phone system to work with TIM Plus. Contact your system maintainer if you are not familiar with the configuration of your PBX.

Connection Type

TIM Plus establishes a TCP connection to this PBX.

Support Files

**Siemens HiPath 4000.TDT**

**Siemens HiPath 4000.TDS**

Required Tasks

Configure the SMDR output

Configure TIM Plus

### Configuring your SMDR output

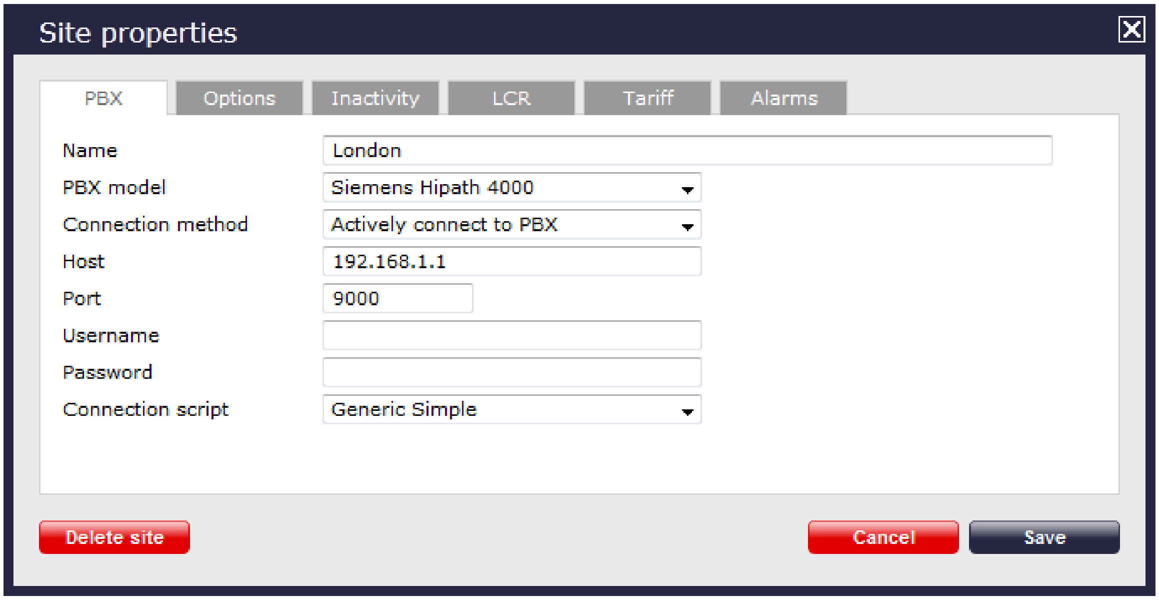
By default, the SMDR output of a Siemens HiPath 4000 is not enabled. To enable it for incoming, outgoing and internal calls, contact your system maintainer.

### Configuring TIM Plus

Follow the steps below to configure TIM Plus to collect the SMDR data from your Siemens HiPath 4000:

1. Click on the Directory tab.

2. Choose the site you want to configure and click Properties .




3. In the **Site Properties** window, select **Siemens HiPath 4000** from the **PBX model** drop-down list.
4. In the **Connection method** field, select **Actively connect to PBX** from the drop-down list.
5. In the **Host** field, enter the IP address of your Siemens HiPath 4000.
6. In the **Port** field, enter **9000**.
7. Leave the **Username** and **Password** fields blank.
8. In the **Connection script** field, select **Generic Simple** from the drop-down list.
9. Click on the Save button to apply the settings.

## Unify (Siemens) OpenOffice

The Unify (Siemens) OpenOffice can be configured to send its SMDR data over an IP or database connection. Click on one of the links below that relates to your preferred connection method.

### Unify (Siemens) OpenOffice - DSN connection

These instructions help you configure your Siemens OpenOffice phone system to work with TIM Plus. Contact your system maintainer if you are not familiar with the configuration of your PBX.

Connection Type

TIM Plus establishes a DSN connection with this PBX.

Support Files

**Siemens OpenOffice.TDT**

**Siemens OpenOffice.TDS**

**Siemens OpenOffice.DBS**

Required Tasks

Configure the SMDR output

Set up a DSN connection

Configure the interface file

Configure TIM Plus

### Configuring your SMDR output

By default, the SMDR output of a Siemens OpenOffice is not enabled. Contact your system maintainer to enable it for incoming, outgoing and internal calls.

### Setting up a DSN connection

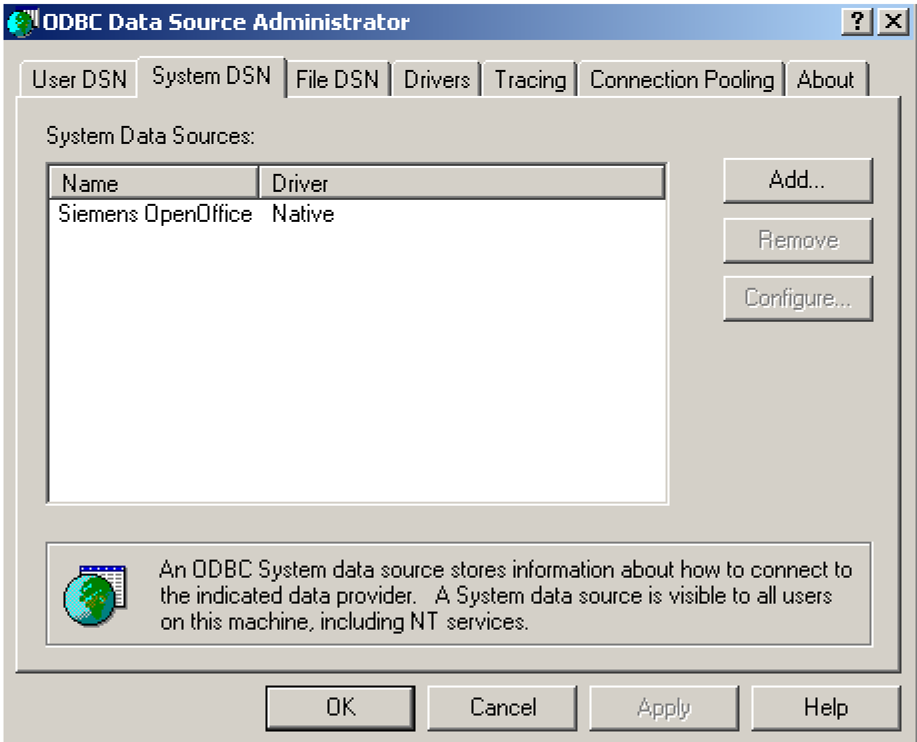
To enable TIM Plus to work with the Siemens OpenOffice, you first need to set up a DSN connection, by following the steps below:

1. Open Windows Control Panel
2. Double-click on the Administrative tools icon
3. Double-click on the Data Sources (ODBC) icon to open the **ODBC Data Source Administrator** window

> For a 64 bit system, access the **ODBC Data Source Administrator** from the following location **C:\Windows\SysWOW64\odbcad32.exe**

4. Click on the System DSN tab
5. Click on the Add button
6. Select **Native** from the driver list and click Finish
7. In the **Data source name** field enter **Siemens OpenOffice**
8. Click on the OK button to save the changes

An example of an ODBC entry is shown below:




### Configuring the interface file

Follow the steps below to configure the interface file to establish an HTTPS connection with your Siemens OpenOffice:

1. Open the **`Siemens OpenOffice.TDT`** file, located by default in **`C:\Program Files (x86)\Tri-Line\TIM Plus\config`**.

2. Edit the file to point to the IP address of your Siemens OpenOffice and enter the relevant username and password, as shown below:

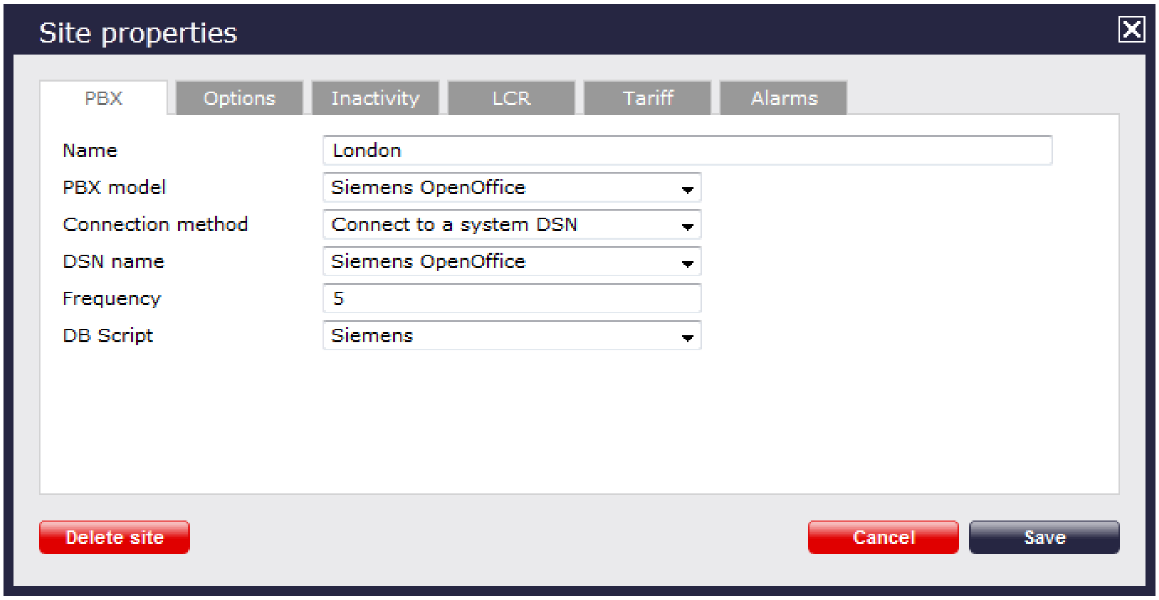
```
'Siemens OpenOffice
'
' When using the https connection method, add the following to the main.cfg in the [Options] section
' GhostFile = data.pbx
' FileScoutInterval = 10

Type = SCRIPT

[Options]

ScriptFile = Siemens.tds

' Options, None, Https
ConnectionType = Https

' Options, Fixed Width, Delimited
FileFormat     = Delimited

' Options, for Delimited File type
Delimiter      = |

' Options, for Https Connection
'IPAddress      = 127.0.0.1
'Username       = user
'Password       = password
BackupFile     = {app}\backup\{year}\{month}\backup-{year}{month}{day}.{sitecode}

'Access codes, comma delimited and sorted in descending length order
' defualt value is none
AccessCodes = 9

'SplitTandem = True
```

3. Remove the apostrophe (') in front of the amended fields to enable them. An example of a configured interface file is shown below:

```
'Siemens OpenOffice
'
' When using the https connection method, add the following to the main.cfg in the [Options] section
' GhostFile = data.pbx
' FileScoutInterval = 10

Type = SCRIPT

[Options]

ScriptFile = Siemens.tds

' Options, None, Https
ConnectionType = Https

' Options, Fixed Width, Delimited
FileFormat     = Delimited

' Options, for Delimited File type
Delimiter      = |

' Options, for Https Connection
IPAddress      = 192.168.1.1
Username       = Siemens
Password       = OpenOffice
BackupFile     = {app}\backup\{year}\{month}\backup-{year}{month}{day}.{sitecode}

'Access codes, comma delimited and sorted in descending length order
' defualt value is none
AccessCodes = 9

'SplitTandem = True
```

Once the DSN connection has been set up, log in to TIM Plus and follow the steps below:

1. Click on the Directory tab.
2. Choose the site you want to configure and click Properties .




3. In the **Site Properties** window, select **Siemens OpenOffice** from the **PBX model** drop-down list.
4. In the **Connection method** field, select **Connect to a system DSN** from the drop-down list.
5. In the **DSN name** field, select **Siemens OpenOffice** from the drop-down list.
6. In the **Frequency** field, enter **5**.
7. In the **DB script** field, select **Siemens** from the drop-down list.
8. Click on the Save button to apply the settings.

## Unify (Siemens) OpenOffice - IP connection

These instructions help you configure your Siemens OpenOffice phone system to work with TIM Plus. Contact your system maintainer if you are not familiar with the configuration of your PBX.

Connection Type

TIM Plus establishes a TCP connection to this PBX.

Support Files

**Siemens OpenOffice.TDT**

**Siemens OpenOffice.TDS**

Required Tasks

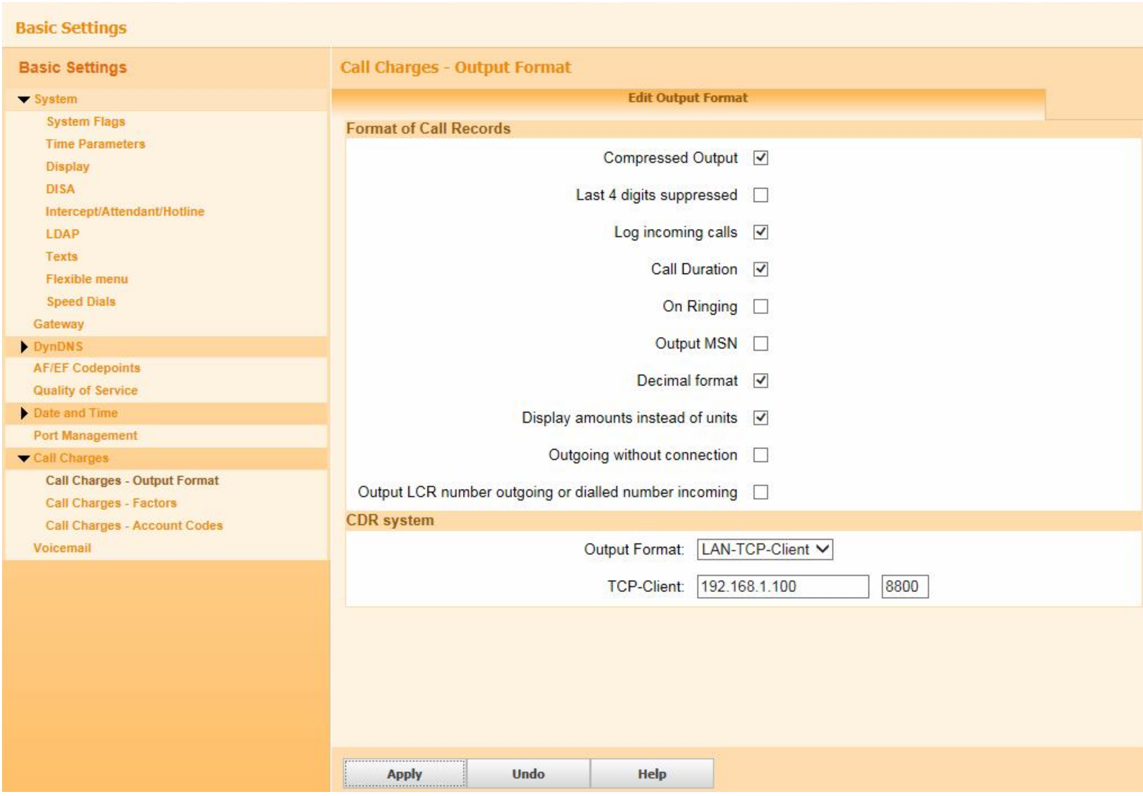
Configure the SMDR output

Configure TIM Plus

### Configure the SMDR output

Follow the steps below to enable the SMDR output in your telephone system:

1. Log in to the Siemens OpenOffice web portal.
2. Click on **Expert Mode** and then select **Basic Settings**.
3. Under the **Call Charges** menu options, select **Call Charges - Output Format** and tick the SMDR options shown below:

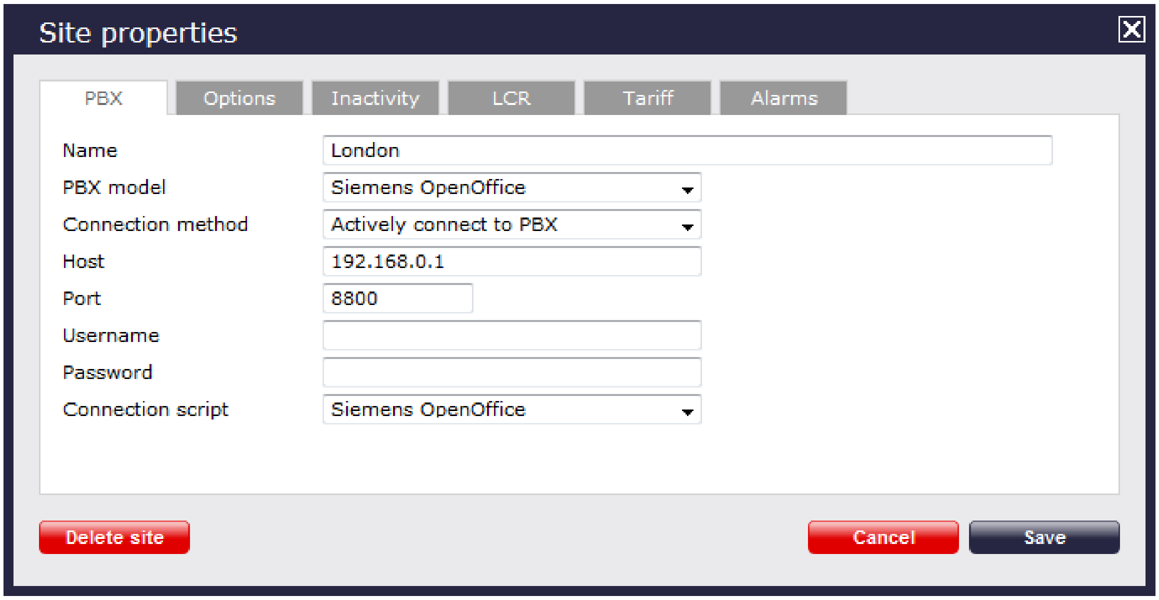



4. Under **CDR System** options, select **LAN-TCP-Client** from the drop-down list, as the output format.
5. In the **TCP-Client** field, enter the IP address of the PC running TIM Plus and the port number that you want your SMDR data to be sent to.
6. Click on the Apply tab to save the changes.

### Configure TIM Plus

Follow the steps below to configure TIM Plus to collect the SMDR data from your telephone system:

1. Click on the Directory tab.
2. Choose the site you want to configure and click Properties .




3. In the **Site Properties** window, select **Siemens OpenOffice** from the **PBX model** drop-down list.
4. In the **Connection method** field, select **Actively connect to PBX** from the drop-down list.
5. In the **Host** field, enter the IP address of your Siemens OpenOffice telephone system.
6. In the **Port** field, enter the port number configured in the phone system.
7. Leave the **Username** and **Password** fields blank.
8. In the **Connection script** field, select **Siemens OpenOffice** from the drop-down list.
9. Click on the Save button to apply the settings.

## Unify (Siemens) OpenScape Business

The Unify OpenScape Business can be configured to send its SMDR data over an IP or database connection. Click on one of the links below that relates to your preferred connection method.

### Unify (Siemens) OpenScape Business - DSN connection

These instructions help you configure your Unify OpenScape Busines phone system to work with TIM Plus. Contact your system maintainer if you are not familiar with the configuration of your PBX.

Connection Type

TIM Plus establishes a DSN connection with this PBX.

Support Files

**Unify OpenScape Business.TDT**

**Unify OpenScape Business.TDS**

**Unify OpenScape Business.DBS**

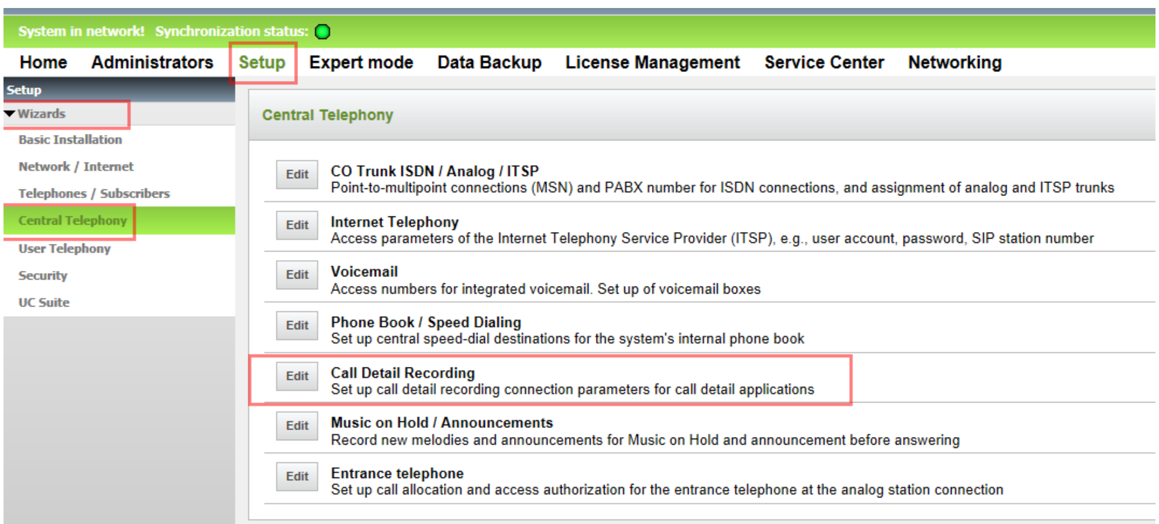
Required Tasks

- Configure the SMDR output
- Set up a DSN connection
- Configure the interface file
- Configure TIM Plus

### Configuring the SMDR output

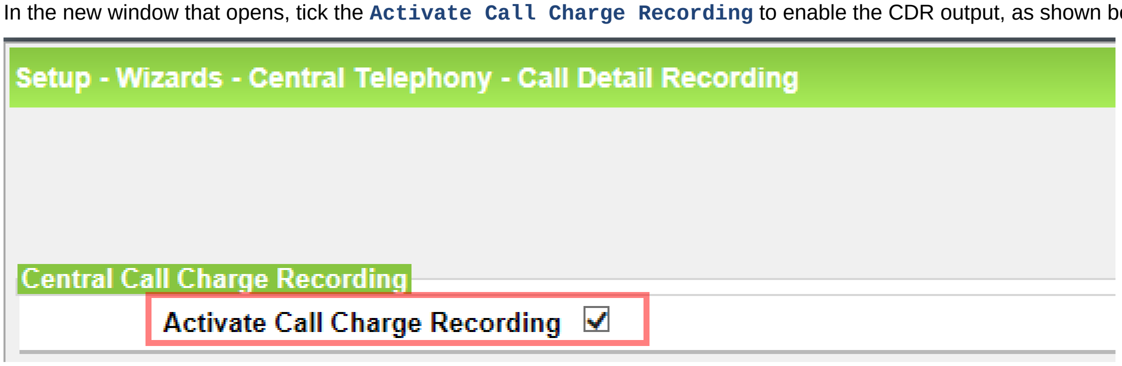
Follow the instructions below to configure the SMDR output in your phone system. These instructions are taken from the Unify OpenScape Business manual.

1. Log on to OpenScape Business Assistant and click on Setup -> Wizards -> Central Telephony, as shown below:




2. Click Edit to start the `Call Detail Recording` wizard.

3. In the new window that opens, tick the **`Activate Call Charge Recording`** to enable the CDR output, as shown below:



### Setting up a DSN connection

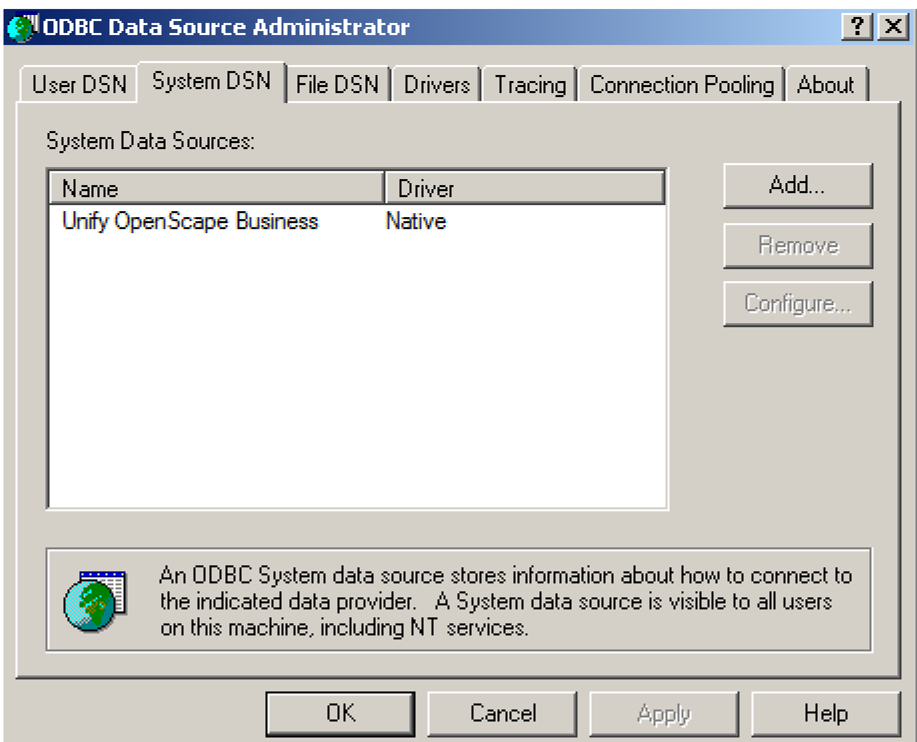
The default SMDR output option in the Unify OpenScape Business phone system is **HTTPS**. To enable TIM Plus to work with Unify OpenScape Business, you first need to set up a DSN connection, by following the steps below:

1. Open Windows Control Panel
2. Double-click on the Administrative tools icon
3. Double-click on the Data Sources (ODBC) icon to open the **ODBC Data Source Administrator** window

> For a 64 bit system, access the **ODBC Data Source Administrator** from the following location **C:\Windows\SysWOW64\odbcad32.exe**

4. Click on the System DSN tab
5. Click on the Add button
6. Select **Native** from the driver list and click Finish
7. In the **Data source name** field enter **Unify OpenScape Business**
8. Click on the OK button to save the changes

An example of an ODBC entry is shown below:




### Configuring the interface file

Follow the steps below to configure the interface file to establish an HTTPS connection with your Unify OpenScape Business:

1. Open the **`Unify OpenScape Business.TDT`** file, located by default in **`C:\Program Files\Tri-Line\TIM Plus\config`**.
2. Edit the file to point to the IP address of your Unify OpenScape Business and enter the relevant username and password, as shown below:

```
' Unify OpenScape Business
'
' When using the https connection method, add the following to the main.cfg in the [Options] section
' GhostFile = data.pbx
' FileScoutInterval = 10

Type = SCRIPT

[Options]

ScriptFile = Unify OpenScape Business.tds

' Options, None, Https
ConnectionType = Https

' Options, Fixed Width, Delimited
FileFormat      = Delimited

' Options, for Delimited File type
Delimiter       = |

' Options, for Https Connection
'IPAddress      = 127.0.0.1
'Username       = user
'Password       = password
BackupFile      = {app}\backup\{year}\{month}\backup-{year}{month}{day}.{sitecode}

'Access codes, comma delimited and sorted in descending length order
' defualt value is none
AccessCodes = 9

'SplitTandem = True
```

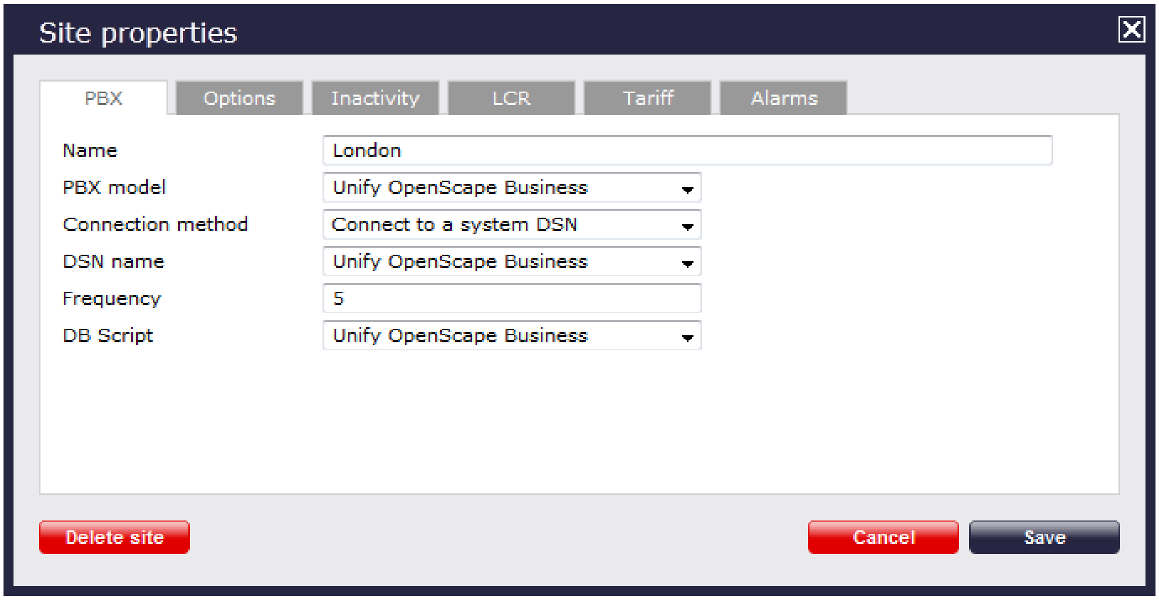
3. Remove the apostrophe (') in front of the amended fields to enable them. An example of a configured interface file is shown below:

```
' Unify OpenScape Business
'
' When using the https connection method, add the following to the main.cfg in the [Options] section
' GhostFile = data.pbx
' FileScoutInterval = 10

Type = SCRIPT

[Options]

ScriptFile = Unify OpenScape Business.tds

' Options, None, Https
ConnectionType = Https

' Options, Fixed Width, Delimited
FileFormat      = Delimited

' Options, for Delimited File type
Delimiter       = |

' Options, for Https Connection
IPAddress       = 192.168.1.1
Username        = Siemens
Password        = OpenOffice
BackupFile      = {app}\backup\{year}\{month}\backup-{year}{month}{day}.{sitecode}

'Access codes, comma delimited and sorted in descending length order
' defualt value is none
AccessCodes = 9

'SplitTandem = True
```

### Configuring TIM Plus

Once the DSN connection has been set up, log in to TIM Plus and follow the steps below:

1. Click on the Directory tab.
2. Choose the site you want to configure and click Properties .




3. In the **Site Properties** window, select **Unify OpenScape Business** from the **PBX model** drop-down list.
4. In the **Connection method** field, select **Connect to a system DSN** from the drop-down list.
5. In the **DSN name** field, select **Unify OpenScape Business** from the drop-down list.
6. In the **Frequency** field, enter **5**.
7. In the **DB script** field, select **Unify OpenScape Business** from the drop-down list.
8. Click on the Save button to apply the settings.

## Unify (Siemens) OpenScape Business - IP connection

These instructions help you configure your Unify OpenScape Busines phone system to work with TIM Plus. Contact your system maintainer if you are not familiar with the configuration of your PBX.

Connection Type

TIM Plus listens for connections from this PBX.

Support Files

**Unify OpenScape Business.TDS**

**Unify OpenScape Business.TDT**

Required Tasks

Configure the SMDR output

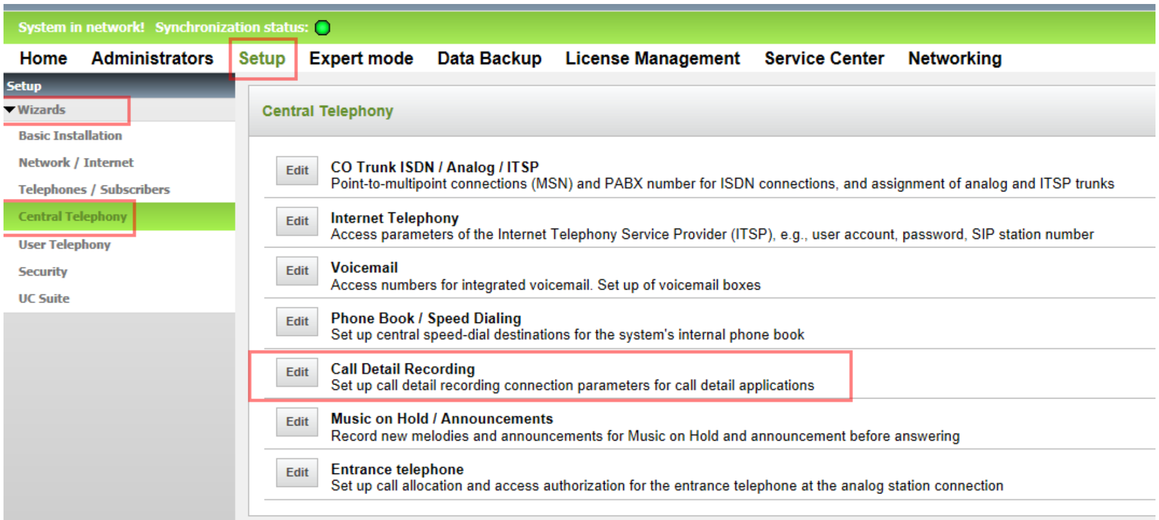
Configure TIM Plus

### Configuring the SMDR output

## Enabling the SMDR output

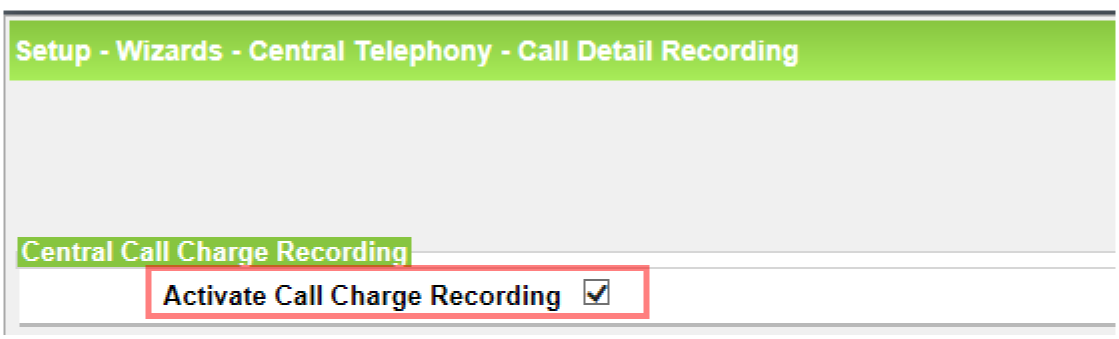
Follow the instructions below to configure the SMDR output in your phone system. These instructions are taken from the Unify OpenScape Business manual:

1. Log on to OpenScape Business Assistant and click on `Setup` -> `Wizards` -> `Central Telephony` , as shown below:




2. Click `Edit` to start the **Call Detail Recording** wizard.

3. In the new window that opens, tick the **Activate Call Charge Recording** to enable the CDR output, as shown below:




## Sending the SMDR via TCP/IP

By default, the Unify OpenScape Business phone system send its SMDR output via HTTPS. To send the data via a TCP/IP, follow the steps below:

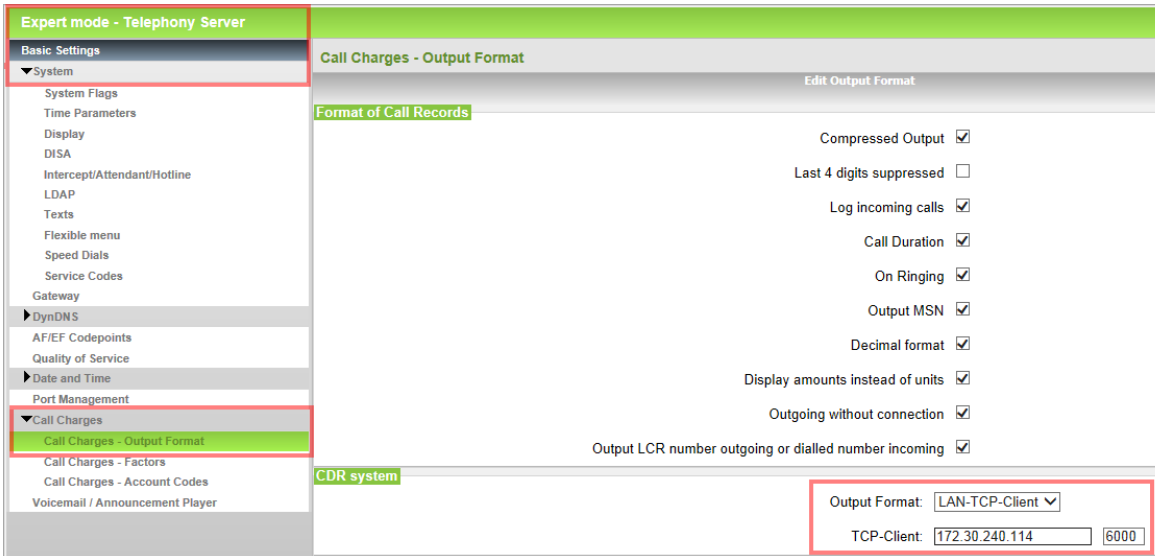
1. Log on to OpenScape Business Assitant with **Expert** profile

2. Click on `Telephony Server` -> `Basic Settings` in the navigation tree

3. Click on **Basic Settings** -> **Call charges** -> **Call charges output format**

4. In the **CDR system** section, select **LAN-TCP-Client** from the drop-down list

5. In the **TCP-Client** field, enter the IP address of the PC running TIM Plus and the port number you want to use for the SMDR output, as shown in the screenshot below:

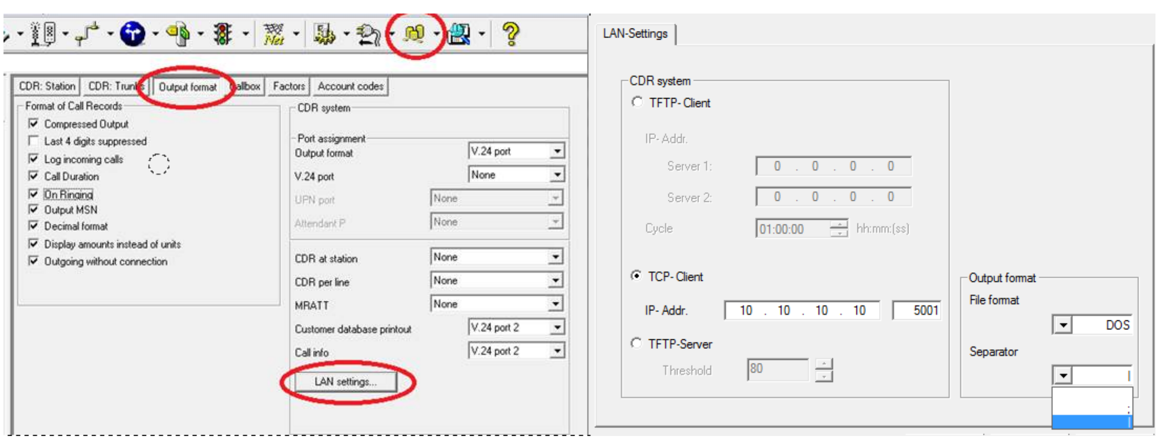



Please note the following:

1. If the system was upgraded from HiPath 3000 using the convert tool, the data format will use **;** as a separator
2. If the system was upgraded from HiPath 3000, but the database was retyped subsequently, the data format will use **|** a s a separator
3. If the system was new, the data format will use **|** as a separator

If the HiPath 3K database was simply converted and not retyped, no change will be required, since both the old and the new database will use **;** a s a separator. If the database was retyped, the new platforms default to **|** separator. This is the most notable in a networked environment where the same template must be used.

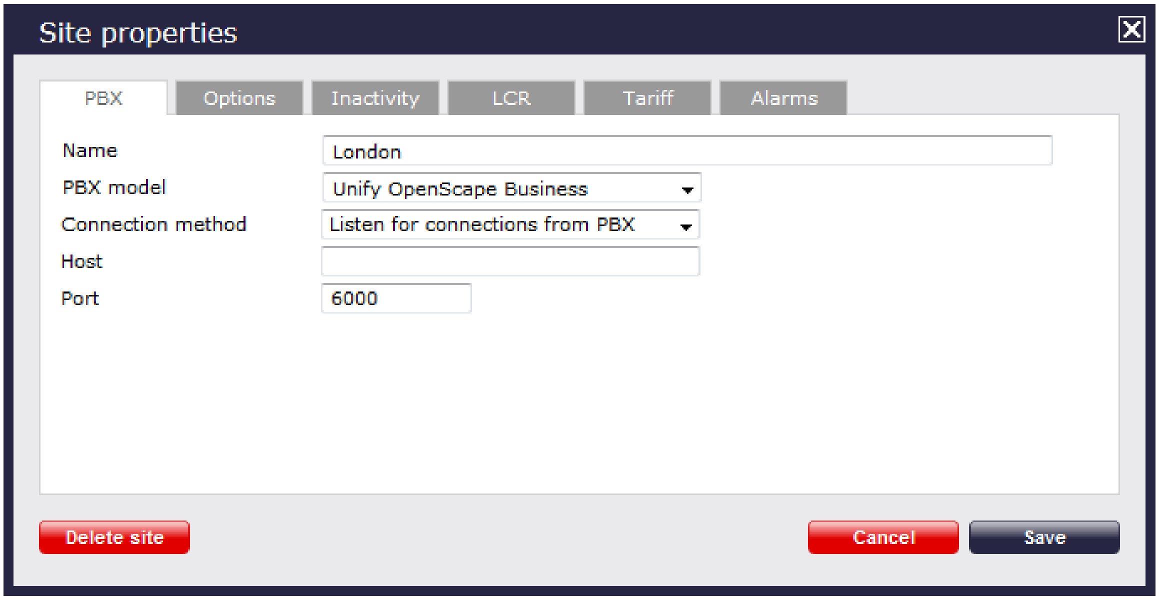
However, the **|** separator cannot be set in the new WBM tool, and can only be configured using the Manager E, as shown below:




### Configuring TIM Plus

Follow the steps below to configure TIM Plus to listen for SMDR data from your telephone system:

1. Click on the **Directory** tab.
2. Choose the site you want to configure and click **Properties** .




3. In the **Site Properties** window, select **Unify OpenScape Business** from the **PBX model** drop-down list.
4. In the **Connection method** field, select **Listen for connections from PBX** from the drop-down list.
5. Leave the **Host** field blank.
6. In the **Port** field, enter the port number configured in the telephone system.
7. Click on the Save button to apply the settings

## Unify (Siemens) Realitis/HiPath DX

The Siemens Realitis/HiPath DX can be configured to send its CIL output via a serial (RS232) or an IP connection. Click on the link below that relates to your preferred connection method.

### Unify (Siemens) Realitis/HiPath DX - Serial connection

These instructions help you configure your Siemens Realitis/HiPath DX phone system to work with TIM Plus. Contact your system maintainer if you are not familiar with the configuration of your PBX.

Connection Type

TIM Plus establishes a serial connection with this PBX.

Support Files

**Siemens HiPath DX.TDT**

**Siemens HiPath DX.TDS**

Required Tasks

Configure the CIL output

Install NetPBX

Configure TIM Plus

#### Configuring your CIL output

When configuring your Siemens Realitis/Hipath DX to send its CIL information via a serial connection, you need to directly connect a serial cable from the phone system's wall box to the PC running NetPBX .

Your system maintainer needs to enable CIL output by setting it to the **Full or unrestricted CIL** format.

### Installing NetPBX

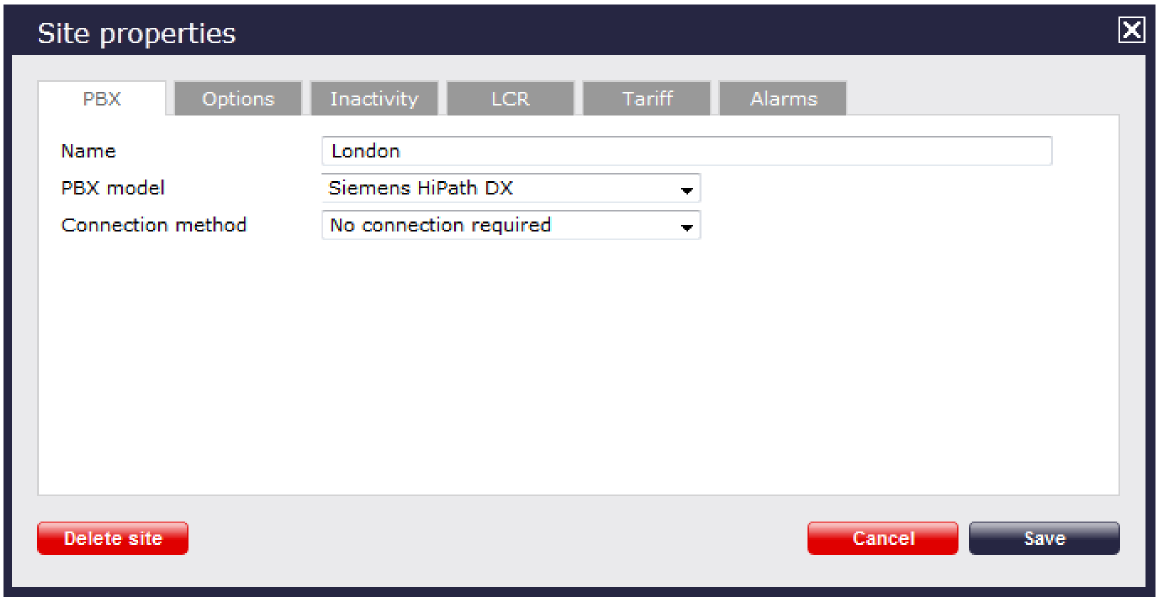
To collect call logging data from the serial port of your phone system and send it to TIM Plus, you first need to install the NetPBX software. For setup instructions, click on the link below:

Install and configure NetPBX

### Configuring TIM Plus

Once NetPBX is configured and collecting data, log in to TIM Plus and perform the steps below:

1. Click on the Directory tab.
2. Choose the site you want to configure and click Properties .




3. In the **Site Properties** window, select **Siemens HiPath DX** from the **PBX model** drop-down list.
4. In the **Connection method** field, select **No connection required** from the drop-down list.
5. Click on the Save button to save the settings.

## Unify (Siemens) Realitis/HiPath DX - IP connection

These instructions help you configure your Siemens Realitis/HiPath DX phone system to work with TIM Plus. Contact your system maintainer if you are not familiar with the configuration of your PBX.

Connection Type

TIM Plus establishes a TCP connection to this PBX.

Support Files

**`Siemens HiPath DX.TDT`**

**`Siemens HiPath DX.TDS`**

Required Tasks

Configure the CIL output

Configure TIM Plus

### Configuring your CIL output

#### CIL access over Ethernet

In addition to CIL access over V.24 ports, all Realitis DX and iSDX systems with firmware revision 6.0 and above can send their CIL information by Ethernet. The System/UPI card - ACI - only allows a maximum of three such connections; subsequent connection requests are rejected.

To set up and activate this feature, a request must be made to Product Management at Siemens, Beeston.

#### Connecting to the CIL server

TIM Plus establishes a TCP connection to the IP address of the System/UPI card of your Siemens phone system.

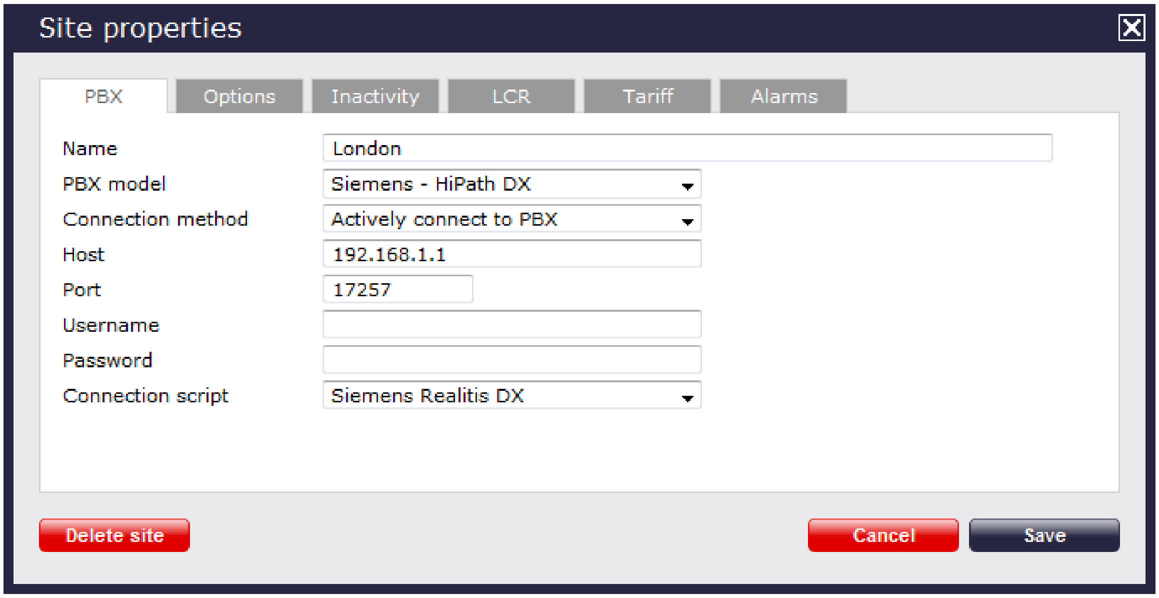
You can choose the IP address of the System/UPI card by setting the variable **`IPACT`** in the permanent database. Your local maintenance engineer should be able to program this address for you.

The default listening port is **`17257`**.

### Configuring TIM Plus

Follow the steps below to configure TIM Plus to collect SMDR data from your Siemens Realitis/HiPath DX:

1. Click on the Directory tab.
2. Choose the site you want to configure and click Properties .




3. In the **`Site Properties`** window, select **`Siemens HiPath DX`** from the **`PBX model`** drop-down list.
4. In the **`Connection method`** field, select **`Actively connect to PBX`** from the drop-down list.
5. In the **`Host`** field, enter the IP address of the System/UPI card of your phone system.
6. In the **`Port`** field, enter **`17257`**.
7. Leave the **`Username`** and **`Password`** fields blank.
8. In the **`Connection script`** field, select **`Siemens Realitis DX`** from the drop-down list.
9. Click on the Save button to apply the settings.

# VoiSpeed

## VoiSpeed PBX

These instructions help you configure your VoiSpeed PBX phone system to work with TIM Plus. Contact your system maintainer if you are not familiar with the configuration of your PBX.

Connection Type

The SMDR data is outputted to a file

Support Files

**`VoiSpeed.TDT`**

Required Tasks

- Configure the SMDR output
- Install NetPBX
- Configure TIM Plus

### Configuring your CDR output

The VoiSpeed phone system outputs its CDR data to a file. To configure the output, contact your system maintainer.

TIM Plus can be installed on the same machine as the VoiSpeed server; however, you should confirm this first with your system maintainer as it may impact system performance.

### Installing NetPBX

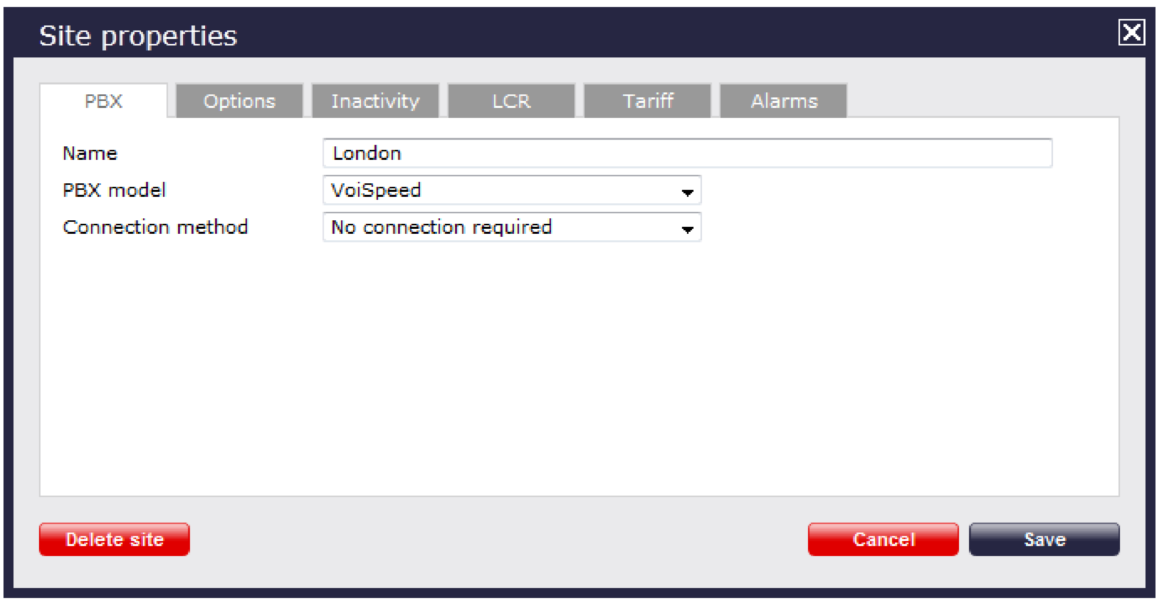
Since your VoiSpeed phone system outputs its call logging data to a file, you first need to install the NetPBX software in order to collect the contents of the call logging file and forward it to TIM Plus. For setup instructions, click on the link below:

Install and configure NetPBX

### Configuring TIM Plus

Once NetPBX is configured and collecting data, log in to TIM Plus and perform the steps below:

1. Click on the Directory tab.
2. Choose the site you want to configure and click Properties .

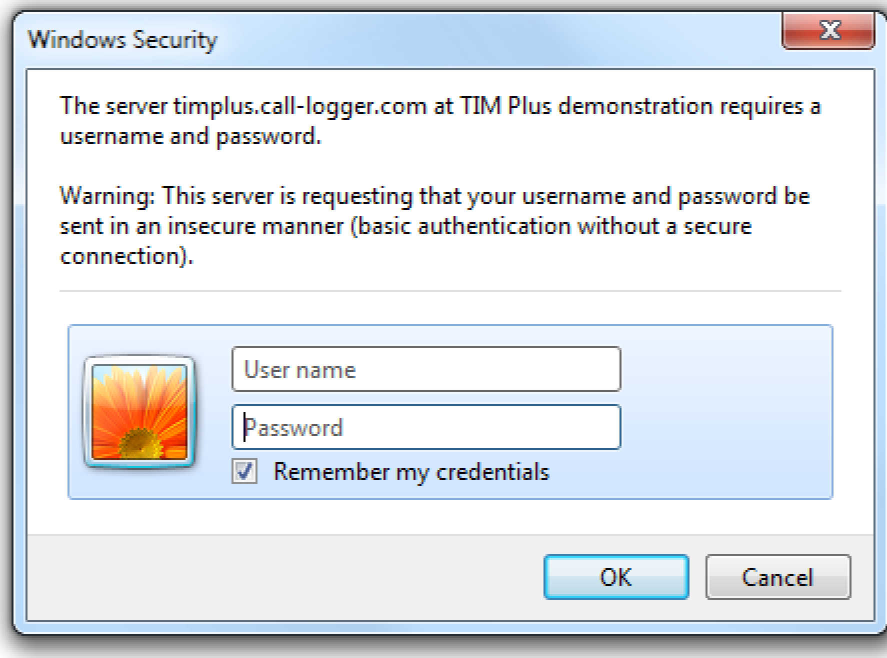



3. In the **Site Properties** window, select **VoiSpeed** from the **PBX model** drop-down list.
4. In the **Connection method** field, select **No connection required** from the drop-down list.
5. Click on the Save button to apply the settings.

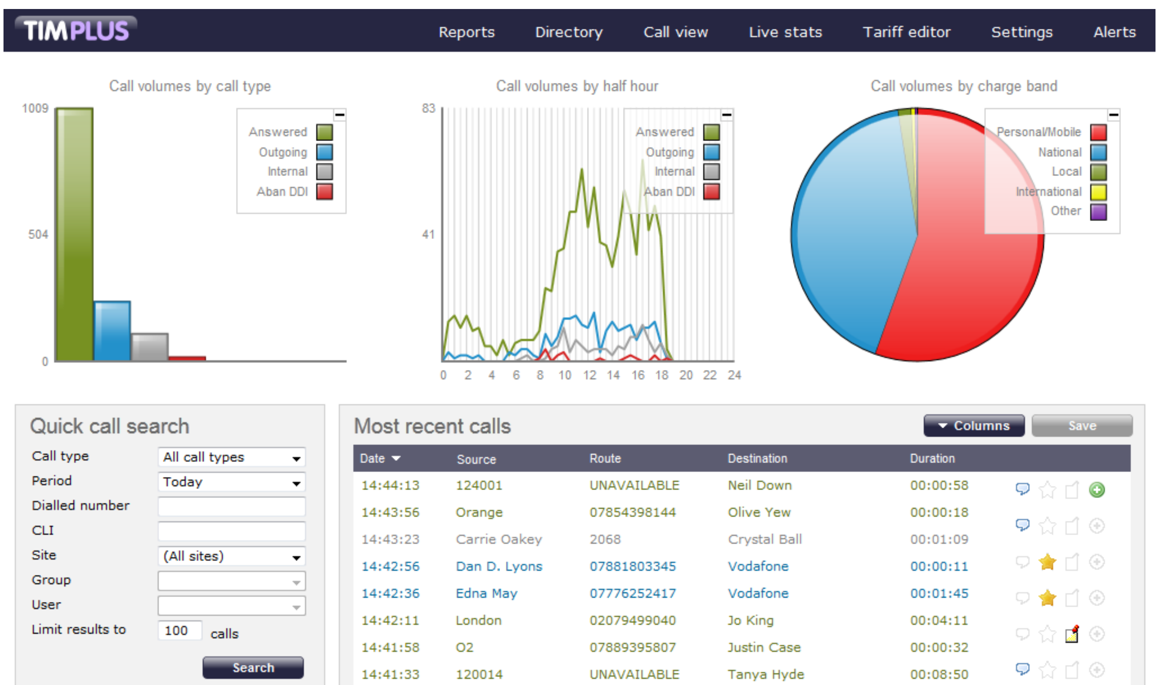
## Accessing the system

TIM Plus resides on a centralised machine within your network where it runs as a service and, due to its in-built web server, it can be accessed via a standard web browser from any other PC on your network.

To access TIM Plus, open a web browser, go to the IP address or host name of the computer running TIM Plus and log in using your username and password.




After successfully logging in, the following "dashboard" screen will be displayed.

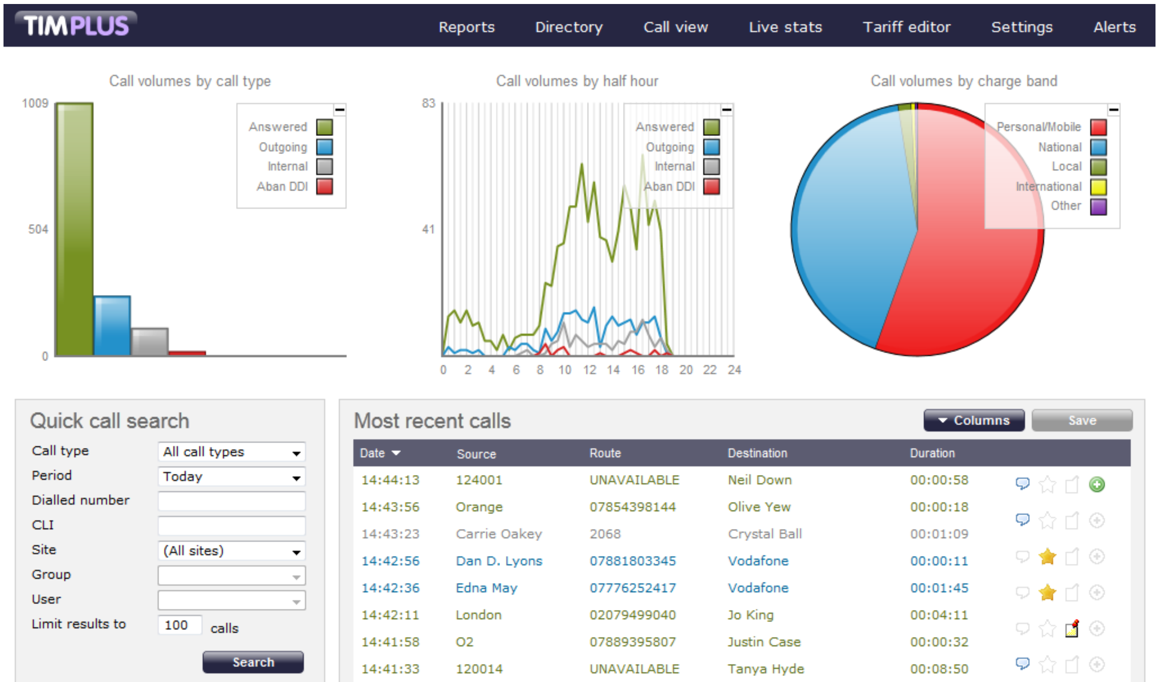



You may find that your access is restricted to a specific site or group. If you need to access other sites or groups, speak to your system administrator to get additional privileges.

# Main screen

## Overview

When logging in to TIM Plus, the following dashboard screen is displayed:




The information you see on this screen is relevant only to the area to which you've been granted access. For example:

- If you are a site administrator, the graphs, live call view and any other call-related information will be derived from calls that happened only on your own site and not those from any other sites within the system.
- If your login account is restricted to a specific user group (department), the statistics will relate only to the call information for users within that particular group.

The dashboard screen consists of a toolbar along the top of the page and three main panels.

The toolbar is the main menu that you use to navigate the major features of TIM Plus. The tabs that make up the toolbar differ according to the type of account you use to log in with. The screenshot above displays an example dashboard screen for a user account that has administrative privileges whereby all of the tabs are present; however, for a restricted web user account, some of the tabs might not be visible, such as Directory or Settings .

The three panels that make up the dashboard screen are as follows:

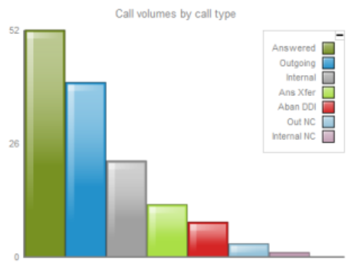
- Summary graphs
- Quick call search
- Most recent calls

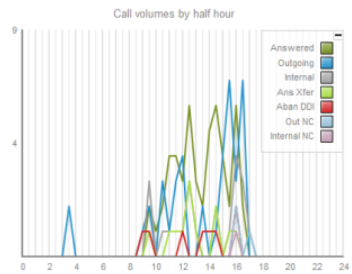
# Summary graphs

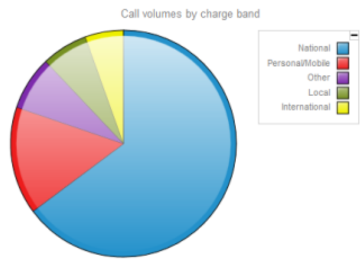
The summary graphs panel consists of three separate graphs, each organising their information using different criteria, as described below:

- Call volumes by call type
- Call volumes by half hour

- Call volumes by charge band



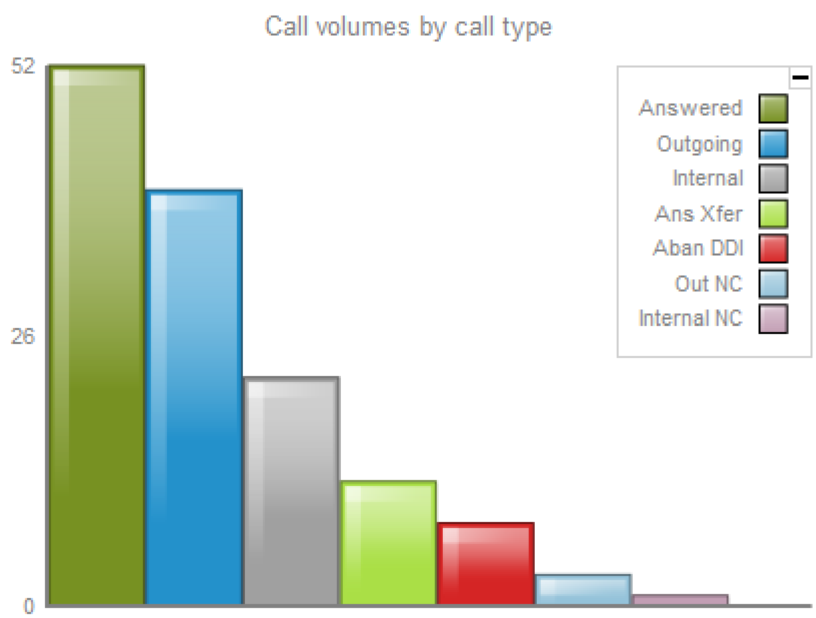




The information you see in each graph pertains only to the area to which the logged-in user has been granted access.

### Call volume by call type

This first graph shows a snapshot of calls for the current day, based on the type of call, e.g. inbound, outbound, missed.




Each call type is colour-coded using a system-wide colour scheme, as follows:

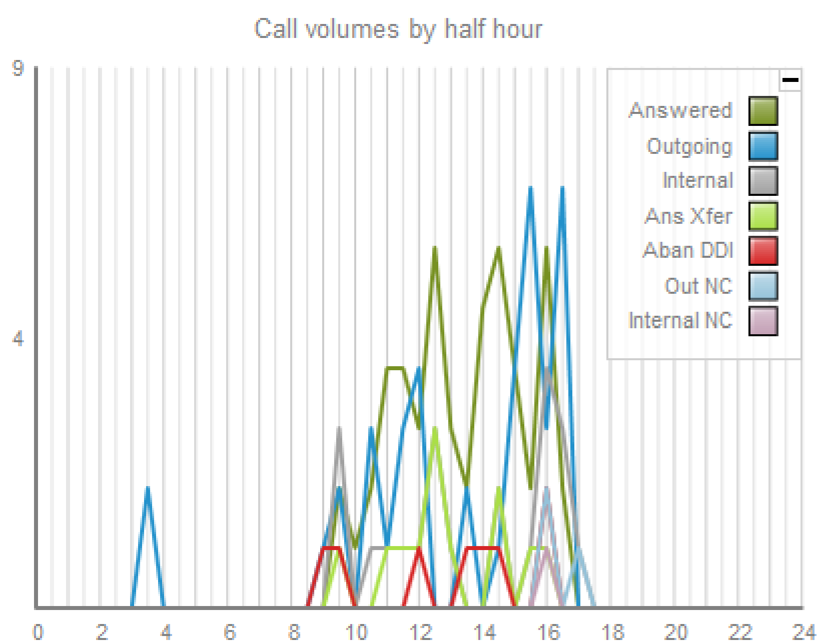
- **Green**: Incoming calls
- **Light green**: Answered transferred calls
- **Blue**: Outgoing calls
- **Light blue**: Outgoing non-connected calls
- **Grey**: Internal calls
- **Mauve**: Internal non-connected calls
- **Red**: Abandoned DDI (Direct Dialled In) calls

- **Pink**: Tandem calls

The same call type colour coding system applies throughout TIM Plus.

### Call volume by half hour

This graph shows a snapshot of calls for the current day, broken down by half-hour, allowing you to quickly identify peaks and troughs in call volumes to identify busy periods.

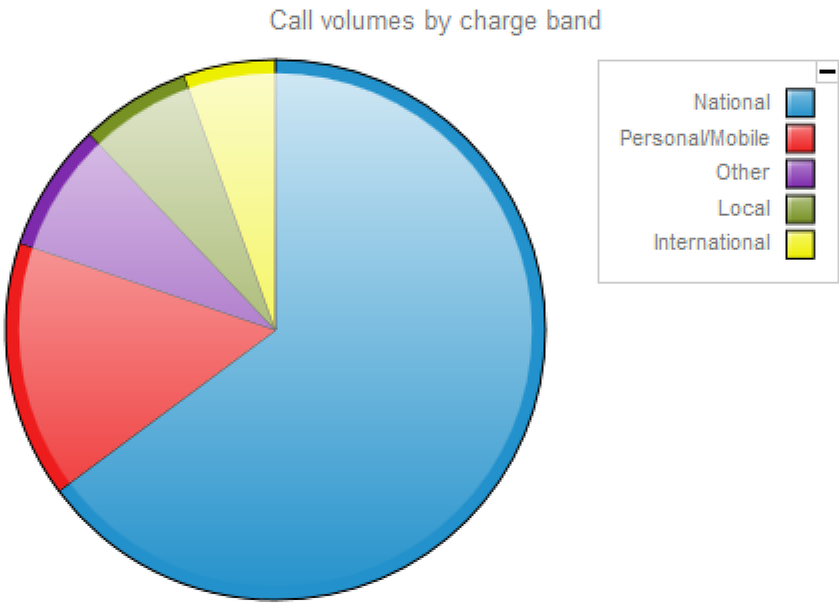



Each call type is colour-coded using a system-wide colour scheme as follows:

- **Green**: Incoming calls
- **Light green**: Answered transferred calls
- **Blue**: Outgoing calls
- **Light blue**: Outgoing non-connected calls
- **Grey**: Internal calls
- **Mauve**: Internal non-connected calls
- **Red**: Abandoned DDI (Direct Dialled In) calls
- **Pink**: Tandem calls

### Call volume by charge band

This graph shows a snapshot of calls for the current day, based on their destination, allowing you to identify where you call most often.  Calls are grouped into geographical locations such as `Mobile, National, Local, International` etc.

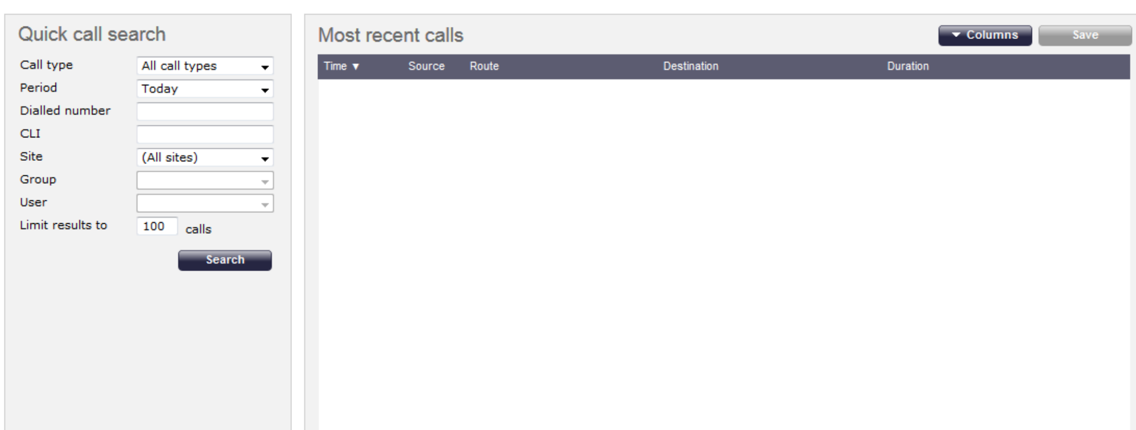



By default, the following colour scheme is used to identify calls to each geographical group:

- **Red**: Personal/Mobile calls
- **Green**: Local calls
- **Blue**: National calls
- **Yellow**: International calls
- **Purple**: Other calls

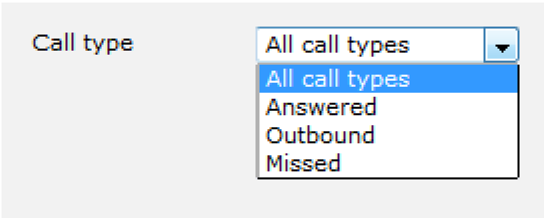
## Quick call search

The `Quick call search` panel offers a rapid way to locate specific calls in the central database, as an alternative to running a full call report. You can refine your search results by using the filters described below:



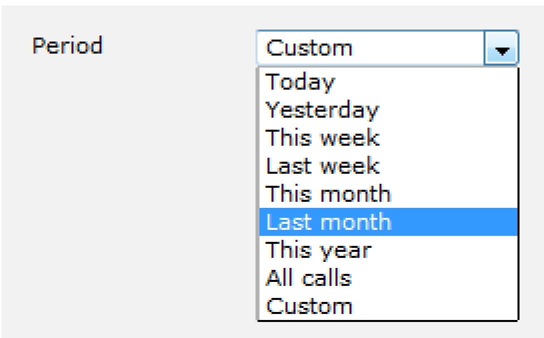

### Call type

This filter allows you to define the type of call you want your search results to cover, e.g. incoming, outgoing, internal etc.  To include all types of call, set this to **`All call types`**.




### Period

The **`Period`** search field defines the time period the results should cover. To choose a period, select it from the drop-down list.




There are several preset reporting periods available for selection, based on the standard Gregorian calendar. The following table describes how the start and end times are defined for each preset period:

| Field | Description |
|---|---|
| **Today** | The start and end dates are set to the current date. The start time is set to **`00:00:00`** and the end time to **`23:59:59`**. |
| **Yesterday** | The start and end dates are set to the current date minus one day. The start time is set to **`00:00:00`** and the end time to **`23:59:59`**. |
| **This week** | The start date is set to the first day (normally Monday) of the current week. The end date is set to the current day. The start time is set to **`00:00:00`** and the end time to the current time. |
| **Last week** | The start date is set to the date of the last Monday, and the end date is set to the start date plus seven days. The start time is set to **`00:00:00`** and the end time to **`23:59:59`**. |
| **This month** | The start date is set to the first day of the current month. The end date is set to the current day. The start time is set to **`00:00:00`** and the end time to the current time. |
| **Last month** | The start date for this period is set in three stages: The day is set to the first day of the month. The month is set to the previous month. The year is set to the current year, unless it is currently January, in which case, the previous year is used. The start and end times are set to **`00:00:00`** and **`23:59:59`** respectively. |
| **This year** | The start date is set to the first day of the first month of the current year, whilst the end date is set to today's date. The start and end times are set to **`00:00:00`** and **`23:59:59`** respectively. |
| **All calls** | The start and end dates and times are set to the dates and times of the first and last call in the entire call database, respectively. |
| **Custom** | Enter the start and end dates and times into the boxes provided. The start and end times are linked to their respective dates. |

### Dialled number

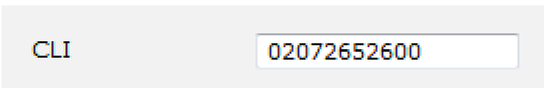
The **Dialled number** field allows you to filter your results by the number that was dialled. You can also specify a partial number to match all calls beginning with that number, e.g. to show all calls to London, enter **0207**.


You can use the * symbol as a wildcard in digit pattern matching, e.g. for calls to Tri-Line, enter **020726526***.

### CLI

Calling Line Identification (CLI) is the telephone number of the remote caller in an incoming call scenario.

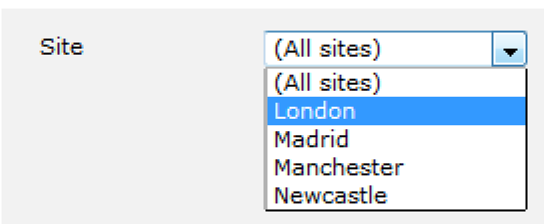
You can filter your results to show only calls that originate from a specific CLI or those whose CLI matches a particular pattern of digits. For example, to report on all incoming calls from London, you could enter **0207**.




You can use the * symbol as a wildcard in digit pattern matching, e.g. for calls from Tri-Line, enter **020726526***.

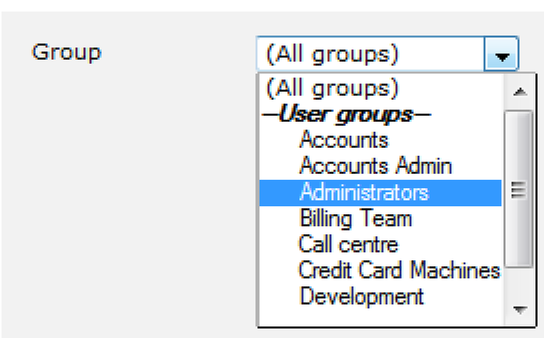
### Site

The **Site** search field enables you to specify the site you want your results to cover. Select **(All sites)** to search across all sites.



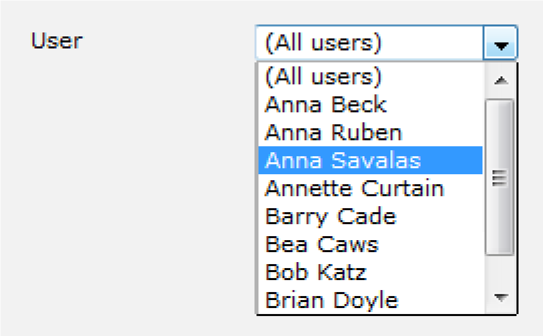

### Group

Having chosen a specific site, you can limit the search results to a specific user group within that site by selecting it from the drop-down list.




### User

If both a site and group have been selected, you can further limit the search results to include only calls involving a particular user, by selecting the user from the drop-down list.




### Limit results to

This feature enables you to specify the maximum number of search results you want to retrieve. Set the limit by entering a value in the field provided, e.g. entering **50** in the `Limit results to` field, will return a maximum of 50 results.


The search results will show in a new panel entitled `Search results`, as shown below:

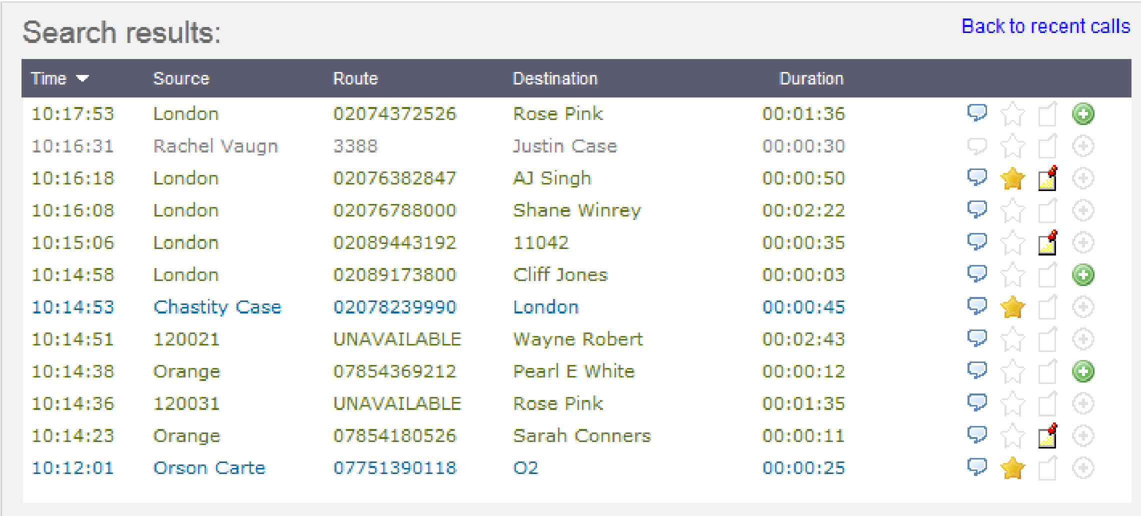
Search results: Back to recent calls

| Time | Source | Route | Destination | Duration |
|---|---|---|---|---|
| 10:17:53 | London | 02074372526 | Rose Pink | 00:01:36 |
| 10:16:31 | Rachel Vaugn | 3388 | Justin Case | 00:00:30 |
| 10:16:18 | London | 02076382847 | AJ Singh | 00:00:50 |
| 10:16:08 | London | 02076788000 | Shane Winrey | 00:02:22 |
| 10:15:06 | London | 02089443192 | 11042 | 00:00:35 |
| 10:14:58 | London | 02089173800 | Cliff Jones | 00:00:03 |
| 10:14:53 | Chastity Case | 02078239990 | London | 00:00:45 |
| 10:14:51 | 120021 | UNAVAILABLE | Wayne Robert | 00:02:43 |
| 10:14:38 | Orange | 07854369212 | Pearl E White | 00:00:12 |
| 10:14:36 | 120031 | UNAVAILABLE | Rose Pink | 00:01:35 |
| 10:14:23 | Orange | 07854180526 | Sarah Conners | 00:00:11 |
| 10:12:01 | Orson Carte | 07751390118 | O2 | 00:00:25 |

To close the search results and return to the `Most recent calls` panel, click on the Back to recent calls link, at the top-right corner of the panel.

## Most recent calls

By default, the `Most recent calls` panel displays the latest calls to have been processed by TIM Plus, with the most recent towards the top of the list. To sort the results by a different column, click on the relevant column header.



Search results: Back to recent calls

| Time | Source | Route | Destination | Duration |
|---|---|---|---|---|
| 10:17:53 | London | 02074372526 | Rose Pink | 00:01:36 |
| 10:16:31 | Rachel Vaugn | 3388 | Justin Case | 00:00:30 |
| 10:16:18 | London | 02076382847 | AJ Singh | 00:00:50 |
| 10:16:08 | London | 02076788000 | Shane Winrey | 00:02:22 |
| 10:15:06 | London | 02089443192 | 11042 | 00:00:35 |
| 10:14:58 | London | 02089173800 | Cliff Jones | 00:00:03 |
| 10:14:53 | Chastity Case | 02078239990 | London | 00:00:45 |
| 10:14:51 | 120021 | UNAVAILABLE | Wayne Robert | 00:02:43 |
| 10:14:38 | Orange | 07854369212 | Pearl E White | 00:00:12 |
| 10:14:36 | 120031 | UNAVAILABLE | Rose Pink | 00:01:35 |
| 10:14:23 | Orange | 07854180526 | Sarah Conners | 00:00:11 |
| 10:12:01 | Orson Carte | 07751390118 | O2 | 00:00:25 |

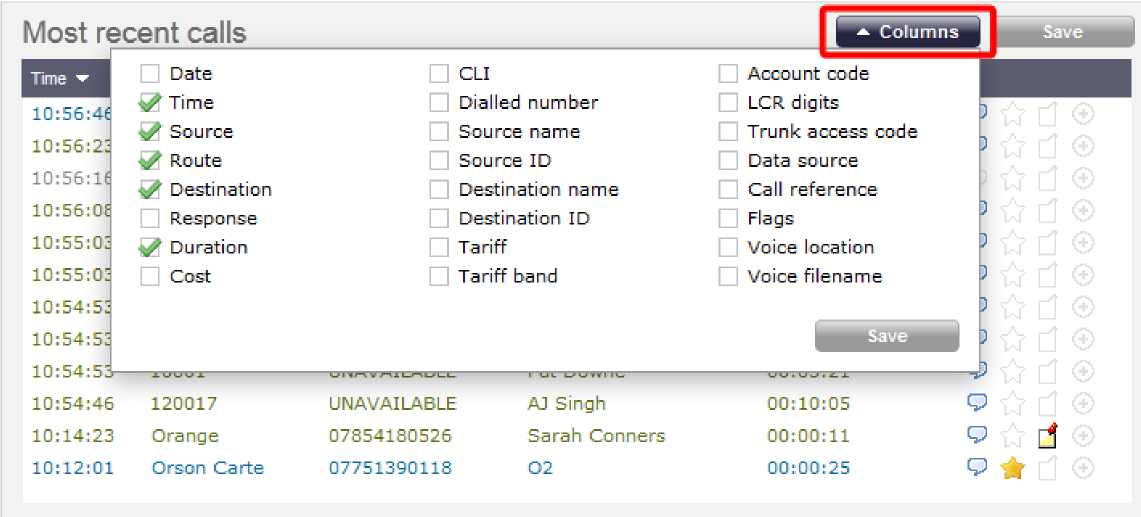
Each call type is colour-coded using a system-wide colour scheme, as follows:

- **Green**: Incoming calls
- **Light green**: Answered transferred calls
- **Blue**: Outgoing calls
- **Light blue**: Outgoing non-connected calls
- **Grey**: Internal calls
- **Mauve**: Internal non-connected calls
- **Red**: Abandoned DDI (Direct Dialled In) calls
- **Pink**: Tandem calls

The calls you see in the `Most recent calls` panel pertain only to the area to which the logged-in user has been granted access; administrators see calls from all sites.

### Columns headers

The column headers shown in the most recent calls list are specific to each web user and can be customised by clicking on the Columns butt on, which will display the following panel:




Include a column header in the list by ticking the box alongside each one. Click on the Save button to apply any changes.

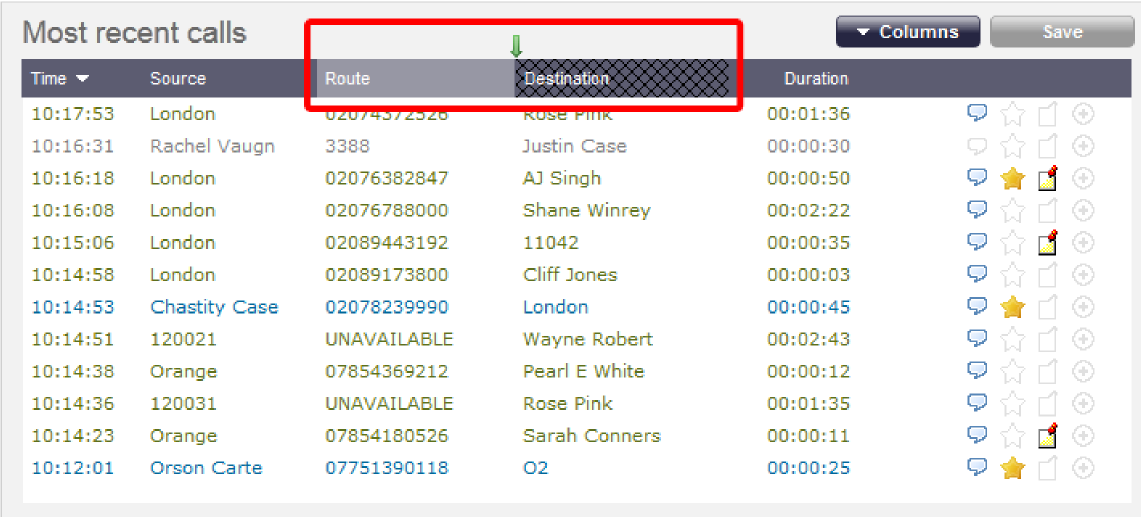
Each column header is described below:

| Field name | Description |
|---|---|
| **Date** | The date the call started. |
| **Time** | The time the call started. |
| **Source** | The place from where the call originated. |
| **Route** | The information displayed in this field is determined by the type of call:<br>▪ for incoming calls, this shows the CLI of the caller;<br>▪ for incoming internal calls, this shows either the caller's username or extension number;<br>▪ for outgoing calls, this shows the dialled number. |
| **Destination** | The information displayed in this field is determined by the type of call:<br>▪ for incoming calls, this shows the name of the user whose extension answered the call, or the extension number if not available;<br>▪ for outgoing calls, this shows the geographical location that was dialled, or an alias if defined in your contacts list;<br>▪ for internal calls, this shows the extension that was dialled, enclosed in square brackets [ ]. |
| **Response** | The time it took for the call to be answered (in seconds). |
| **Duration** | The duration of the call (in hours, minutes and seconds). |
| **Cost** | The cost of the call. |
| **CLI** | The telephone number of the remote caller for inbound calls. |

| | |
|---|---|
| **Dialled number** | The number that was dialled in order to reach a particular destination. |
| **Source name** | The name of the person who made the call. |
| **Source ID** | The ID of the person who made the call. |
| **Destination name** | The name of the destination called, e.g. Manchester, Tri-Line, London. |
| **Destination ID** | The ID of the destination called. |
| **Tariff** | The name of the tariff table that was used to cost the call, e.g. BT. |
| **Tariff band** | The specific tariff band that was used to cost the call, e.g. International, National, Mobile etc. |
| **Account code** | The account code associated with the call. |
| **LCR Digits** | The Least Cost Routing (LCR) digits used to route the call. |
| **Trunk access code** | The trunk access code used to access a group of channels. |
| **Data source** | The location where the call originated. |
| **Call reference** | Any call reference number associated with the call. |
| **Flags** | Any flags associated with a call, as described below:<br>▪ The call has no associated voice recording.<br>▪ The call has an associated voice recording; click on the icon to listen to the call.<br>▪ The call has not been scored; click on the icon to score the call.<br>▪ The call has been scored; click on the icon to review scoring information for the call.<br>▪ The call has not been annotated; click on the icon to add a note to the call.<br>▪ The call has one or more associated notes; click on the icon to review the note(s).<br>▪ The call has no related transfer legs.<br>▪ The call has related transfer legs; click on the icon to view all transfers associated with the call. |
| **Voice location** | The unique ID of the call recording device that captured audio for the call. |
| **Voice filename** | The unique call reference identifying any voice recording associated with the call. |

### Reordering column headers

Each column header can be reordered by clicking and dragging it to the new location, as shown below:




Columns can be sorted by clicking the relevant column header, with each click toggling between ascending and descending order.

Any layout changes you make to the **`Most recent calls`** panel are saved only for the current web user and do not affect other web users.

# Reports

## What are reports?

Reports are the means by which your telephone call data is presented to you in a visual, meaningful way. Although the results of each report type differ substantially, running each of them involves following a similar, wizard-style procedure. Each report accepts several filters and options, allowing you to tailor the results to exactly the information you are looking for.

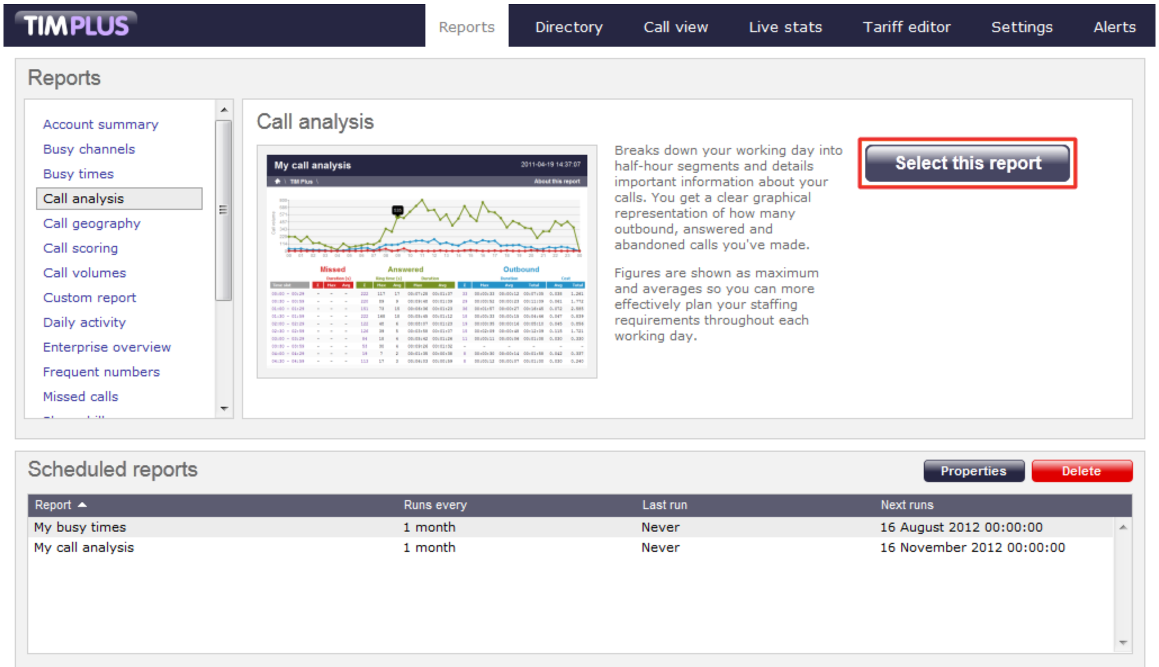
They can be run on demand at any time, or be scheduled to run at predetermined times in the future.

Below is an example output of the **`Call Analysis`** report:

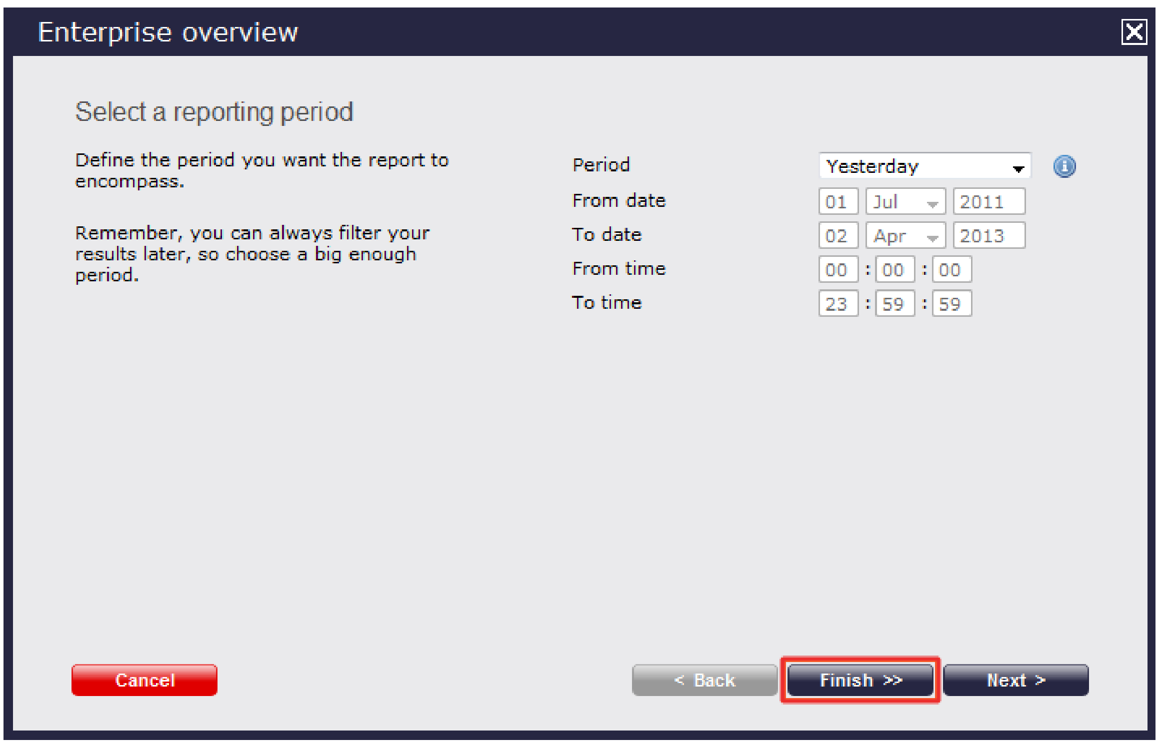
### Reports overview video

## Running reports on demand

To run a report on demand, click on the Reports tab and, from the list of reports in the left-hand panel, select the report you want to run. Click on the Select this report button to start the report wizard, as shown below:



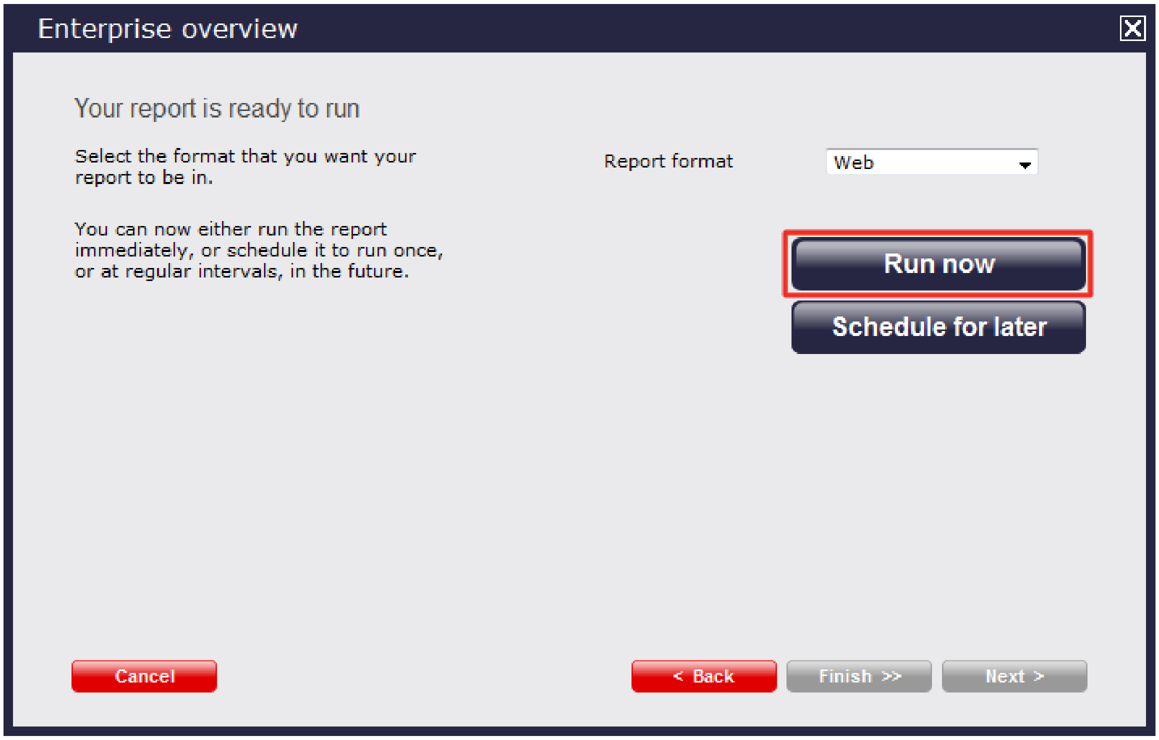

A new window will open, where you can set the parameters of your report. If you do not want to change any of the default settings, click on the Finish button, as shown below:




If you want to change any of the report's parameters, refer to the relevant page in the list below:

- Setting the report period
- Setting the report entity
- Setting the report filters
- Setting the report options
- Setting the report formats

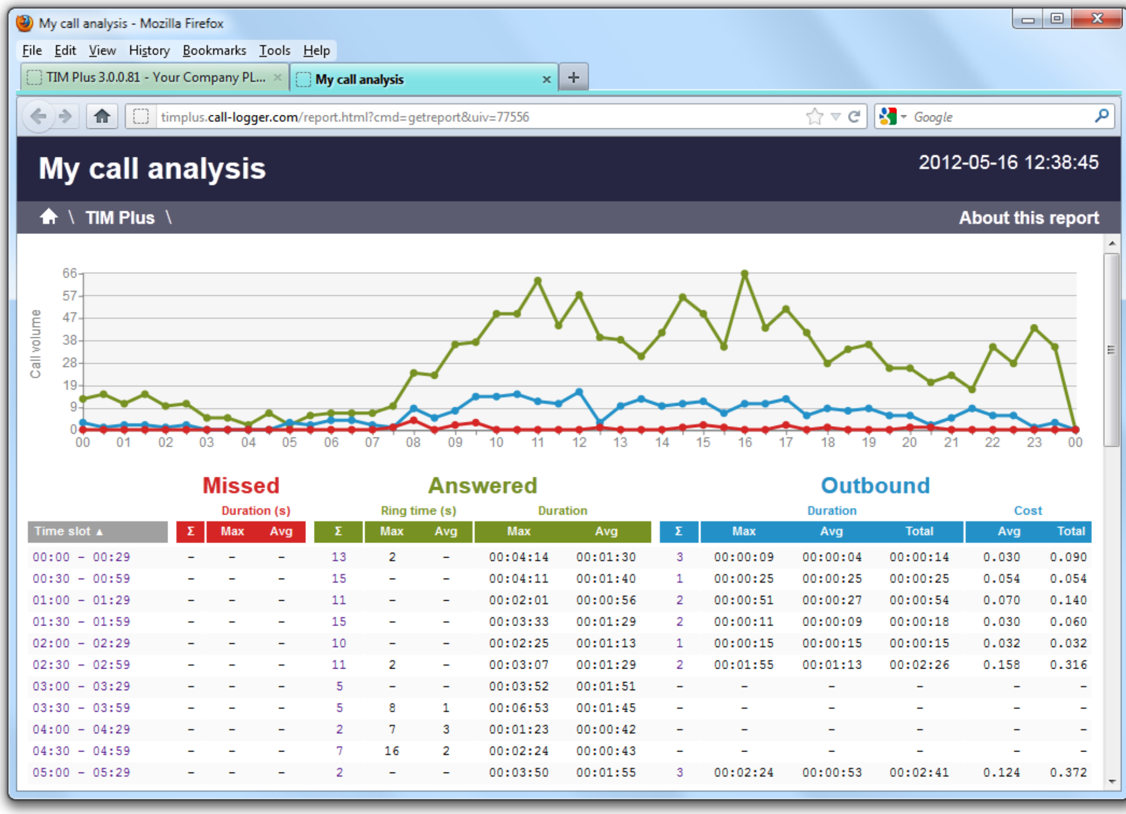
When you are ready to run the report, click on the Run now button, as shown below:




When the report has finished, its results will open in a new browser window.

If the results window does not appear after running your report, it may be because your browser is using a pop-up blocker. You should disable pop-up blocking for the TIM Plus web address.

The example below shows a Call Analysis report in **`Web`** format:




| Time slot ▲ | Missed Σ | Missed Duration (s) Max | Missed Duration (s) Avg | Answered Σ | Answered Ring time (s) Max | Answered Ring time (s) Avg | Answered Duration Max | Answered Duration Avg | Outbound Σ | Outbound Duration Max | Outbound Duration Avg | Outbound Duration Total | Outbound Cost Avg | Outbound Cost Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 00:00 – 00:29 | – | – | – | 13 | 2 | – | 00:04:14 | 00:01:30 | 3 | 00:00:09 | 00:00:04 | 00:00:14 | 0.030 | 0.090 |
| 00:30 – 00:59 | – | – | – | 15 | – | – | 00:04:11 | 00:01:40 | 1 | 00:00:25 | 00:00:25 | 00:00:25 | 0.054 | 0.054 |
| 01:00 – 01:29 | – | – | – | 11 | – | – | 00:02:01 | 00:00:56 | 2 | 00:00:51 | 00:00:27 | 00:00:54 | 0.070 | 0.140 |
| 01:30 – 01:59 | – | – | – | 15 | – | – | 00:03:33 | 00:01:29 | 2 | 00:00:11 | 00:00:09 | 00:00:18 | 0.030 | 0.060 |
| 02:00 – 02:29 | – | – | – | 10 | – | – | 00:02:25 | 00:01:13 | 1 | 00:00:15 | 00:00:15 | 00:00:15 | 0.032 | 0.032 |
| 02:30 – 02:59 | – | – | – | 11 | 2 | – | 00:03:07 | 00:01:29 | 2 | 00:01:55 | 00:01:13 | 00:02:26 | 0.158 | 0.316 |
| 03:00 – 03:29 | – | – | – | 5 | – | – | 00:03:52 | 00:01:51 | – | – | – | – | – | – |
| 03:30 – 03:59 | – | – | – | 5 | 8 | 1 | 00:06:53 | 00:01:45 | – | – | – | – | – | – |
| 04:00 – 04:29 | – | – | – | 2 | 7 | 3 | 00:01:23 | 00:00:42 | – | – | – | – | – | – |
| 04:30 – 04:59 | – | – | – | 7 | 16 | 2 | 00:02:24 | 00:00:43 | – | – | – | – | – | – |
| 05:00 – 05:29 | – | – | – | 2 | – | – | 00:03:50 | 00:01:55 | 3 | 00:02:24 | 00:00:53 | 00:02:41 | 0.124 | 0.372 |

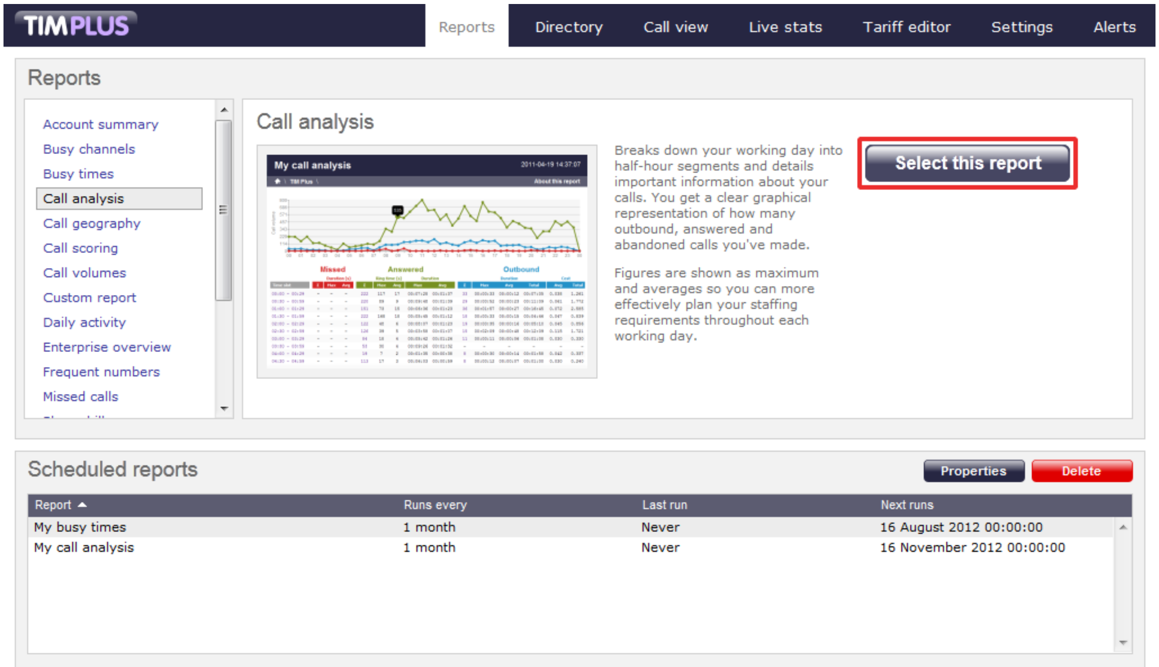
# Scheduling reports

**Scheduling reports**

- Preparing the report
- Setting the scheduling parameters
- Editing a scheduled report
- Deleting a scheduled report

## Preparing the report

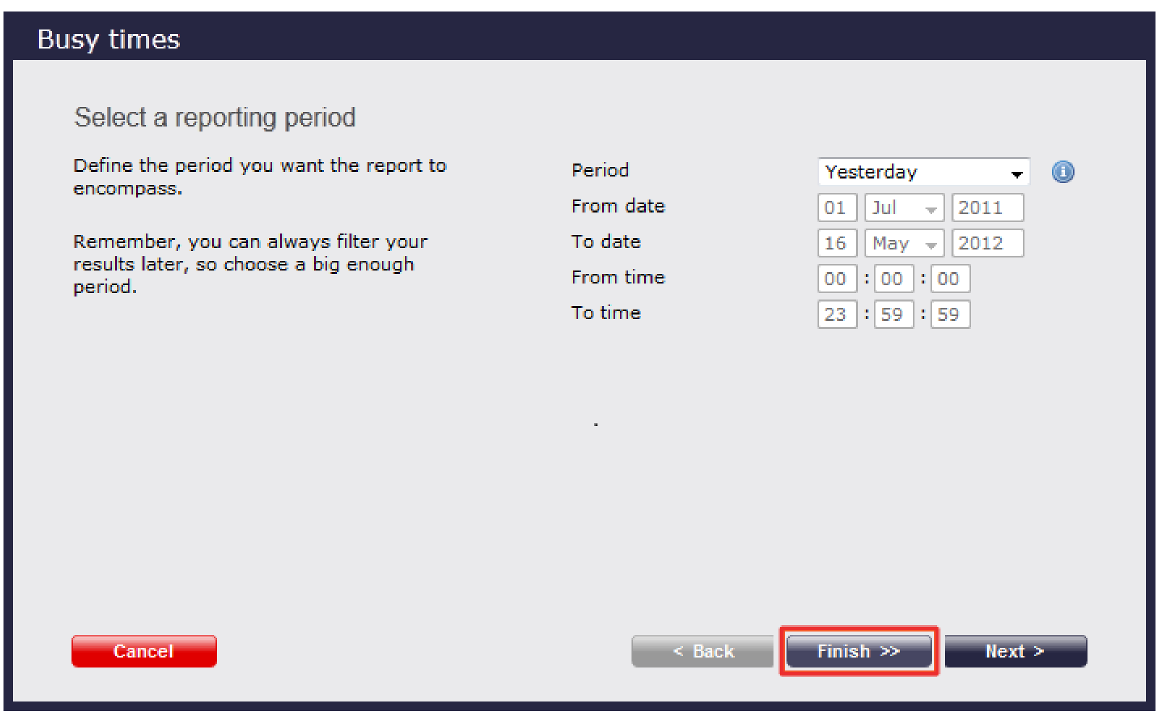
To schedule a report, choose the one you want to run from the list in the left-hand panel, then click on the **Select this report** button to start the report wizard, as shown below:



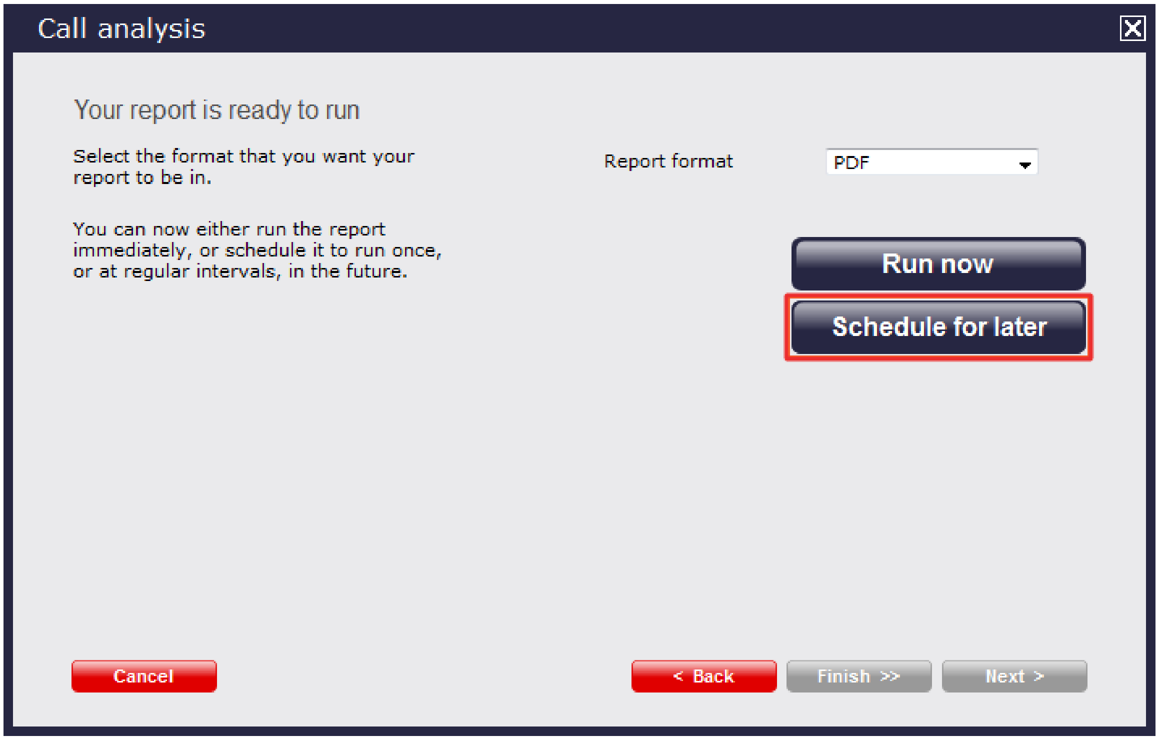

In the same way as with running a report on demand, you can modify the report period, entity, filters, options and format before scheduling, by referring to the relevant pages below:

- Setting the report period
- Setting the report entity
- Setting the report filters
- Setting the report options
- Setting the report formats

If you do not want to change any of the default settings, click on the Finish button, as shown below:



Once you have selected your report's parameters, click on the Schedule for later button.



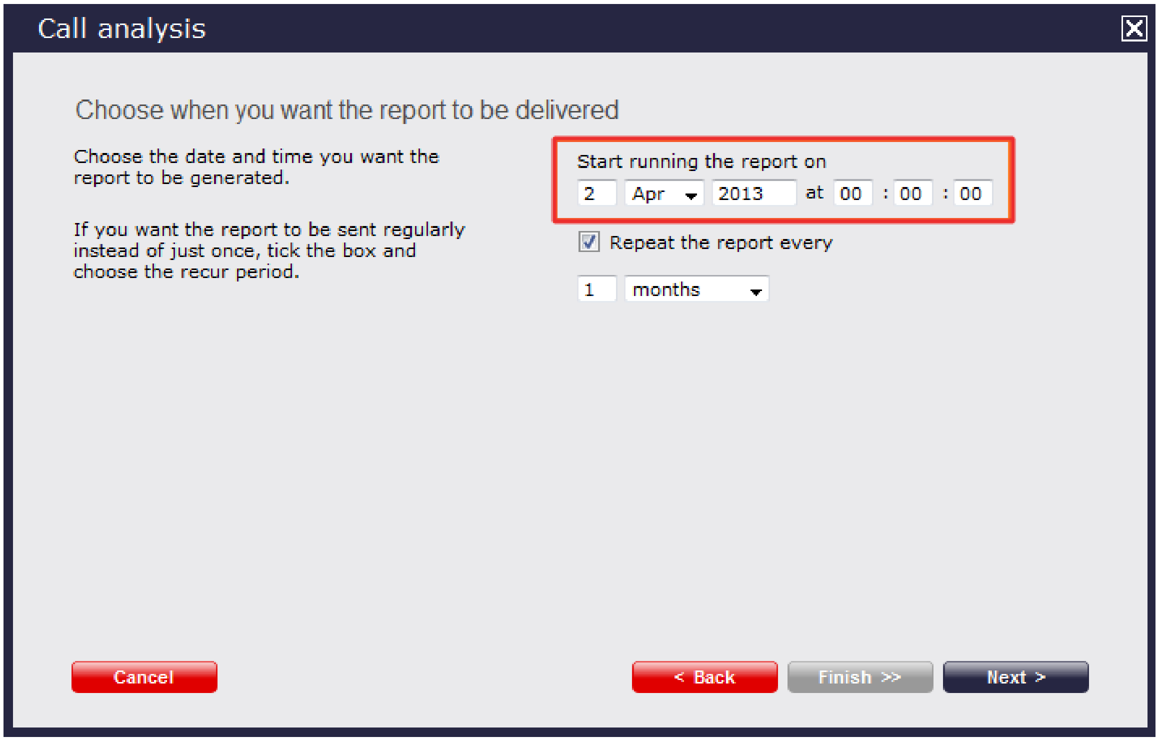

In the new window that opens you can set the scheduling parameters of the report:

- when you want the report to first run
- how frequently you want the report to run
- how you want the report delivered
- who should receive the report

## Setting the scheduling parameters

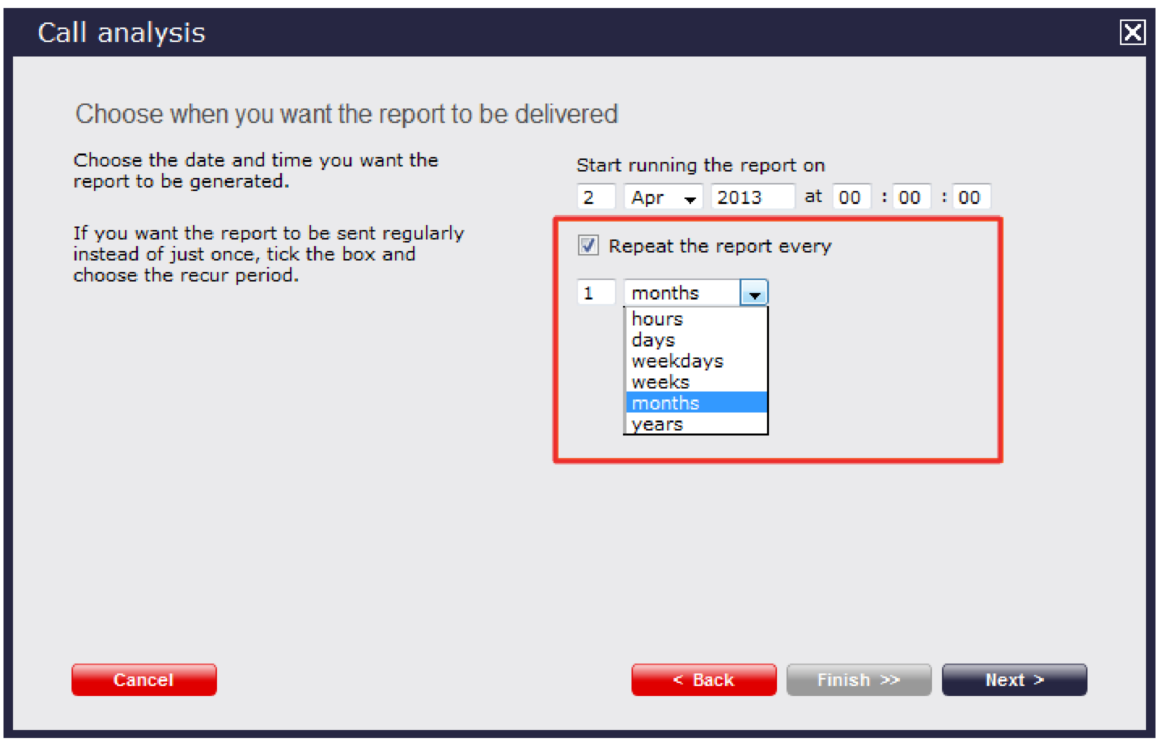
### When do you want the first report to run?

Enter the future date and time that you want the report to run at, as shown below:



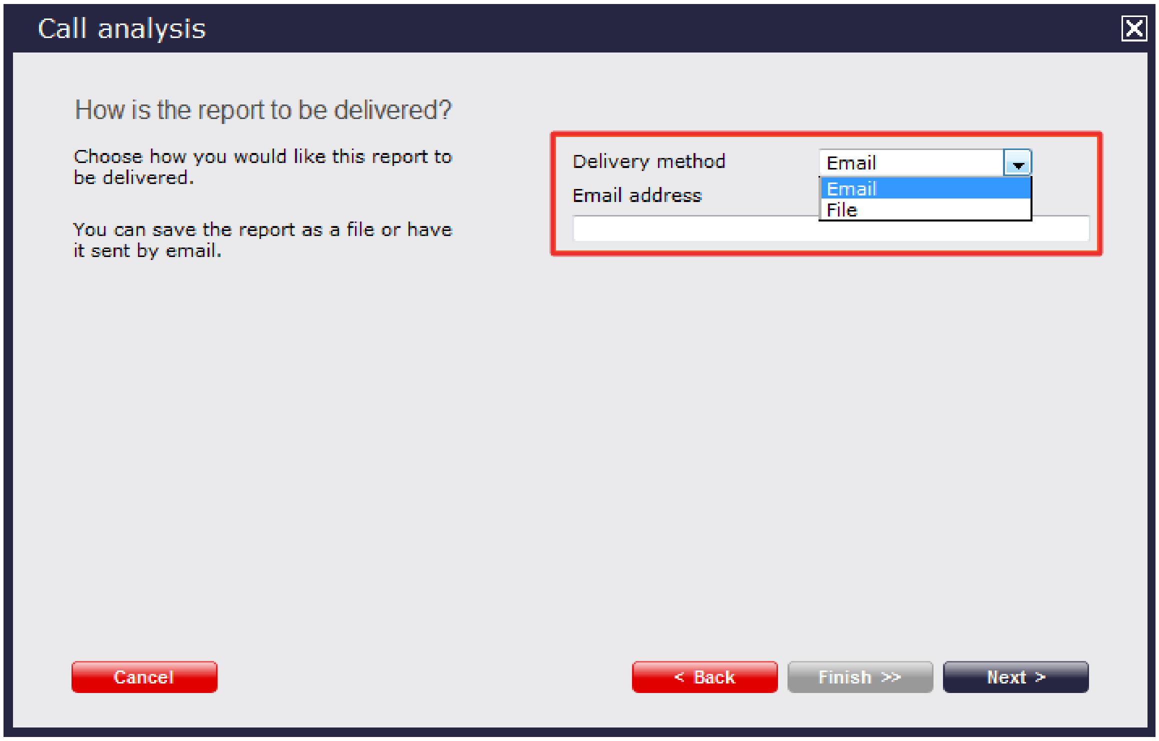

### How often do you want the report to recur?

If you want the report to recur, tick the `Repeat the report` box and select the frequency for re-runs from the drop-down list, as shown below:




### How do you want the report delivered?

The report can be delivered by e-mail or saved as a file to a specific location, by choosing a delivery method from the drop-down list:




### Who receives the report?

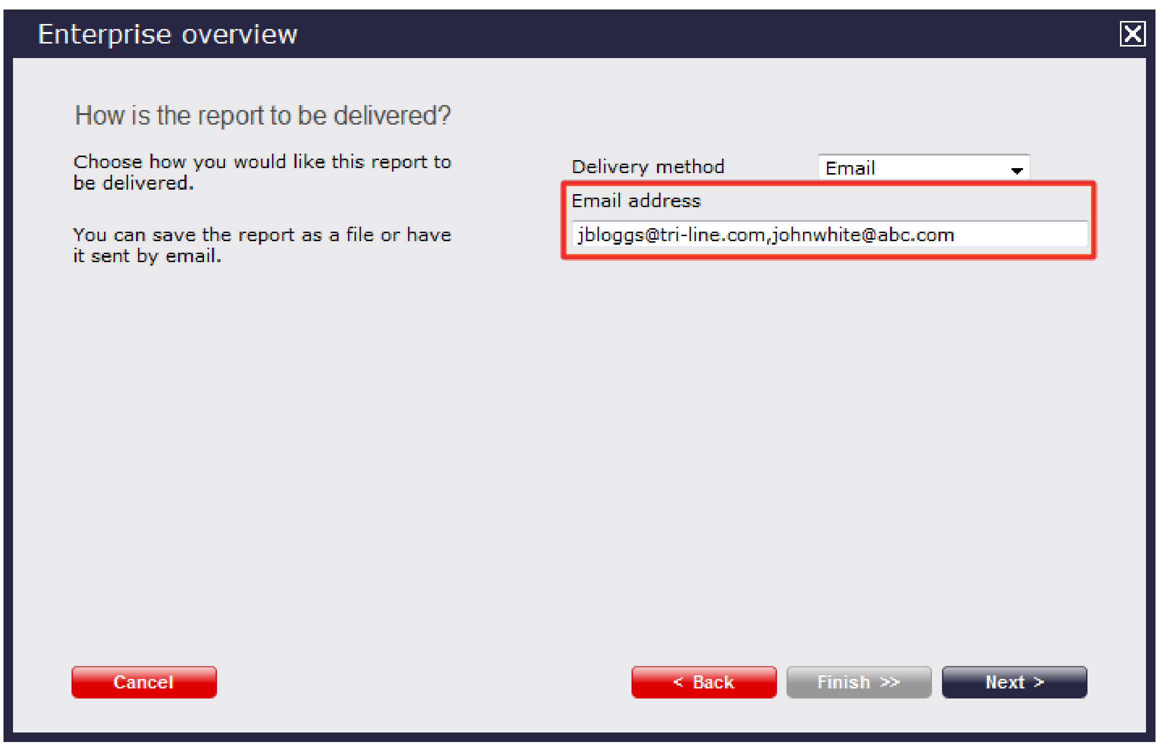
| Delivery method | Description |
|---|---|
| **E-mail** | ▪ Enter the e-mail address that you want the report to be delivered to<br>▪ If you want the report to be e-mailed to more than one person, separate each address using the **;** symbol. |

**File**

- Type the full filename, including folder, of the location that you want the report to be saved as, e.g. `C:\My Reports\My Call Analysis.html`
- The filename can include the following variables:

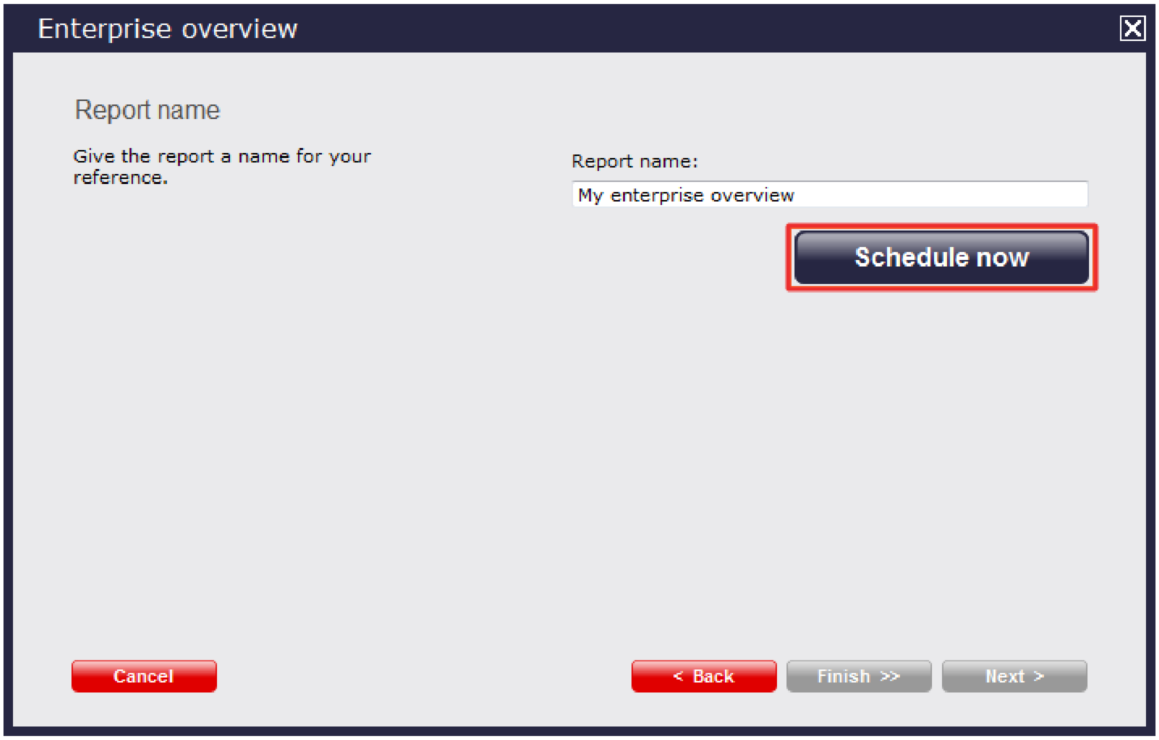
| Variable | Description |
|---|---|
| `{year}` | The current year |
| `{month}` | The current month |
| `{week}` | The current week number |
| `{day}` | The current day of the month |
| `{hhmmss}` | The time that the report ran, in a compact hours, minutes and seconds format |
| `{name}` | The name given to the report |
| `{uiv}` | A unique numeric report identifier |

- To save the report to a network share, specify the filename using a UNC path. You must ensure that the user account running the TIM Plus service has access privileges to write to the file you have specified.

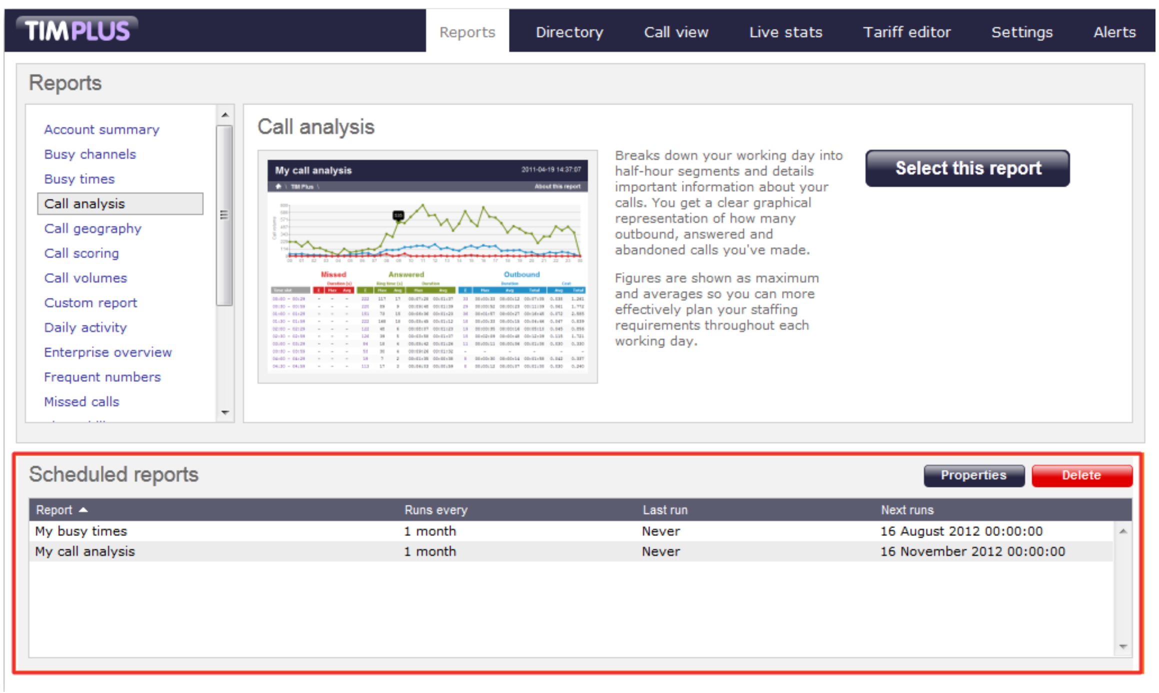



## Schedule now

When you have configured the scheduling parameters, click on the Schedule now button to save the report's definition.



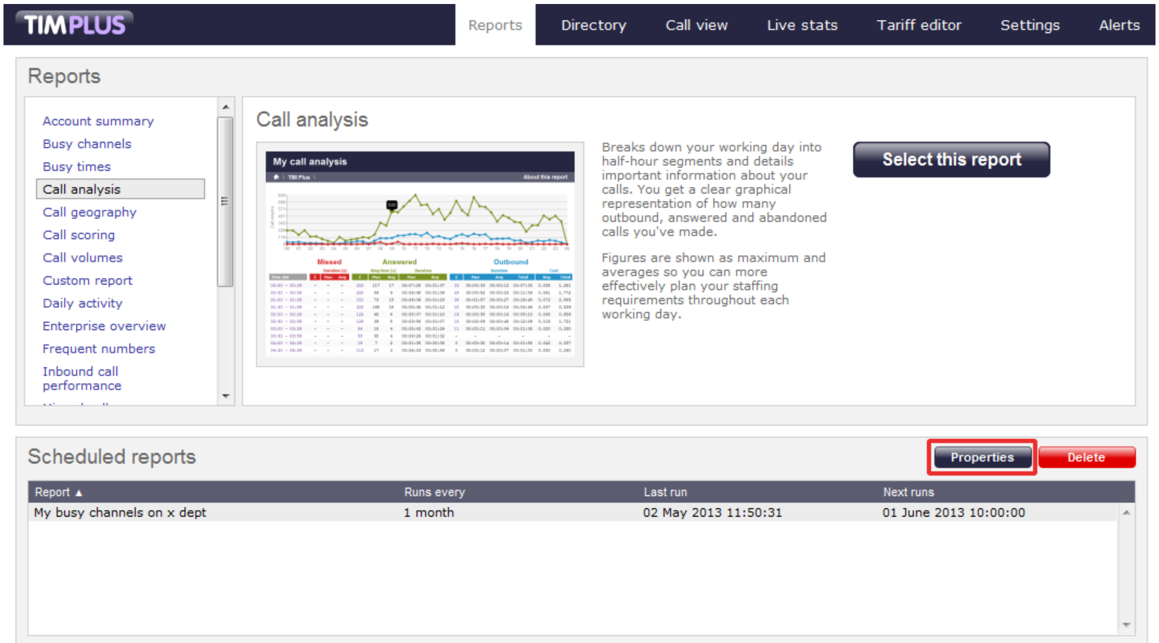

Notice that your newly-scheduled reports are now listed in the `Scheduled reports` panel at the bottom of the screen, as shown below:



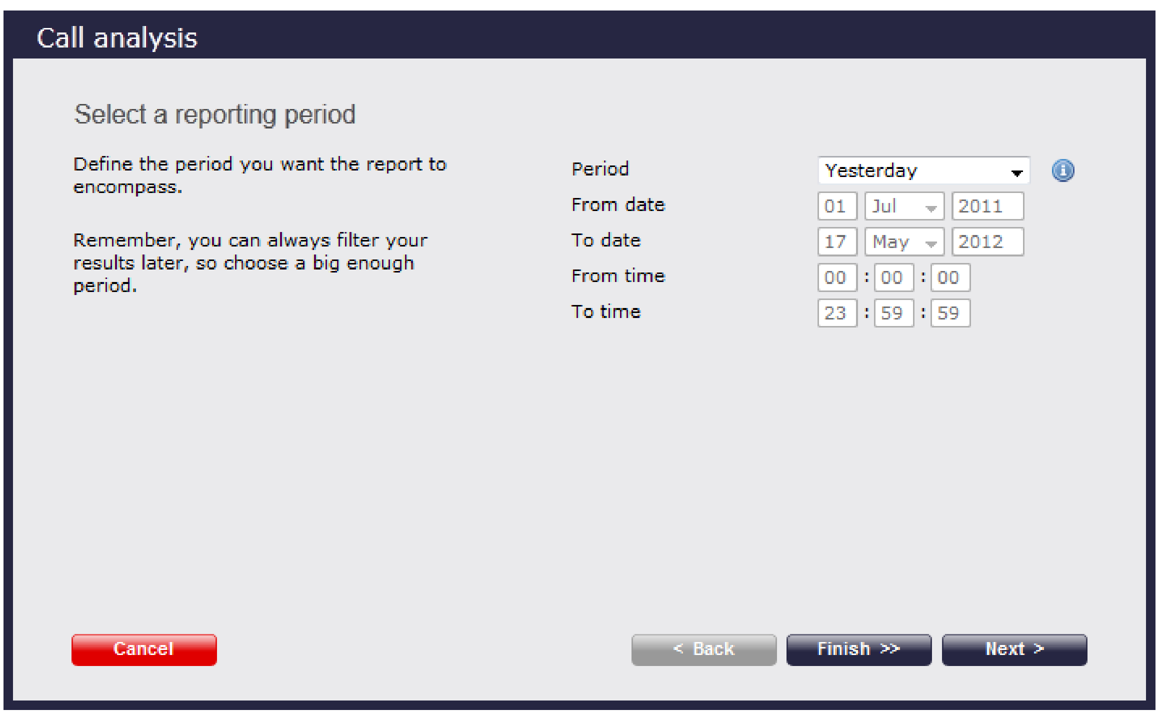

The properties of a scheduled reports are web user specific, and can be seen or edited only by the web user that initially added the report in the system.

## Editing a scheduled report

To edit a scheduled report, select it from the `Scheduled reports` panel, and click on the Properties button, as shown below:




A new window with the properties of the report will open, where you can edit the period, entity, filters, options and format of the report.



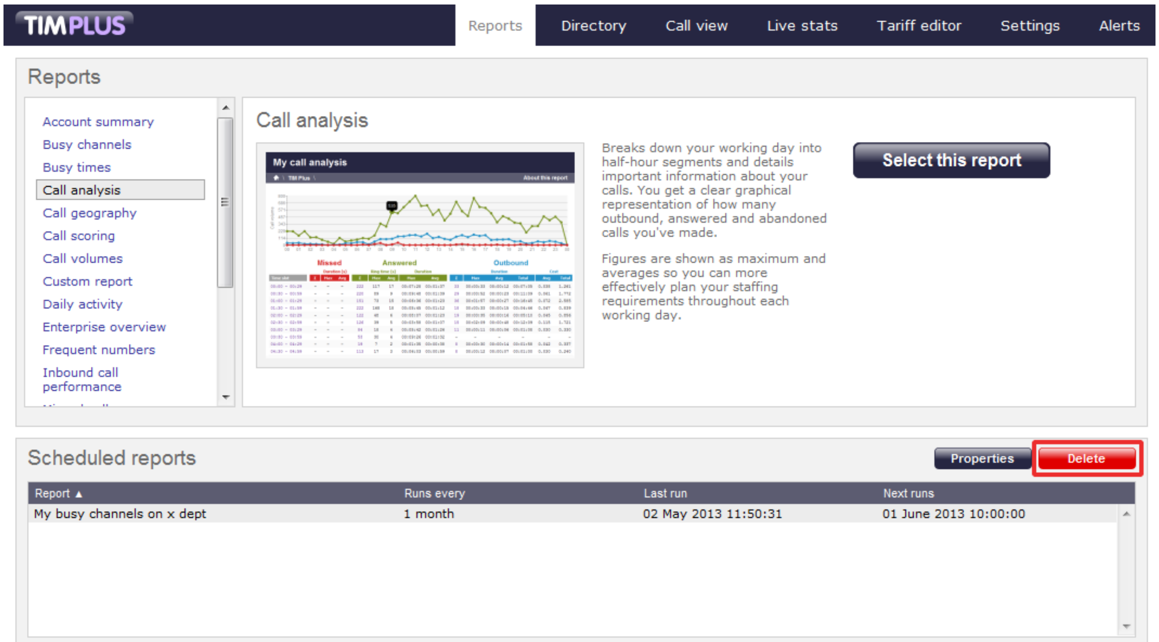

Click on the links below for details of how to configure these parameters:

- Setting the report period
- Setting the report entity

- Setting the report filters
- Setting the report options
- Setting the report formats

## Deleting a scheduled report

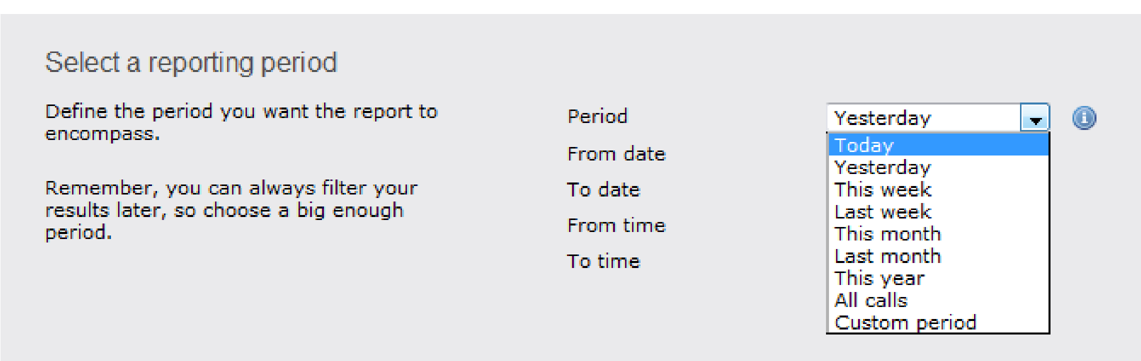
To delete a scheduled report, select it from the `Scheduled reports` panel and click the Delete button, as shown below:




# Report parameters

## Setting the report period

For each report, you must specify a time span that covers the calls you want the report to include. This is known as the "reporting period".



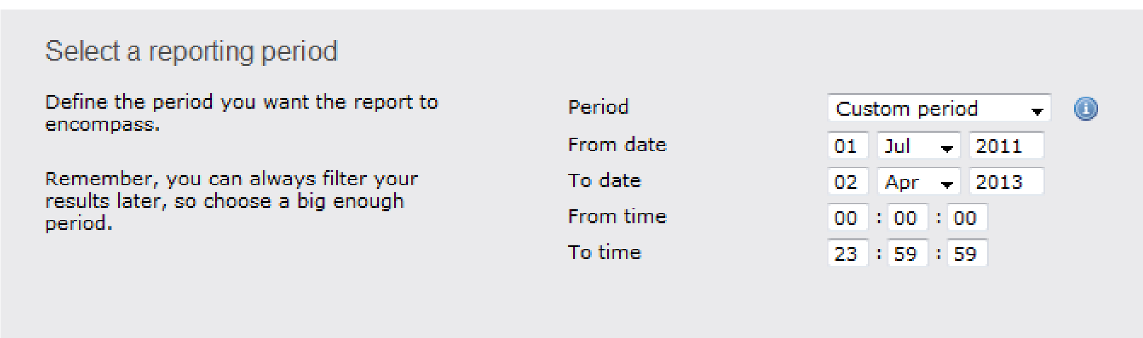

### Preset period

There are several preset reporting periods available for selection, based on the standard Gregorian calendar. The following table describes how the start and end times are defined for each preset period:

| Period | Description |
|---|---|
| **Today** | The start and end dates are set to the current date. The start time is set to `00:00:00` and the end time to `23:59:59`. |
| **Yesterday** | The start and end dates are set to the current date minus one day. The start time is set to `00:00:00` and the end time to `23:59:59`. |
| **This week** | The start date is set to the first day of the current week (normally Monday). The end date is set to the current day. The start time is set to `00:00:00` and the end time to the current time. |
| **Last week** | The start date is set to the date of the last Monday, and the end date is set to the start date plus seven days. The start time is set to `00:00:00` and the end time to `23:59:59`. |
| **This month** | The start date is set to the first day of the current month. The end date is set to the current day. The start time is set to `00:00:00` and the end time to the current time. |
| **Last month** | The start date for this period is set in three stages: The day is set to the first day of the month. The month is set to the previous month. The year is set to the current year, unless it is currently January, in which case, the previous year is used. The start and end times are set to `00:00:00` and `23:59:59` respectively. |
| **This year** | The start date is set to the first day of the first month of the current year, whilst the end date is set to today's date. The start and end times are set to `00:00:00` and `23:59:59` respectively. |
| **All calls** | The start and end dates and times are set to the dates and times of the first and last call in the entire call database, respectively. |

#### Custom period

In addition to the presets described above, it is possible to specify a custom reporting period by choosing `Custom period` from the `Period` drop-down list and specifying your own `Start date`, `Start time`, `End date` and `End time` of the period you want to report on.

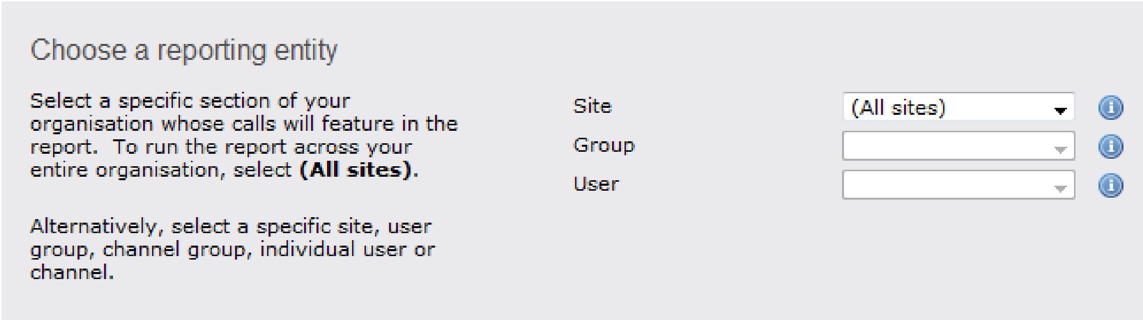



### Run or schedule the report

To run or schedule the report without setting any further parameters, select the Finish button; to apply further settings, click on the Next button, which will direct you to the Entity section of the report wizard.

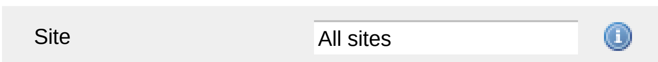
## Setting the report entity

The `Reporting entity` parameter allows you to select the part of your organisation whose calls the report should include, e.g. a site, a group or an individual user.



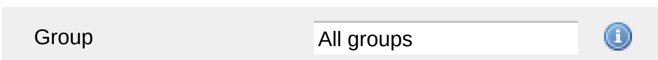

#### Site

To report on a particular site, select it from the drop-down list or select `All sites` .



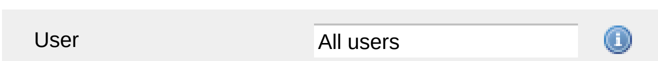

#### Group

If a site has been selected, you are able to further limit the report's results by selecting a group from the drop-down list.




#### User

If both a site and group have been selected, you can further limit the report's results to include only calls involving a particular user, by selecting that user from the drop-down list.



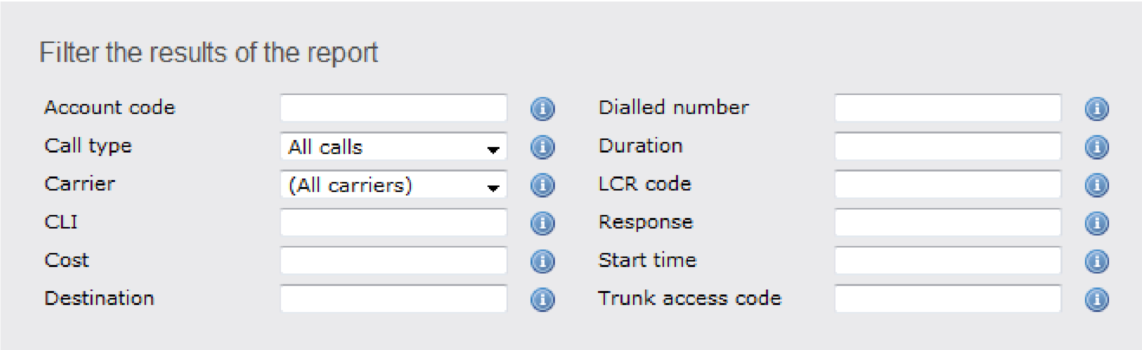

If your web account is restricted to a specific site or group, only those entities to which you have access will be available in the drop-down lists.

### Run or schedule the report

To run or schedule the report without setting any further parameters, select the Finish button; to apply further settings, click on the Next button, which will direct you to the Filters section of the report wizard.

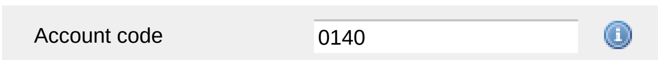
## Setting the report filters

Below is a list of all report filters available in TIM Plus, although not all filters are relevant to all reports:




### Account code

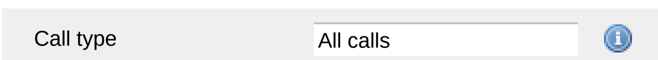
To produce a report consisting only of calls that were made using a particular account code, enter the account code in the field provided.




To report on more than one account code, separate each code using a comma.

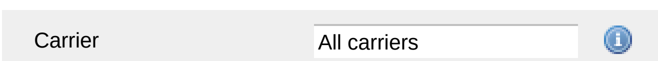
### Call type

This filter allows you to select the type of call you want to report on, in terms of where the call originated and where it was delivered, e.g. incoming, outgoing, internal, etc. To report on all types of call, set this to `All calls`.




### Carrier

If you use more than one carrier, you can limit the results to include only calls that were made using a specific carrier.

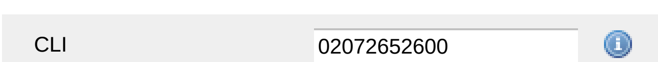



> If you use only one carrier, there will be no drop-down list available and no option to choose a carrier.

### CLI

Calling Line Identification (CLI) is the telephone number of the remote caller in an incoming call scenario.

You can report on calls that originate from a specific CLI or those whose CLI matches a particular pattern of digits. For example, to report on all incoming calls from Tri-Line, you could enter `02072652600`.




You can use the `!` symbol to explicitly exclude a CLI from the report's results, and/or the `*` symbol as a wildcard in digit pattern matching.  For example, to exclude calls from Tri-Line, but include all others, you could use `!020726526*`. To report on more than one CLI, use a comma to separate each entry.

### Cost

You can define a cost filter to include calls above or below specific values by entering your criteria, as shown below:

| | |
|---|---|
| Cost | <2.00 |

You can specify a cost range by using the `-` symbol; to specify limits, use the comparison operators, **>**, **<**, and `!` .

### Destination

If you want to filter calls to a specific, known destination, type the name of the destination in the text box provided. This filter accepts the `!` and `*` symbols for excluding values and specifying partial matches, respectively.

For example, if you wanted to exclude all calls to France, you could enter **`!France*`**, as shown below:

| | |
|---|---|
| Destination | !France* |

### Dialled number

To filter calls to a specific dialled number, type it in the text box provided. The dialled number is defined as the number that is dialled (in the case of an outbound call), or the DDI number that the remote party dialled to reach a particular extension or group (in the case of an inbound call).

To filter calls to a specific area, a partial number can be entered (e.g. **`0033`** for calls to France).

| | |
|---|---|
| Dialled number | 0033 |

You can use the `!` symbol to explicitly exclude a dialled number from the report's results, and/or the `*` symbol as a wildcard in digit pattern matching. For example, to exclude calls to Tri-Line, but include all others, you could use **`!020726526*`**). To report on more than one dialled number, use a comma to separate each entry.

### Duration

To filter calls above or below a particular duration, enter the desired duration in seconds.

| | |
|---|---|
| Duration | >1800 |

You can specify a duration range by using the `-` symbol; to specify limits, use the comparison operators, **>**, **<**, and `!` .

In the above example, the report will return only calls longer than 1800 seconds (30 minutes).

### LCR code

To filter your results to include only calls that used a Least Cost Routing (LCR) code, enter it in the text box provided.

| | |
|---|---|
| LCR code | 162 |

You can use the `!` symbol to explicitly exclude a LCR code from the report's results, and/or the `*` symbol as a wildcard in digit pattern matching. For example, to exclude calls made using all LCR codes beginning `162`, you could enter **`!162*`**. To report on more than one LCR code, use a comma to separate each entry.

### Response

This option allows you to filter calls based on their response time, measured in seconds. Specify the desired response time threshold in the text box provided.

| | |
|---|---|
| Response time | >10 |

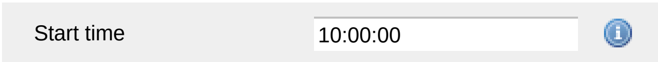
In the above example, the search results will display calls that have a response time greater than 10 seconds.

You can specify a response time range by using the `-` symbol and; to specify limits, use the comparison operators, **>**, **<**, and `!` .

### Start time

This option allows you to filter calls based on the time the call started. Specify the start time in the text box provided using the **`hh:mm:ss`** format.

For example, to include only calls that began after 10 am, you could enter **10:00:00** in the **Start time** field, as shown below:




### Trunk access code

If your telephone system uses trunk access codes to connect calls using specific channels, you can limit your report's results to include only calls made using those codes. Specify the trunk access code in the text box provided.


You can use the **!** symbol to explicitly exclude a trunk access code from the report's results, and/or the * symbol as a wildcard in digit pattern matching. For example, to exclude calls made using the **9** trunk access code, you could enter **!9**. To report on more than one trunk access code, use a comma to separate each entry.

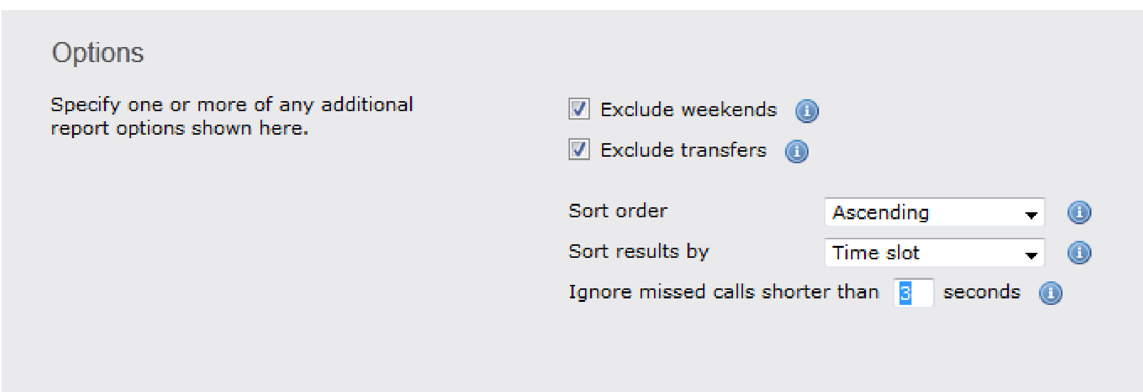
### Run or schedule the report

To run or schedule the report without setting any further parameters, select the Finish button; to apply further settings, click on the Next button, which will direct you to the Options section of the report wizard.

## Setting the report options

### Reporting options

This section allows you to further narrow down your report results, by excluding certain types of call or sorting the results in a particular manner. These options are specific to the type of report you are running and differ between report types. Next to each option there is an **Information** icon which, if clicked, opens a help prompt describing that particular option.




In the example above, the user wants to exclude weekends and transferred calls, as well as missed calls shorter than 3 seconds.

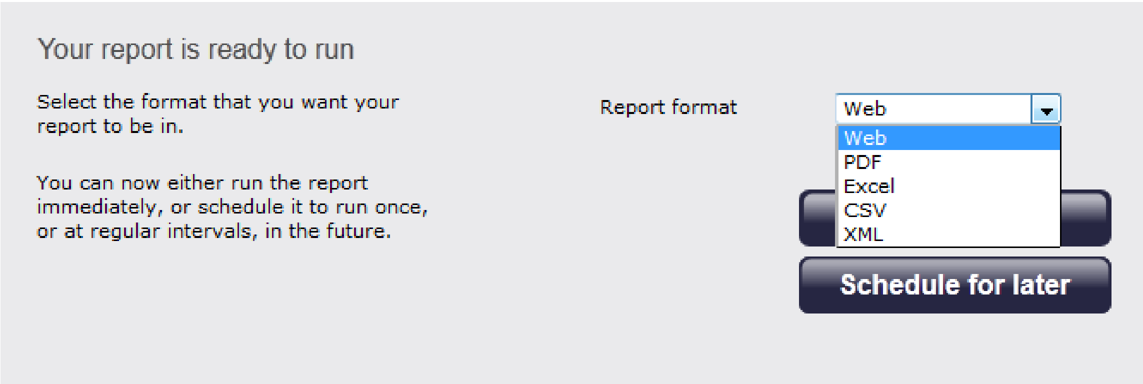
### Run or schedule the report

To run or schedule the report without setting any further parameters, select the Finish button; to apply further settings, click on the Next button, which will direct you to the Format section of the report wizard.

## Setting the report formats

### Report format

This section allows you to choose the media format of your completed report. To select a media format, select it from the drop-down list:




The following formats are available:

| Format | Description |
|---|---|
| **Web** | ▪ The web format is the default interface for all report types. The results are displayed in a new browser window which contains a combination of HTML, CSS and JavaScript content.<br>▪ To navigate through a report consisting of multiple pages, click on the , , or icons at the top-right corner of the screen.<br>▪ Universally-accessible, the web format provides a mixture of graphical charts and tabular data, whose column headers are click-able to allow dynamic sorting of results. |
| **PDF** | ▪ The PDF format guarantees an identical look across all operating systems, making it an ideal report format for printing out on paper, or for e-mailing to colleagues inside and outside of your organisation.<br>▪ Due to the static nature of the PDF format, dynamic sorting of column headers is not available, although results can be pre-sorted using the filters and options available during report creation. |
| **XLS** | The Excel format is useful for onward manipulation of the data contained in your reports, or for including results in popular spreadsheet packages. |
| **CSV** | The CSV format allows report results to be arranged in comma-separated lists of data.<br>CSV files are often used for transferring data between different applications, such as databases, spreadsheets, and other third-party programs. |
| **XML** | The XML format can be useful when transferring the structured data from your report results to third-party applications, such as billing, accounting and time management applications. |

### Run or schedule the report

This is the final screen of the report wizard. Click on the Run now button to run the report immediately, or select the Schedule for later button to schedule the report to run at a later time. To revise the report parameters you have entered, click on the Back button, which will lead you to the previous report options.

# Report types

## Account Summary

**The Account Summary report**



### Introduction

The Account Summary report produces a type of phone bill for tracking how much billable time you've spent with each client, grouping its results by account code.

In order to use this report, your telephone system needs to be capable of providing account code information as part of its call logging data.

# My account summary

2012-05-17 15:05:01

TIM Plus \ London \ Accounts \ About this report

## Calls with no account code

| Carrier▲ | Charge band | Σ | Total duration | Total cost |
|---|---|---|---|---|
| London | No charge band | 95 | 01:06:29 | - |
| BT | International | 2 | 00:00:06 | 0.087 |
| BT | Local | 31 | 00:41:59 | 3.730 |
| BT | National | 51 | 02:13:01 | 13.059 |
| | | 179 | 04:01:35 | 16.876 |

## 52003

| Carrier▲ | Charge band | Σ | Total duration | Total cost |
|---|---|---|---|---|
| BT | National | 3 | 00:03:45 | 0.377 |
| | | 3 | 00:03:45 | 0.377 |

## 52004

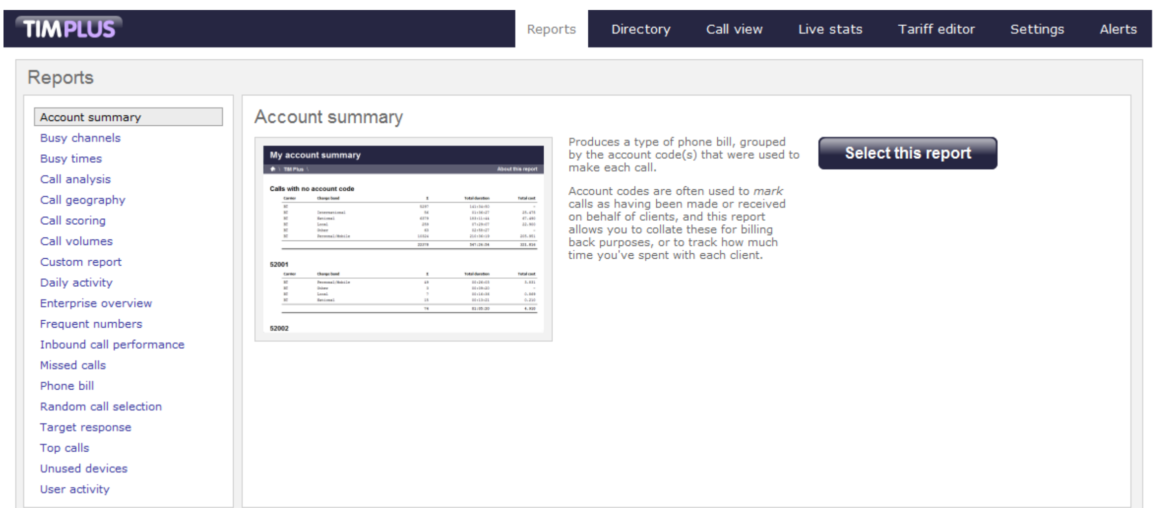
| Carrier▲ | Charge band | Σ | Total duration | Total cost |
|---|---|---|---|---|
| BT | National | 5 | 00:30:32 | 1.987 |
| | | 5 | 00:30:32 | 1.987 |

## 52005

| Carrier▲ | Charge band | Σ | Total duration | Total cost |
|---|---|---|---|---|
| BT | National | 3 | 00:05:23 | 0.374 |

## Running the report

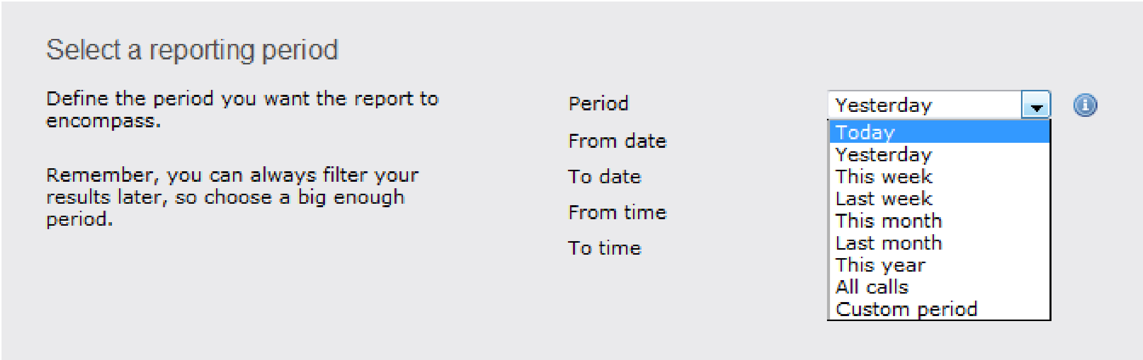
On the **Reports** screen, select the **Account summary** report from the left-hand pane and click the Select this report button.




A new window will appear, where you can set the parameters of your report.

### Selecting the reporting period

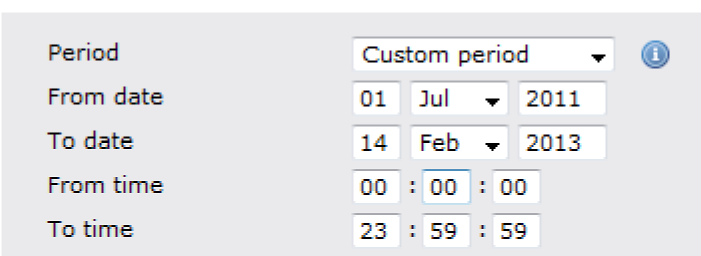
For each report, you must specify a time span that covers the calls you want the report to include. This is known as the "reporting period".




There are several preset reporting periods available for selection, based on the standard Gregorian calendar. The following table describes how the start and end times are defined for each preset period:

| Period | Description |
|---|---|
| **Today** | The start and end dates are set to the current date. The start time is set to `00:00:00` and the end time to `23:59:59`. |
| **Yesterday** | The start and end dates are set to the current date minus one day. The start time is set to `00:00:00` and the end time to `23:59:59`. |
| **This week** | The start date is set to the first day (normally Monday) of the current week. The end date is set to the current day. The start time is set to `00:00:00` and the end time to the current time. |
| **Last week** | The start date is set to the date of the last Monday, and the end date is set to the start date plus seven days. The start time is set to `00:00:00` and the end time to `23:59:59`. |
| **This month** | The start date is set to the first day of the current month. The end date is set to the current day. The start time is set to `00:00:00` and the end time to the current time. |
| **Last month** | The start date for this period is set in three stages: The day is set to the first day of the month. The month is set to the previous month. The year is set to the current year, unless it is currently January, in which case, the previous year is used. The start and end times are set to `00:00:00` and `23:59:59` respectively. |
| **This year** | The start date is set to the first day of the first month of the current year, whilst the end date is set to today's date. The start and end times are set to `00:00:00` and `23:59:59` respectively. |
| **All calls** | The start and end dates and times are set to the dates and times of the first and last call in the entire call database, respectively. |

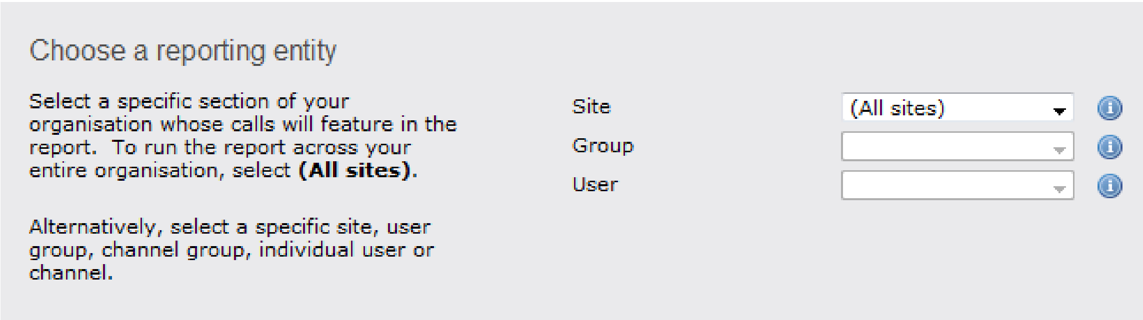
In addition to the presets described above, it is possible to specify a custom reporting period by choosing `Custom period` from the `Period` drop-down list and specifying your own `Start date`, `Start time`, `End date` and `End time` of the period you want to report on.




Once you have set the reporting period, click on the Next button to set additional report parameters and options, or select the Finish button to run the report immediately.

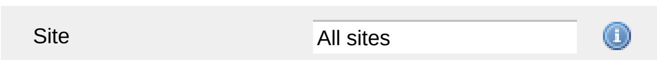
### Selecting the reporting entity

The `Reporting entity` parameter allows you to select the part of your organisation whose calls the report should include, e.g. a site, a group or an individual user.



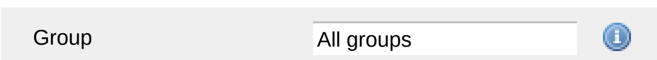

#### Site

To report on a particular site, select it from the drop-down list or select **`All sites`** .



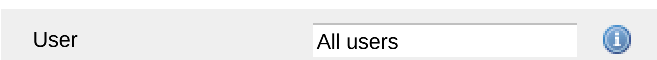

#### Group

If a site has been selected, you are able to further limit the report's results by selecting a group from the drop-down list.




#### User

If both a site and group have been selected, you can further limit the report's results to include only calls involving a particular user, by selecting that user from the drop-down list.

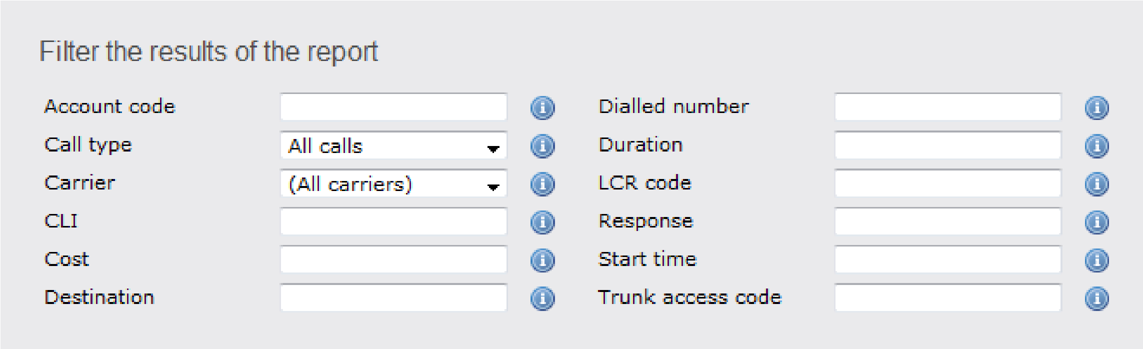



If your web account is restricted to a specific site or group, only those entities to which you have access will be available in the drop-down lists.

Once you have selected the scope of your report, click on the Next button to set additional report parameters and options, or to run the report immediately, click the Finish button.

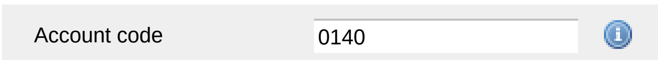
### Selecting the report filters

You can limit the results of your report by choosing one or more of the following filters:




### Account code

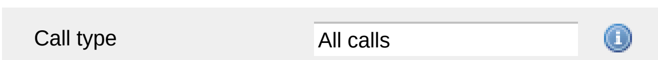
To produce a report consisting only of calls that were made using a particular account code, enter the account code in the field provided.




To report on more than one account code, separate each code using a comma.

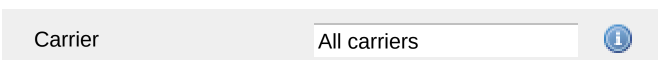
### Call type

This filter allows you to define the type of call you want to report on, in terms of where the call originated and where it was delivered, e.g. incoming, outgoing, internal etc.  To report on all types of call, set this to **`All calls`**.




### Carrier

If you use more than one carrier, you can limit the results to include only calls that were made using a specific carrier.

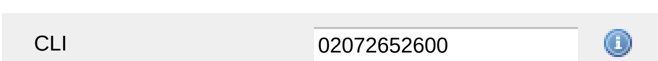



> If you use only one carrier, there will be no drop-down list available and no option to choose a carrier.

### CLI

Calling Line Identification (CLI) is the telephone number of the remote caller in an incoming call scenario.

You can report on calls that originate from a specific CLI or those whose CLI matches a particular pattern of digits. For example, to report on all incoming calls from Tri-Line, you could enter **`02072652600`**.




You can use the `!` symbol to explicitly exclude a CLI from the report's results, and/or the `*` symbol as a wildcard in digit pattern matching.  For example, to exclude calls from Tri-Line, but include all others, you could use **`!020726526*`**. To report on more than one CLI, use a comma to separate each entry.

### Cost

You can define a cost filter to include calls above or below specific values by entering your criteria, as shown below:

| | |
|---|---|
| Cost | <2.00 |

You can specify a cost range by using the `-` symbol; to specify limits, use the comparison operators, **>**, **<**, and `!` .

### Destination

If you want to filter calls to a specific, known destination, type the name of the destination in the text box provided. This filter accepts the `!` and `*` symbols for excluding values and specifying partial matches, respectively.

For example, if you wanted to exclude all calls to France, you could enter **`!France*`**, as shown below:

| | |
|---|---|
| Destination | !France* |

### Dialled number

To filter calls to a specific dialled number, type it in the text box provided. The dialled number is defined as the number that is dialled (in the case of an outbound call), or the DDI number that the remote party dialled to reach a particular extension or group (in the case of an inbound call).

To filter calls to a specific area, a partial number can be entered (e.g. **`0033`** for calls to France).

| | |
|---|---|
| Dialled number | 0033 |

You can use the `!` symbol to explicitly exclude a dialled number from the report's results, and/or the `*` symbol as a wildcard in digit pattern matching.  For example, to exclude calls to Tri-Line, but include all others, you could use **`!020726526*`**). To report on more than one dialled number, use a comma to separate each entry.

### Duration

To filter calls above or below a particular duration, enter the desired duration in seconds.

| | |
|---|---|
| Duration | >1800 |

You can specify a duration range by using the `-` symbol; to specify limits, use the comparison operators, **>**, **<**, and `!` .

In the above example, the report will return only calls longer than 1800 seconds (30 minutes).

### LCR code

To filter your results to include only calls that used a Least Cost Routing (LCR) code, enter it in the text box provided.

| | |
|---|---|
| LCR code | 162 |

You can use the `!` symbol to explicitly exclude a LCR code from the report's results, and/or the `*` symbol as a wildcard in digit pattern matching.  For example, to exclude calls made using all LCR codes beginning **`162`**, you could enter **`!162*`**. To report on more than one LCR code, use a comma to separate each entry.

### Response

This option allows you to filter calls based on their response time, measured in seconds. Specify the desired response time threshold in the text box provided.

| | |
|---|---|
| Response time | >10 |

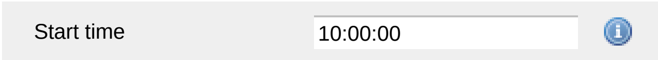
In the above example, the search results will display calls that have a response time greater than 10 seconds.

You can specify a response time range by using the `-` symbol and; to specify limits, use the comparison operators, **>**, **<**, and `!` .

### Start time

This option allows you to filter calls based on the time the call started. Specify the start time in the text box provided using the **`hh:mm:ss`** format.

For example, to include only calls that began after 10 am, you could enter **`10:00:00`** in the **`Start time`** field, as shown below:



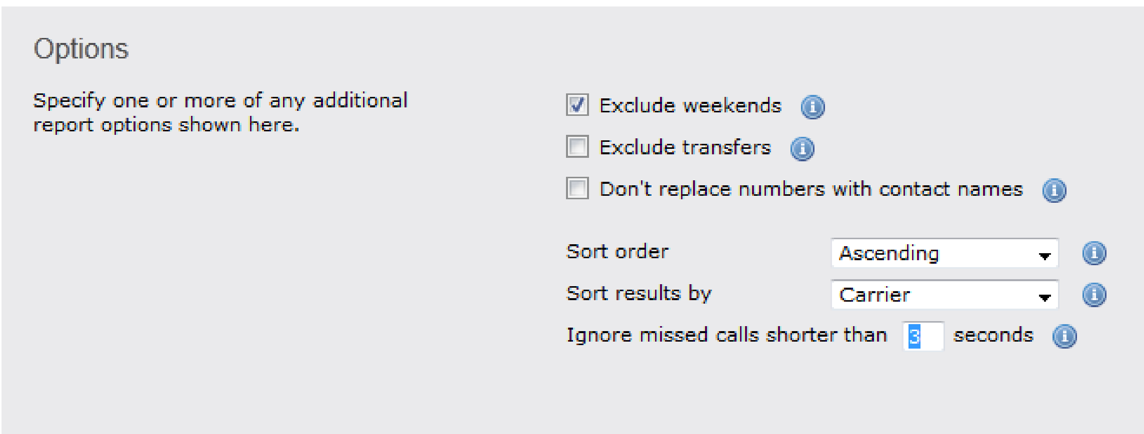

#### Trunk access code

If your telephone system uses trunk access codes to connect calls using specific channels, you can limit your report's results to include only calls made using those codes. Specify the trunk access code in the text box provided.


You can use the **`!`** symbol to explicitly exclude a trunk access code from the report's results, and/or the **`*`** symbol as a wildcard in digit pattern matching. For example, to exclude calls made using the **`9`** trunk access code, you could enter **`!9`**. To report on more than one trunk access code, use a comma to separate each entry.

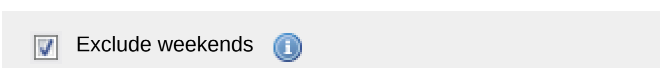
### Selecting the report options

This section enables you to further narrow down your report results, by excluding certain types of calls. It also allows you to sort the report's results in a particular manner.



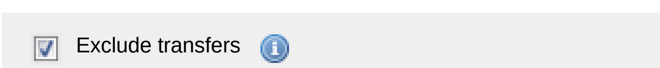

#### Exclude weekends

To exclude weekend calls from your report's results, select the **`Exclude weekends`** option.



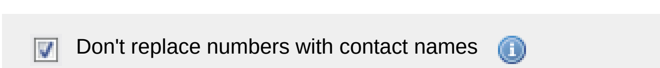

#### Exclude transfers

To exclude transferred calls from your report's results, select the **`Exclude transfers`** option.



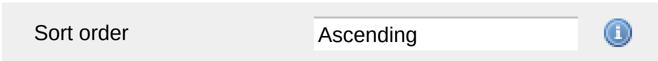

#### Don't replace numbers with contact names

Tick this option if you do not want to replace dialled numbers, CLIs and account codes with their associated names, as defined in your web user's contacts list.



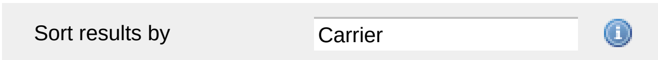

#### Sort order

Choose from the **`Sort order`** drop-down list whether you want the results of the report to appear in ascending or descending order.



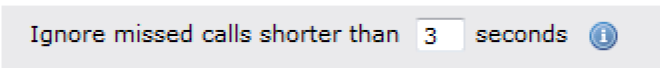

#### Sort results by

To sort your report's results by a particular column, select it from the **`Sort results by`** drop-down list.




#### Ignore short missed calls

Missed calls below a certain duration can sometimes pollute the meaning of a report's results. To exclude such short calls from your report, enter a duration threshold in the text box provided, e.g. to ignore calls below 3 seconds, enter **`3`** .



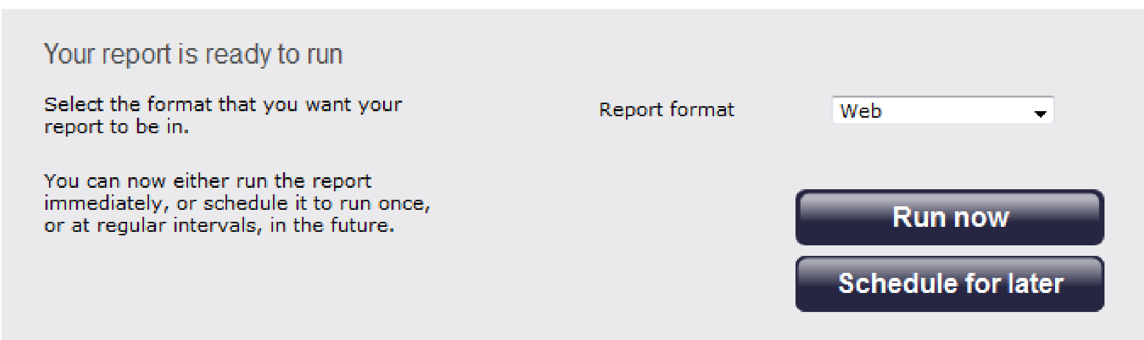

### Selecting the report format

This section allows you to choose the media format of your completed report. The formats available are **`Web`**, **`PDF`**, **`Excel`**, **`CSV`** and **`XML`**.

More details about each report format are available in the Setting the report format section above.

## Creating the report

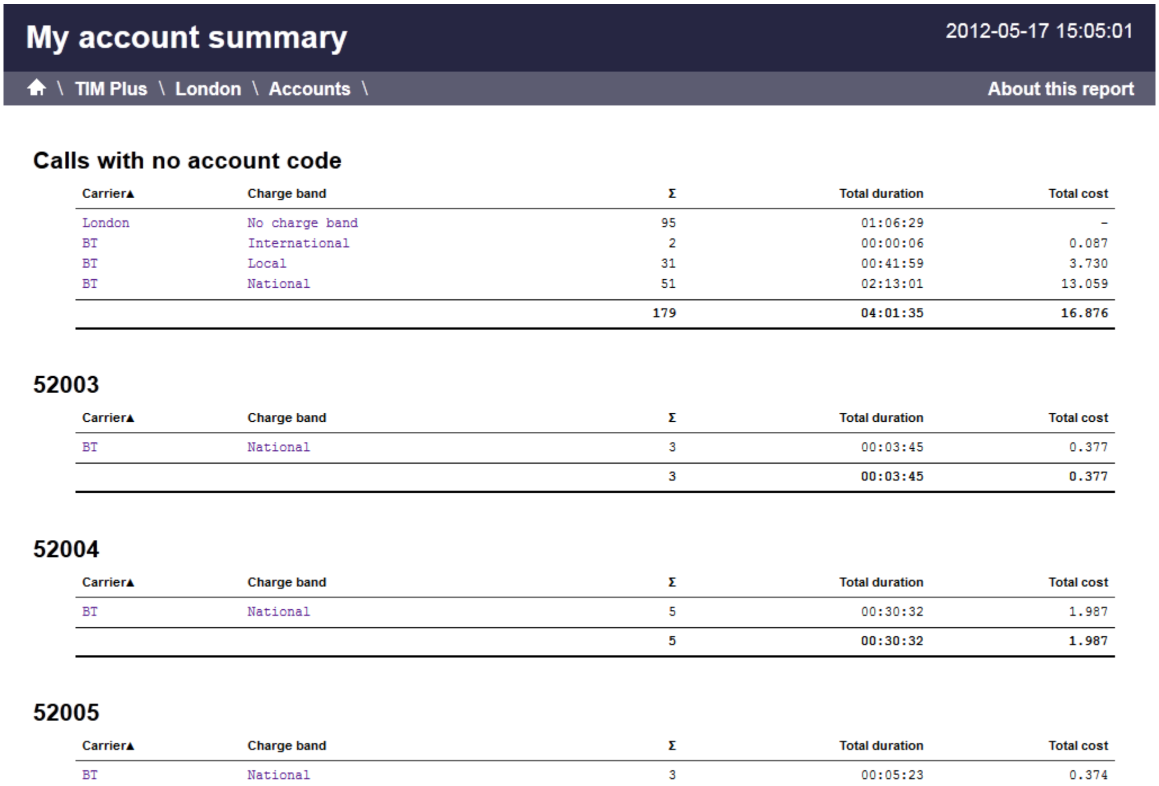
When you have selected a reporting period and have chosen any filters and options, you can either run the report immediately by clicking on the Run now button, or schedule it for future delivery.




## The report's results

The results of this report are presented as a tabular breakdown of calls - grouped by account code - according to the parameters you've selected.

Below is an example of this report's output in **`Web`** format, showing a summary of account code usage:



# My account summary

2012-05-17 15:05:01

\ TIM Plus \ London \ Accounts \ — About this report

## Calls with no account code

| Carrier▴ | Charge band | Σ | Total duration | Total cost |
|---|---|---|---|---|
| London | No charge band | 95 | 01:06:29 | - |
| BT | International | 2 | 00:00:06 | 0.087 |
| BT | Local | 31 | 00:41:59 | 3.730 |
| BT | National | 51 | 02:13:01 | 13.059 |
| | | 179 | 04:01:35 | 16.876 |

## 52003

| Carrier▴ | Charge band | Σ | Total duration | Total cost |
|---|---|---|---|---|
| BT | National | 3 | 00:03:45 | 0.377 |
| | | 3 | 00:03:45 | 0.377 |

## 52004

| Carrier▴ | Charge band | Σ | Total duration | Total cost |
|---|---|---|---|---|
| BT | National | 5 | 00:30:32 | 1.987 |
| | | 5 | 00:30:32 | 1.987 |

## 52005

| Carrier▴ | Charge band | Σ | Total duration | Total cost |
|---|---|---|---|---|
| BT | National | 3 | 00:05:23 | 0.374 |

As with all reports produced by TIM Plus, each page of the report includes the following information:

- the report's title
- the date and time that the report was generated
- the name of the report, if applicable

The **Web** format is the most interactive of all formats: all column headers are click-sortable and most graphical and tabular elements can be drilled down into, allowing deeper analysis of your results.

The headers of this report are as follows:

| Header | Description |
|---|---|
| **Carrier** | The carrier used to route the call. |
| **Charge band** | The charge band used to cost the call. |
| | The total volume of calls to each charge band. |
| **Total duration** | The total time spent on calls to each charge band. |
| **Total cost** | The total cost of calls to each charge band. |

By clicking on the **About this report** link at the top-right corner of the page, you can review any filters and options that have been applied to the report.

To modify your report to cover a larger organisational scope, click on an element of the breadcrumb as shown below:

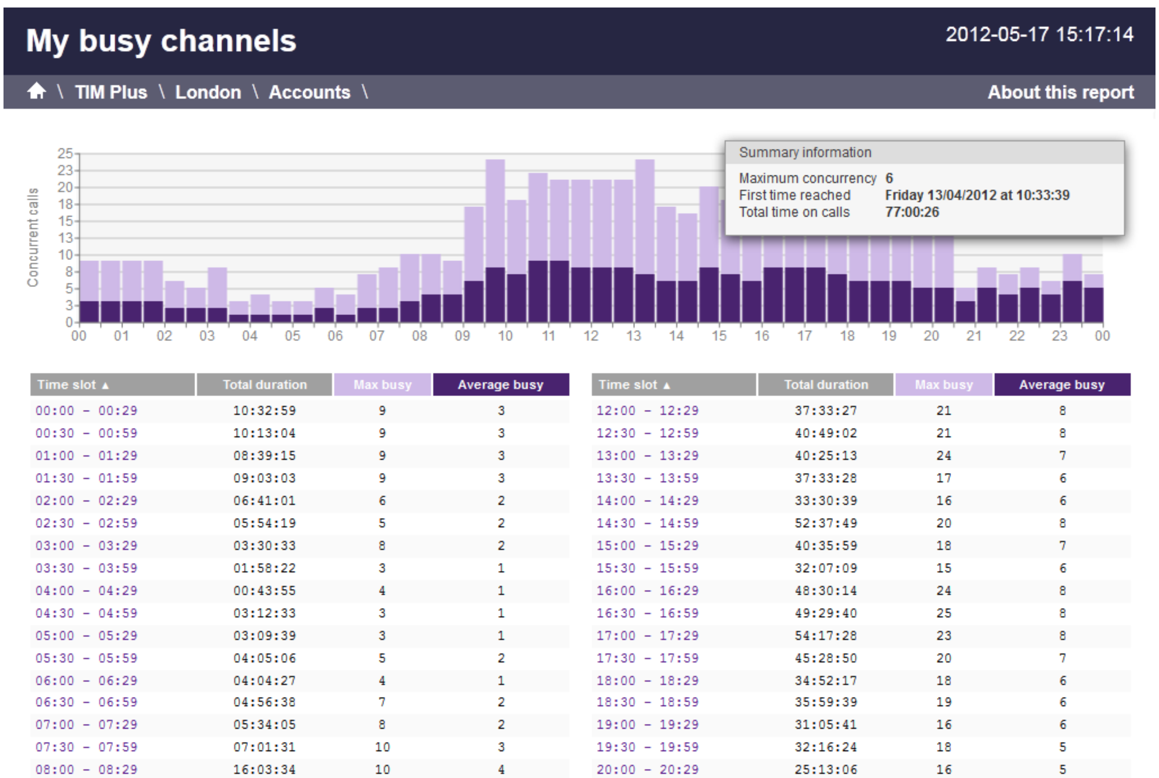
# Busy Channels

**The Busy Channels report**



## Introduction

The Busy Channels report allows you to break down each business day into half-hour periods, showing the maximum and average number of telephone lines in use for each half-hour period. This report is useful for determining whether or not you have enough lines or if you have too many.

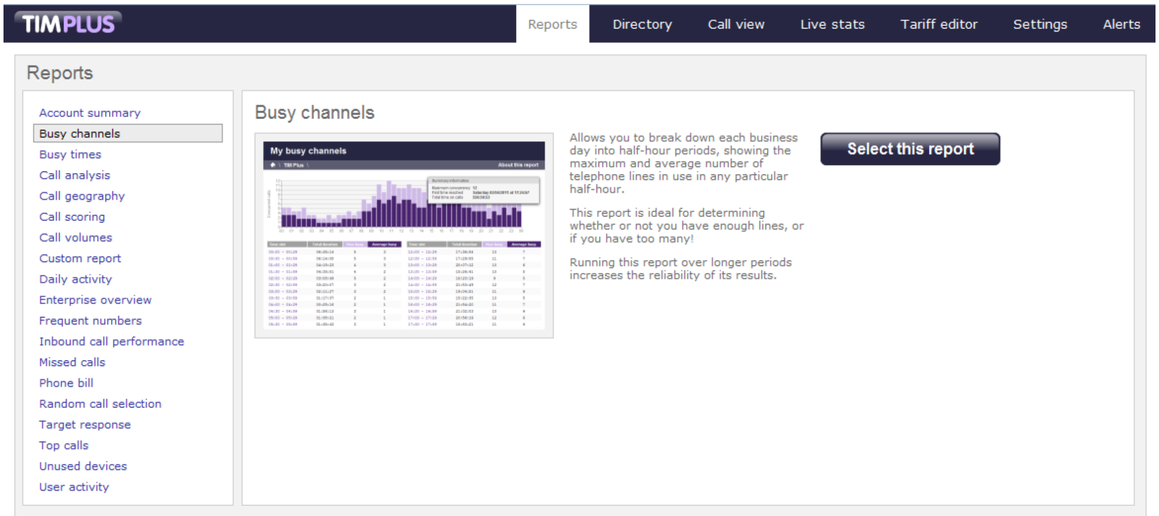



| Time slot ▲ | Total duration | Max busy | Average busy |
|---|---|---|---|
| 00:00 - 00:29 | 10:32:59 | 9 | 3 |
| 00:30 - 00:59 | 10:13:04 | 9 | 3 |
| 01:00 - 01:29 | 08:39:15 | 9 | 3 |
| 01:30 - 01:59 | 09:03:03 | 9 | 3 |
| 02:00 - 02:29 | 06:41:01 | 6 | 2 |
| 02:30 - 02:59 | 05:54:19 | 5 | 2 |
| 03:00 - 03:29 | 03:30:33 | 8 | 2 |
| 03:30 - 03:59 | 01:58:22 | 3 | 1 |
| 04:00 - 04:29 | 00:43:55 | 4 | 1 |
| 04:30 - 04:59 | 03:12:33 | 3 | 1 |
| 05:00 - 05:29 | 03:09:39 | 3 | 1 |
| 05:30 - 05:59 | 04:05:06 | 5 | 2 |
| 06:00 - 06:29 | 04:04:27 | 4 | 1 |
| 06:30 - 06:59 | 04:56:38 | 7 | 2 |
| 07:00 - 07:29 | 05:34:05 | 8 | 2 |
| 07:30 - 07:59 | 07:01:31 | 10 | 3 |
| 08:00 - 08:29 | 16:03:34 | 10 | 4 |

| Time slot ▲ | Total duration | Max busy | Average busy |
|---|---|---|---|
| 12:00 - 12:29 | 37:33:27 | 21 | 8 |
| 12:30 - 12:59 | 40:49:02 | 21 | 8 |
| 13:00 - 13:29 | 40:25:13 | 24 | 7 |
| 13:30 - 13:59 | 37:33:28 | 17 | 6 |
| 14:00 - 14:29 | 33:30:39 | 16 | 6 |
| 14:30 - 14:59 | 52:37:49 | 20 | 8 |
| 15:00 - 15:29 | 40:35:59 | 18 | 7 |
| 15:30 - 15:59 | 32:07:09 | 15 | 6 |
| 16:00 - 16:29 | 48:30:14 | 24 | 8 |
| 16:30 - 16:59 | 49:29:40 | 25 | 8 |
| 17:00 - 17:29 | 54:17:28 | 23 | 8 |
| 17:30 - 17:59 | 45:28:50 | 20 | 7 |
| 18:00 - 18:29 | 34:52:17 | 18 | 6 |
| 18:30 - 18:59 | 35:59:39 | 19 | 6 |
| 19:00 - 19:29 | 31:05:41 | 16 | 6 |
| 19:30 - 19:59 | 32:16:24 | 18 | 5 |
| 20:00 - 20:29 | 25:13:06 | 16 | 5 |

## Running the report

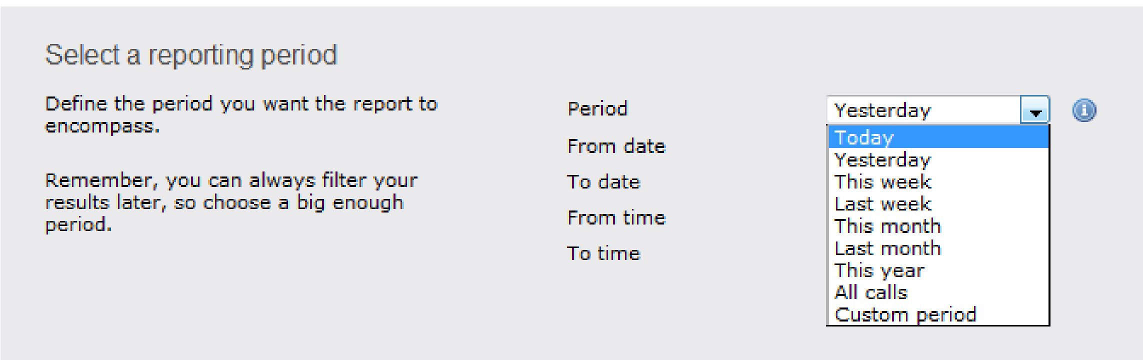
On the `Reports` screen, select the `Busy channels` report from the left-hand pane and click the Select this report button.




A new window will appear, where you can set the parameters of your report.

### Selecting the reporting period

For each report, you must specify a time span that covers the calls you want the report to include. This is known as the "reporting period".

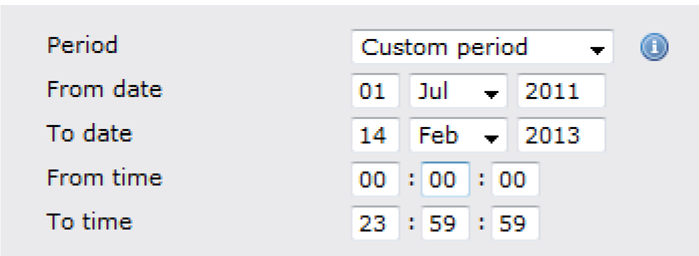



There are several preset reporting periods available for selection, based on the standard Gregorian calendar. The following table describes how the start and end times are defined for each preset period:

| Period | Description |
|---|---|
| **Today** | The start and end dates are set to the current date. The start time is set to `00:00:00` and the end time to `23:59:59`. |
| **Yesterday** | The start and end dates are set to the current date minus one day. The start time is set to `00:00:00` and the end time to `23:59:59`. |
| **This week** | The start date is set to the first day of the current week (normally Monday). The end date is set to the current day. The start time is set to `00:00:00` and the end time to the current time. |
| **Last week** | The start date is set to the date of the last Monday, and the end date is set to the start date plus seven days. The start time is set to `00:00:00` and the end time to `23:59:59`. |
| **This month** | The start date is set to the first day of the current month. The end date is set to the current day. The start time is set to `00:00:00` and the end time to the current time. |

| | |
|---|---|
| **Last month** | The start date for this period is set in three stages: The day is set to the first day of the month. The month is set to the previous month. The year is set to the current year, unless it is currently January, in which case, the previous year is used. The start and end times are set to **`00:00:00`** and **`23:59:59`** respectively. |
| **This year** | The start date is set to the first day of the first month of the current year, whilst the end date is set to today's date. The start and end times are set to **`00:00:00`** and **`23:59:59`** respectively. |
| **All calls** | The start and end dates and times are set to the dates and times of the first and last call in the entire call database, respectively. |

In addition to the presets described above, it is possible to specify a custom reporting period by choosing **`Custom period`** from the **`Period`** drop-down list and specifying your own **`Start date`**, **`Start time`**, **`End date`** and **`End time`** of the period you want to report on.

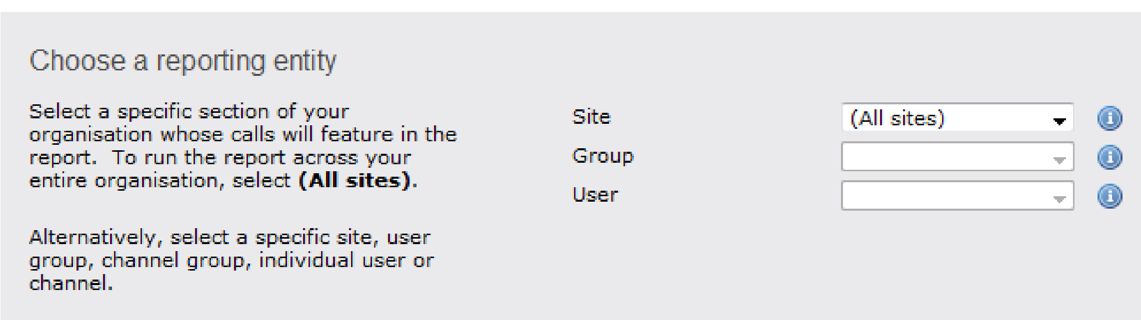



Once you have set the reporting period, click on the Next button to set additional report parameters and options, or select the Finish button to run the report immediately.

Running this report over longer periods of time gives a more accurate picture of your telephone line usage.

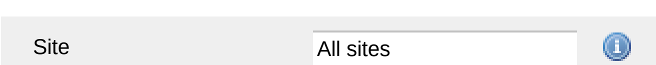
### Selecting the reporting entity

The **`Reporting entity`** parameter allows you to select the part of your organisation whose calls the report should include, e.g. a site, a group or an individual user.



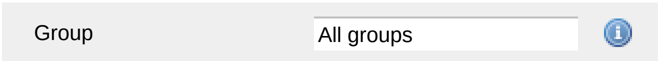

#### Site

To report on a particular site, select it from the drop-down list or select **`All sites`** .



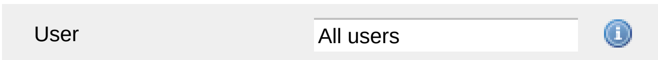

#### Group

If a site has been selected, you are able to further limit the report's results by selecting a group from the drop-down list.




### User

If both a site and group have been selected, you can further limit the report's results to include only calls involving a particular user, by selecting that user from the drop-down list.

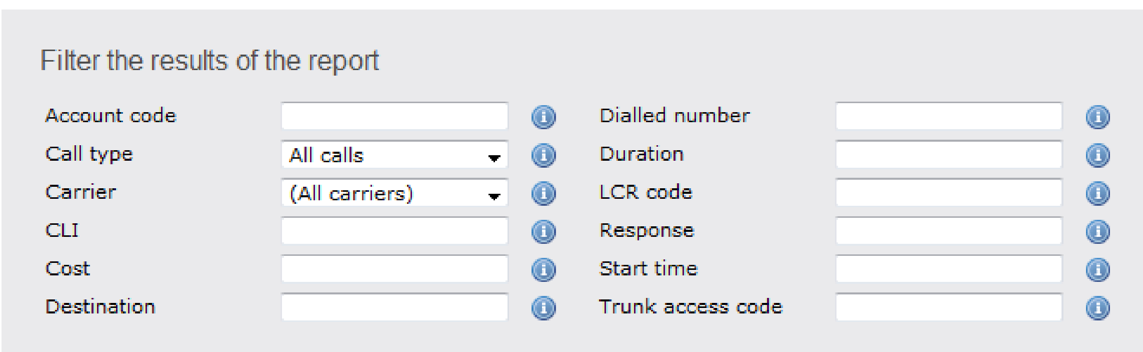



> If your web account is restricted to a specific site or group, only those entities to which you have access will be available in the drop-down lists.

Once you have selected the scope of your report, click on the **Next** button to set additional report parameters and options, or to run the report immediately, click the **Finish** button.

## Selecting the report filters

You can limit the results of your report by choosing one or more of the following filters:



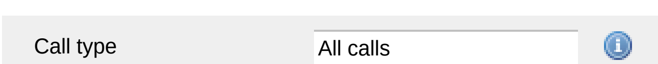

### Account code

To produce a report consisting only of calls that were made using a particular account code, enter the account code in the field provided.


To report on more than one account code, separate each code using a comma.

### Call type

This filter allows you to define the type of call you want to report on, in terms of where the call originated and where it was delivered, e.g. incoming, outgoing, internal etc.  To report on all types of call, set this to `All calls`.




### Carrier

If you use more than one carrier, you can limit the results to include only calls that were made using a specific carrier.

| Carrier | All carriers |
|---|---|

If you use only one carrier, there will be no drop-down list available and no option to choose a carrier.

### CLI

Calling Line Identification (CLI) is the telephone number of the remote caller in an incoming call scenario.

You can report on calls that originate from a specific CLI or those whose CLI matches a particular pattern of digits. For example, to report on all incoming calls from Tri-Line, you could enter **02072652600**.

| CLI | 02072652600 |
|---|---|

You can use the **!** symbol to explicitly exclude a CLI from the report's results, and/or the * symbol as a wildcard in digit pattern matching. For example, to exclude calls from Tri-Line, but include all others, you could use **!020726526***. To report on more than one CLI, use a comma to separate each entry.

### Cost

You can define a cost filter to include calls above or below specific values by entering your criteria, as shown below:

| Cost | <2.00 |
|---|---|

You can specify a cost range by using the **-** symbol; to specify limits, use the comparison operators, **>**, **<**, and **!** .

### Destination

If you want to filter calls to a specific, known destination, type the name of the destination in the text box provided. This filter accepts the **!** and ***** symbols for excluding values and specifying partial matches, respectively.

For example, if you wanted to exclude all calls to France, you could enter **!France***, as shown below:

| Destination | !France* |
|---|---|

### Dialled number

To filter calls to a specific dialled number, type it in the text box provided. The dialled number is defined as the number that is dialled (in the case of an outbound call), or the DDI number that the remote party dialled to reach a particular extension or group (in the case of an inbound call).

To filter calls to a specific area, a partial number can be entered (e.g. **0033** for calls to France).

| Dialled number | 0033 |
|---|---|

You can use the **!** symbol to explicitly exclude a dialled number from the report's results, and/or the * symbol as a wildcard in digit pattern matching. For example, to exclude calls to Tri-Line, but include all others, you could use **!020726526***). To report on more than one dialled number, use a comma to separate each entry.

### Duration

To filter calls above or below a particular duration, enter the desired duration in seconds.

| Duration | >1800 |
|---|---|

You can specify a duration range by using the **-** symbol; to specify limits, use the comparison operators, **>**, **<**, and **!** .

In the above example, the report will return only calls longer than 1800 seconds (30 minutes).

#### LCR code

To filter your results to include only calls that used a Least Cost Routing (LCR) code, enter it in the text box provided.


You can use the **!** symbol to explicitly exclude a LCR code from the report's results, and/or the ***** symbol as a wildcard in digit pattern matching. For example, to exclude calls made using all LCR codes beginning **162**, you could enter **!162***. To report on more than one LCR code, use a comma to separate each entry.

#### Response

This option allows you to filter calls based on their response time, measured in seconds. Specify the desired response time threshold in the text box provided.

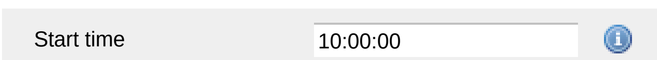

In the above example, the search results will display calls that have a response time greater than 10 seconds.

You can specify a response time range by using the **-** symbol and; to specify limits, use the comparison operators, **>**, **<**, and **!** .

#### Start time

This option allows you to filter calls based on the time the call started. Specify the start time in the text box provided using the **hh:mm:ss** format.

For example, to include only calls that began after 10 am, you could enter **10:00:00** in the **Start time** field, as shown below:



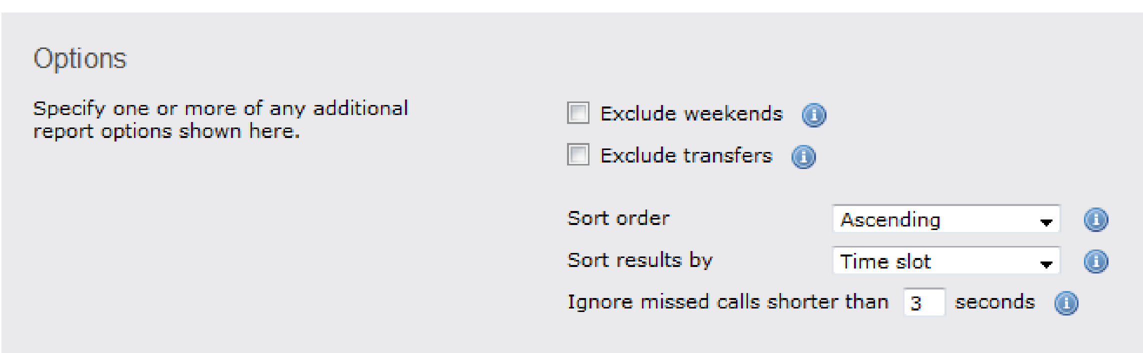

#### Trunk access code

If your telephone system uses trunk access codes to connect calls using specific channels, you can limit your report's results to include only calls made using those codes. Specify the trunk access code in the text box provided.


You can use the **!** symbol to explicitly exclude a trunk access code from the report's results, and/or the ***** symbol as a wildcard in digit pattern matching. For example, to exclude calls made using the **9** trunk access code, you could enter **!9**. To report on more than one trunk access code, use a comma to separate each entry.

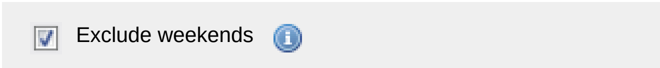
### Selecting the report options

This section enables you to further narrow down your report results, by excluding certain types of calls. It also allows you to sort the report's results in a particular manner.



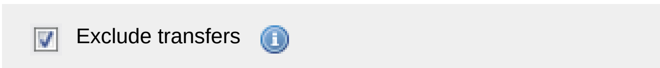
### Exclude weekends

To exclude weekend calls from your report's results, select the **`Exclude weekends`** option.



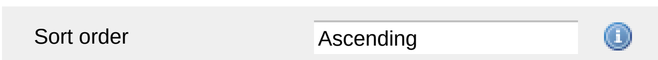

### Exclude transfers

To exclude transferred calls from your report's results, select the **`Exclude transfers`** option.



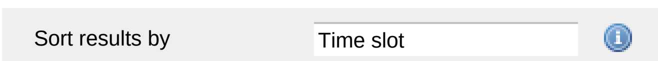

### Sort order

Choose from the **`Sort order`** drop-down list whether you want the results of the report to appear in ascending or descending order.



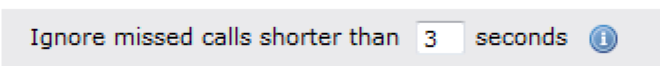

### Sort results by

To sort your report's results by a particular column, select it from the **`Sort results by`** drop-down list.




### Ignore short missed calls

Missed calls below a certain duration can sometimes pollute the meaning of a report's results. To exclude such short calls from your report, enter a duration threshold in the text box provided, e.g. to ignore calls below 3 seconds, enter **3** .



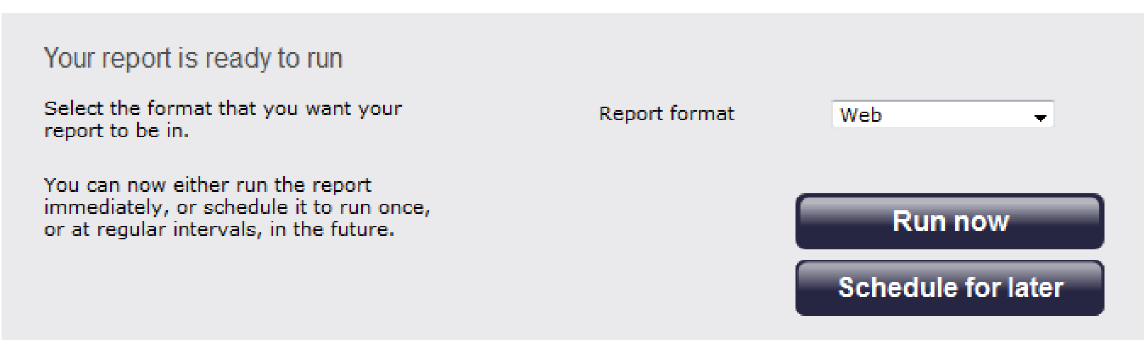

## Selecting the report format

This section allows you to choose the media format of your completed report. The formats available are **`Web`**, **`PDF`**, **`Excel`**, **`CSV`** and **`XML`**.

More details about each report format are available in the Setting the report format section above.

## Creating the report

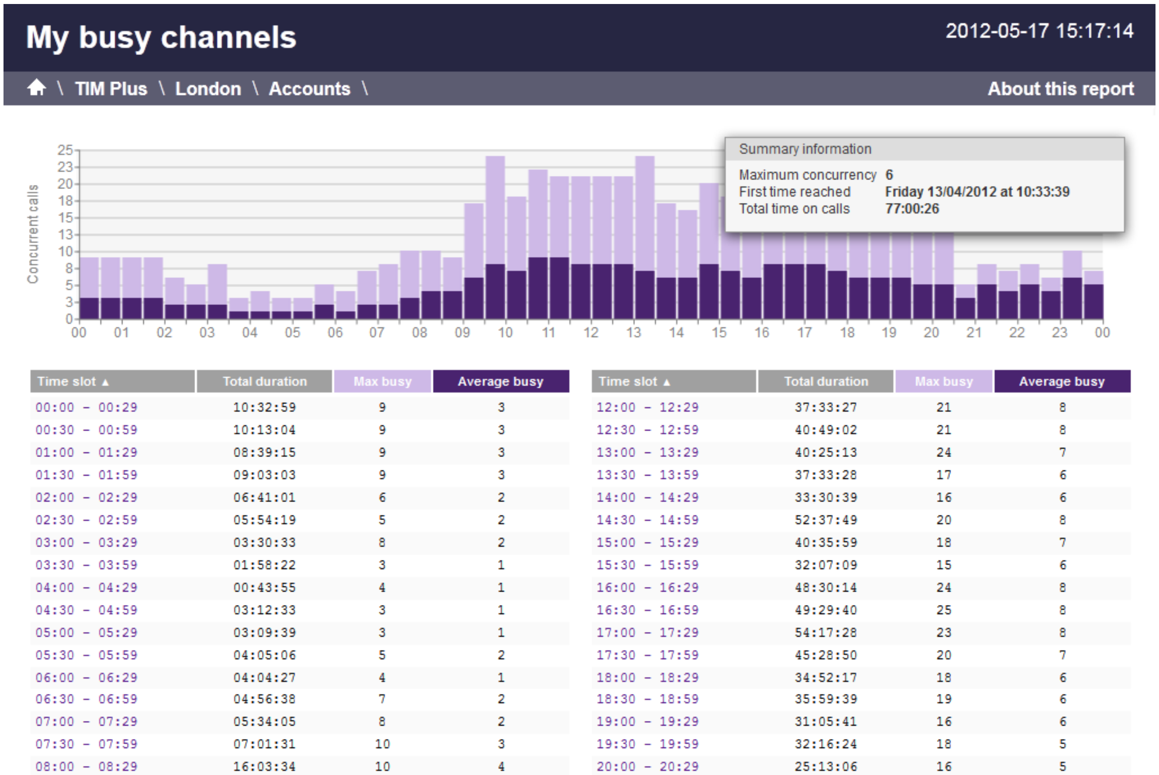
When you have selected a reporting period and have chosen any filters and options, you can either run the report immediately by clicking on the Run now button, or schedule it for future delivery.



## The report's results

### Web format

Below is an example of this report's output in **Web** format, displaying the activity of your telephone lines grouped in half-hour time slots:




| Time slot ▲ | Total duration | Max busy | Average busy |
|---|---|---|---|
| 00:00 – 00:29 | 10:32:59 | 9 | 3 |
| 00:30 – 00:59 | 10:13:04 | 9 | 3 |
| 01:00 – 01:29 | 08:39:15 | 9 | 3 |
| 01:30 – 01:59 | 09:03:03 | 9 | 3 |
| 02:00 – 02:29 | 06:41:01 | 6 | 2 |
| 02:30 – 02:59 | 05:54:19 | 5 | 2 |
| 03:00 – 03:29 | 03:30:33 | 8 | 2 |
| 03:30 – 03:59 | 01:58:22 | 3 | 1 |
| 04:00 – 04:29 | 00:43:55 | 4 | 1 |
| 04:30 – 04:59 | 03:12:33 | 3 | 1 |
| 05:00 – 05:29 | 03:09:39 | 3 | 1 |
| 05:30 – 05:59 | 04:05:06 | 5 | 2 |
| 06:00 – 06:29 | 04:04:27 | 4 | 1 |
| 06:30 – 06:59 | 04:56:38 | 7 | 2 |
| 07:00 – 07:29 | 05:34:05 | 8 | 2 |
| 07:30 – 07:59 | 07:01:31 | 10 | 3 |
| 08:00 – 08:29 | 16:03:34 | 10 | 4 |

| Time slot ▲ | Total duration | Max busy | Average busy |
|---|---|---|---|
| 12:00 – 12:29 | 37:33:27 | 21 | 8 |
| 12:30 – 12:59 | 40:49:02 | 21 | 8 |
| 13:00 – 13:29 | 40:25:13 | 24 | 7 |
| 13:30 – 13:59 | 37:33:28 | 17 | 6 |
| 14:00 – 14:29 | 33:30:39 | 16 | 6 |
| 14:30 – 14:59 | 52:37:49 | 20 | 8 |
| 15:00 – 15:29 | 40:35:59 | 18 | 7 |
| 15:30 – 15:59 | 32:07:09 | 15 | 6 |
| 16:00 – 16:29 | 48:30:14 | 24 | 8 |
| 16:30 – 16:59 | 49:29:40 | 25 | 8 |
| 17:00 – 17:29 | 54:17:28 | 23 | 8 |
| 17:30 – 17:59 | 45:28:50 | 20 | 7 |
| 18:00 – 18:29 | 34:52:17 | 18 | 6 |
| 18:30 – 18:59 | 35:59:39 | 19 | 6 |
| 19:00 – 19:29 | 31:05:41 | 16 | 6 |
| 19:30 – 19:59 | 32:16:24 | 18 | 5 |
| 20:00 – 20:29 | 25:13:06 | 16 | 5 |

The **Web** format is the most interactive of all formats: all column headers are click-sortable and most graphical and tabular elements can be drilled down into, allowing deeper analysis of your results. By clicking on the **About this report** link at the top-right corner of the page, you can review any filters and options that have been applied to the report.

As with all reports produced by TIM Plus, each page of the report includes the following information:

- the report's title
- the date and time that the report was generated
- the name of the report, if applicable

The body of the report consists of a graph and a table:

- The graph is a quick and easy indication of your line usage, broken down into half-hour time slots. The percentage on the y-axis shows the number of lines utilised, and the x-axis shows each half-hour of the day. The bars on the graph coloured light-purple show the *maximum* number of busy trunks in each particular half-hour, and the overlaid dark-purple ones show the *average* number of busy trunks in the same time period.
- The table displays the actual data organised in columns for maximum and average busy lines and the total duration for each half-hour time slot. Each column is described below:

| Header | Description |
|---|---|

| | |
|---|---|
| **Time slot** | The time of day in half-hour periods |
| **Total duration** | The total duration of all calls made or received within the time slot shown |
| **Max busy** | The maximum number of trunks in use during the time slot shown |
| **Average busy** | The average number of trunks in use during the time slot shown |

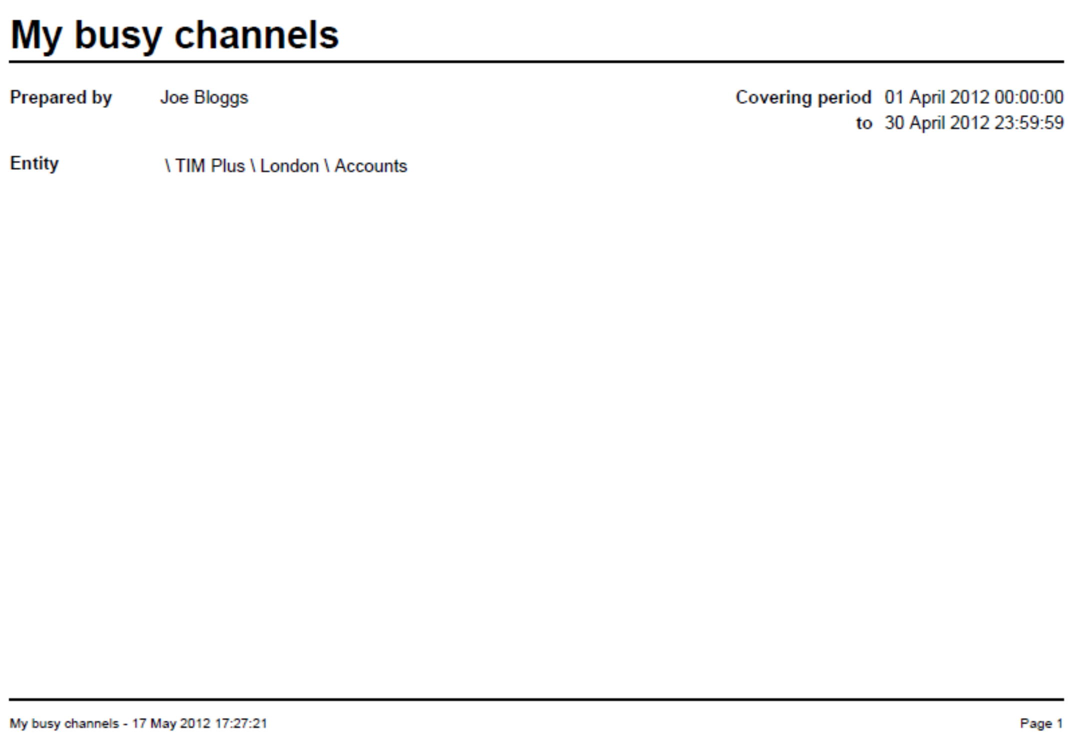
All column headers are clickable, allowing you to dynamically reorder the results.

To modify your report to cover a larger organisational scope, click on an element of the breadcrumb as shown below:


### PDF format

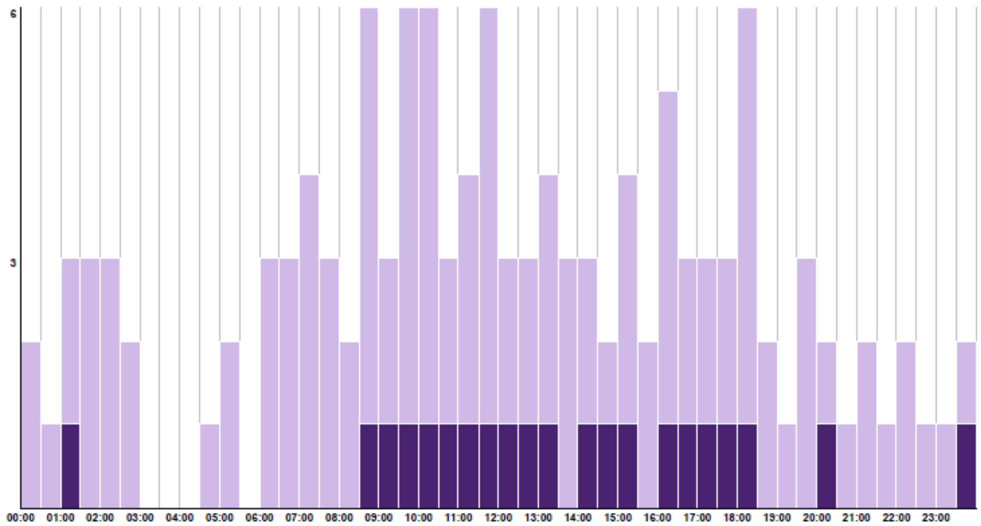
If you chose to run the report in **PDF** format, the report will consist of three pages.

The first page shows the login name of the person who has prepared/scheduled the report, the entity you are reporting on, the period covered and any filters used in the report.




The second page has a graph depicting the average and maximum number of channels used, as shown below:

## Report




My busy channels - 17 May 2012 17:27:21 Page 2

The third page contains a table of time slots, showing the maximum and average number of channels that were busy, along with the total duration of time spent on calls during each time slot.

## Data

| Time slot | Total duration | Max busy | Average busy |
|---|---|---|---|
| 00:00 - 00:29 | 00:09:06 | 2 | - |
| 00:30 - 00:59 | 00:01:24 | 1 | - |
| 01:00 - 01:29 | 00:52:45 | 3 | 1 |
| 01:30 - 01:59 | 00:13:54 | 3 | - |
| 02:00 - 02:29 | 00:52:27 | 3 | - |
| 02:30 - 02:59 | 00:22:47 | 2 | - |
| 03:00 - 03:29 | - | - | - |
| 03:30 - 03:59 | - | - | - |
| 04:00 - 04:29 | - | - | - |
| 04:30 - 04:59 | 00:15:08 | 1 | - |
| 05:00 - 05:29 | 00:01:19 | 2 | - |
| 05:30 - 05:59 | - | - | - |
| 06:00 - 06:29 | 00:09:22 | 3 | - |
| 06:30 - 06:59 | 00:39:00 | 3 | - |
| 07:00 - 07:29 | 00:34:10 | 4 | - |
| 07:30 - 07:59 | 00:47:09 | 3 | - |
| 08:00 - 08:29 | 00:51:53 | 2 | - |
| 08:30 - 08:59 | 01:49:55 | 6 | 1 |
| 09:00 - 09:29 | 03:59:58 | 3 | 1 |
| 09:30 - 09:59 | 04:19:29 | 6 | 1 |
| 10:00 - 10:29 | 02:33:48 | 6 | 1 |
| 10:30 - 10:59 | 01:22:35 | 3 | 1 |
| 11:00 - 11:29 | 02:07:29 | 4 | 1 |
| 11:30 - 11:59 | 01:44:31 | 6 | 1 |

| Time slot | Total duration | Max busy | Average busy |
|---|---|---|---|
| 12:00 - 12:29 | 01:11:34 | 3 | 1 |
| 12:30 - 12:59 | 00:36:41 | 3 | 1 |
| 13:00 - 13:29 | 00:58:11 | 4 | 1 |
| 13:30 - 13:59 | 00:07:38 | 3 | - |
| 14:00 - 14:29 | 00:53:04 | 3 | 1 |
| 14:30 - 14:59 | 01:34:11 | 2 | 1 |
| 15:00 - 15:29 | 01:36:15 | 4 | 1 |
| 15:30 - 15:59 | 00:21:46 | 2 | - |
| 16:00 - 16:29 | 00:27:52 | 5 | 1 |
| 16:30 - 16:59 | 01:44:37 | 3 | 1 |
| 17:00 - 17:29 | 00:45:47 | 3 | 1 |
| 17:30 - 17:59 | 02:18:00 | 3 | 1 |
| 18:00 - 18:29 | 02:40:29 | 6 | 1 |
| 18:30 - 18:59 | 01:28:19 | 2 | - |
| 19:00 - 19:29 | 00:31:57 | 1 | - |
| 19:30 - 19:59 | 00:01:43 | 3 | - |
| 20:00 - 20:29 | 00:56:20 | 2 | 1 |
| 20:30 - 20:59 | 00:13:47 | 1 | - |
| 21:00 - 21:29 | 00:46:09 | 2 | - |
| 21:30 - 21:59 | 00:14:49 | 1 | - |
| 22:00 - 22:29 | 01:46:40 | 2 | - |
| 22:30 - 22:59 | 00:13:29 | 1 | - |
| 23:00 - 23:29 | 01:11:37 | 1 | - |
| 23:30 - 23:59 | 00:01:28 | 2 | 1 |

My busy channels - 17 May 2012 17:27:21 Page 3

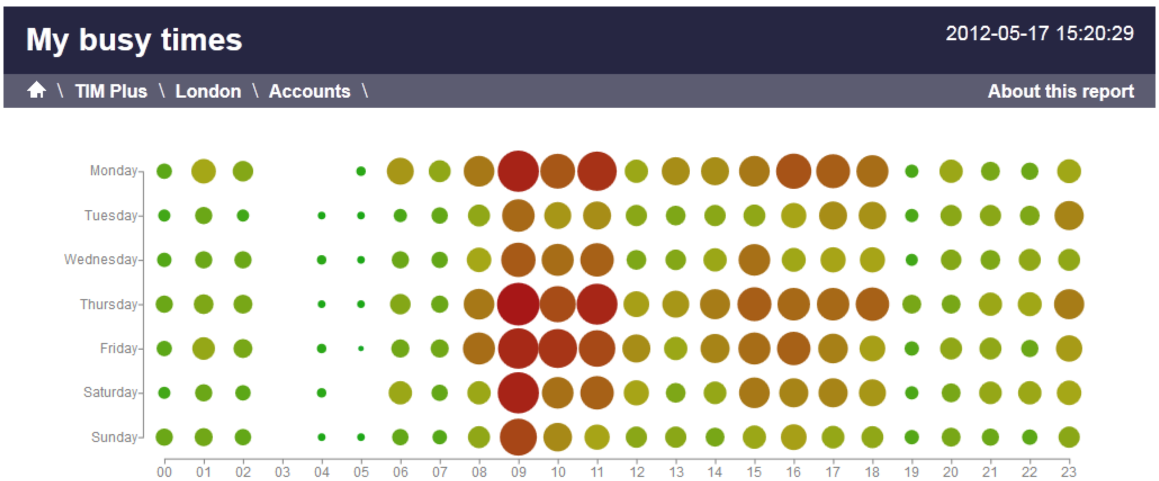
# Busy Times

**The Busy Times report**



## Introduction

The Busy Times report provides an hour-by-hour graphical representation of your call volumes for each day, giving a detailed breakdown of calls by type, for each time slot. This report is useful for identifying call traffic trends and can readily highlight your busiest periods, allowing you to more effectively plan your staffing requirements.

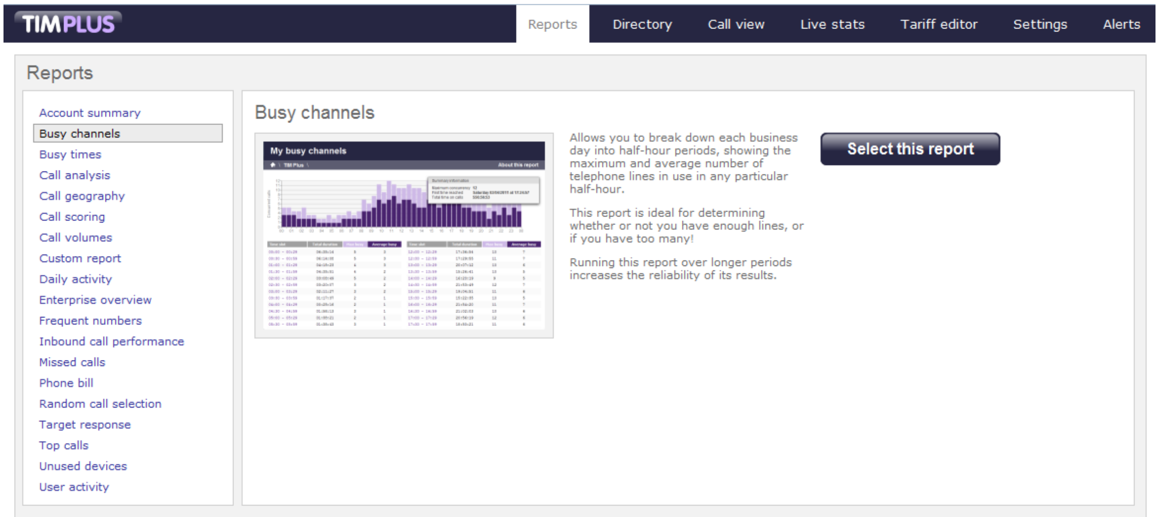



**Call volumes by hour**

| Day | 00 | 01 | 02 | 03 | 04 | 05 | 06 | 07 | 08 | 09 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Monday | 8 | 20 | 14 | - | - | 3 | 24 | 16 | 31 | 56 | 40 | 51 | 18 | 26 | 26 | 31 | 41 | 38 | 34 | 6 | 18 | 12 | 10 | 19 |
| Tuesday | 5 | 10 | 5 | - | 2 | 2 | 6 | 9 | 16 | 35 | 24 | 26 | 15 | 13 | 15 | 16 | 21 | 26 | 25 | 6 | 15 | 15 | 13 | 28 |
| Wednesday | 7 | 10 | 10 | - | 3 | 2 | 10 | 9 | 20 | 39 | 34 | 37 | 13 | 14 | 18 | 33 | 19 | 21 | 21 | 5 | 14 | 13 | 16 | 16 |
| Thursday | 10 | 13 | 12 | - | 2 | 2 | 14 | 10 | 31 | 60 | 43 | 55 | 22 | 24 | 30 | 38 | 35 | 35 | 37 | 12 | 12 | 18 | 19 | 30 |
| Friday | 8 | 17 | 12 | - | 3 | 1 | 11 | 11 | 34 | 54 | 50 | 44 | 26 | 18 | 28 | 34 | 37 | 29 | 22 | 7 | 16 | 16 | 10 | 23 |
| Saturday | 5 | 10 | 8 | - | 3 | - | 18 | 9 | 18 | 56 | 33 | 37 | 21 | 13 | 17 | 31 | 28 | 28 | 24 | 6 | 12 | 17 | 18 | 20 |
| Sunday | 10 | 11 | 9 | - | 2 | 2 | 9 | 7 | 16 | 45 | 27 | 21 | 15 | 15 | 12 | 18 | 22 | 17 | 16 | 7 | 12 | 10 | 8 | 15 |
| Total | 53 | 91 | 70 | - | 15 | 12 | 92 | 71 | 166 | 345 | 251 | 271 | 130 | 123 | 146 | 201 | 203 | 194 | 179 | 49 | 99 | 101 | 94 | 151 |

## Running the report

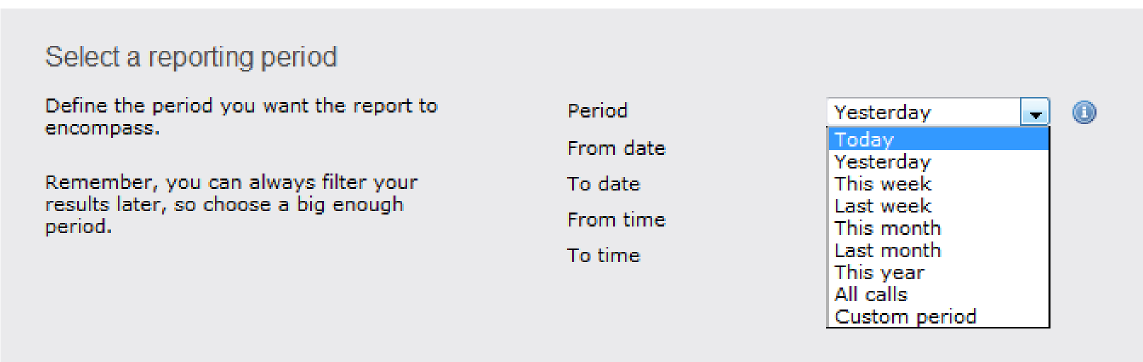
On the **Reports** screen, select the **Busy times** report from the left-hand pane and click the Select this report button.




A new window will appear, where you can set the parameters of your report.

## Selecting the reporting period

For each report, you must specify a time span that covers the calls you want the report to include. This is known as the "reporting period".

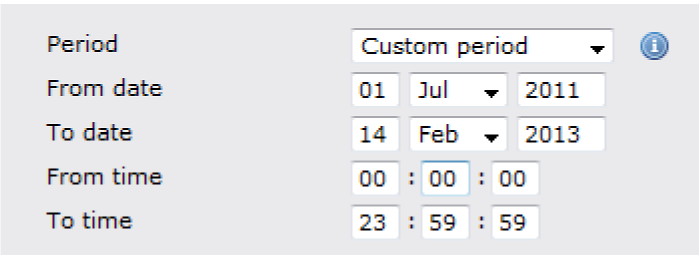



There are several preset reporting periods available for selection, based on the standard Gregorian calendar. The following table describes how the start and end times are defined for each preset period:

| Period | Description |
|---|---|
| **Today** | The start and end dates are set to the current date. The start time is set to `00:00:00` and the end time to `23:59:59`. |
| **Yesterday** | The start and end dates are set to the current date minus one day. The start time is set to `00:00:00` and the end time to `23:59:59`. |
| **This week** | The start date is set to the first day of the current week (normally Monday). The end date is set to the current day. The start time is set to `00:00:00` and the end time to the current time. |
| **Last week** | The start date is set to the date of the last Monday, and the end date is set to the start date plus seven days. The start time is set to `00:00:00` and the end time to `23:59:59`. |
| **This month** | The start date is set to the first day of the current month. The end date is set to the current day. The start time is set to `00:00:00` and the end time to the current time. |

| | |
|---|---|
| **Last month** | The start date for this period is set in three stages: The day is set to the first day of the month. The month is set to the previous month. The year is set to the current year, unless it is currently January, in which case, the previous year is used. The start and end times are set to `00:00:00` and `23:59:59` respectively. |
| **This year** | The start date is set to the first day of the first month of the current year, whilst the end date is set to today's date. The start and end times are set to `00:00:00` and `23:59:59` respectively. |
| **All calls** | The start and end dates and times are set to the dates and times of the first and last call in the entire call database, respectively. |

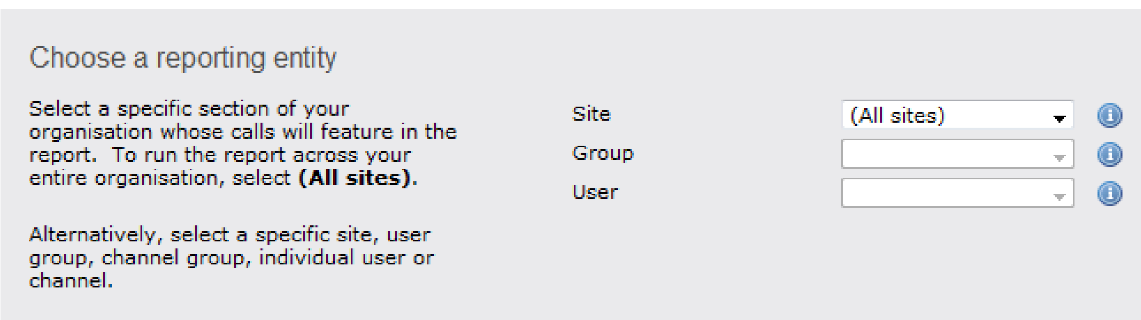
In addition to the presets described above, it is possible to specify a custom reporting period by choosing `Custom period` from the `Period` drop-down list and specifying your own `Start date`, `Start time`, `End date` and `End time` of the period you want to report on.




Once you have set the reporting period, click on the Next button to set additional report parameters and options, or select the Finish button to run the report immediately.

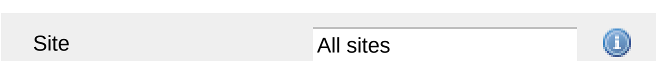
### Selecting the reporting entity

The `Reporting entity` parameter allows you to select the part of your organisation whose calls the report should include, e.g. a site, a group or an individual user.



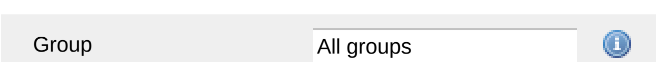

#### Site

To report on a particular site, select it from the drop-down list or select `All sites` .



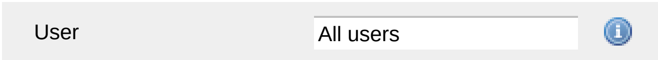

#### Group

If a site has been selected, you are able to further limit the report's results by selecting a group from the drop-down list.




#### User

If both a site and group have been selected, you can further limit the report's results to include only calls involving a particular user, by selecting that user from the drop-down list.

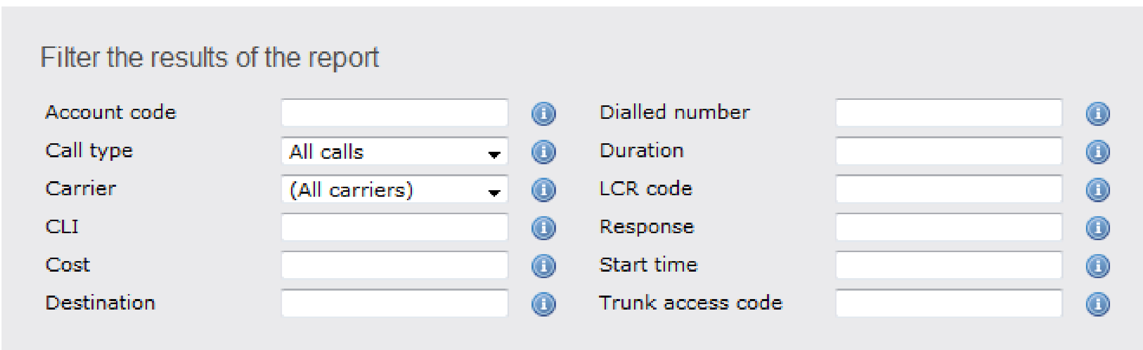



If your web account is restricted to a specific site or group, only those entities to which you have access will be available in the drop-down lists.

Once you have selected the scope of your report, click on the Next button to set additional report parameters and options, or to run the report immediately, click the Finish button.

## Selecting the report filters

You can limit the results of your report by choosing one or more of the following filters:



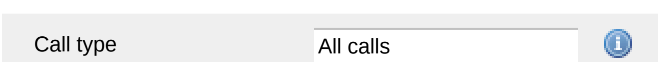

### Account code

To produce a report consisting only of calls that were made using a particular account code, enter the account code in the field provided.


To report on more than one account code, separate each code using a comma.

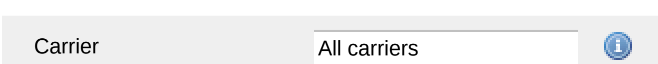
### Call type

This filter allows you to define the type of call you want to report on, in terms of where the call originated and where it was delivered, e.g. incoming, outgoing, internal, etc.  To report on all types of call, set this to `All calls`.




### Carrier

If you use more than one carrier, you can limit the results to include only calls that were made using a specific carrier.

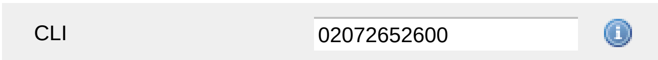



If you use only one carrier, there will be no drop-down list available and no option to choose a carrier.

### CLI

Calling Line Identification (CLI) is the telephone number of the remote caller in an incoming call scenario.

You can report on calls that originate from a specific CLI or those whose CLI matches a particular pattern of digits. For example, to report on all incoming calls from Tri-Line, you could enter **`02072652600`**.




You can use the `!` symbol to explicitly exclude a CLI from the report's results, and/or the `*` symbol as a wildcard in digit pattern matching.  For example, to exclude calls from Tri-Line, but include all others, you could use **`!020726526*`**. To report on more than one CLI, use a comma to separate each entry.

### Cost

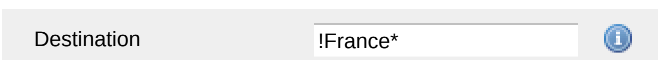
You can define a cost filter to include calls above or below specific values by entering your criteria, as shown below:


You can specify a cost range by using the `-` symbol; to specify limits, use the comparison operators, **`>`**, **`<`**, and **`!`** .

### Destination

If you want to filter calls to a specific, known destination, type the name of the destination in the text box provided. This filter accepts the **`!`** and **`*`** symbols for excluding values and specifying partial matches, respectively.

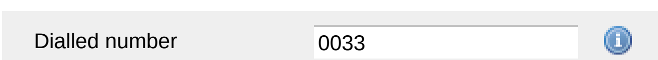
For example, if you wanted to exclude all calls to France, you could enter **`!France*`**, as shown below:




### Dialled number

To filter calls to a specific dialled number, type it in the text box provided. The dialled number is defined as the number that is dialled (in the case of an outbound call), or the DDI number that the remote party dialled to reach a particular extension or group (in the case of an inbound call).

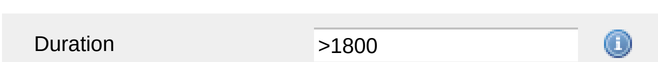
To filter calls to a specific area, a partial number can be entered (e.g. **`0033`** for calls to France).




You can use the `!` symbol to explicitly exclude a dialled number from the report's results, and/or the `*` symbol as a wildcard in digit pattern matching.  For example, to exclude calls to Tri-Line, but include all others, you could use **`!020726526*`**). To report on more than one dialled number, use a comma to separate each entry.

### Duration

To filter calls above or below a particular duration, enter the desired duration in seconds.




You can specify a duration range by using the `-` symbol; to specify limits, use the comparison operators, **`>`**, **`<`**, and **`!`** .

In the above example, the report will return only calls longer than 1800 seconds (30 minutes).

### LCR code

To filter your results to include only calls that used a Least Cost Routing (LCR) code, enter it in the text box provided.

You can use the **!** symbol to explicitly exclude a LCR code from the report's results, and/or the * symbol as a wildcard in digit pattern matching. For example, to exclude calls made using all LCR codes beginning `162`, you could enter `!162*`. To report on more than one LCR code, use a comma to separate each entry.

#### Response

This option allows you to filter calls based on their response time, measured in seconds. Specify the desired response time threshold in the text box provided.

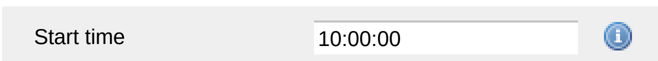

In the above example, the search results will display calls that have a response time greater than 10 seconds.

You can specify a response time range by using the `-` symbol and; to specify limits, use the comparison operators, `>`, `<`, and `!` .

#### Start time

This option allows you to filter calls based on the time the call started. Specify the start time in the text box provided using the `hh:mm:ss` format.

For example, to include only calls that began after 10 am, you could enter `10:00:00` in the `Start time` field, as shown below:



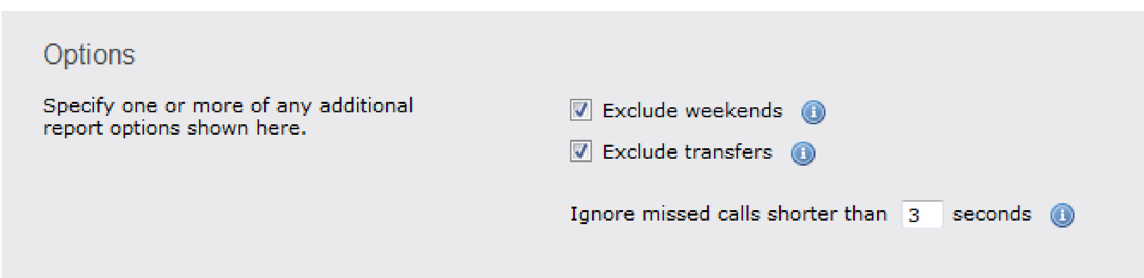

#### Trunk access code

If your telephone system uses trunk access codes to connect calls using specific channels, you can limit your report's results to include only calls made using those codes. Specify the trunk access code in the text box provided.


You can use the **!** symbol to explicitly exclude a trunk access code from the report's results, and/or the * symbol as a wildcard in digit pattern matching. For example, to exclude calls made using the `9` trunk access code, you could enter `!9`. To report on more than one trunk access code, use a comma to separate each entry.

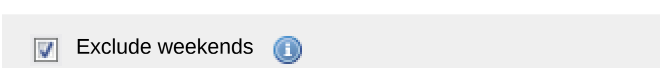
### Selecting the report options

This section enables you to further narrow down your report results, by excluding certain types of calls. It also allows you to sort the report's results in a particular manner.



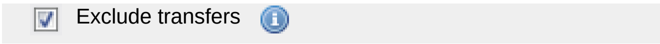

#### Exclude weekends

To exclude weekend calls from your report's results, select the `Exclude weekends` option.



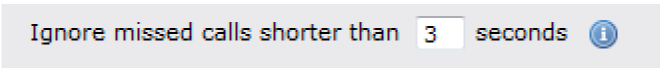

#### Exclude transfers

To exclude transferred calls from your report's results, select the `Exclude transfers` option.




### Ignore short missed calls

Missed calls below a certain duration can sometimes pollute the meaning of a report's results. To exclude such short calls from your report, enter a duration threshold in the text box provided, e.g. to ignore calls below 3 seconds, enter **3** .



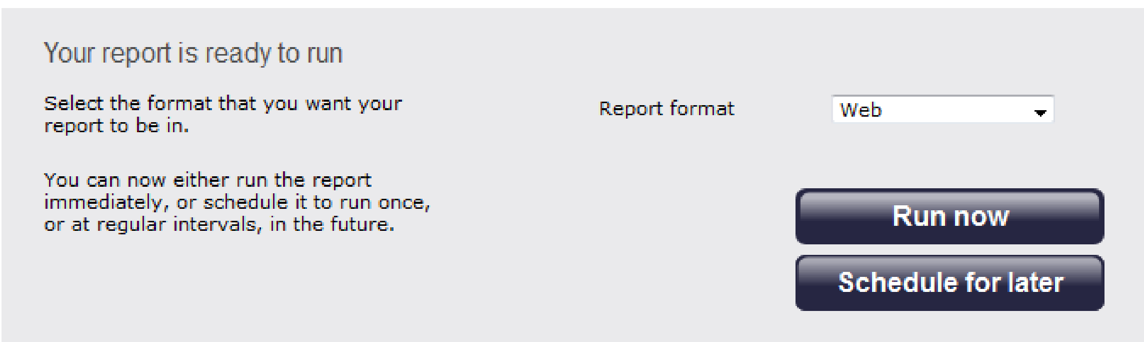

### Selecting the report format

This section allows you to choose the media format of your completed report. The formats available are **`Web`**, **`PDF`**, **`Excel`**, **`CSV`** and **`XML`**.

More details about each report format are available in the Setting the report format section above.

## Creating the report

When you have selected a reporting period and have chosen any filters and options, you can either run the report immediately by clicking on the Run now button, or schedule it for future delivery.



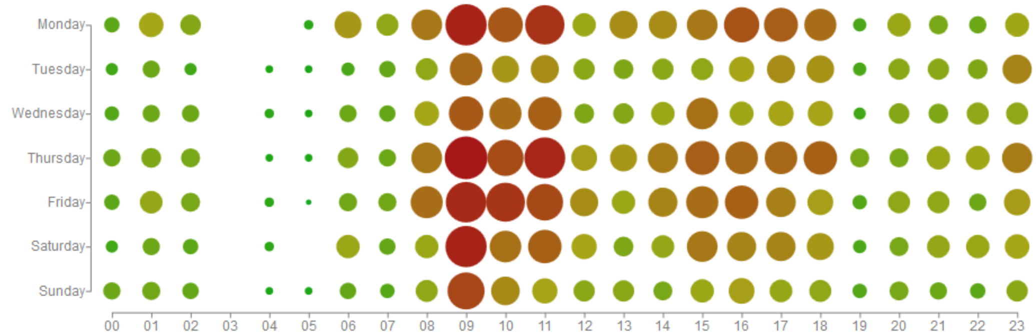

## The report's results

Below is an example of this report's output in **`Web`** format, showing a graphical representation of calls grouped into time slots of one hour.

## My busy times

2012-05-17 15:20:29

\ TIM Plus \ London \ Accounts \ About this report




**Call volumes by hour**

| Day | 00 | 01 | 02 | 03 | 04 | 05 | 06 | 07 | 08 | 09 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Monday | 8 | 20 | 14 | - | - | 3 | 24 | 16 | 31 | 56 | 40 | 51 | 18 | 26 | 26 | 31 | 41 | 38 | 34 | 6 | 18 | 12 | 10 | 19 |
| Tuesday | 5 | 10 | 5 | - | 2 | 2 | 6 | 9 | 16 | 35 | 24 | 26 | 15 | 13 | 15 | 16 | 21 | 26 | 25 | 6 | 15 | 15 | 13 | 28 |
| Wednesday | 7 | 10 | 10 | - | 3 | 2 | 10 | 9 | 20 | 39 | 34 | 37 | 13 | 14 | 18 | 33 | 19 | 21 | 21 | 5 | 14 | 13 | 16 | 16 |
| Thursday | 10 | 13 | 12 | - | 2 | 2 | 14 | 10 | 31 | 60 | 43 | 55 | 22 | 24 | 30 | 38 | 35 | 35 | 37 | 12 | 12 | 18 | 19 | 30 |
| Friday | 8 | 17 | 12 | - | 3 | 1 | 11 | 11 | 34 | 54 | 50 | 44 | 26 | 18 | 28 | 34 | 37 | 29 | 22 | 7 | 16 | 16 | 10 | 23 |
| Saturday | 5 | 10 | 8 | - | 3 | - | 18 | 9 | 18 | 56 | 33 | 37 | 21 | 13 | 17 | 31 | 28 | 28 | 24 | 6 | 12 | 17 | 18 | 20 |
| Sunday | 10 | 11 | 9 | - | 2 | 2 | 9 | 7 | 16 | 45 | 27 | 21 | 15 | 15 | 12 | 18 | 22 | 17 | 16 | 7 | 12 | 10 | 8 | 15 |
| Total | 53 | 91 | 70 | - | 15 | 12 | 92 | 71 | 166 | 345 | 251 | 271 | 130 | 123 | 146 | 201 | 203 | 194 | 179 | 49 | 99 | 101 | 94 | 151 |

The large, dark red dots represent your busiest periods, whereas the small, green dots represent quieter periods; by hovering your cursor over a particular dot a tooltip will be displayed, showing the volume of calls for that dot's time period.

The time slot data is also displayed in tabular form, each value being a hyperlink which, if clicked, will drill down into a detailed list of calls for that time slot.

## My busy times

2012-10-03 15:27:11

\ TIM Plus \ About this report

All | Outbound | Answered | Missed | Internal

Show all 1 of 37

| Date & Time ▲ | Source | CLI | Route | Destination | Response | Duration | Cost |
|---|---|---|---|---|---|---|---|
| 2012-09-04 00:00:46 | London | 02070108072 | - | Laura Thompson | - | 00:00:10 | - |
| 2012-09-04 00:00:56 | Amanda Lynn | - | 07957357127 | T-Mobile | - | 00:00:01 | 0.030 |
| 2012-09-04 00:03:36 | T-Mobile | 07940367495 | - | Louise Lucas | - | 00:01:17 | - |
| 2012-09-04 00:03:46 | T-Mobile | 07981955275 | - | Winston Horn | - | 00:01:37 | - |
| 2012-09-04 00:03:51 | London | 02076636000 | - | David Ellis | - | 00:01:03 | - |
| 2012-09-04 00:07:21 | T-Mobile | 07957584564 | - | Matt Earley | - | 00:01:41 | - |
| 2012-09-04 00:09:26 | O2 | 07714247647 | - | Graham Manning | - | 00:01:49 | - |
| 2012-09-04 00:10:56 | Vodafone | 07825068611 | - | Floyd Tomlinson | - | 00:01:47 | - |
| 2012-09-04 00:14:38 | Vodafone | 07775668307 | - | Yu Woo | - | 00:00:03 | - |
| 2012-09-04 00:15:06 | Vodafone | 07747862786 | - | Derek Smith | - | 00:01:15 | - |
| 2012-09-04 00:18:33 | Orange | 07967625420 | - | Hannah Soras | - | 00:04:01 | - |
| 2012-09-04 00:19:13 | London | 02072293477 | - | David Ellis | - | 00:02:48 | - |
| 2012-09-04 00:19:33 | O2 | 07803831958 | - | George Evans | - | 00:00:01 | - |
| 2012-09-04 00:20:13 | Orange | 07929200231 | - | Edward James | - | 00:02:47 | - |
| 2012-09-04 00:20:23 | Amanda Lynn | - | 07939006896 | T-Mobile | - | 00:00:07 | 0.030 |
| 2012-09-04 00:20:28 | O2 | 07926262196 | - | Dean Tomkins | - | 00:00:07 | - |
| 2012-09-04 00:21:38 | London | 02073878885 | - | Holly Wood | - | 00:00:01 | - |
| 2012-09-04 00:27:43 | T-Mobile | 07950488657 | - | Alastair Burnett | - | 00:00:16 | - |
| 2012-09-04 00:28:43 | 1081 | - | 07961150000 | T-Mobile | - | 00:00:09 | 0.030 |
| 2012-09-04 00:28:51 | London | 02072843500 | - | Ricardo De Souze | - | 00:01:34 | - |
| 2012-09-04 00:33:01 | Vodafone | 07901750601 | - | Floyd Tomlinson | - | 00:01:44 | - |
| 2012-09-04 00:34:36 | Vodafone | 07717530155 | - | Natt Chen | - | 00:03:24 | - |
| 2012-09-04 00:34:56 | Vodafone | 07767777666 | - | Sally Gansa | - | 00:01:16 | - |
| 2012-09-04 00:35:36 | Vodafone | 07825041492 | - | Floyd Tomlinson | - | 00:01:02 | - |
| 2012-09-04 00:38:03 | Hutchison 3G | 07723054591 | - | Jack Garrett | - | 00:02:55 | - |
| 2012-09-04 00:38:31 | London | 02072528275 | - | Sam Thornton | - | 00:00:07 | - |
| 2012-09-04 00:39:36 | UNAVAILABLE | - | - | Pete Moore | - | 00:00:45 | - |
| 2012-09-04 00:42:13 | UNAVAILABLE | - | - | Prakash Pindoria | - | 00:00:53 | - |
| 2012-09-04 00:45:21 | Jack Garrett | - | 07904034692 | T-Mobile | - | 00:00:53 | 0.115 |

As with all reports produced by TIM Plus, each page of the report includes the following information:

- the report's title
- the date and time that the report was generated
- the name of the report, if applicable

The **Web** format is the most interactive of all formats: all column headers are click-sortable and most graphical and tabular elements can be drilled down into, allowing deeper analysis of your results. By clicking on the **About this report** link at the top-right corner of the page, you can review any filters and options that have been applied to the report.

To modify your report to cover a larger organisational scope, click on an element of the breadcrumb as shown below:

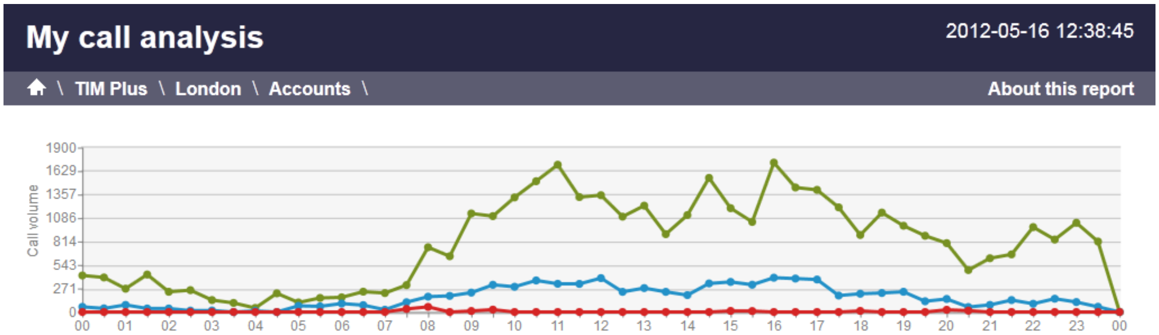

## Call Analysis

**The Call Analysis report**



### Introduction

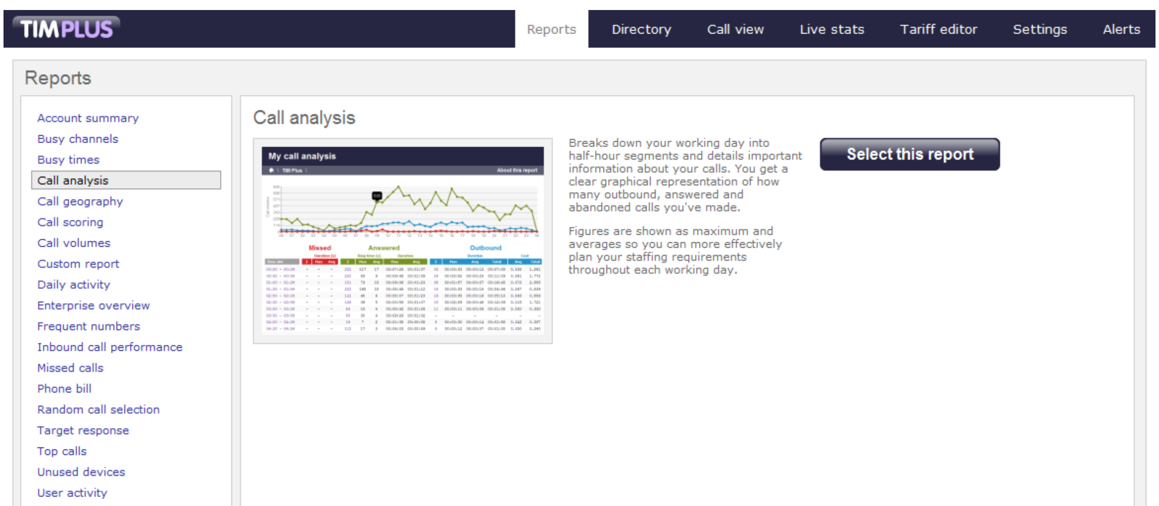
The Call Analysis report breaks down your working day into half-hour segments, providing a clear graphical representation of your outbound, answered and abandoned calls. Call volumes are shown as *maximums* and *averages* which can help with staff planning.




| | Missed | | | Answered | | | | | Outbound | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Duration (s) | | | Ring time (s) | | Duration | | | Duration | | | Cost | |
| Time slot ▲ | Σ | Max | Avg | Σ | Max | Avg | Max | Avg | Σ | Max | Avg | Total | Avg | Total |
| 00:00 - 00:29 | - | - | - | 426 | 11 | - | 00:07:34 | 00:01:28 | 60 | 00:00:32 | 00:00:11 | 00:11:45 | 0.036 | 2.171 |
| 00:30 - 00:59 | - | - | - | 403 | - | - | 00:09:26 | 00:01:35 | 42 | 00:00:53 | 00:00:23 | 00:16:47 | 0.057 | 2.406 |
| 01:00 - 01:29 | - | - | - | 272 | - | - | 00:07:57 | 00:01:34 | 83 | 00:02:31 | 00:00:29 | 00:41:18 | 0.073 | 6.051 |
| 01:30 - 01:59 | - | - | - | 437 | - | - | 00:05:19 | 00:01:23 | 41 | 00:00:35 | 00:00:13 | 00:09:29 | 0.039 | 1.615 |
| 02:00 - 02:29 | - | - | - | 236 | 10 | - | 00:08:02 | 00:01:30 | 41 | 00:00:34 | 00:00:14 | 00:10:02 | 0.039 | 1.592 |
| 02:30 - 02:59 | - | - | - | 255 | 4 | - | 00:03:30 | 00:01:05 | 16 | 00:02:06 | 00:01:10 | 00:18:54 | 0.155 | 2.476 |
| 03:00 - 03:29 | - | - | - | 139 | - | - | 00:04:43 | 00:01:29 | 18 | 00:00:11 | 00:00:06 | 00:01:50 | 0.030 | 0.540 |
| 03:30 - 03:59 | - | - | - | 106 | - | - | 00:09:51 | 00:01:16 | - | - | - | - | - | - |
| 04:00 - 04:29 | - | - | - | 47 | 8 | 1 | 00:01:35 | 00:00:43 | 13 | 00:00:34 | 00:00:13 | 00:03:01 | 0.038 | 0.490 |
| 04:30 - 04:59 | - | - | - | 218 | 19 | 2 | 00:06:12 | 00:00:51 | - | - | - | - | - | - |
| 05:00 - 05:29 | - | - | - | 111 | 25 | 2 | 00:06:33 | 00:01:20 | 72 | 00:02:25 | 00:00:29 | 00:35:17 | 0.073 | 5.276 |
| 05:30 - 05:59 | - | - | - | 164 | 8 | 1 | 00:11:33 | 00:01:33 | 66 | 00:00:49 | 00:00:14 | 00:15:26 | 0.040 | 2.628 |
| 06:00 - 06:29 | - | - | - | 171 | 25 | 2 | 00:05:11 | 00:01:10 | 99 | 00:00:35 | 00:00:09 | 00:16:21 | 0.033 | 3.290 |
| 06:30 - 06:59 | - | - | - | 237 | 13 | - | 00:05:14 | 00:01:10 | 80 | 00:00:34 | 00:00:10 | 00:13:58 | 0.034 | 2.696 |
| 07:00 - 07:29 | - | - | - | 221 | 25 | 1 | 00:06:54 | 00:01:29 | 27 | 00:00:29 | 00:00:13 | 00:06:07 | 0.038 | 1.029 |
| 07:30 - 07:59 | 36 | 51 | 16 | 314 | 39 | 2 | 00:03:31 | 00:00:52 | 114 | 00:26:48 | 00:02:24 | 04:33:49 | 0.149 | 16.997 |

## Running the report

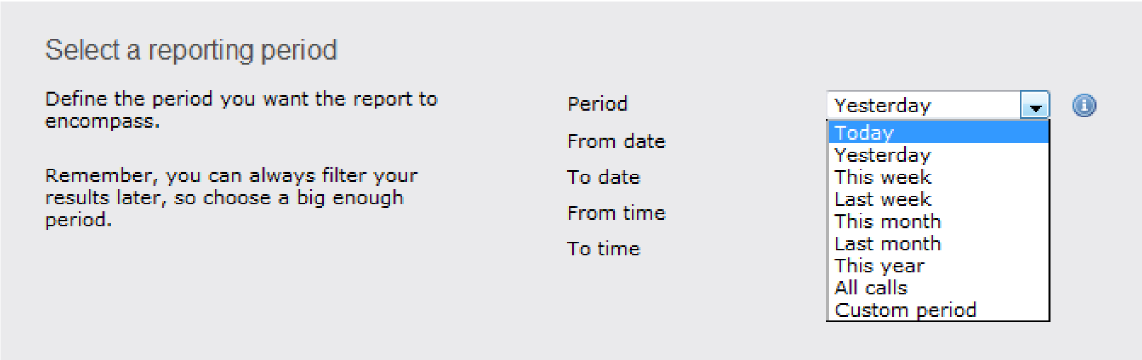
On the **Reports** screen, select the **Call analysis** report from the left-hand pane and click the Select this report button.




A new window will appear, where you can set the parameters of your report.

### Selecting the reporting period

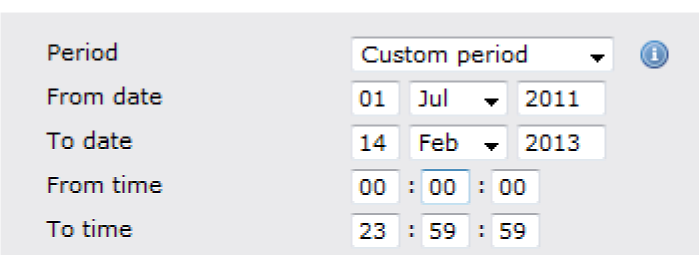
For each report, you must specify a time span that covers the calls you want the report to include. This is known as the "reporting period".




There are several preset reporting periods available for selection, based on the standard Gregorian calendar. The following table describes how the start and end times are defined for each preset period:

| Period | Description |
|---|---|
| **Today** | The start and end dates are set to the current date. The start time is set to **`00:00:00`** and the end time to **`23:59:59`**. |
| **Yesterday** | The start and end dates are set to the current date minus one day. The start time is set to **`00:00:00`** and the end time to **`23:59:59`**. |
| **This week** | The start date is set to the first day of the current week (normally Monday). The end date is set to the current day. The start time is set to **`00:00:00`** and the end time to the current time. |
| **Last week** | The start date is set to the date of the last Monday, and the end date is set to the start date plus seven days. The start time is set to **`00:00:00`** and the end time to **`23:59:59`**. |
| **This month** | The start date is set to the first day of the current month. The end date is set to the current day. The start time is set to **`00:00:00`** and the end time to the current time. |
| **Last month** | The start date for this period is set in three stages: The day is set to the first day of the month. The month is set to the previous month. The year is set to the current year, unless it is currently January, in which case, the previous year is used. The start and end times are set to **`00:00:00`** and **`23:59:59`** respectively. |
| **This year** | The start date is set to the first day of the first month of the current year, whilst the end date is set to today's date. The start and end times are set to **`00:00:00`** and **`23:59:59`** respectively. |
| **All calls** | The start and end dates and times are set to the dates and times of the first and last call in the entire call database, respectively. |

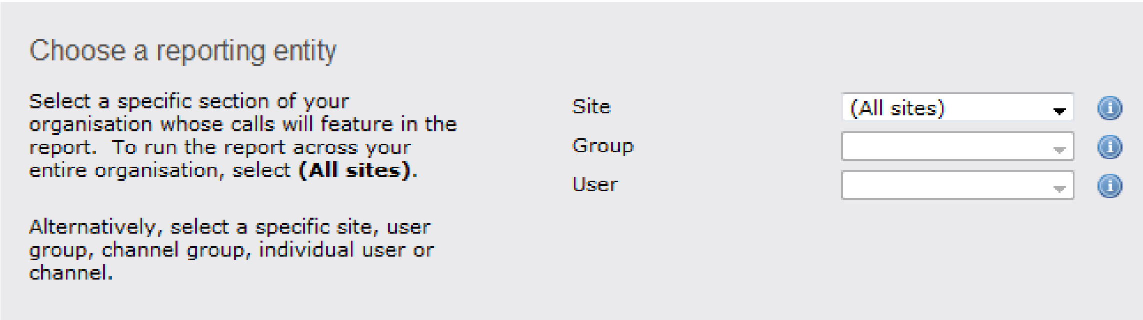
In addition to the presets described above, it is possible to specify a custom reporting period by choosing **`Custom period`** from the **`Period`** drop-down list and specifying your own **`Start date`**, **`Start time`**, **`End date`** and **`End time`** of the period you want to report on.




Once you have set the reporting period, click on the Next button to set additional report parameters and options, or select the Finish button to run the report immediately.

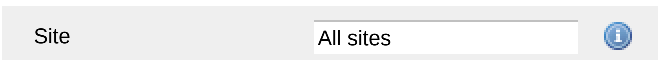
### Selecting the reporting entity

The **`Reporting entity`** parameter allows you to select the part of your organisation whose calls the report should include, e.g. a site, a group or an individual user.



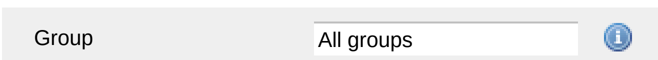

#### Site

To report on a particular site, select it from the drop-down list or select **`All sites`** .



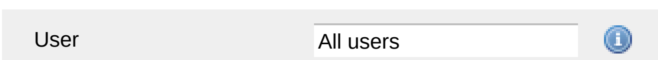

#### Group

If a site has been selected, you are able to further limit the report's results by selecting a group from the drop-down list.




#### User

If both a site and group have been selected, you can further limit the report's results to include only calls involving a particular user, by selecting that user from the drop-down list.

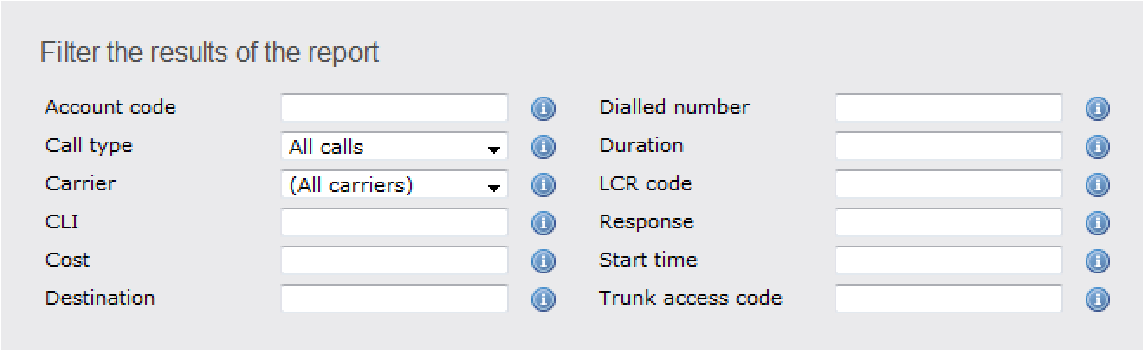



If your web account is restricted to a specific site or group, only those entities to which you have access will be available in the drop-down lists.

Once you have selected the scope of your report, click on the Next button to set additional report parameters and options, or to run the report immediately, click the Finish button.

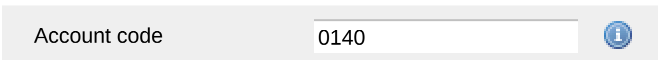
### Selecting the report filters

You can limit the results of your report by choosing one or more of the following filters:




### Account code

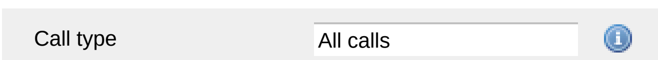
To produce a report consisting only of calls that were made using a particular account code, enter the account code in the field provided.




To report on more than one account code, separate each code using a comma.

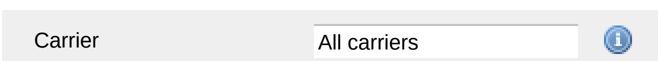
### Call type

This filter allows you to define the type of call you want to report on, in terms of where the call originated and where it was delivered, e.g. incoming, outgoing, internal, etc.  To report on all types of call, set this to **`All calls`**.




### Carrier

If you use more than one carrier, you can limit the results to include only calls that were made using a specific carrier.

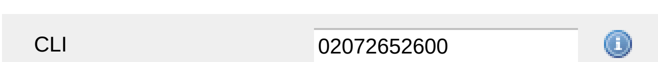



> If you use only one carrier, there will be no drop-down list available and no option to choose a carrier.

### CLI

Calling Line Identification (CLI) is the telephone number of the remote caller in an incoming call scenario.

You can report on calls that originate from a specific CLI or those whose CLI matches a particular pattern of digits. For example, to report on all incoming calls from Tri-Line, you could enter **`02072652600`**.




You can use the `!` symbol to explicitly exclude a CLI from the report's results, and/or the `*` symbol as a wildcard in digit pattern matching.  For example, to exclude calls from Tri-Line, but include all others, you could use **`!020726526*`**. To report on more than one CLI, use a comma to separate each entry.

### Cost

You can define a cost filter to include calls above or below specific values by entering your criteria, as shown below:

| | |
|---|---|
| Cost | <2.00 |

You can specify a cost range by using the `-` symbol; to specify limits, use the comparison operators, **>**, **<**, and **!** .

### Destination

If you want to filter calls to a specific, known destination, type the name of the destination in the text box provided. This filter accepts the **!** and ***** symbols for excluding values and specifying partial matches, respectively.

For example, if you wanted to exclude all calls to France, you could enter **`!France*`**, as shown below:

| | |
|---|---|
| Destination | !France* |

### Dialled number

To filter calls to a specific dialled number, type it in the text box provided. The dialled number is defined as the number that is dialled (in the case of an outbound call), or the DDI number that the remote party dialled to reach a particular extension or group (in the case of an inbound call).

To filter calls to a specific area, a partial number can be entered (e.g. **`0033`** for calls to France).

| | |
|---|---|
| Dialled number | 0033 |

You can use the `!` symbol to explicitly exclude a dialled number from the report's results, and/or the `*` symbol as a wildcard in digit pattern matching.  For example, to exclude calls to Tri-Line, but include all others, you could use **`!020726526*`**). To report on more than one dialled number, use a comma to separate each entry.

### Duration

To filter calls above or below a particular duration, enter the desired duration in seconds.

| | |
|---|---|
| Duration | >1800 |

You can specify a duration range by using the `-` symbol; to specify limits, use the comparison operators, **>**, **<**, and **!** .

In the above example, the report will return only calls longer than 1800 seconds (30 minutes).

### LCR code

To filter your results to include only calls that used a Least Cost Routing (LCR) code, enter it in the text box provided.

| | |
|---|---|
| LCR code | 162 |

You can use the `!` symbol to explicitly exclude a LCR code from the report's results, and/or the `*` symbol as a wildcard in digit pattern matching.  For example, to exclude calls made using all LCR codes beginning **`162`**, you could enter **`!162*`**. To report on more than one LCR code, use a comma to separate each entry.

### Response

This option allows you to filter calls based on their response time, measured in seconds. Specify the desired response time threshold in the text box provided.

| | |
|---|---|
| Response time | >10 |

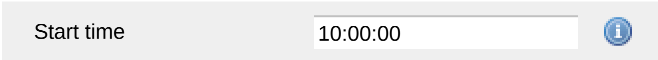
In the above example, the search results will display calls that have a response time greater than 10 seconds.

You can specify a response time range by using the `-` symbol and; to specify limits, use the comparison operators, **>**, **<**, and **!** .

### Start time

This option allows you to filter calls based on the time the call started. Specify the start time in the text box provided using the **`hh:mm:ss`** format.

For example, to include only calls that began after 10 am, you could enter **10:00:00** in the **Start time** field, as shown below:



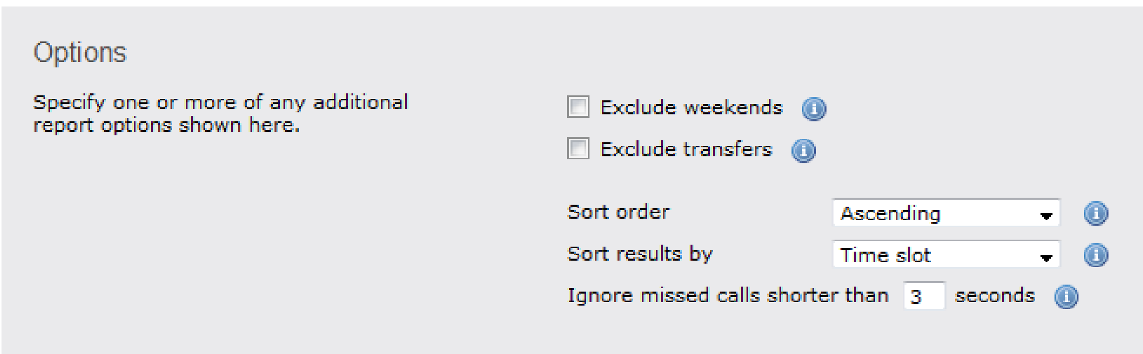

### Trunk access code

If your telephone system uses trunk access codes to connect calls using specific channels, you can limit your report's results to include only calls made using those codes. Specify the trunk access code in the text box provided.


You can use the **!** symbol to explicitly exclude a trunk access code from the report's results, and/or the * symbol as a wildcard in digit pattern matching. For example, to exclude calls made using the **9** trunk access code, you could enter **!9**. To report on more than one trunk access code, use a comma to separate each entry.

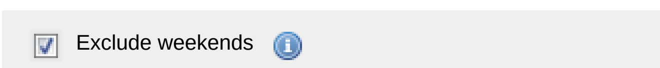
## Selecting the report options

This section enables you to further narrow down your report results, by excluding certain types of calls. It also allows you to sort the report's results in a particular manner.



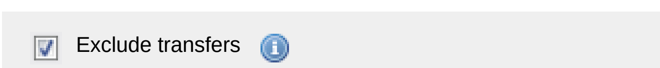

### Exclude weekends

To exclude weekend calls from your report's results, select the **Exclude weekends** option.



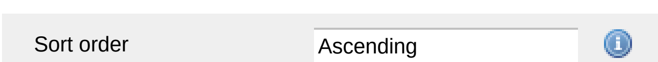

### Exclude transfers

To exclude transferred calls from your report's results, select the **Exclude transfers** option.



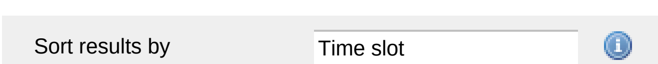

### Sort order

Choose from the **Sort order** drop-down list whether you want the results of the report to appear in ascending or descending order.



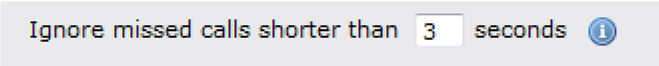

### Sort results by

To sort your report's results by a particular column, select it from the **Sort results by** drop-down list.



#### Ignore short missed calls

Missed calls below a certain duration can sometimes pollute the meaning of a report's results. To exclude such short calls from your report, enter a duration threshold in the text box provided, e.g. to ignore calls below 3 seconds, enter **3** .



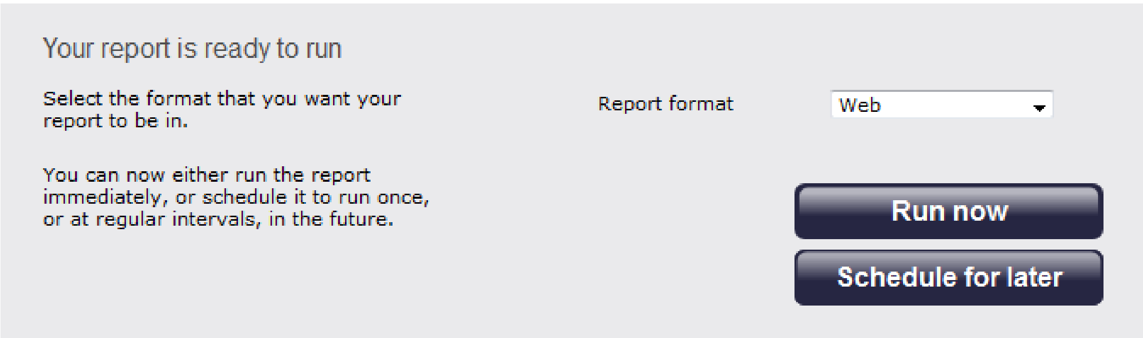

### Selecting the report format

This section allows you to choose the media format of your completed report. The formats available are **Web**, **PDF**, **Excel**, **CSV** and **XML**.

More details about each report format are available in the Setting the report format section above.

## Creating the report

When you have selected a reporting period and have chosen any filters and options, you can either run the report immediately by clicking on the Run now button, or schedule it for future delivery.



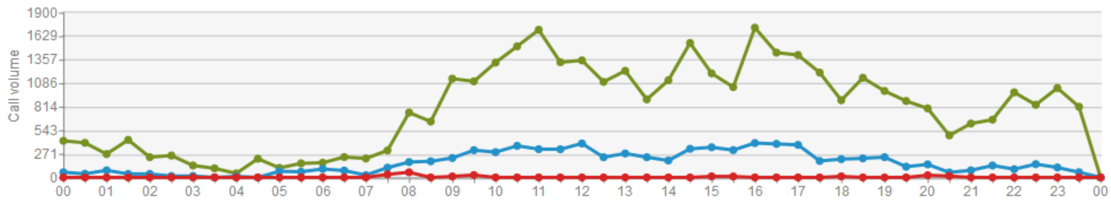

## The report's results

Below is an example of this report's output in **Web** format, displaying a breakdown of calls organised in half-hour time slots:

## My call analysis

2012-05-16 12:38:45

\ TIM Plus \ London \ Accounts \ | About this report




| | Missed | | | Answered | | | | | Outbound | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Duration (s) | | | Ring time (s) | | Duration | | | Duration | | | Cost | |
| Time slot ▲ | Σ | Max | Avg | Σ | Max | Avg | Max | Avg | Σ | Max | Avg | Total | Avg | Total |
| 00:00 - 00:29 | - | - | - | 426 | 11 | - | 00:07:34 | 00:01:28 | 60 | 00:00:32 | 00:00:11 | 00:11:45 | 0.036 | 2.171 |
| 00:30 - 00:59 | - | - | - | 403 | - | - | 00:09:26 | 00:01:35 | 42 | 00:00:53 | 00:00:23 | 00:16:47 | 0.057 | 2.406 |
| 01:00 - 01:29 | - | - | - | 272 | - | - | 00:07:57 | 00:01:34 | 83 | 00:02:31 | 00:00:29 | 00:41:18 | 0.073 | 6.051 |
| 01:30 - 01:59 | - | - | - | 437 | - | - | 00:05:19 | 00:01:23 | 41 | 00:00:35 | 00:00:13 | 00:09:29 | 0.039 | 1.615 |
| 02:00 - 02:29 | - | - | - | 236 | 10 | - | 00:08:02 | 00:01:30 | 41 | 00:00:34 | 00:00:14 | 00:10:02 | 0.039 | 1.592 |
| 02:30 - 02:59 | - | - | - | 255 | 4 | - | 00:03:30 | 00:01:05 | 16 | 00:02:06 | 00:01:10 | 00:18:54 | 0.155 | 2.476 |
| 03:00 - 03:29 | - | - | - | 139 | - | - | 00:04:43 | 00:01:29 | 18 | 00:00:11 | 00:00:06 | 00:01:50 | 0.030 | 0.540 |
| 03:30 - 03:59 | - | - | - | 106 | - | - | 00:09:51 | 00:01:16 | - | - | - | - | - | - |
| 04:00 - 04:29 | - | - | - | 47 | 8 | 1 | 00:01:35 | 00:00:43 | 13 | 00:00:34 | 00:00:13 | 00:03:01 | 0.038 | 0.490 |
| 04:30 - 04:59 | - | - | - | 218 | 19 | 2 | 00:06:12 | 00:00:51 | - | - | - | - | - | - |
| 05:00 - 05:29 | - | - | - | 111 | 25 | 2 | 00:06:33 | 00:01:20 | 72 | 00:02:25 | 00:00:29 | 00:35:17 | 0.073 | 5.276 |
| 05:30 - 05:59 | - | - | - | 164 | 8 | 1 | 00:11:33 | 00:01:33 | 66 | 00:00:49 | 00:00:14 | 00:15:26 | 0.040 | 2.628 |
| 06:00 - 06:29 | - | - | - | 171 | 25 | 2 | 00:05:11 | 00:01:10 | 99 | 00:00:35 | 00:00:09 | 00:16:21 | 0.033 | 3.290 |
| 06:30 - 06:59 | - | - | - | 237 | 13 | - | 00:05:14 | 00:01:10 | 80 | 00:00:34 | 00:00:10 | 00:13:58 | 0.034 | 2.696 |
| 07:00 - 07:29 | - | - | - | 221 | 25 | 1 | 00:06:54 | 00:01:29 | 27 | 00:00:29 | 00:00:13 | 00:06:07 | 0.038 | 1.029 |
| 07:30 - 07:59 | 36 | 51 | 16 | 314 | 39 | 2 | 00:03:31 | 00:00:52 | 114 | 00:26:48 | 00:02:24 | 04:33:49 | 0.149 | 16.997 |

By clicking on the `About this report` link at the top-right corner of the page, you can review any filters and options that have been applied to the report.

As with all reports produced by TIM Plus, each page of the report includes the following information:

- the report's title
- the date and time that the report was generated
- the name of the report, if applicable

The `Web` format is the most interactive of all formats: all column headers are click-sortable and most graphical and tabular elements can be drilled down into, allowing deeper analysis of your results. The headers of this report are as follows:

| Header | Description |
|---|---|
| **Time slot** | The time period to which the other headers' results relate. |
| **Missed** | ▪ **:** The total number of missed calls.<br>▪ **Max:** The maximum length of time a caller waited before abandoning the call (in seconds).<br>▪ **Avg:** The average length of time a caller waited before abandoning the call (in seconds). |

| | |
|---|---|
| **Answered** | ▪ **:** The total number of answered calls.<br>▪ **Ring time Max:** The maximum length of time a caller waited before a call was answered (in seconds).<br>▪ **Ring time Avg:** The average length of time a caller waited before the call was answered (in seconds).<br>▪ **Duration Max:** The duration of the longest answered call (in hours, mins, secs).<br>▪ **Duration Avg:** The average length of all answered calls (in hours, mins, secs). |
| **Outbound** | ▪ **:** The total number of outbound calls.<br>▪ **Duration Max:** The duration of the longest outbound call (in hours, mins, secs).<br>▪ **Duration Avg:** The average length of all outbound calls (in hours, mins, secs).<br>▪ **Duration Total:** The total duration of time spent on outbound calls.<br>▪ **Cost Avg:** The average cost of all outbound calls.<br>▪ **Cost Total:** The total cost of all outbound calls. |

To modify your report to cover a larger organisational scope, click on an element of the breadcrumb as shown below:


## Call Geography

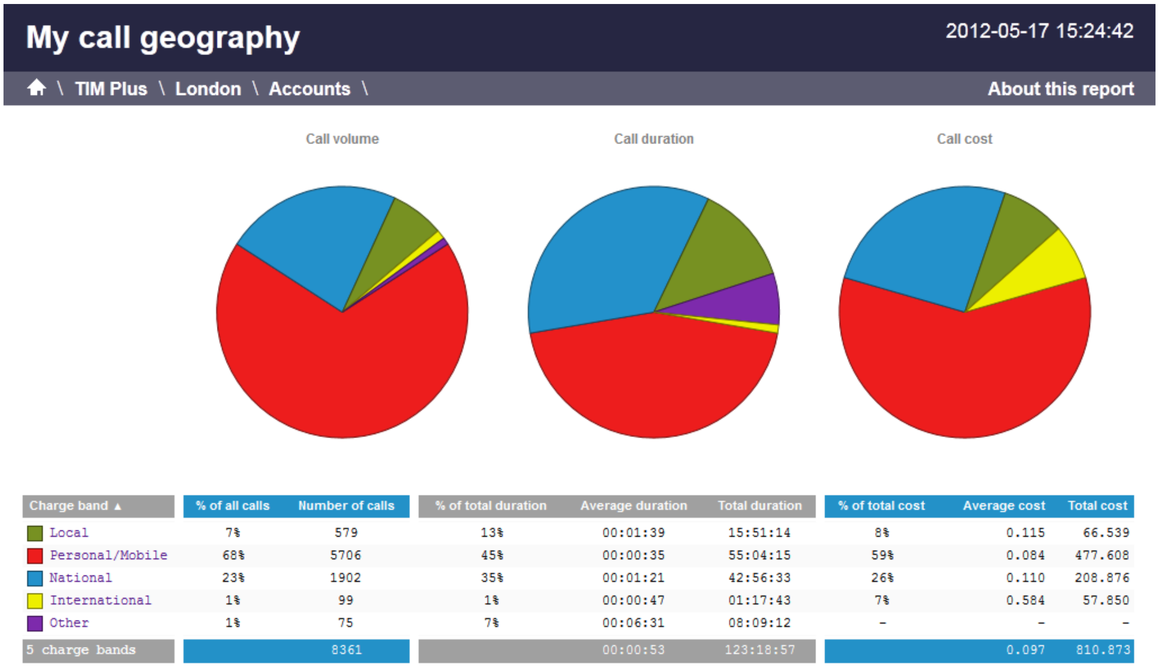
**The Call Geography report**



### Introduction

The Call Geography report consists of three pie charts, each showing call information grouped by volume, duration and cost. An accompanying table is also shown, containing details of where - geographically - your calls are made, classified by their tariff band, such as local, national, mobile or international.

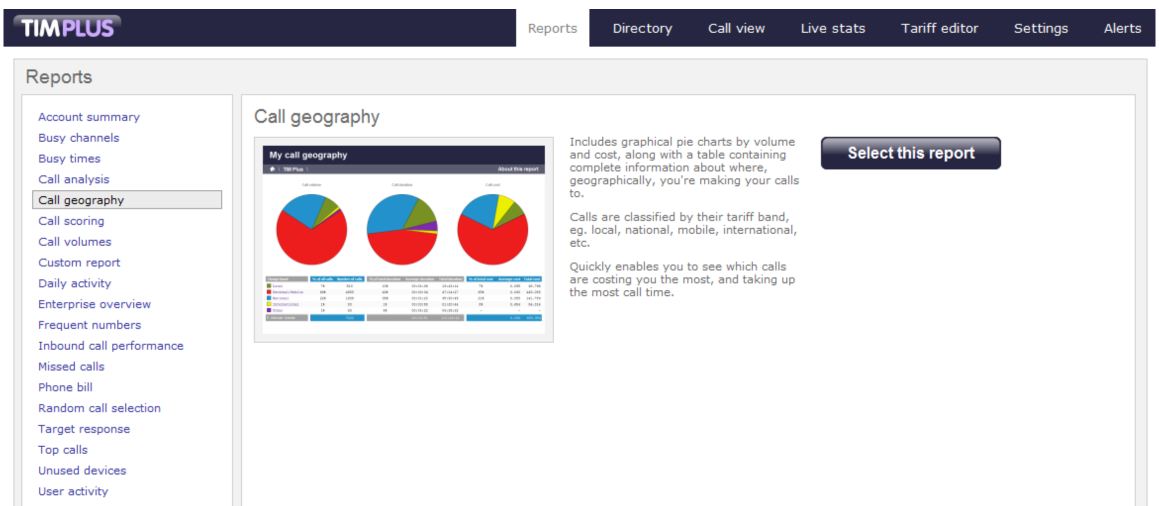
The proportion of calls to each geographical destination is shown in terms of volume, duration and cost, highlighting the calls that are costing you the most and taking up most of your time.




| Charge band ▲ | % of all calls | Number of calls | % of total duration | Average duration | Total duration | % of total cost | Average cost | Total cost |
|---|---|---|---|---|---|---|---|---|
| Local | 7% | 579 | 13% | 00:01:39 | 15:51:14 | 8% | 0.115 | 66.539 |
| Personal/Mobile | 68% | 5706 | 45% | 00:00:35 | 55:04:15 | 59% | 0.084 | 477.608 |
| National | 23% | 1902 | 35% | 00:01:21 | 42:56:33 | 26% | 0.110 | 208.876 |
| International | 1% | 99 | 1% | 00:00:47 | 01:17:43 | 7% | 0.584 | 57.850 |
| Other | 1% | 75 | 7% | 00:06:31 | 08:09:12 | - | - | - |
| 5 charge bands | | 8361 | | 00:00:53 | 123:18:57 | | 0.097 | 810.873 |

## Running the report

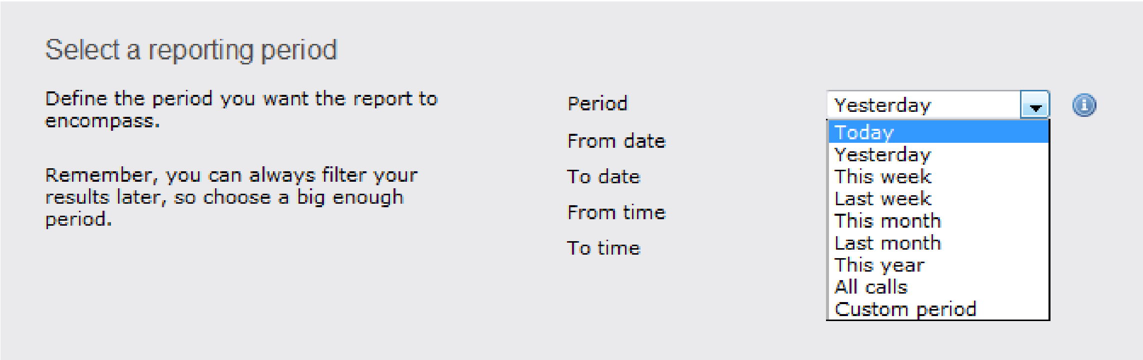
On the **Reports** screen, select the **Call geography** report from the left-hand pane and click the Select this report button.




A new window will appear, where you can set the parameters of your report.

### Selecting the reporting period

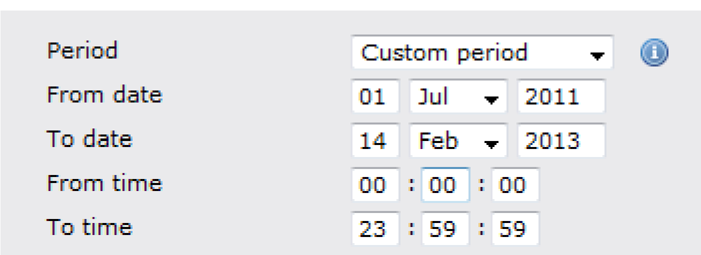
For each report, you must specify a time span that covers the calls you want the report to include. This is known as the "reporting period".




There are several preset reporting periods available for selection, based on the standard Gregorian calendar. The following table describes how the start and end times are defined for each preset period:

| Period | Description |
|---|---|
| **Today** | The start and end dates are set to the current date. The start time is set to `00:00:00` and the end time to `23:59:59`. |
| **Yesterday** | The start and end dates are set to the current date minus one day. The start time is set to `00:00:00` and the end time to `23:59:59`. |
| **This week** | The start date is set to the first day of the current week (normally Monday). The end date is set to the current day. The start time is set to `00:00:00` and the end time to the current time. |
| **Last week** | The start date is set to the date of the last Monday, and the end date is set to the start date plus seven days. The start time is set to `00:00:00` and the end time to `23:59:59`. |
| **This month** | The start date is set to the first day of the current month. The end date is set to the current day. The start time is set to `00:00:00` and the end time to the current time. |
| **Last month** | The start date for this period is set in three stages: The day is set to the first day of the month. The month is set to the previous month. The year is set to the current year, unless it is currently January, in which case, the previous year is used. The start and end times are set to `00:00:00` and `23:59:59` respectively. |
| **This year** | The start date is set to the first day of the first month of the current year, whilst the end date is set to today's date. The start and end times are set to `00:00:00` and `23:59:59` respectively. |
| **All calls** | The start and end dates and times are set to the dates and times of the first and last call in the entire call database, respectively. |

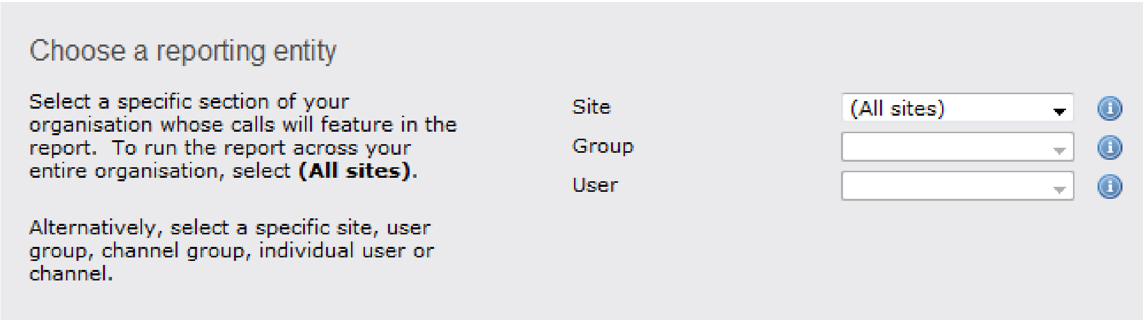
In addition to the presets described above, it is possible to specify a custom reporting period by choosing `Custom period` from the `Period` drop-down list and specifying your own `Start date`, `Start time`, `End date` and `End time` of the period you want to report on.




Once you have set the reporting period, click on the Next button to set additional report parameters and options, or select the Finish button to run the report immediately.

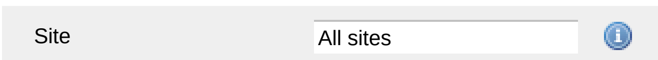
### Selecting the reporting entity

The `Reporting entity` parameter allows you to select the part of your organisation whose calls the report should include, e.g. a site, a group or an individual user.



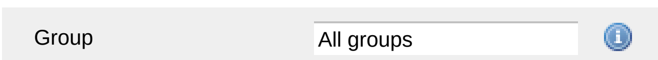

#### Site

To report on a particular site, select it from the drop-down list or select **`All sites`** .



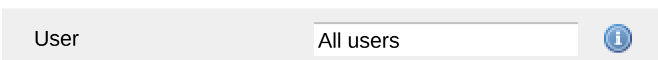

#### Group

If a site has been selected, you are able to further limit the report's results by selecting a group from the drop-down list.




#### User

If both a site and group have been selected, you can further limit the report's results to include only calls involving a particular user, by selecting that user from the drop-down list.

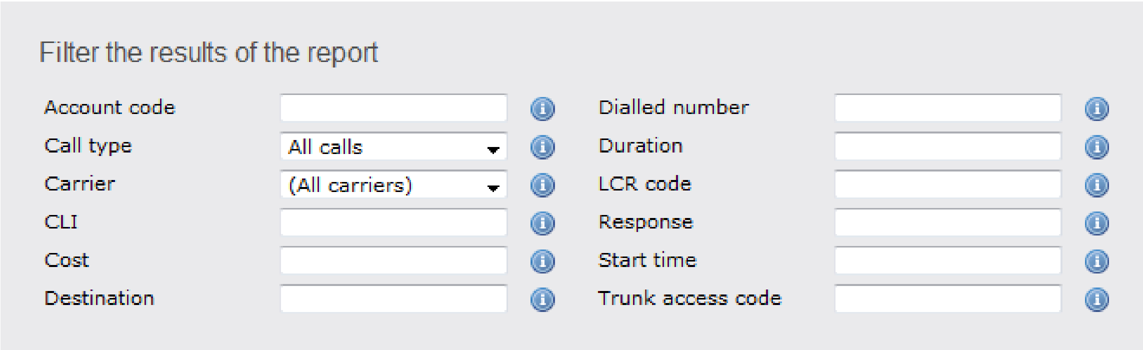



> If your web account is restricted to a specific site or group, only those entities to which you have access will be available in the drop-down lists.

Once you have selected the scope of your report, click on the **Next** button to set additional report parameters and options, or to run the report immediately, click the **Finish** button.

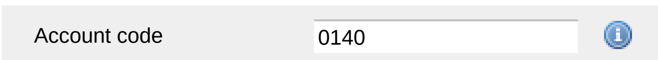
### Selecting the report filters

You can limit the results of your report by choosing one or more of the following filters:




### Account code

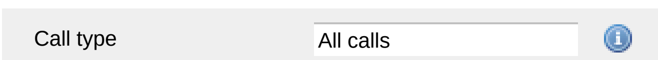
To produce a report consisting only of calls that were made using a particular account code, enter the account code in the field provided.




To report on more than one account code, separate each code using a comma.

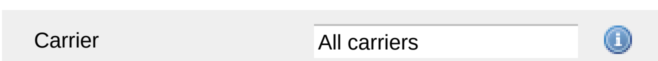
### Call type

This filter allows you to define the type of call you want to report on, in terms of where the call originated and where it was delivered, e.g. incoming, outgoing, internal, etc.  To report on all types of call, set this to `All calls`.




### Carrier

If you use more than one carrier, you can limit the results to include only calls that were made using a specific carrier.

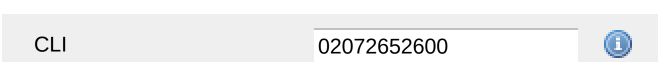



> If you use only one carrier, there will be no drop-down list available and no option to choose a carrier.

### CLI

Calling Line Identification (CLI) is the telephone number of the remote caller in an incoming call scenario.

You can report on calls that originate from a specific CLI or those whose CLI matches a particular pattern of digits. For example, to report on all incoming calls from Tri-Line, you could enter `02072652600`.




You can use the `!` symbol to explicitly exclude a CLI from the report's results, and/or the `*` symbol as a wildcard in digit pattern matching.  For example, to exclude calls from Tri-Line, but include all others, you could use `!020726526*`. To report on more than one CLI, use a comma to separate each entry.

### Cost

You can define a cost filter to include calls above or below specific values by entering your criteria, as shown below:

| | |
|---|---|
| Cost | <2.00 |

You can specify a cost range by using the `-` symbol; to specify limits, use the comparison operators, **>**, **<**, and **!** .

### Destination

If you want to filter calls to a specific, known destination, type the name of the destination in the text box provided. This filter accepts the **!** and ***** symbols for excluding values and specifying partial matches, respectively.

For example, if you wanted to exclude all calls to France, you could enter **`!France*`**, as shown below:

| | |
|---|---|
| Destination | !France* |

### Dialled number

To filter calls to a specific dialled number, type it in the text box provided. The dialled number is defined as the number that is dialled (in the case of an outbound call), or the DDI number that the remote party dialled to reach a particular extension or group (in the case of an inbound call).

To filter calls to a specific area, a partial number can be entered (e.g. **`0033`** for calls to France).

| | |
|---|---|
| Dialled number | 0033 |

You can use the `!` symbol to explicitly exclude a dialled number from the report's results, and/or the `*` symbol as a wildcard in digit pattern matching.  For example, to exclude calls to Tri-Line, but include all others, you could use **`!020726526*`**). To report on more than one dialled number, use a comma to separate each entry.

### Duration

To filter calls above or below a particular duration, enter the desired duration in seconds.

| | |
|---|---|
| Duration | >1800 |

You can specify a duration range by using the `-` symbol; to specify limits, use the comparison operators, **>**, **<**, and **!** .

In the above example, the report will return only calls longer than 1800 seconds (30 minutes).

### LCR code

To filter your results to include only calls that used a Least Cost Routing (LCR) code, enter it in the text box provided.

| | |
|---|---|
| LCR code | 162 |

You can use the `!` symbol to explicitly exclude a LCR code from the report's results, and/or the `*` symbol as a wildcard in digit pattern matching.  For example, to exclude calls made using all LCR codes beginning **`162`**, you could enter **`!162*`**. To report on more than one LCR code, use a comma to separate each entry.

### Response

This option allows you to filter calls based on their response time, measured in seconds. Specify the desired response time threshold in the text box provided.

| | |
|---|---|
| Response time | >10 |

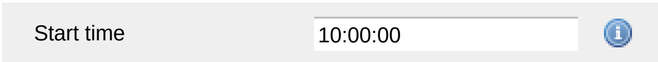
In the above example, the search results will display calls that have a response time greater than 10 seconds.

You can specify a response time range by using the `-` symbol and; to specify limits, use the comparison operators, **>**, **<**, and **!** .

### Start time

This option allows you to filter calls based on the time the call started. Specify the start time in the text box provided using the **`hh:mm:ss`** format.

For example, to include only calls that began after 10 am, you could enter **10:00:00** in the **Start time** field, as shown below:



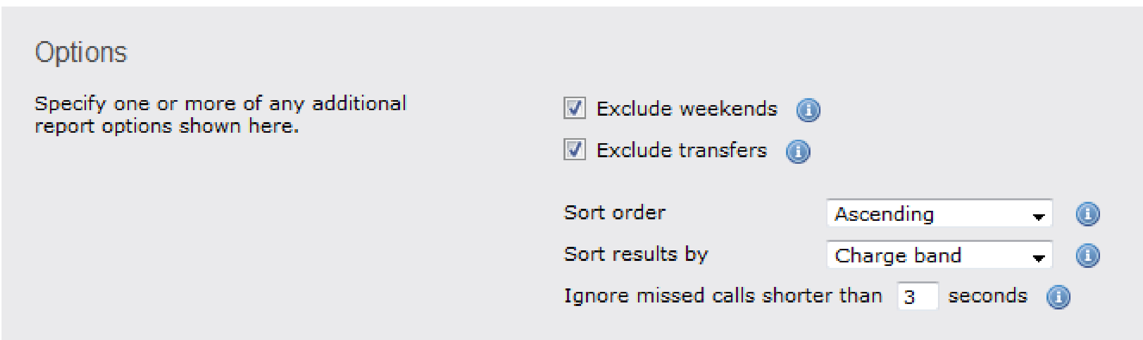

### Trunk access code

If your telephone system uses trunk access codes to connect calls using specific channels, you can limit your report's results to include only calls made using those codes. Specify the trunk access code in the text box provided.


You can use the **!** symbol to explicitly exclude a trunk access code from the report's results, and/or the ***** symbol as a wildcard in digit pattern matching. For example, to exclude calls made using the **9** trunk access code, you could enter **!9**. To report on more than one trunk access code, use a comma to separate each entry.

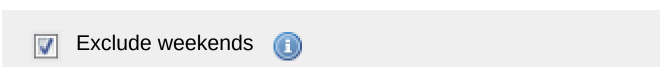
## Selecting the report options

This section enables you to further narrow down your report results, by excluding certain types of calls. It also allows you to sort the report's results in a particular manner.



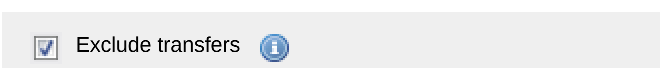

### Exclude weekends

To exclude weekend calls from your report's results, select the **Exclude weekends** option.



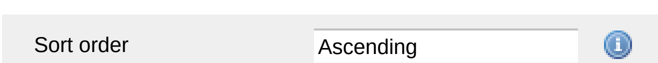

### Exclude transfers

To exclude transferred calls from your report's results, select the **Exclude transfers** option.



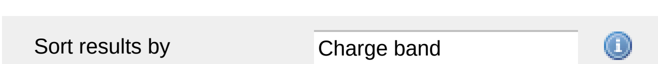

### Sort order

Choose from the **Sort order** drop-down list whether you want the results of the report to appear in ascending or descending order.



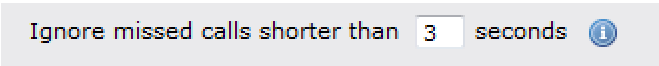

### Sort results by

To sort your report's results by a particular column, select it from the **Sort results by** drop-down list.



#### Ignore short missed calls

Missed calls below a certain duration can sometimes pollute the meaning of a report's results. To exclude such short calls from your report, enter a duration threshold in the text box provided, e.g. to ignore calls below 3 seconds, enter **3** .



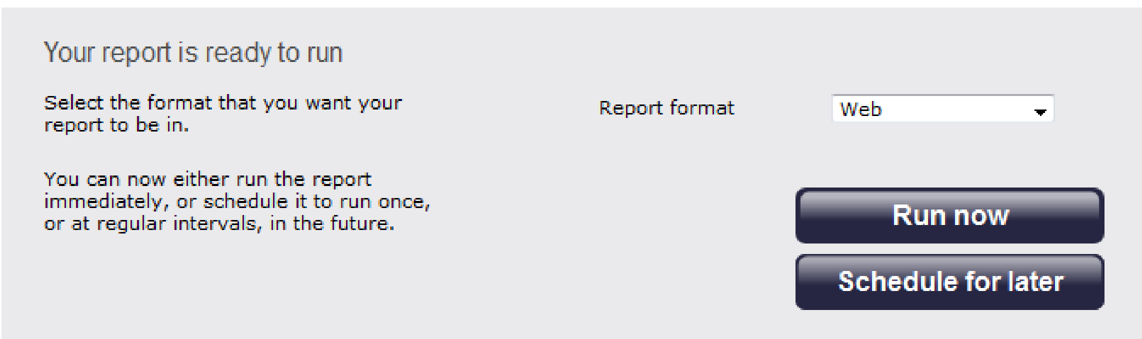

### Selecting the report format

This section allows you to choose the media format of your completed report. The formats available are `Web`, `PDF`, `Excel`, `CSV` and `XML`.

More details about each report format are available in the Setting the report format section above.

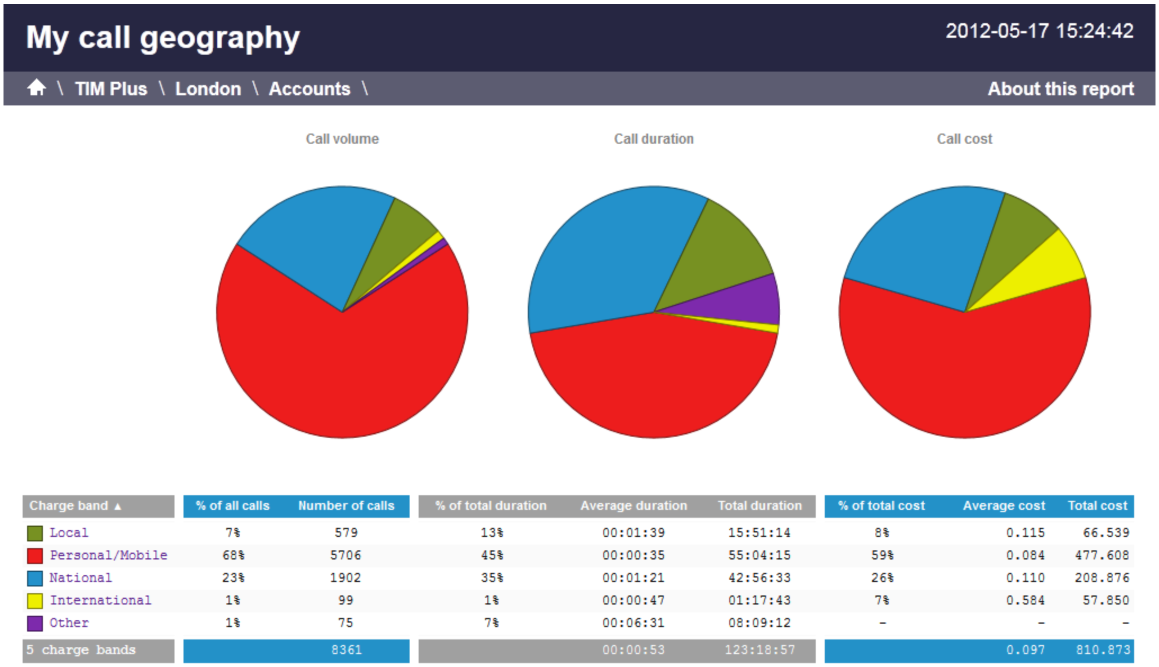
## Creating the report

When you have selected a reporting period and have chosen any filters and options, you can either run the report immediately by clicking on the Run now button, or schedule it for future delivery.




## The report's results

Below is an example of this report's output in `Web` format:




| Charge band ▲ | % of all calls | Number of calls | % of total duration | Average duration | Total duration | % of total cost | Average cost | Total cost |
|---|---|---|---|---|---|---|---|---|
| Local | 7% | 579 | 13% | 00:01:39 | 15:51:14 | 8% | 0.115 | 66.539 |
| Personal/Mobile | 68% | 5706 | 45% | 00:00:35 | 55:04:15 | 59% | 0.084 | 477.608 |
| National | 23% | 1902 | 35% | 00:01:21 | 42:56:33 | 26% | 0.110 | 208.876 |
| International | 1% | 99 | 1% | 00:00:47 | 01:17:43 | 7% | 0.584 | 57.850 |
| Other | 1% | 75 | 7% | 00:06:31 | 08:09:12 | - | - | - |
| 5 charge bands | | 8361 | | 00:00:53 | 123:18:57 | | 0.097 | 810.873 |

The final report consists of three pie charts and a table.

### Pie charts

- The left-hand pie chart shows the amount of calls to each location
- The centre chart shows the time spent on calls to each location
- The right-hand chart shows the cost of calls to each location

### Table

The table shows the following information about the calls made to each charge band location:

| Header | Description |
|---|---|
| **Charge band** | The charge band, e.g. Local, National, International, Mobile, etc. Each listed charge band is click-able, allowing you to drill-down to see which site, department or user made calls to that charge band location. |
| **% of calls** | The number of calls per charge band location as a percentage of the total calls made. To reorder, click on the header to alternate between descending and ascending. |
| **Number of calls** | The total volume of calls made to each charge band location. |
| **% of total duration** | The total duration of calls made to each charge band location, expressed as a percentage of all charge bands. |
| **Average duration** | The average duration spent on calls to the corresponding charge band. |
| **Total duration** | The total amount of time spent on calls to the corresponding charge band. |

| | |
|---|---|
| **% of total cost** | The total cost of all calls made to each charge band location, expressed as a percentage of the total cost of all calls. |
| **Average cost** | The average cost of calls made to each charge band location. |
| **Total cost** | The total cost of calls made to each charge band location. |

The summary line at the foot of the table shows the total number of calls included in the report, the total duration of calls, average and total costs.

As with all reports produced by TIM Plus, each page of the report includes the following information:

- the report's title
- the date and time that the report was generated
- the name of the report, if applicable

The `Web` format is the most interactive of all formats: all column headers are click-sortable and most graphical and tabular elements can be drilled down into, allowing deeper analysis of your results. By clicking on the `About this report` link at the top-right corner of the page, you can review any filters and options that have been applied to the report.

To modify your report to cover a larger organisational scope, click on an element of the breadcrumb as shown below:


## Call Scoring

**The Call Scoring report**



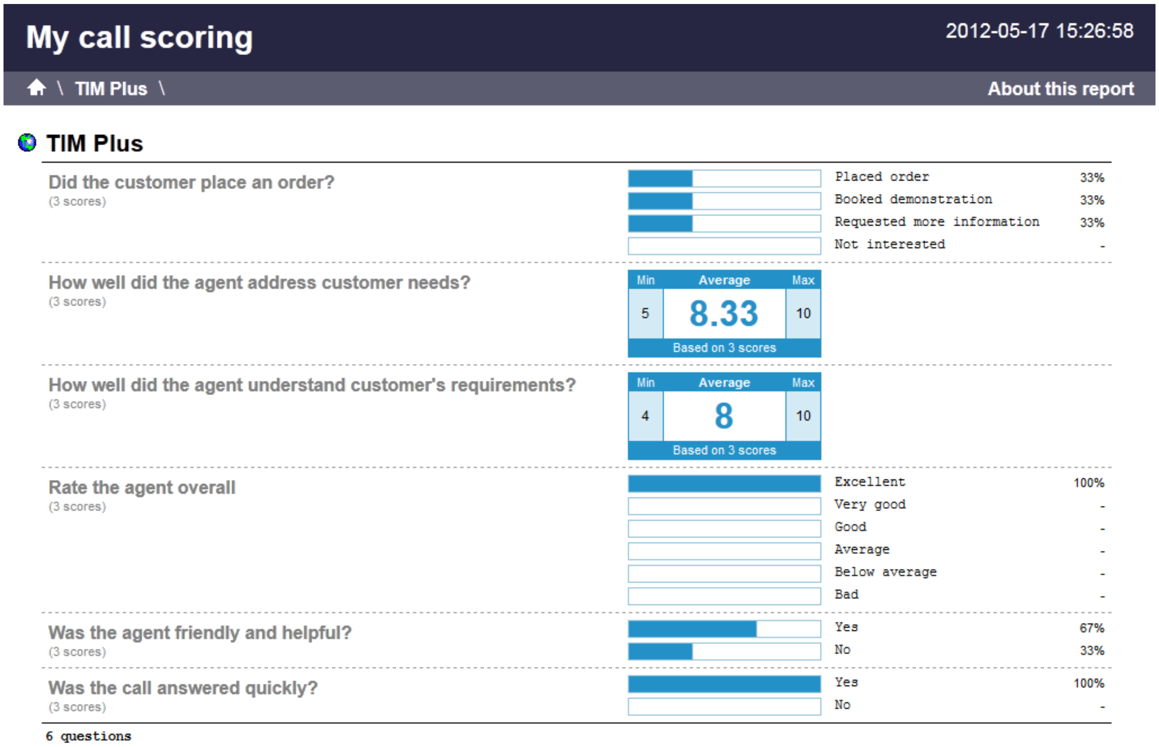
### Introduction

The Call Scoring report provides a comprehensive analysis of previously-scored calls, enabling you to more efficiently assess the performance of your staff. TIM Plus gives you the option to create your own score cards, so you can specifically rate any call according to a set of custom evaluation criteria.

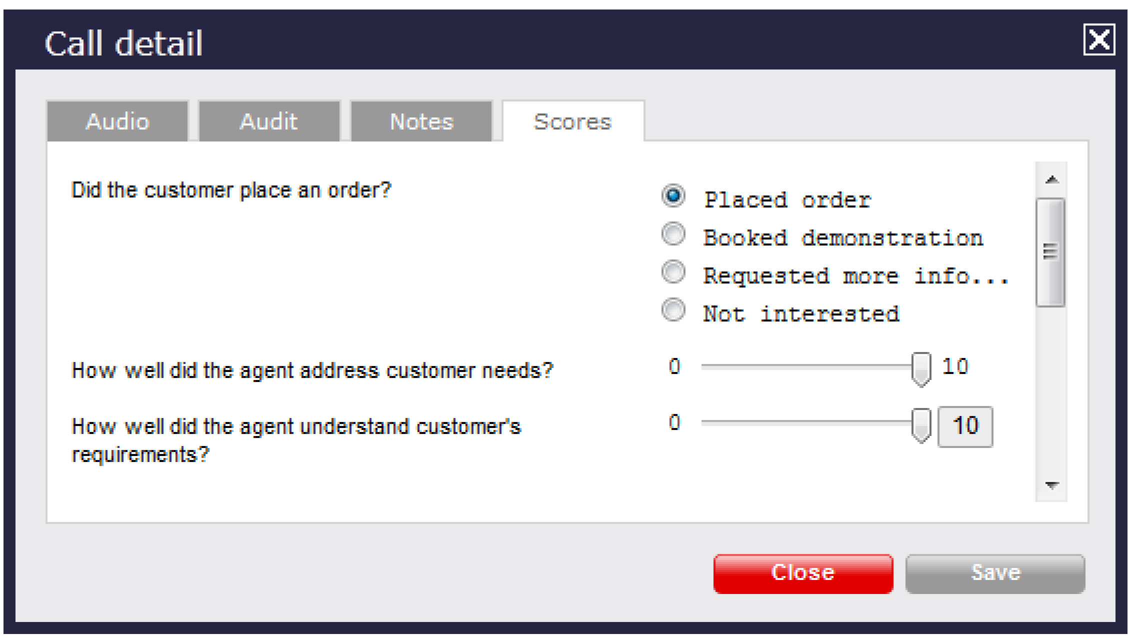
The scores can be based on any combination of questions whose answers are of the following type:

- **Yes/No**
- **A value range**
- **Multiple choice**

All questions are summarised in a clear, easy-to-understand format and are displayed separately, grouped into their respective categories.

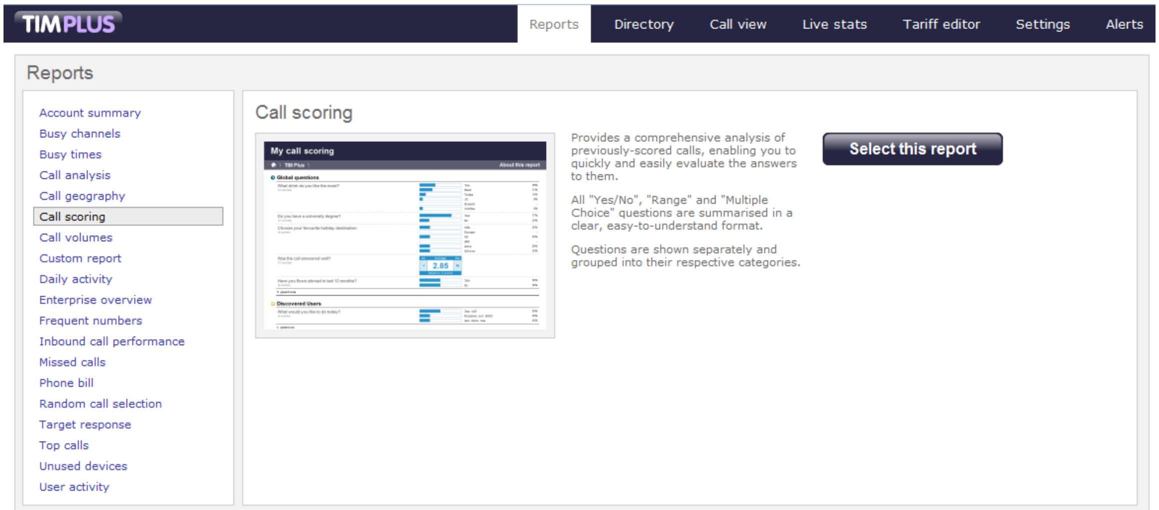



An example of a scoring card can be seen below:




## Running the report

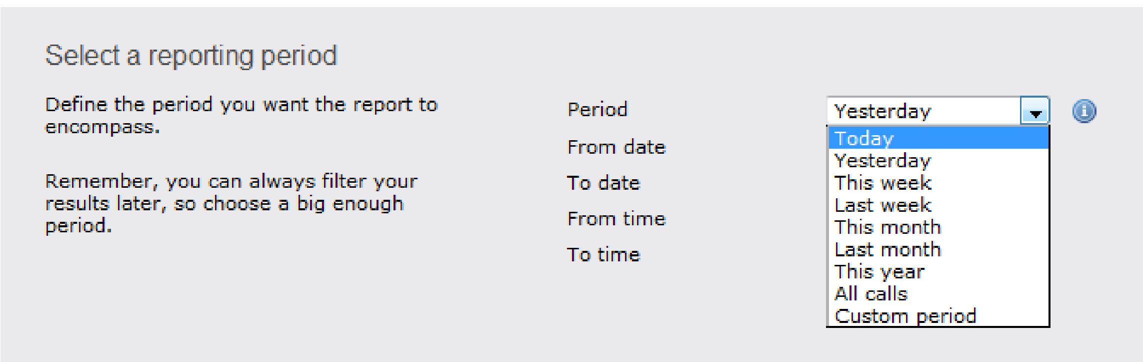
On the **Reports** screen, select the **Call scoring** report from the left-hand pane and click the Select this report button.




A new window will appear, where you can set the parameters of your report.

### Selecting the reporting period

For each report, you must specify a time span that covers the calls you want the report to include. This is known as the "reporting period".

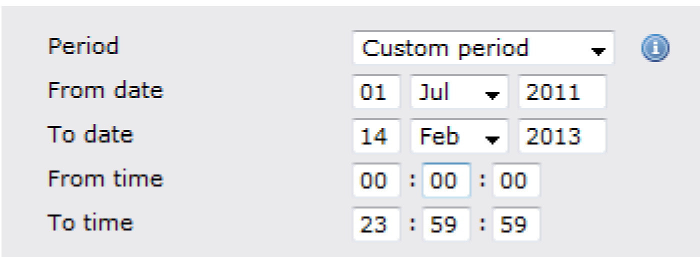



There are several preset reporting periods available for selection, based on the standard Gregorian calendar. The following table describes how the start and end times are defined for each preset period:

| Period | Description |
|---|---|
| **Today** | The start and end dates are set to the current date. The start time is set to `00:00:00` and the end time to `23:59:59`. |
| **Yesterday** | The start and end dates are set to the current date minus one day. The start time is set to `00:00:00` and the end time to `23:59:59`. |
| **This week** | The start date is set to the first day of the current week (normally Monday). The end date is set to the current day. The start time is set to `00:00:00` and the end time to the current time. |
| **Last week** | The start date is set to the date of the last Monday, and the end date is set to the start date plus seven days. The start time is set to `00:00:00` and the end time to `23:59:59`. |
| **This month** | The start date is set to the first day of the current month. The end date is set to the current day. The start time is set to `00:00:00` and the end time to the current time. |

| | |
|---|---|
| **Last month** | The start date for this period is set in three stages: The day is set to the first day of the month. The month is set to the previous month. The year is set to the current year, unless it is currently January, in which case, the previous year is used. The start and end times are set to `00:00:00` and `23:59:59` respectively. |
| **This year** | The start date is set to the first day of the first month of the current year, whilst the end date is set to today's date. The start and end times are set to `00:00:00` and `23:59:59` respectively. |
| **All calls** | The start and end dates and times are set to the dates and times of the first and last call in the entire call database, respectively. |

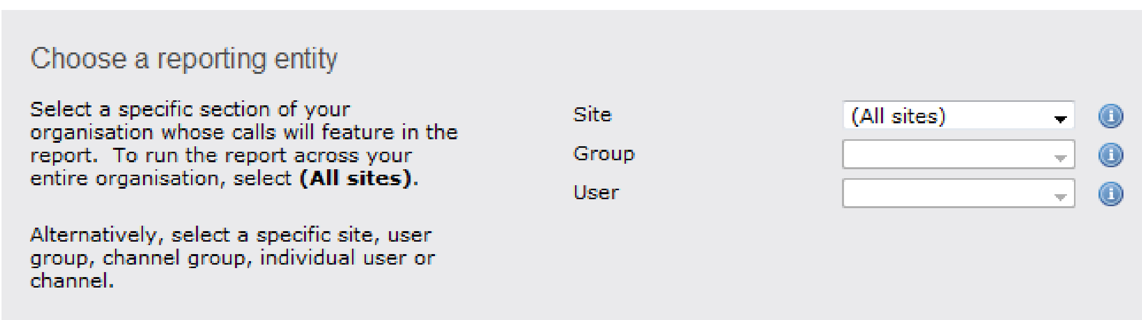
In addition to the presets described above, it is possible to specify a custom reporting period by choosing `Custom period` from the `Period` drop-down list and specifying your own `Start date`, `Start time`, `End date` and `End time` of the period you want to report on.




Once you have set the reporting period, click on the Next button to set additional report parameters and options, or select the Finish button to run the report immediately.

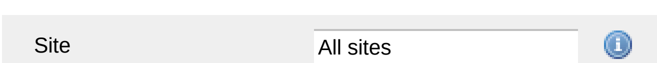
### Selecting the reporting entity

The `Reporting entity` parameter allows you to select the part of your organisation whose calls the report should include, e.g. a site, a group or an individual user.



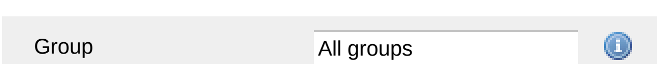

#### Site

To report on a particular site, select it from the drop-down list or select `All sites` .




#### Group

If a site has been selected, you are able to further limit the report's results by selecting a group from the drop-down list.




#### User

If both a site and group have been selected, you can further limit the report's results to include only calls involving a particular user, by selecting that user from the drop-down list.

| | | |
|---|---|---|
| User | All users | i |

If your web account is restricted to a specific site or group, only those entities to which you have access will be available in the drop-down lists.

Once you have selected the scope of your report, click on the Next button to set additional report parameters and options, or to run the report immediately, click the Finish button.

### Selecting the report filters

You can limit the results of your report by choosing one or more of the following filters:

**Filter the results of the report**

| | | | |
|---|---|---|---|
| Account code | | Dialled number | |
| Call type | All calls | Duration | |
| Carrier | (All carriers) | LCR code | |
| CLI | | Response | |
| Cost | | Start time | |
| Destination | | Trunk access code | |

#### Call type

This filter allows you to define the type of call you want to report on, in terms of where the call originated and where it was delivered, e.g. incoming, outgoing, internal, etc. To report on all types of call, set this to **`All calls`**.

| | | |
|---|---|---|
| Call type | All calls | i |

#### CLI

Calling Line Identification (CLI) is the telephone number of the remote caller in an incoming call scenario.

You can report on calls that originate from a specific CLI or those whose CLI matches a particular pattern of digits. For example, to report on all incoming calls from Tri-Line, you could enter **`02072652600`**.

| | | |
|---|---|---|
| CLI | 02072652600 | i |

#### Dialled number

To filter calls to a specific dialled number, type it in the text box provided. The dialled number is defined as the number that is dialled (in the case of an outbound call), or the DDI number that the remote party dialled to reach a particular extension or group (in the case of an inbound call).

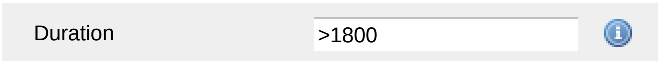
To filter calls to a specific area, a partial number can be entered (e.g. **`0033`** for calls to France).

| | | |
|---|---|---|
| Dialled number | 0033 | i |

You can use the `!` symbol to explicitly exclude a dialled number from the report's results, and/or the `*` symbol as a wildcard in digit pattern matching. For example, to exclude calls to Tri-Line, but include all others, you could use **`!020726526*`**). To report on more than one dialled number, use a comma to separate each entry.

#### Duration

To filter calls above or below a particular duration, enter the desired duration in seconds.

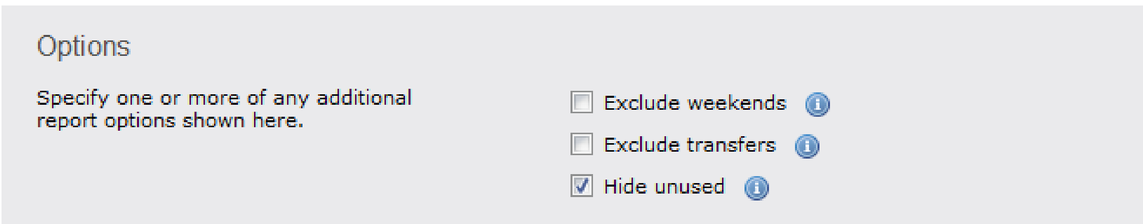



You can specify a duration range by using the - symbol; to specify limits, use the comparison operators, **>**, **<**, and **!** .

In the above example, the report will return only calls longer than 1800 seconds (30 minutes).

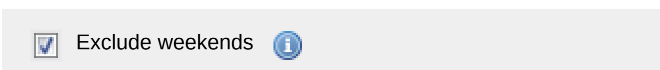
### Selecting the report options

This section enables you to further narrow down your report results, by excluding certain types of calls. It also allows you to sort the report's results in a particular manner.



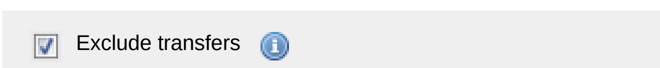

#### Exclude weekends

To exclude weekend calls from your report's results, select the `Exclude weekends` option.



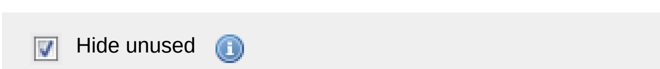

#### Exclude transfers

To exclude transferred calls from your report's results, select the `Exclude transfers` option.




#### Hide unused

To exclude unused extensions from your report's results, select the `Hide unused` option.



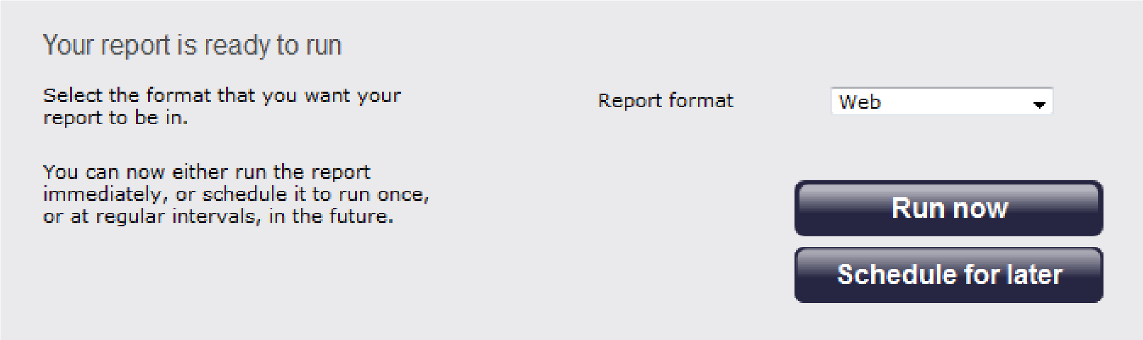

### Selecting the report format

This section allows you to choose the media format of your completed report. The formats available are **Web**, **PDF**, **Excel**, **CSV** and **XML**.

More details about each report format are available in the Setting the report format section above.

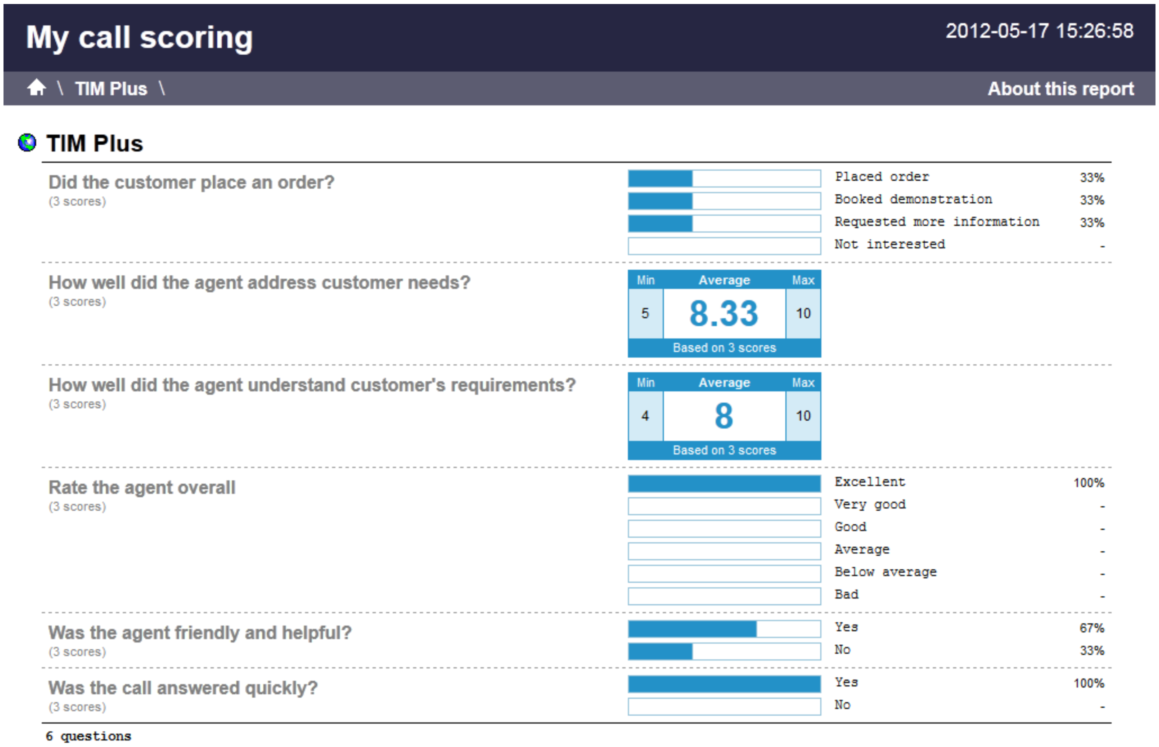
## Creating the report

When you have selected a reporting period and have chosen any filters and options, you can either run the report immediately by clicking on the Run now button, or schedule it for future delivery.




## The report's results

Below is an example of this report's output in **`Web`** format:




The **`Web`** format is the most interactive of all formats: all column headers are click-sortable and most graphical and tabular elements can be drilled down into, allowing deeper analysis of your results. By clicking on the **`About this report`** link at the top-right corner of the page, you can review any filters and options that have been applied to the report.

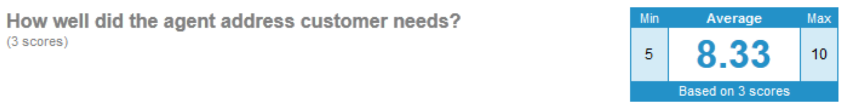
As with all reports produced by TIM Plus, each page of the report includes the following information:

- the report's title
- the date and time that the report was generated
- the name of the report, if applicable

The results of the call scoring report will vary depending on the type of questions used to create your score cards:

**Yes/No** questions show their answers as two bars, each indicating the proportion of total answers.

**Range** questions show the minimum and maximum scores, as well as the average score.




**Multiple choice** questions show each possible answer as a percentage of the total number of answers.


To modify your report to cover a larger organisational scope, click on an element of the breadcrumb as shown below:

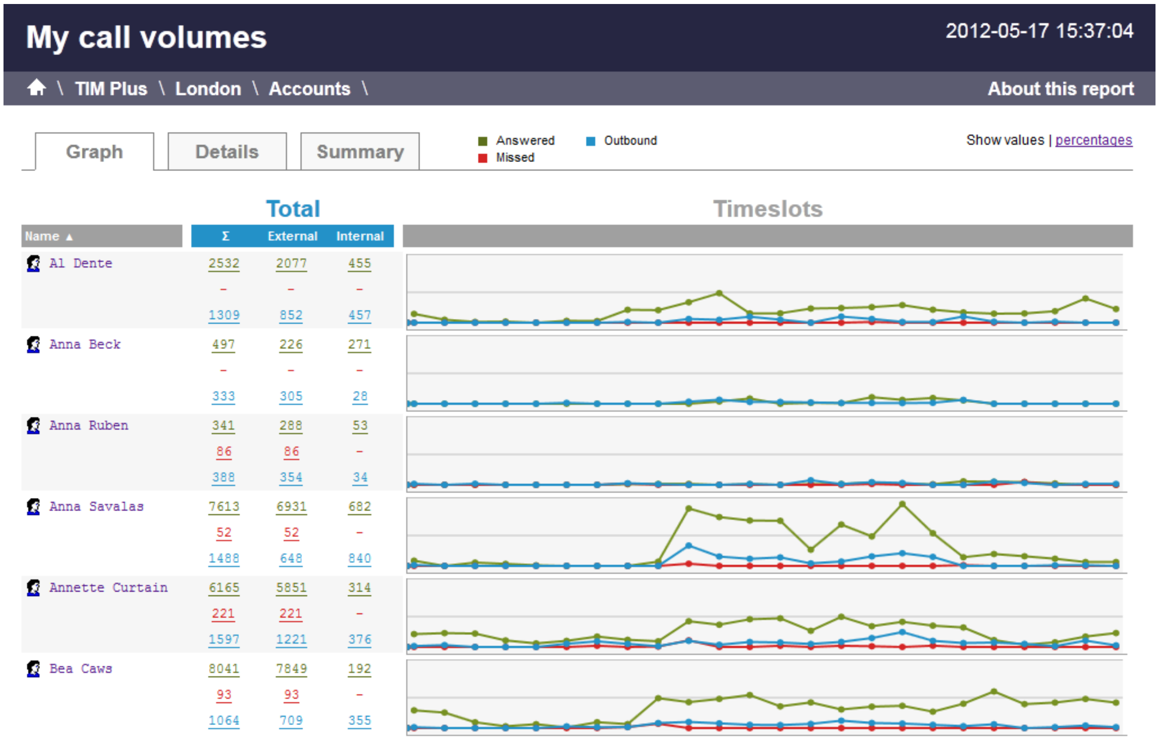

## Call Volumes

**The Call Volumes report**



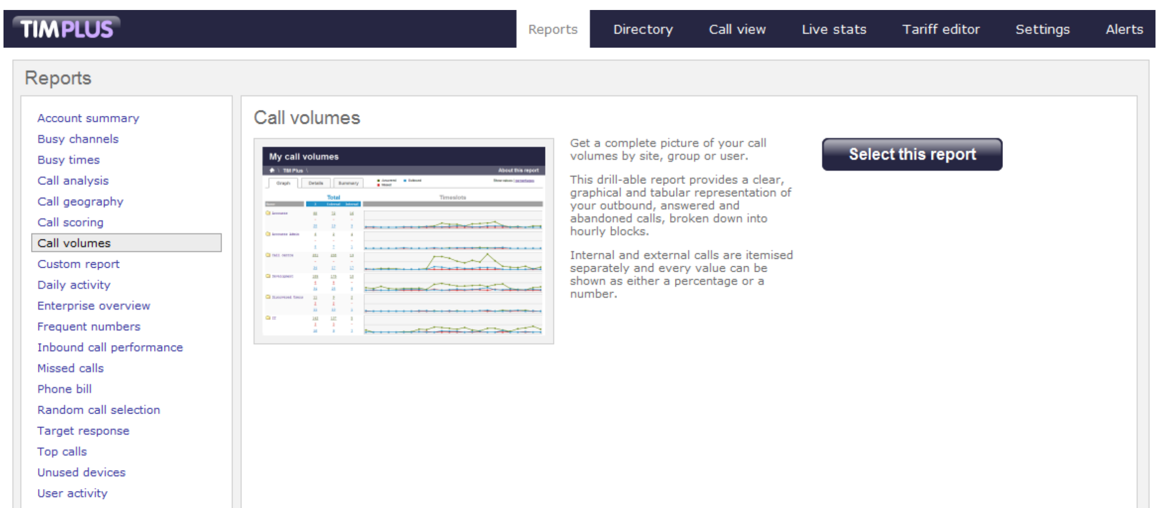
### Introduction

The Call Volumes report gives you a complete picture of your call volumes organised by site, group or user. It provides a clear, graphical and tabular representation of your outbound, answered and abandoned calls, broken down into hourly time slots. Internal and external calls are itemised separately and every value can be toggled between a percentage or a number. Additionally, all of the displayed values are shown as hyperlinks, allowing you to drill down further into the results.



## Running the report

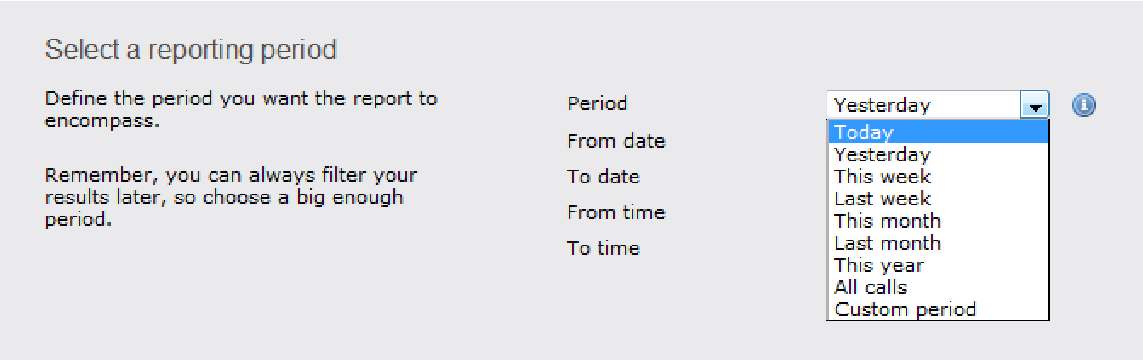
On the **Reports** screen, select the **Call volumes** report from the left-hand pane and click the Select this report button.



A new window will appear, where you can set the parameters of your report.

### Selecting the reporting period

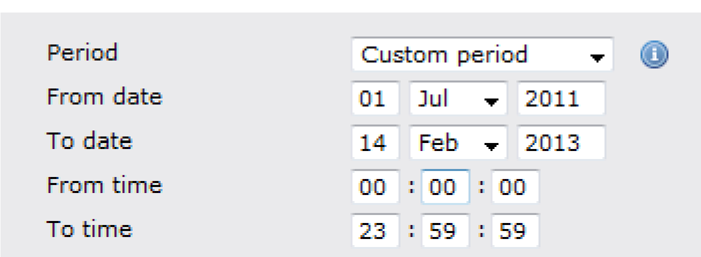
For each report, you must specify a time span that covers the calls you want the report to include. This is known as the "reporting period".




There are several preset reporting periods available for selection, based on the standard Gregorian calendar. The following table describes how the start and end times are defined for each preset period:

| Period | Description |
|---|---|
| **Today** | The start and end dates are set to the current date. The start time is set to `00:00:00` and the end time to `23:59:59`. |
| **Yesterday** | The start and end dates are set to the current date minus one day. The start time is set to `00:00:00` and the end time to `23:59:59`. |
| **This week** | The start date is set to the first day of the current week (normally Monday). The end date is set to the current day. The start time is set to `00:00:00` and the end time to the current time. |
| **Last week** | The start date is set to the date of the last Monday, and the end date is set to the start date plus seven days. The start time is set to `00:00:00` and the end time to `23:59:59`. |
| **This month** | The start date is set to the first day of the current month. The end date is set to the current day. The start time is set to `00:00:00` and the end time to the current time. |
| **Last month** | The start date for this period is set in three stages: The day is set to the first day of the month. The month is set to the previous month. The year is set to the current year, unless it is currently January, in which case, the previous year is used. The start and end times are set to `00:00:00` and `23:59:59` respectively. |
| **This year** | The start date is set to the first day of the first month of the current year, whilst the end date is set to today's date. The start and end times are set to `00:00:00` and `23:59:59` respectively. |
| **All calls** | The start and end dates and times are set to the dates and times of the first and last call in the entire call database, respectively. |

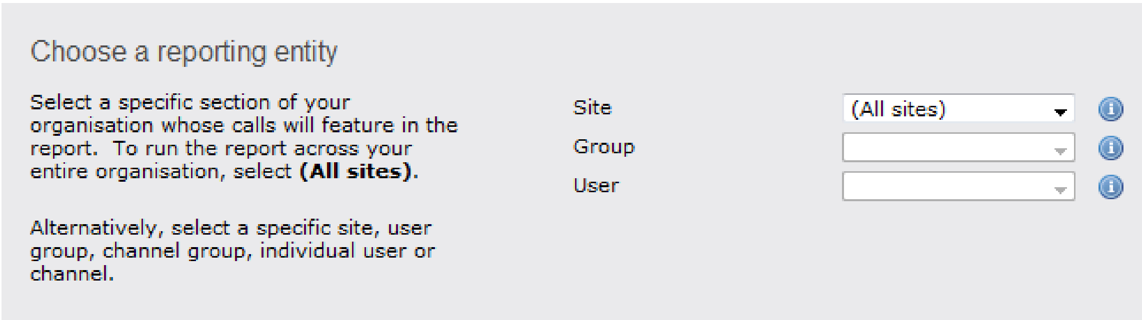
In addition to the presets described above, it is possible to specify a custom reporting period by choosing `Custom period` from the `Period` drop-down list and specifying your own `Start date`, `Start time`, `End date` and `End time` of the period you want to report on.




Once you have set the reporting period, click on the Next button to set additional report parameters and options, or select the Finish button to run the report immediately.

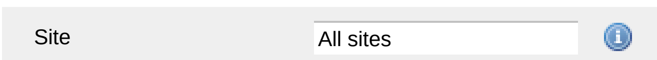
## Selecting the reporting entity

The `Reporting entity` parameter allows you to select the part of your organisation whose calls the report should include, e.g. a site, a group or an individual user.



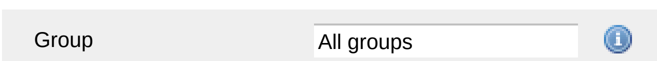

### Site

To report on a particular site, select it from the drop-down list or select `All sites` .



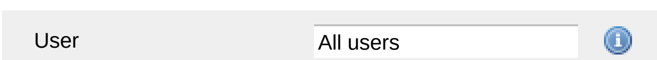

### Group

If a site has been selected, you are able to further limit the report's results by selecting a group from the drop-down list.




### User

If both a site and group have been selected, you can further limit the report's results to include only calls involving a particular user, by selecting that user from the drop-down list.

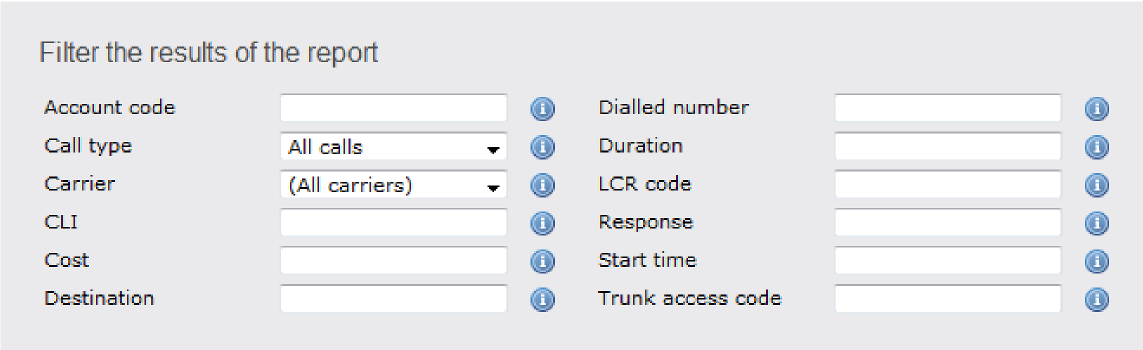



If your web account is restricted to a specific site or group, only those entities to which you have access will be available in the drop-down lists.

Once you have selected the scope of your report, click on the **Next** button to set additional report parameters and options, or to run the report immediately, click the **Finish** button.

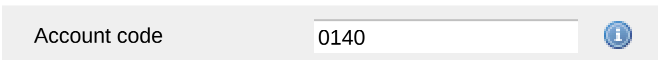
## Selecting the report filters

You can limit the results of your report by choosing one or more of the following filters:




### Account code

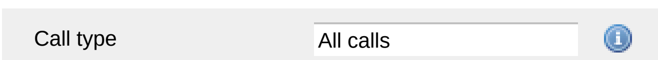
To produce a report consisting only of calls that were made using a particular account code, enter the account code in the field provided.




To report on more than one account code, separate each code using a comma.

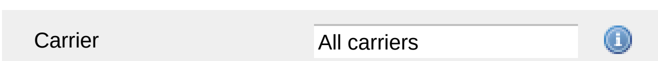
### Call type

This filter allows you to define the type of call you want to report on, in terms of where the call originated and where it was delivered, e.g. incoming, outgoing, internal, etc.  To report on all types of call, set this to **`All calls`**.




### Carrier

If you use more than one carrier, you can limit the results to include only calls that were made using a specific carrier.

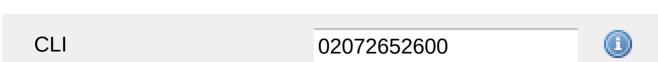



> If you use only one carrier, there will be no drop-down list available and no option to choose a carrier.

### CLI

Calling Line Identification (CLI) is the telephone number of the remote caller in an incoming call scenario.

You can report on calls that originate from a specific CLI or those whose CLI matches a particular pattern of digits. For example, to report on all incoming calls from Tri-Line, you could enter **`02072652600`**.




You can use the `!` symbol to explicitly exclude a CLI from the report's results, and/or the `*` symbol as a wildcard in digit pattern matching.  For example, to exclude calls from Tri-Line, but include all others, you could use **`!020726526*`**. To report on more than one CLI, use a comma to separate each entry.

### Cost

You can define a cost filter to include calls above or below specific values by entering your criteria, as shown below:

| | |
|---|---|
| Cost | <2.00 |

You can specify a cost range by using the `-` symbol; to specify limits, use the comparison operators, `>`, `<`, and `!` .

### Destination

If you want to filter calls to a specific, known destination, type the name of the destination in the text box provided. This filter accepts the `!` and `*` symbols for excluding values and specifying partial matches, respectively.

For example, if you wanted to exclude all calls to France, you could enter `!France*`, as shown below:

| | |
|---|---|
| Destination | !France* |

### Dialled number

To filter calls to a specific dialled number, type it in the text box provided. The dialled number is defined as the number that is dialled (in the case of an outbound call), or the DDI number that the remote party dialled to reach a particular extension or group (in the case of an inbound call).

To filter calls to a specific area, a partial number can be entered (e.g. `0033` for calls to France).

| | |
|---|---|
| Dialled number | 0033 |

You can use the `!` symbol to explicitly exclude a dialled number from the report's results, and/or the `*` symbol as a wildcard in digit pattern matching. For example, to exclude calls to Tri-Line, but include all others, you could use `!020726526*`). To report on more than one dialled number, use a comma to separate each entry.

### Duration

To filter calls above or below a particular duration, enter the desired duration in seconds.

| | |
|---|---|
| Duration | >1800 |

You can specify a duration range by using the `-` symbol; to specify limits, use the comparison operators, `>`, `<`, and `!` .

In the above example, the report will return only calls longer than 1800 seconds (30 minutes).

### LCR code

To filter your results to include only calls that used a Least Cost Routing (LCR) code, enter it in the text box provided.

| | |
|---|---|
| LCR code | 162 |

You can use the `!` symbol to explicitly exclude a LCR code from the report's results, and/or the `*` symbol as a wildcard in digit pattern matching. For example, to exclude calls made using all LCR codes beginning `162`, you could enter `!162*`. To report on more than one LCR code, use a comma to separate each entry.

### Response

This option allows you to filter calls based on their response time, measured in seconds. Specify the desired response time threshold in the text box provided.

| | |
|---|---|
| Response time | >10 |

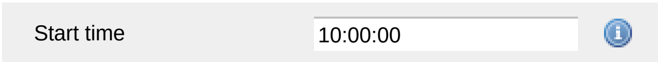
In the above example, the search results will display calls that have a response time greater than 10 seconds.

You can specify a response time range by using the `-` symbol and; to specify limits, use the comparison operators, `>`, `<`, and `!` .

### Start time

This option allows you to filter calls based on the time the call started. Specify the start time in the text box provided using the `hh:mm:ss` format.

For example, to include only calls that began after 10 am, you could enter **10:00:00** in the **Start time** field, as shown below:



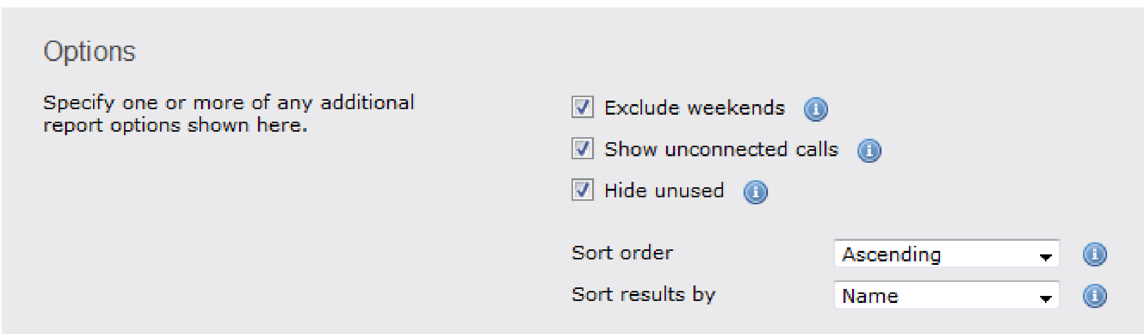

### Trunk access code

If your telephone system uses trunk access codes to connect calls using specific channels, you can limit your report's results to include only calls made using those codes. Specify the trunk access code in the text box provided.


You can use the **!** symbol to explicitly exclude a trunk access code from the report's results, and/or the * symbol as a wildcard in digit pattern matching. For example, to exclude calls made using the **9** trunk access code, you could enter **!9**. To report on more than one trunk access code, use a comma to separate each entry.

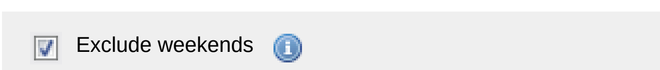
## Selecting the report options

This section enables you to further narrow down your report results, by excluding certain types of calls. It also allows you to sort the report's results in a particular manner.




### Exclude weekends

To exclude weekend calls from your report's results, select the **Exclude weekends** option.

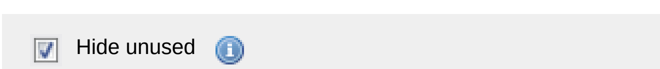



### Show unconnected calls

To show unconnected calls in your report results, select the **Show unconnected calls** option:

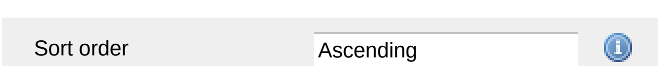

### Hide unused

To exclude unused extensions from your report's results, select the **Hide unused** option.



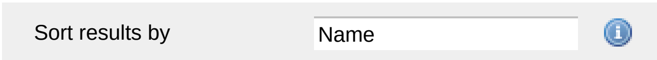

### Sort order

Choose from the **Sort order** drop-down list whether you want the results of the report to appear in ascending or descending order.



#### Sort results by

To sort your report's results by a particular column, select it from the **`Sort results by`** drop-down list.



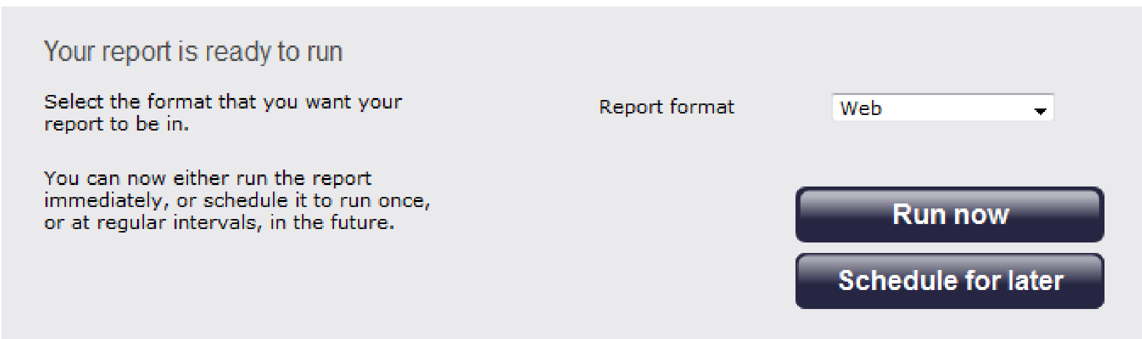

### Selecting the report format

This section allows you to choose the media format of your completed report. The formats available are **`Web`**, **`PDF`**, **`Excel`**, **`CSV`** and **`XML`**.

More details about each report format are available in the Setting the report format section above.

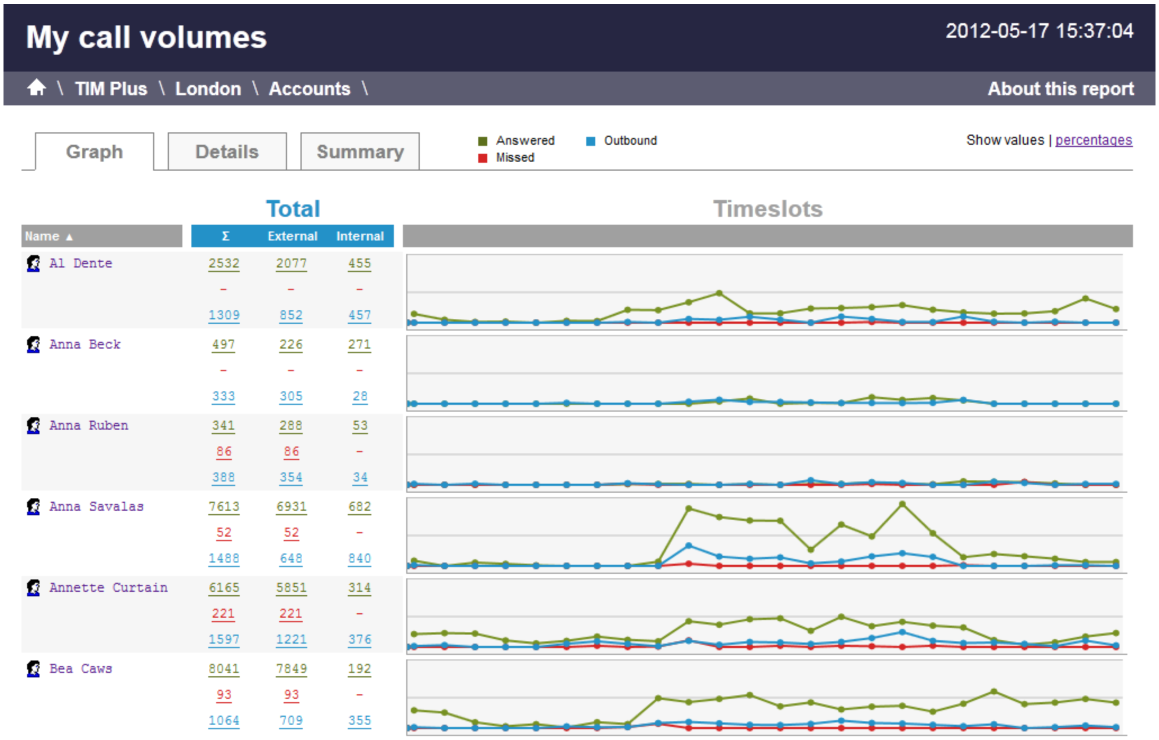
## Creating the report

When you have selected a reporting period and have chosen any filters and options, you can either run the report immediately by clicking on the Run now button, or schedule it for future delivery.




## The report's results

Below is an example of this report's output in **`Web`** format:




As with all reports produced by TIM Plus, each page of the report includes the following information:

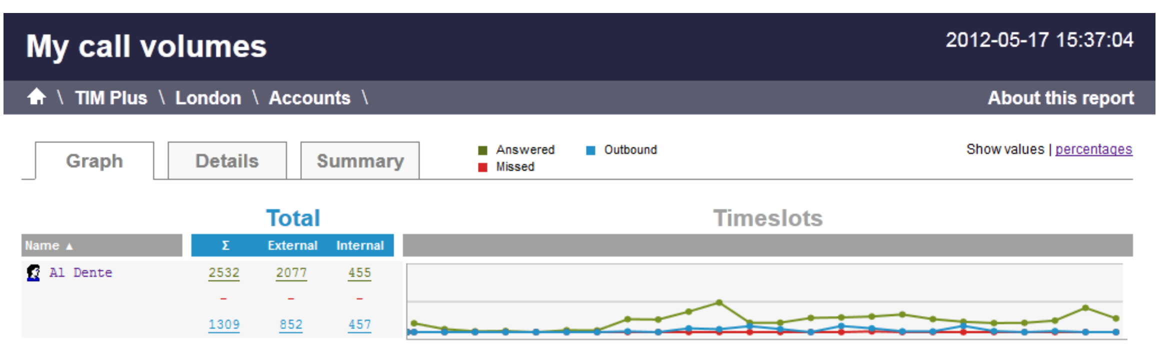
- the report's title
- the date and time that the report was generated
- the name of the report, if applicable

The **Web** format is the most interactive of all formats: all column headers are click-sortable and most graphical and tabular elements can be drilled down into, allowing deeper analysis of your results. To view details of any filters or parameters used in creating this report, click on **About this report** at the top-right corner of the page.

The report is divided into three sections: **Graph**, **Details** and **Summary**.

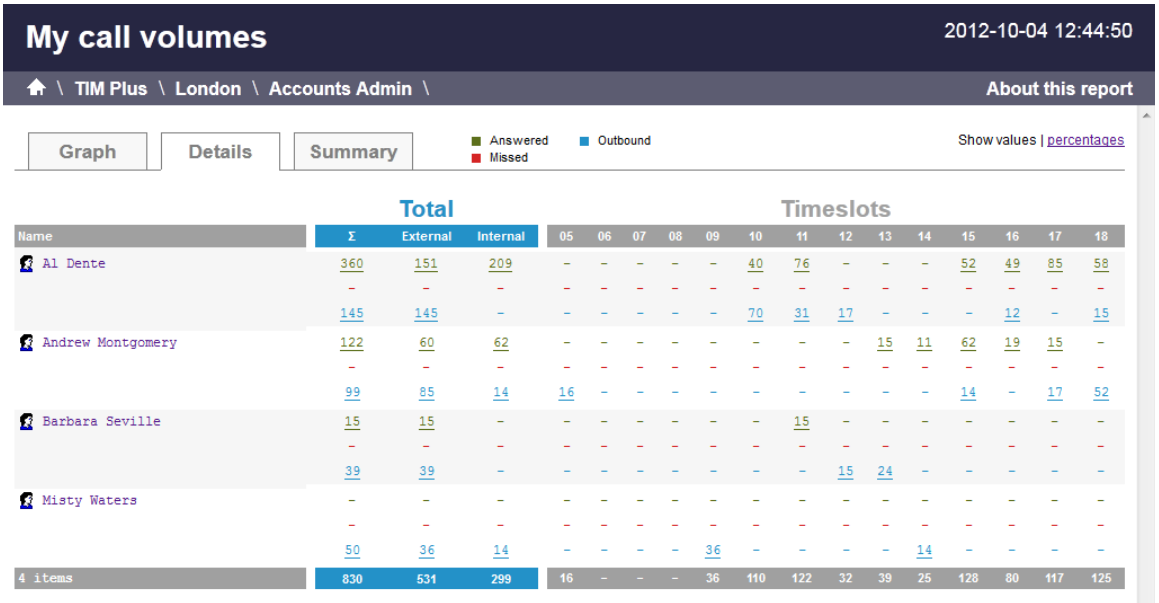
### Graph

The Graph tab provides a visual representation of all inbound, outbound and missed calls for both external and internal call activity. A simple toggle button at the top right of the screen enables you to flip between call volumes and percentages.

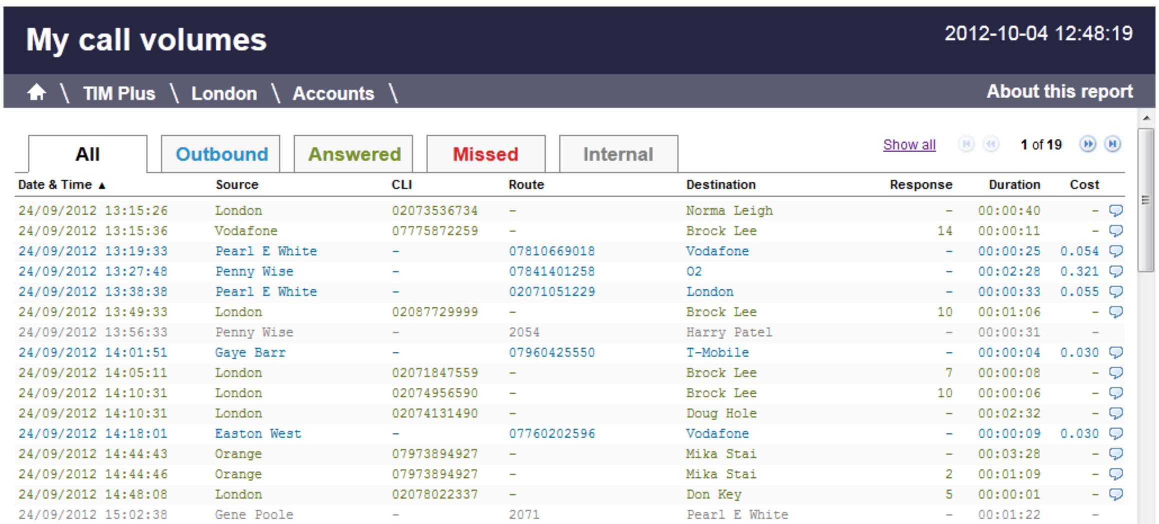



### Details

The Details tab shows the actual volumes (or percentages) of calls for each time slot throughout the day.




All numeric figures are shown as hyperlinks, allowing you to drill down into an itemised list of the calls that they represent.



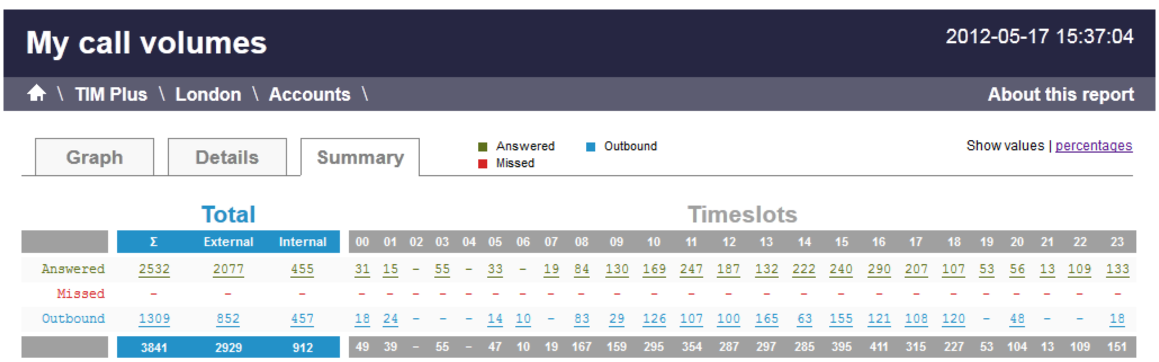

Below is a description of each table header:

| Header | Description |
|---|---|
| **Date & Time** | The date and time the call started |
| **Source** | The place from where the call originated |
| **CLI** | The telephone number of the remote caller for inbound calls |

| | |
|---|---|
| **Route** | The information displayed in this field is determined by the type of call:<br>▪ for incoming calls, this shows the CLI of the caller<br>▪ for incoming internal calls, this shows either the caller's username or extension number<br>▪ for outgoing calls, this shows the dialled number |
| **Destination** | The information displayed in this field is determined by the type of call:<br>▪ for incoming calls, this shows the name of the user whose extension answered the call, or the extension number if not available<br>▪ for outgoing calls, this shows the geographical location that was dialled, or an alias if defined in your contacts list<br>▪ for internal calls, this shows the extension that was dialled, enclosed in square brackets [ ] |
| **Response** | The length of time it took for the call to be answered (i.e. the response time) |
| **Duration** | The duration of the call (in hours, minutes and seconds) |
| **Cost** | The cost of the call |

### Summary

The Summary tab shows a summary of all call activity for the reporting period you selected.




| | Σ | External | Internal | 00 | 01 | 02 | 03 | 04 | 05 | 06 | 07 | 08 | 09 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Answered | 2532 | 2077 | 455 | 31 | 15 | - | 55 | - | 33 | - | 19 | 84 | 130 | 169 | 247 | 187 | 132 | 222 | 240 | 290 | 207 | 107 | 53 | 56 | 13 | 109 | 133 |
| Missed | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Outbound | 1309 | 852 | 457 | 18 | 24 | - | - | - | 14 | 10 | - | 83 | 29 | 126 | 107 | 100 | 165 | 63 | 155 | 121 | 108 | 120 | - | 48 | - | - | 18 |
| | 3841 | 2929 | 912 | 49 | 39 | - | 55 | - | 47 | 10 | 19 | 167 | 159 | 295 | 354 | 287 | 297 | 285 | 395 | 411 | 315 | 227 | 53 | 104 | 13 | 109 | 151 |

To modify your report to cover a larger organisational scope, click on an element of the breadcrumb as shown below:

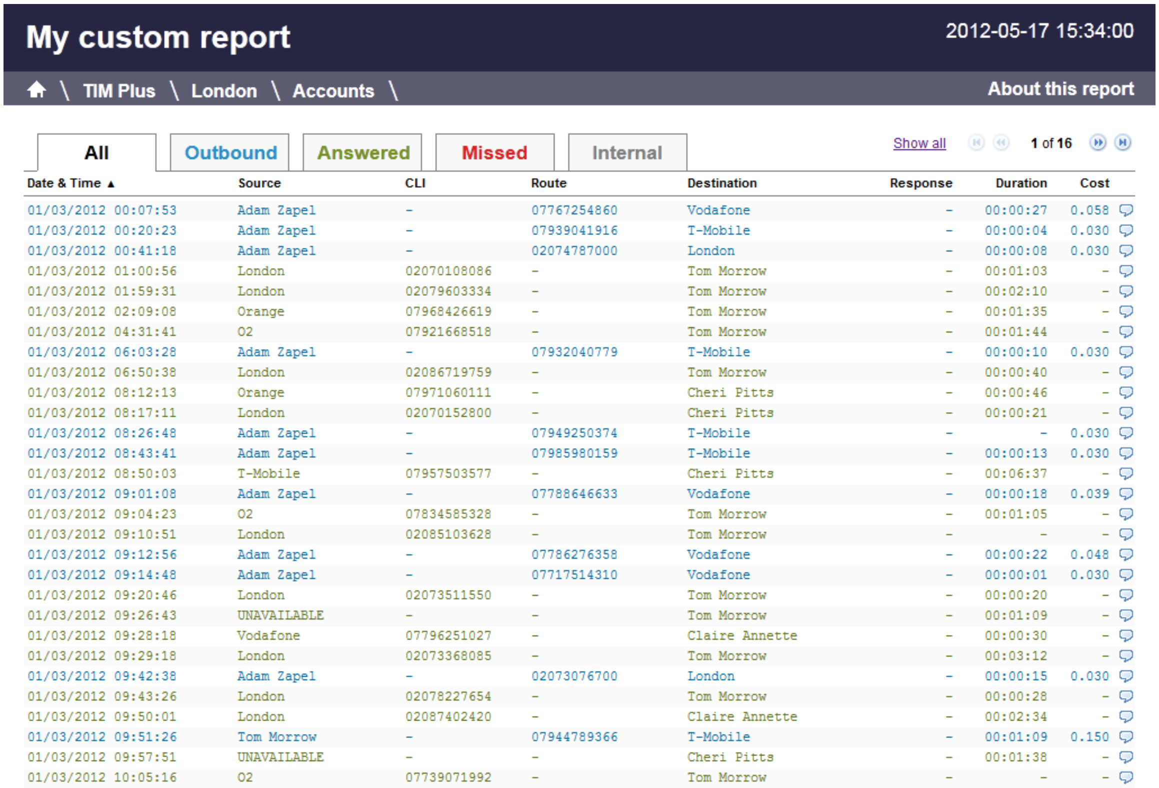

## Custom

**The Custom report**



## Introduction

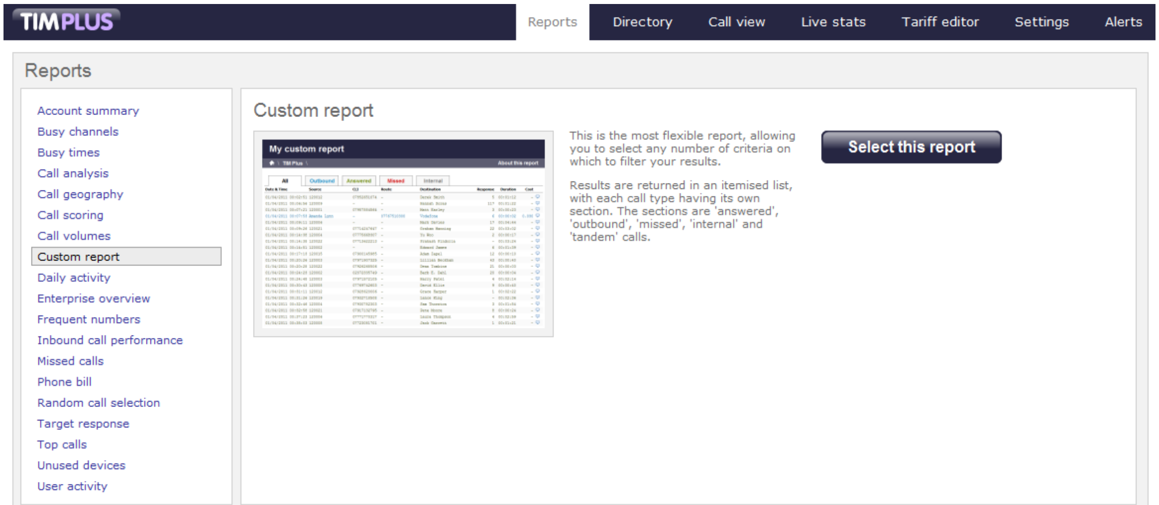
The Custom report allows a wide range of options and filtering criteria to be selected, enabling you to search for very specific phone calls. The results are displayed as an itemised list, grouped by call type: **`All`**, **`Outbound`**, **`Answered`**, **`Missed`**, **`Internal`** and **`Tandem`**.




| Date & Time ▲ | Source | CLI | Route | Destination | Response | Duration | Cost |
|---|---|---|---|---|---|---|---|
| 01/03/2012 00:07:53 | Adam Zapel | - | 07767254860 | Vodafone | - | 00:00:27 | 0.058 |
| 01/03/2012 00:20:23 | Adam Zapel | - | 07939041916 | T-Mobile | - | 00:00:04 | 0.030 |
| 01/03/2012 00:41:18 | Adam Zapel | - | 02074787000 | London | - | 00:00:08 | 0.030 |
| 01/03/2012 01:00:56 | London | 02070108086 | - | Tom Morrow | - | 00:01:03 | - |
| 01/03/2012 01:59:31 | London | 02079603334 | - | Tom Morrow | - | 00:02:10 | - |
| 01/03/2012 02:09:08 | Orange | 07968426619 | - | Tom Morrow | - | 00:01:35 | - |
| 01/03/2012 04:31:41 | O2 | 07921668518 | - | Tom Morrow | - | 00:01:44 | - |
| 01/03/2012 06:03:28 | Adam Zapel | - | 07932040779 | T-Mobile | - | 00:00:10 | 0.030 |
| 01/03/2012 06:50:38 | London | 02086719759 | - | Tom Morrow | - | 00:00:40 | - |
| 01/03/2012 08:12:13 | Orange | 07971060111 | - | Cheri Pitts | - | 00:00:46 | - |
| 01/03/2012 08:17:11 | London | 02070152800 | - | Cheri Pitts | - | 00:00:21 | - |
| 01/03/2012 08:26:48 | Adam Zapel | - | 07949250374 | T-Mobile | - | - | 0.030 |
| 01/03/2012 08:43:41 | Adam Zapel | - | 07985980159 | T-Mobile | - | 00:00:13 | 0.030 |
| 01/03/2012 08:50:03 | T-Mobile | 07957503577 | - | Cheri Pitts | - | 00:06:37 | - |
| 01/03/2012 09:01:08 | Adam Zapel | - | 07788646633 | Vodafone | - | 00:00:18 | 0.039 |
| 01/03/2012 09:04:23 | O2 | 07834585328 | - | Tom Morrow | - | 00:01:05 | - |
| 01/03/2012 09:10:51 | London | 02085103628 | - | Tom Morrow | - | - | - |
| 01/03/2012 09:12:56 | Adam Zapel | - | 07786276358 | Vodafone | - | 00:00:22 | 0.048 |
| 01/03/2012 09:14:48 | Adam Zapel | - | 07717514310 | Vodafone | - | 00:00:01 | 0.030 |
| 01/03/2012 09:20:46 | London | 02073511550 | - | Tom Morrow | - | 00:00:20 | - |
| 01/03/2012 09:26:43 | UNAVAILABLE | - | - | Tom Morrow | - | 00:01:09 | - |
| 01/03/2012 09:28:18 | Vodafone | 07796251027 | - | Claire Annette | - | 00:00:30 | - |
| 01/03/2012 09:29:18 | London | 02073368085 | - | Tom Morrow | - | 00:03:12 | - |
| 01/03/2012 09:42:38 | Adam Zapel | - | 02073076700 | London | - | 00:00:15 | 0.030 |
| 01/03/2012 09:43:26 | London | 02078227654 | - | Tom Morrow | - | 00:00:28 | - |
| 01/03/2012 09:50:01 | London | 02087402420 | - | Claire Annette | - | 00:02:34 | - |
| 01/03/2012 09:51:26 | Tom Morrow | - | 07944789366 | T-Mobile | - | 00:01:09 | 0.150 |
| 01/03/2012 09:57:51 | UNAVAILABLE | - | - | Cheri Pitts | - | 00:01:38 | - |
| 01/03/2012 10:05:16 | O2 | 07739071992 | - | Tom Morrow | - | - | - |

## Running the report

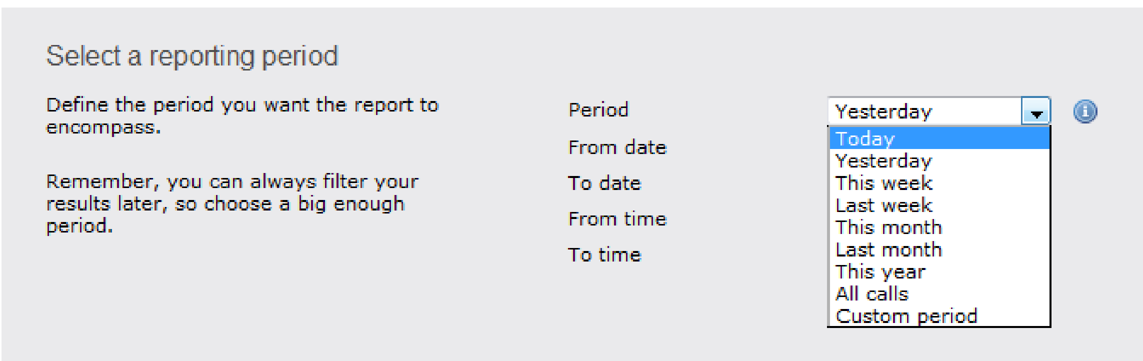
On the **`Reports`** screen, select **`Custom report`** from the left-hand pane and click the Select this report button.




A new window will appear, where you can set the parameters of your report.

### Selecting the reporting period

For each report, you must specify a time span that covers the calls you want the report to include. This is known as the "reporting period".

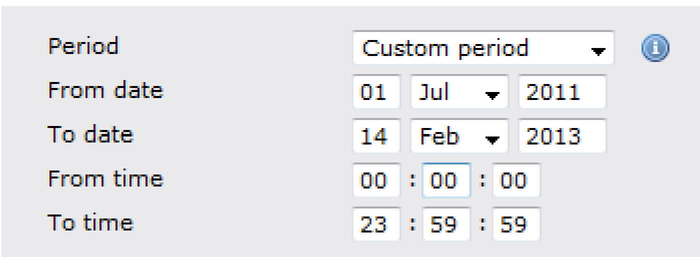



There are several preset reporting periods available for selection, based on the standard Gregorian calendar. The following table describes how the start and end times are defined for each preset period:

| Period | Description |
|---|---|
| **Today** | The start and end dates are set to the current date. The start time is set to `00:00:00` and the end time to `23:59:59`. |
| **Yesterday** | The start and end dates are set to the current date minus one day. The start time is set to `00:00:00` and the end time to `23:59:59`. |
| **This week** | The start date is set to the first day of the current week (normally Monday). The end date is set to the current day. The start time is set to `00:00:00` and the end time to the current time. |
| **Last week** | The start date is set to the date of the last Monday, and the end date is set to the start date plus seven days. The start time is set to `00:00:00` and the end time to `23:59:59`. |
| **This month** | The start date is set to the first day of the current month. The end date is set to the current day. The start time is set to `00:00:00` and the end time to the current time. |

| | |
|---|---|
| **Last month** | The start date for this period is set in three stages: The day is set to the first day of the month. The month is set to the previous month. The year is set to the current year, unless it is currently January, in which case, the previous year is used. The start and end times are set to `00:00:00` and `23:59:59` respectively. |
| **This year** | The start date is set to the first day of the first month of the current year, whilst the end date is set to today's date. The start and end times are set to `00:00:00` and `23:59:59` respectively. |
| **All calls** | The start and end dates and times are set to the dates and times of the first and last call in the entire call database, respectively. |

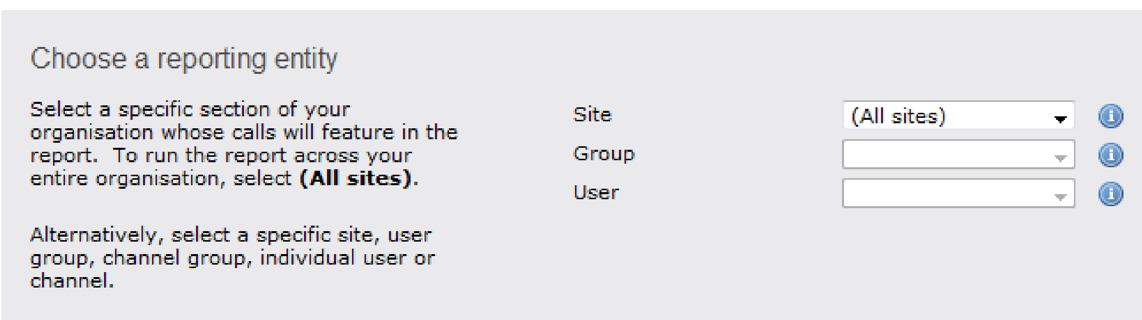
In addition to the presets described above, it is possible to specify a custom reporting period by choosing `Custom period` from the `Period` drop-down list and specifying your own `Start date`, `Start time`, `End date` and `End time` of the period you want to report on.




Once you have set the reporting period, click on the Next button to set additional report parameters and options, or select the Finish button to run the report immediately.

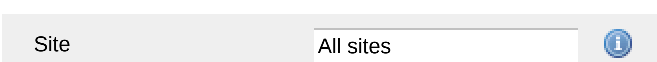
### Selecting the reporting entity

The `Reporting entity` parameter allows you to select the part of your organisation whose calls the report should include, e.g. a site, a group or an individual user.



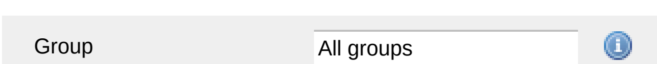

#### Site

To report on a particular site, select it from the drop-down list or select `All sites` .




#### Group

If a site has been selected, you are able to further limit the report's results by selecting a group from the drop-down list.




#### User

If both a site and group have been selected, you can further limit the report's results to include only calls involving a particular user, by selecting that user from the drop-down list.

| | |
|---|---|
| User | All users |

If your web account is restricted to a specific site or group, only those entities to which you have access will be available in the drop-down lists.

Once you have selected the scope of your report, click on the Next button to set additional report parameters and options, or to run the report immediately, click the Finish button.

## Selecting the report filters

You can limit the results of your report by choosing one or more of the following filters:

**Filter the results of the report**

| | | | |
|---|---|---|---|
| Account code | | Dialled number | |
| Call type | All calls | Duration | |
| Carrier | (All carriers) | LCR code | |
| CLI | | Response | |
| Cost | | Start time | |
| Destination | | Trunk access code | |

### Account code

To produce a report consisting only of calls that were made using a particular account code, enter the account code in the field provided.

| | |
|---|---|
| Account code | 0140 |

To report on more than one account code, separate each code using a comma.

### Call type

This filter allows you to define the type of call you want to report on, in terms of where the call originated and where it was delivered, e.g. incoming, outgoing, internal, etc. To report on all types of call, set this to `All calls`.

| | |
|---|---|
| Call type | All calls |

### Carrier

If you use more than one carrier, you can limit the results to include only calls that were made using a specific carrier.

| | |
|---|---|
| Carrier | All carriers |

If you use only one carrier, there will be no drop-down list available and no option to choose a carrier.

### CLI

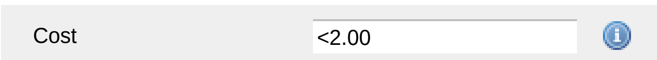
Calling Line Identification (CLI) is the telephone number of the remote caller in an incoming call scenario.

You can report on calls that originate from a specific CLI or those whose CLI matches a particular pattern of digits. For example, to report on all incoming calls from Tri-Line, you could enter **02072652600**.


You can use the **!** symbol to explicitly exclude a CLI from the report's results, and/or the * symbol as a wildcard in digit pattern matching.  For example, to exclude calls from Tri-Line, but include all others, you could use **!020726526***. To report on more than one CLI, use a comma to separate each entry.

### Cost

You can define a cost filter to include calls above or below specific values by entering your criteria, as shown below:

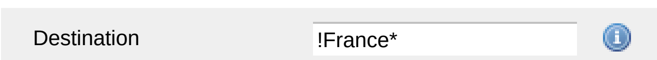



You can specify a cost range by using the - symbol; to specify limits, use the comparison operators, **>**, **<**, and **!** .

### Destination

If you want to filter calls to a specific, known destination, type the name of the destination in the text box provided. This filter accepts the **!** and ***** symbols for excluding values and specifying partial matches, respectively.

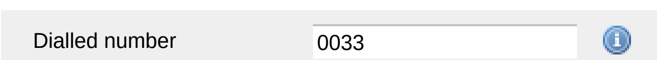
For example, if you wanted to exclude all calls to France, you could enter **!France***, as shown below:




### Dialled number

To filter calls to a specific dialled number, type it in the text box provided. The dialled number is defined as the number that is dialled (in the case of an outbound call), or the DDI number that the remote party dialled to reach a particular extension or group (in the case of an inbound call).

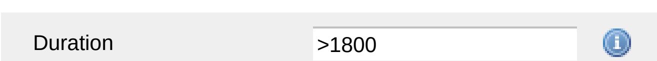
To filter calls to a specific area, a partial number can be entered (e.g. **0033** for calls to France).




You can use the **!** symbol to explicitly exclude a dialled number from the report's results, and/or the * symbol as a wildcard in digit pattern matching.  For example, to exclude calls to Tri-Line, but include all others, you could use **!020726526***). To report on more than one dialled number, use a comma to separate each entry.

### Duration

To filter calls above or below a particular duration, enter the desired duration in seconds.




You can specify a duration range by using the - symbol; to specify limits, use the comparison operators, **>**, **<**, and **!** .

In the above example, the report will return only calls longer than 1800 seconds (30 minutes).

### LCR code

To filter your results to include only calls that used a Least Cost Routing (LCR) code, enter it in the text box provided.

You can use the `!` symbol to explicitly exclude a LCR code from the report's results, and/or the `*` symbol as a wildcard in digit pattern matching. For example, to exclude calls made using all LCR codes beginning `162`, you could enter **`!162*`**. To report on more than one LCR code, use a comma to separate each entry.

#### Response

This option allows you to filter calls based on their response time, measured in seconds. Specify the desired response time threshold in the text box provided.

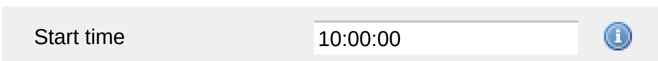

In the above example, the search results will display calls that have a response time greater than 10 seconds.

You can specify a response time range by using the `-` symbol and; to specify limits, use the comparison operators, **>**, **<**, and `!` .

#### Start time

This option allows you to filter calls based on the time the call started. Specify the start time in the text box provided using the **`hh:mm:ss`** format.

For example, to include only calls that began after 10 am, you could enter **`10:00:00`** in the `Start time` field, as shown below:



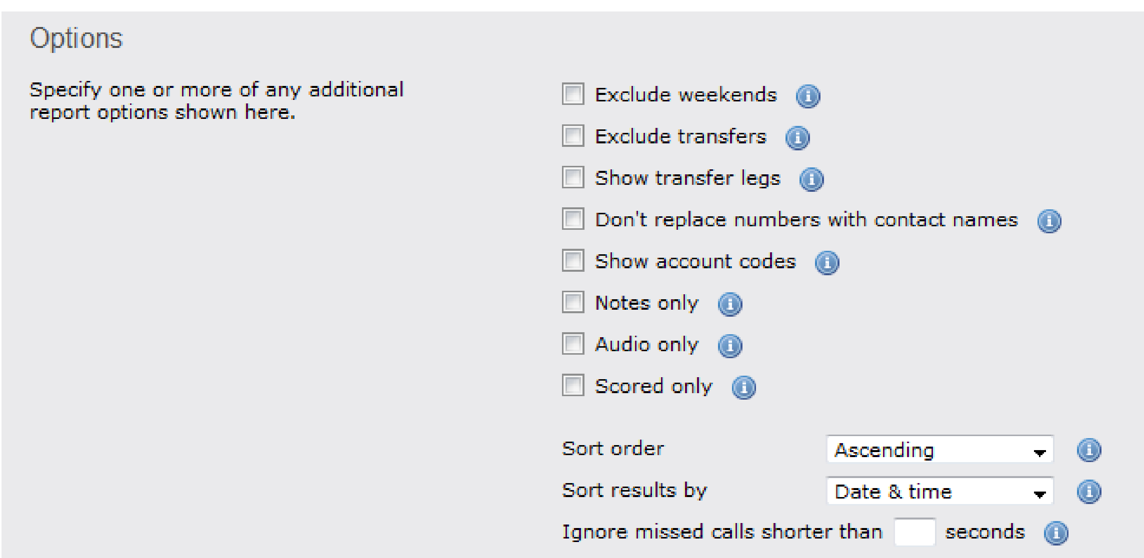

#### Trunk access code

If your telephone system uses trunk access codes to connect calls using specific channels, you can limit your report's results to include only calls made using those codes. Specify the trunk access code in the text box provided.


You can use the `!` symbol to explicitly exclude a trunk access code from the report's results, and/or the `*` symbol as a wildcard in digit pattern matching. For example, to exclude calls made using the `9` trunk access code, you could enter **`!9`**. To report on more than one trunk access code, use a comma to separate each entry.

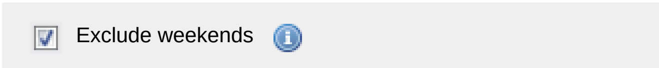
### Selecting the report options

This section enables you to further narrow down your report results, by excluding certain types of calls. It also allows you to sort the report's results in a particular manner.



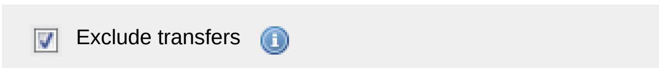

#### Exclude weekends

To exclude weekend calls from your report's results, select the `Exclude weekends` option.



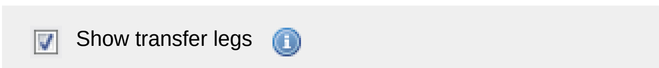

### Exclude transfers

To exclude transferred calls from your report's results, select the `Exclude transfers` option.



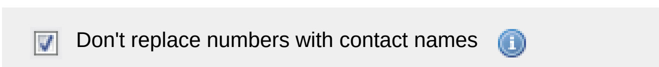

### Show transfer legs

To show the legs of transferred calls, click on the `Show transfer legs` option . A icon will be displayed next to any call with associated call legs.




### Don't replace numbers with contact names

Tick this option if you do not want to replace dialled numbers, CLIs and account codes with their associated names, as defined in your web user's contacts list.

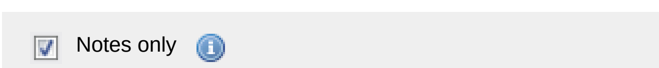



### Show account codes

Select this option to display any associated account codes as an additional column in this report.

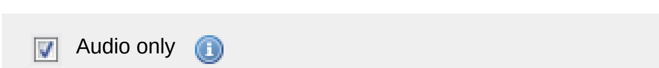

### Notes only

Tick this option if you want your search results to include only calls that have notes associated with them.



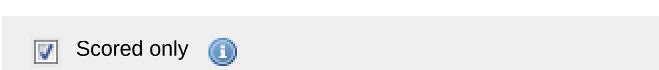

### Audio only

Tick this option if you want your search results to include only calls that have an associated voice recording.



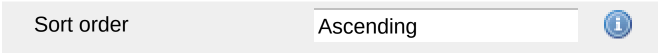

### Scored only

Tick this option to include only calls that have a score associated with them, e.g. calls that have already been listened to and scored



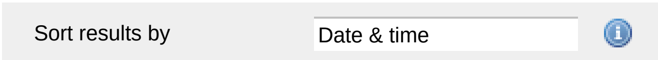

### Sort order

Choose from the `Sort order` drop-down list whether you want the results of your report to appear in ascending or descending order.




### Sort results by

To sort your report's results by a particular column, select it from the **`Sort results by`** drop-down list.




### Ignore short missed calls

Missed calls below a certain duration can sometimes pollute the meaning of a report's results. To exclude such short calls from your report, enter a duration threshold in the text box provided, e.g. to ignore calls below 3 seconds, enter **`3`** .

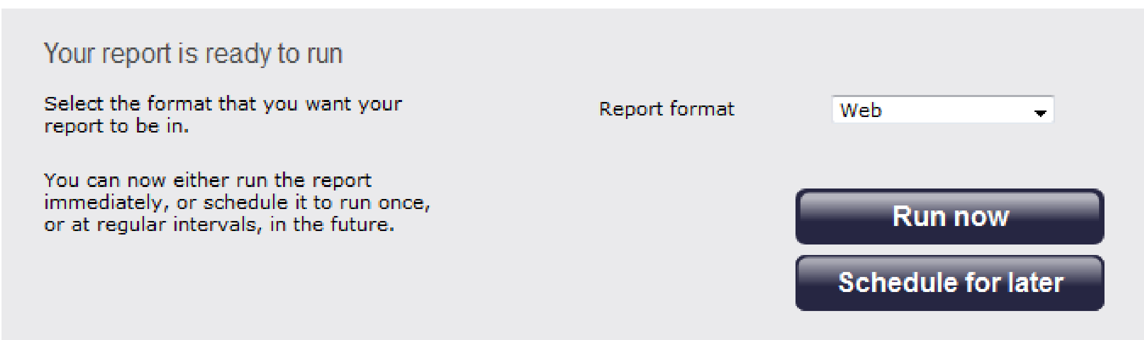
## Selecting the report format

This section allows you to choose the media format of your completed report. The formats available are **`Web`**, **`PDF`**, **`Excel`**, **`CSV`** and **`XML`**.

More details about each report format are available in the Setting the report format section above.

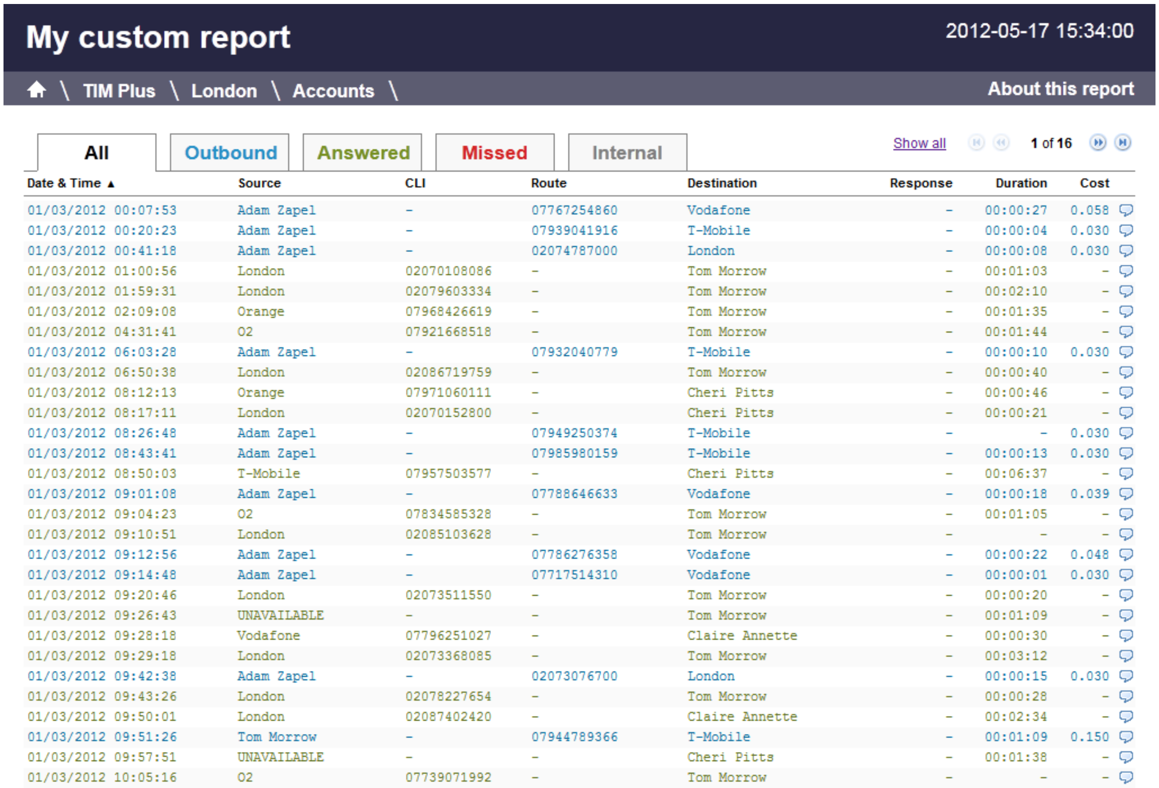
# Creating the report

When you have selected a reporting period and have chosen any filters and options, you can either run the report immediately by clicking on the Run now button, or schedule it for future delivery.




# The report's results

Below is an example of this report's output in **`Web`** format:


My custom report

2012-05-17 15:34:00

TIM Plus \ London \ Accounts \

About this report

All | Outbound | Answered | Missed | Internal

Show all 1 of 16

| Date & Time ▲ | Source | CLI | Route | Destination | Response | Duration | Cost |
|---|---|---|---|---|---|---|---|
| 01/03/2012 00:07:53 | Adam Zapel | - | 07767254860 | Vodafone | - | 00:00:27 | 0.058 |
| 01/03/2012 00:20:23 | Adam Zapel | - | 07939041916 | T-Mobile | - | 00:00:04 | 0.030 |
| 01/03/2012 00:41:18 | Adam Zapel | - | 02074787000 | London | - | 00:00:08 | 0.030 |
| 01/03/2012 01:00:56 | London | 02070108086 | - | Tom Morrow | - | 00:01:03 | - |
| 01/03/2012 01:59:31 | London | 02079603334 | - | Tom Morrow | - | 00:02:10 | - |
| 01/03/2012 02:09:08 | Orange | 07968426619 | - | Tom Morrow | - | 00:01:35 | - |
| 01/03/2012 04:31:41 | O2 | 07921668518 | - | Tom Morrow | - | 00:01:44 | - |
| 01/03/2012 06:03:28 | Adam Zapel | - | 07932040779 | T-Mobile | - | 00:00:10 | 0.030 |
| 01/03/2012 06:50:38 | London | 02086719759 | - | Tom Morrow | - | 00:00:40 | - |
| 01/03/2012 08:12:13 | Orange | 07971060111 | - | Cheri Pitts | - | 00:00:46 | - |
| 01/03/2012 08:17:11 | London | 02070152800 | - | Cheri Pitts | - | 00:00:21 | - |
| 01/03/2012 08:26:48 | Adam Zapel | - | 07949250374 | T-Mobile | - | - | 0.030 |
| 01/03/2012 08:43:41 | Adam Zapel | - | 07985980159 | T-Mobile | - | 00:00:13 | 0.030 |
| 01/03/2012 08:50:03 | T-Mobile | 07957503577 | - | Cheri Pitts | - | 00:06:37 | - |
| 01/03/2012 09:01:08 | Adam Zapel | - | 07788646633 | Vodafone | - | 00:00:18 | 0.039 |
| 01/03/2012 09:04:23 | O2 | 07834585328 | - | Tom Morrow | - | 00:01:05 | - |
| 01/03/2012 09:10:51 | London | 02085103628 | - | Tom Morrow | - | - | - |
| 01/03/2012 09:12:56 | Adam Zapel | - | 07786276358 | Vodafone | - | 00:00:22 | 0.048 |
| 01/03/2012 09:14:48 | Adam Zapel | - | 07717514310 | Vodafone | - | 00:00:01 | 0.030 |
| 01/03/2012 09:20:46 | London | 02073511550 | - | Tom Morrow | - | 00:00:20 | - |
| 01/03/2012 09:26:43 | UNAVAILABLE | - | - | Tom Morrow | - | 00:01:09 | - |
| 01/03/2012 09:28:18 | Vodafone | 07796251027 | - | Claire Annette | - | 00:00:30 | - |
| 01/03/2012 09:29:18 | London | 02073368085 | - | Tom Morrow | - | 00:03:12 | - |
| 01/03/2012 09:42:38 | Adam Zapel | - | 02073076700 | London | - | 00:00:15 | 0.030 |
| 01/03/2012 09:43:26 | London | 02078227654 | - | Tom Morrow | - | 00:00:28 | - |
| 01/03/2012 09:50:01 | London | 02087402420 | - | Claire Annette | - | 00:02:34 | - |
| 01/03/2012 09:51:26 | Tom Morrow | - | 07944789366 | T-Mobile | - | 00:01:09 | 0.150 |
| 01/03/2012 09:57:51 | UNAVAILABLE | - | - | Cheri Pitts | - | 00:01:38 | - |
| 01/03/2012 10:05:16 | O2 | 07739071992 | - | Tom Morrow | - | - | - |

The **Web** format is the most interactive of all formats: all column headers are click-sortable and most graphical and tabular elements can be drilled down into, allowing deeper analysis of your results. By clicking on the **About this report** link at the top-right corner of the page, you can review any filters and options that have been applied to the report.

As with all reports produced by TIM Plus, each page of the report includes the following information:

- the report's title
- the date and time that the report was generated
- the name of the report, if applicable

The report consists of a table containing an itemised list of the calls that matched your selection criteria. Each column header of the table is described below:

| Header | Description |
|---|---|
| **Date & Time** | The date and time the call started |
| **Source** | The place from where the call originated |
| **CLI** | The telephone number of the remote caller for inbound calls |
| **Route** | The information displayed in this field is determined by the type of call:<br>▪ for incoming and outgoing calls, this shows the number that was dialled<br>▪ for incoming internal calls, this shows either the caller's username or extension number |

| | |
|---|---|
| **Destination** | The information displayed in this field is determined by the type of call:<br>▪ for incoming calls, this shows the name of the user whose extension answered the call, or the extension number if not available<br>▪ for outgoing calls, this shows the geographical location that was dialled, or an alias if defined in your contacts list<br>▪ for internal calls, this shows the extension that was dialled, enclosed in square brackets [ ] |
| **Response** | The length of time it took for the call to be answered (e.g. the response time) |
| **Duration** | The duration of the call (in hours, minutes and seconds) |
| **Cost** | The cost of the call |

To modify your report to cover a larger organisational scope, click on an element of the breadcrumb as shown below:

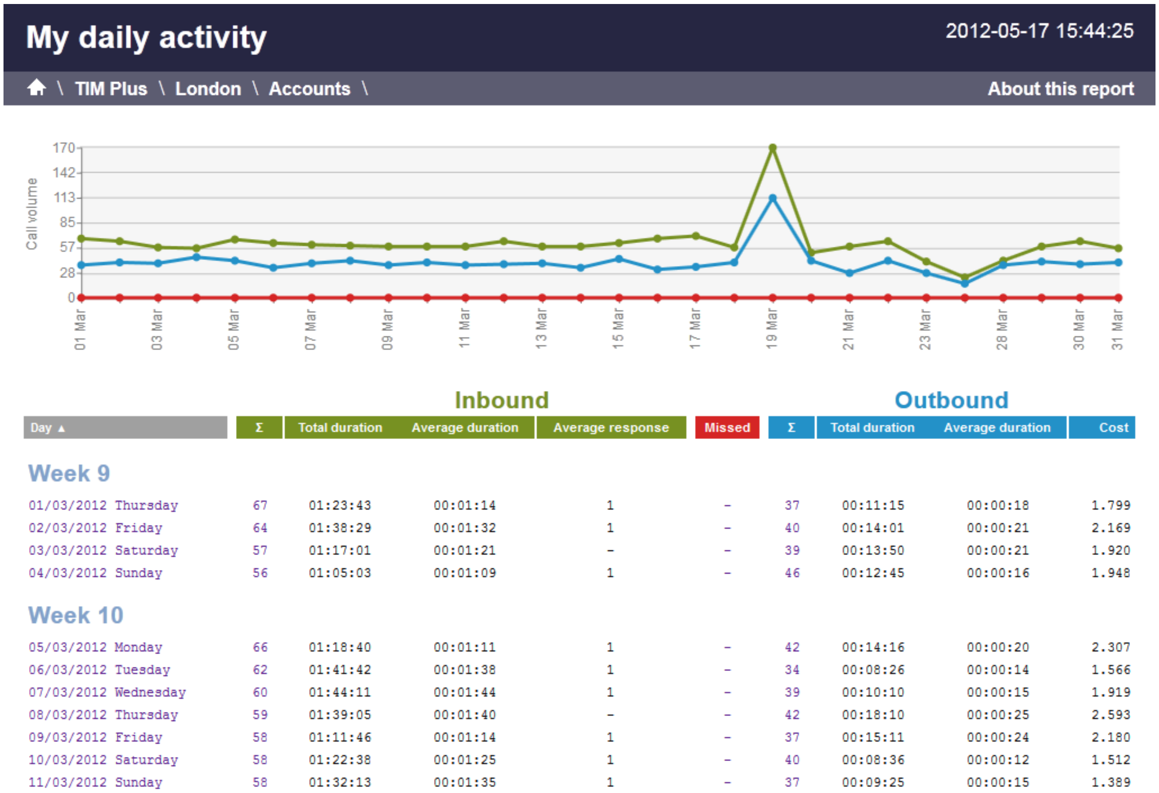

## Daily Activity

**The Daily Activity report**



### Introduction

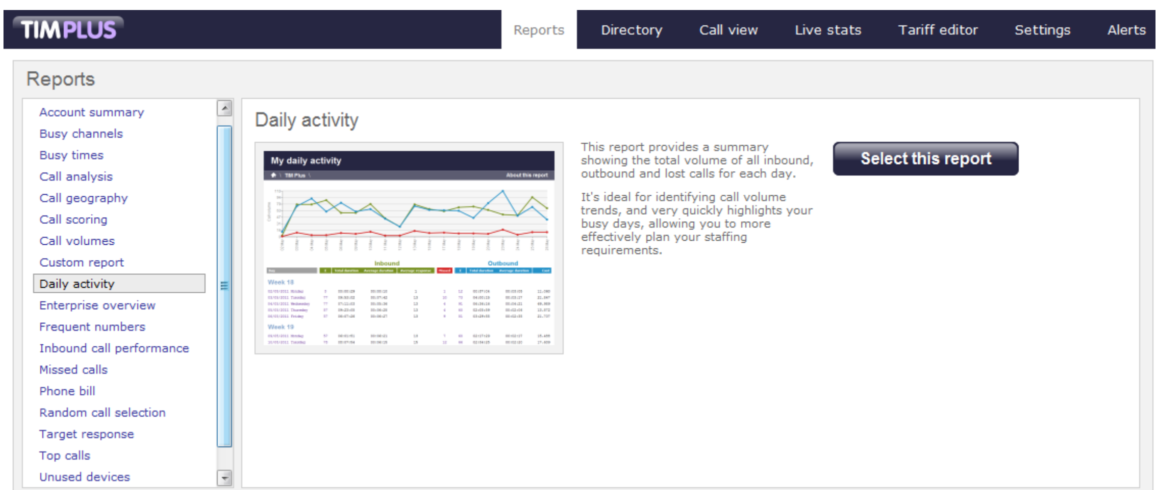
The Daily Activity report provides a summary showing the volume of all inbound, outbound and missed calls for each day. It is useful for organisations whose call traffic fluctuates throughout the year because, by identifying your busiest periods, it allows you to more effectively plan your staffing requirements.




| Day ▲ | Inbound Σ | Total duration | Average duration | Average response | Missed | Outbound Σ | Total duration | Average duration | Cost |
|---|---|---|---|---|---|---|---|---|---|
| **Week 9** | | | | | | | | | |
| 01/03/2012 Thursday | 67 | 01:23:43 | 00:01:14 | 1 | - | 37 | 00:11:15 | 00:00:18 | 1.799 |
| 02/03/2012 Friday | 64 | 01:38:29 | 00:01:32 | 1 | - | 40 | 00:14:01 | 00:00:21 | 2.169 |
| 03/03/2012 Saturday | 57 | 01:17:01 | 00:01:21 | - | - | 39 | 00:13:50 | 00:00:21 | 1.920 |
| 04/03/2012 Sunday | 56 | 01:05:03 | 00:01:09 | 1 | - | 46 | 00:12:45 | 00:00:16 | 1.948 |
| **Week 10** | | | | | | | | | |
| 05/03/2012 Monday | 66 | 01:18:40 | 00:01:11 | 1 | - | 42 | 00:14:16 | 00:00:20 | 2.307 |
| 06/03/2012 Tuesday | 62 | 01:41:42 | 00:01:38 | 1 | - | 34 | 00:08:26 | 00:00:14 | 1.566 |
| 07/03/2012 Wednesday | 60 | 01:44:11 | 00:01:44 | 1 | - | 39 | 00:10:10 | 00:00:15 | 1.919 |
| 08/03/2012 Thursday | 59 | 01:39:05 | 00:01:40 | - | - | 42 | 00:18:10 | 00:00:25 | 2.593 |
| 09/03/2012 Friday | 58 | 01:11:46 | 00:01:14 | 1 | - | 37 | 00:15:11 | 00:00:24 | 2.180 |
| 10/03/2012 Saturday | 58 | 01:22:38 | 00:01:25 | 1 | - | 40 | 00:08:36 | 00:00:12 | 1.512 |
| 11/03/2012 Sunday | 58 | 01:32:13 | 00:01:35 | 1 | - | 37 | 00:09:25 | 00:00:15 | 1.389 |

## Running the report

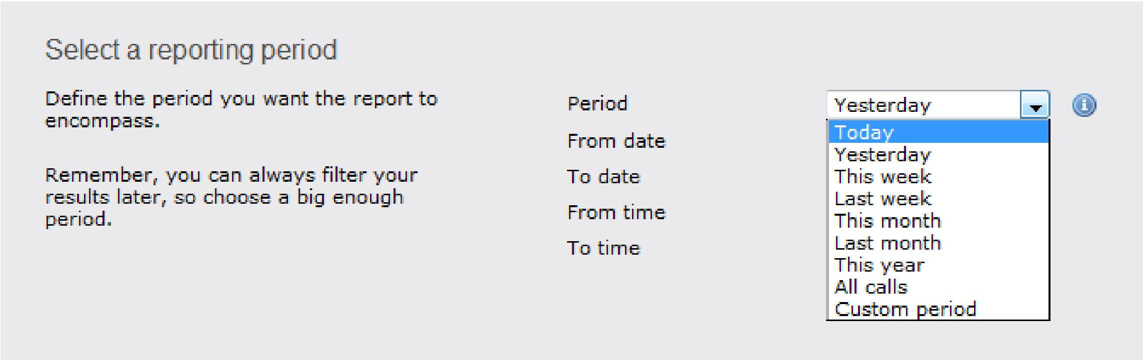
On the **Reports** screen, select the **Daily activity** report from the left-hand pane and click the Select this report button.




A new window will appear, where you can set the parameters of your report.

### Selecting the reporting period

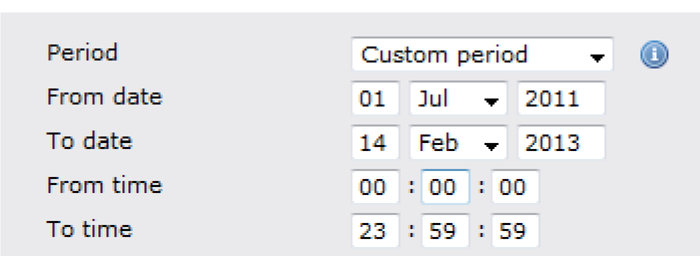
For each report, you must specify a time span that covers the calls you want the report to include. This is known as the "reporting period".




There are several preset reporting periods available for selection, based on the standard Gregorian calendar. The following table describes how the start and end times are defined for each preset period:

| Period | Description |
|---|---|
| **Today** | The start and end dates are set to the current date. The start time is set to `00:00:00` and the end time to `23:59:59`. |
| **Yesterday** | The start and end dates are set to the current date minus one day. The start time is set to `00:00:00` and the end time to `23:59:59`. |
| **This week** | The start date is set to the first day of the current week (normally Monday). The end date is set to the current day. The start time is set to `00:00:00` and the end time to the current time. |
| **Last week** | The start date is set to the date of the last Monday, and the end date is set to the start date plus seven days. The start time is set to `00:00:00` and the end time to `23:59:59`. |
| **This month** | The start date is set to the first day of the current month. The end date is set to the current day. The start time is set to `00:00:00` and the end time to the current time. |
| **Last month** | The start date for this period is set in three stages: The day is set to the first day of the month. The month is set to the previous month. The year is set to the current year, unless it is currently January, in which case, the previous year is used. The start and end times are set to `00:00:00` and `23:59:59` respectively. |
| **This year** | The start date is set to the first day of the first month of the current year, whilst the end date is set to today's date. The start and end times are set to `00:00:00` and `23:59:59` respectively. |
| **All calls** | The start and end dates and times are set to the dates and times of the first and last call in the entire call database, respectively. |

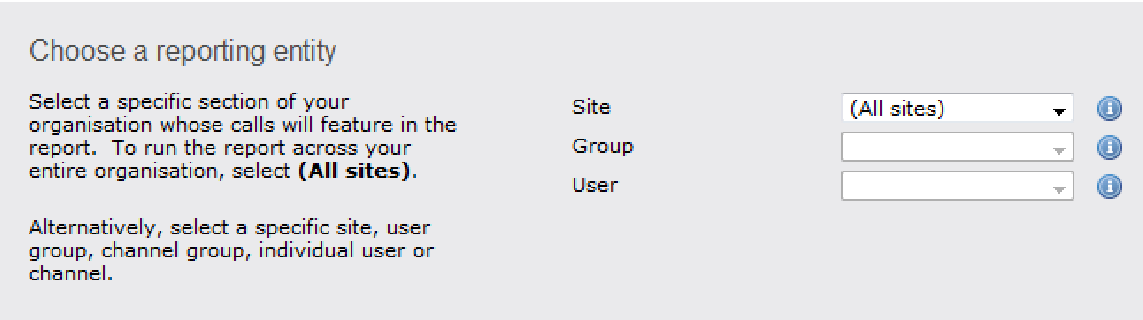
In addition to the presets described above, it is possible to specify a custom reporting period by choosing `Custom period` from the `Period` drop-down list and specifying your own `Start date`, `Start time`, `End date` and `End time` of the period you want to report on.




Once you have set the reporting period, click on the Next button to set additional report parameters and options, or select the Finish button to run the report immediately.

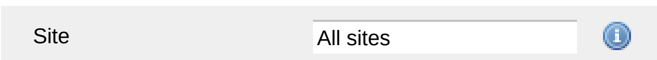
## Selecting the reporting entity

The `Reporting entity` parameter allows you to select the part of your organisation whose calls the report should include, e.g. a site, a group or an individual user.



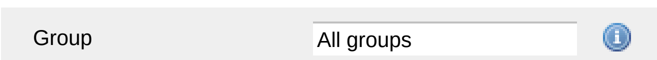

### Site

To report on a particular site, select it from the drop-down list or select `All sites` .



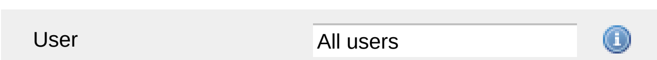

### Group

If a site has been selected, you are able to further limit the report's results by selecting a group from the drop-down list.




### User

If both a site and group have been selected, you can further limit the report's results to include only calls involving a particular user, by selecting that user from the drop-down list.

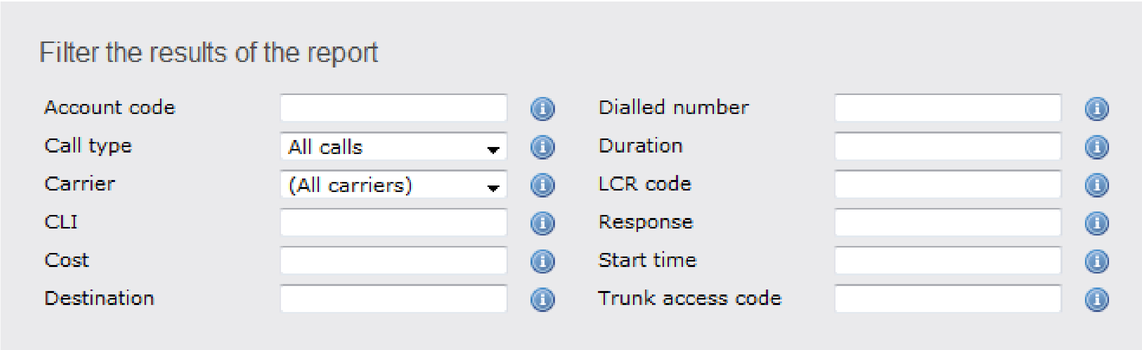



If your web account is restricted to a specific site or group, only those entities to which you have access will be available in the drop-down lists.

Once you have selected the scope of your report, click on the **Next** button to set additional report parameters and options, or to run the report immediately, click the **Finish** button.

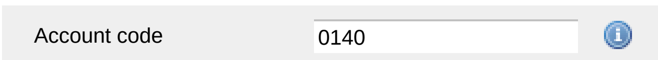
## Selecting the report filters

You can limit the results of your report by choosing one or more of the following filters:




**Account code**

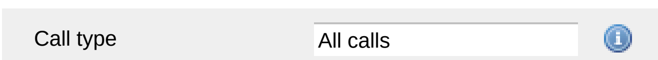
To produce a report consisting only of calls that were made using a particular account code, enter the account code in the field provided.




To report on more than one account code, separate each code using a comma.

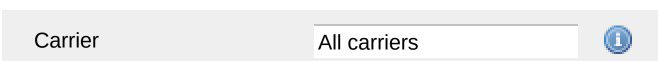
**Call type**

This filter allows you to define the type of call you want to report on, in terms of where the call originated and where it was delivered, e.g. incoming, outgoing, internal etc.  To report on all types of call, set this to **`All calls`**.




**Carrier**

If you use more than one carrier, you can limit the results to include only calls that were made using a specific carrier.

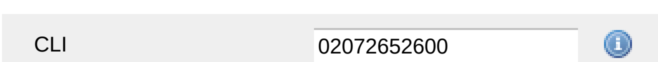



If you use only one carrier, there will be no drop-down list available and no option to choose a carrier.

**CLI**

Calling Line Identification (CLI) is the telephone number of the remote caller in an incoming call scenario.

You can report on calls that originate from a specific CLI or those whose CLI matches a particular pattern of digits. For example, to report on all incoming calls from Tri-Line, you could enter **`02072652600`**.




You can use the `!` symbol to explicitly exclude a CLI from the report's results, and/or the `*` symbol as a wildcard in digit pattern matching.  For example, to exclude calls from Tri-Line, but include all others, you could use **`!020726526*`**. To report on more than one CLI, use a comma to separate each entry.

**Cost**

You can define a cost filter to include calls above or below specific values by entering your criteria, as shown below:

| | |
|---|---|
| Cost | <2.00 |

You can specify a cost range by using the `-` symbol; to specify limits, use the comparison operators, **>**, **<**, and **!** .

### Destination

If you want to filter calls to a specific, known destination, type the name of the destination in the text box provided. This filter accepts the **!** and ***** symbols for excluding values and specifying partial matches, respectively.

For example, if you wanted to exclude all calls to France, you could enter **`!France*`**, as shown below:

| | |
|---|---|
| Destination | !France* |

### Dialled number

To filter calls to a specific dialled number, type it in the text box provided. The dialled number is defined as the number that is dialled (in the case of an outbound call), or the DDI number that the remote party dialled to reach a particular extension or group (in the case of an inbound call).

To filter calls to a specific area, a partial number can be entered (e.g. **`0033`** for calls to France).

| | |
|---|---|
| Dialled number | 0033 |

You can use the `!` symbol to explicitly exclude a dialled number from the report's results, and/or the `*` symbol as a wildcard in digit pattern matching.  For example, to exclude calls to Tri-Line, but include all others, you could use **`!020726526*`**). To report on more than one dialled number, use a comma to separate each entry.

### Duration

To filter calls above or below a particular duration, enter the desired duration in seconds.

| | |
|---|---|
| Duration | >1800 |

You can specify a duration range by using the `-` symbol; to specify limits, use the comparison operators, **>**, **<**, and **!** .

In the above example, the report will return only calls longer than 1800 seconds (30 minutes).

### LCR code

To filter your results to include only calls that used a Least Cost Routing (LCR) code, enter it in the text box provided.

| | |
|---|---|
| LCR code | 162 |

You can use the `!` symbol to explicitly exclude a LCR code from the report's results, and/or the `*` symbol as a wildcard in digit pattern matching.  For example, to exclude calls made using all LCR codes beginning **`162`**, you could enter **`!162*`**. To report on more than one LCR code, use a comma to separate each entry.

### Response

This option allows you to filter calls based on their response time, measured in seconds. Specify the desired response time threshold in the text box provided.

| | |
|---|---|
| Response time | >10 |

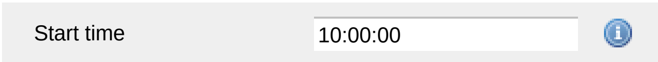
In the above example, the search results will display calls that have a response time greater than 10 seconds.

You can specify a response time range by using the `-` symbol and; to specify limits, use the comparison operators, **>**, **<**, and **!** .

### Start time

This option allows you to filter calls based on the time the call started. Specify the start time in the text box provided using the **`hh:mm:ss`** format.

For example, to include only calls that began after 10 am, you could enter **10:00:00** in the **Start time** field, as shown below:



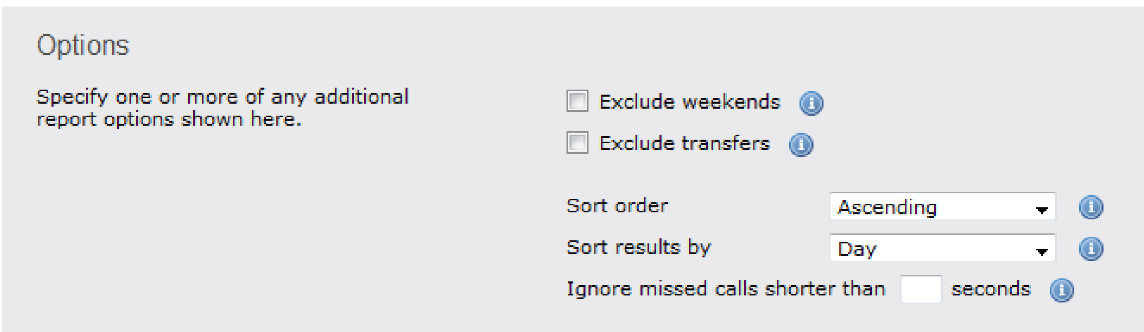

### Trunk access code

If your telephone system uses trunk access codes to connect calls using specific channels, you can limit your report's results to include only calls made using those codes. Specify the trunk access code in the text box provided.


You can use the **!** symbol to explicitly exclude a trunk access code from the report's results, and/or the ***** symbol as a wildcard in digit pattern matching. For example, to exclude calls made using the **9** trunk access code, you could enter **!9**. To report on more than one trunk access code, use a comma to separate each entry.

## Selecting the report options

This section enables you to further narrow down your report results, by excluding certain types of calls. It also allows you to sort the report's results in a particular manner.

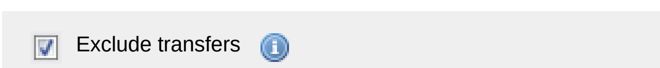



### Exclude weekends

To exclude weekend calls from your report's results, select the **Exclude weekends** option.

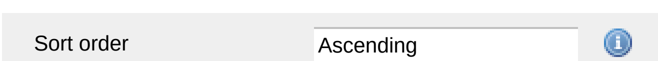

### Exclude transfers

To exclude transferred calls from your report's results, select the **Exclude transfers** option.



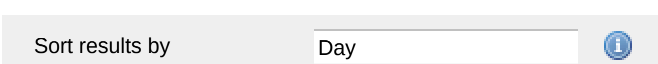

### Sort order

Choose from the **Sort order** drop-down list whether you want the results of the report to appear in ascending or descending order.



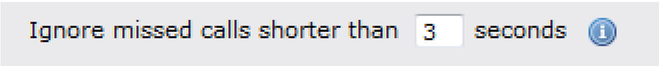

### Sort results by

To sort your report's results by a particular column, select it from the **Sort results by** drop-down list.



#### Ignore short missed calls

Missed calls below a certain duration can sometimes pollute the meaning of a report's results. To exclude such short calls from your report, enter a duration threshold in the text box provided, e.g. to ignore calls below 3 seconds, enter **3** .



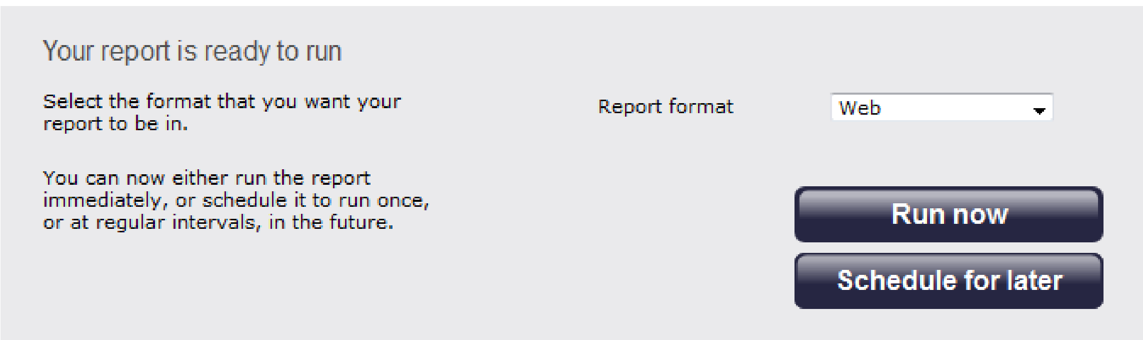

### Selecting the report format

This section allows you to choose the media format of your completed report. The formats available are **Web**, **PDF**, **Excel**, **CSV** and **XML**.

More details about each report format are available in the Setting the report format section above.

## Creating the report

When you have selected a reporting period and have chosen any filters and options, you can either run the report immediately by clicking on the Run now button, or schedule it for future delivery.



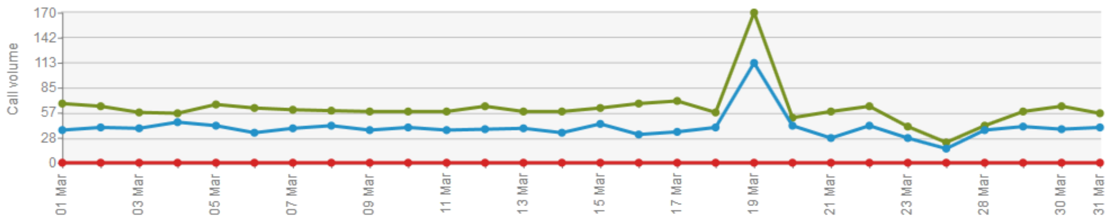

## The report's results

Below is an example of this report's output in **Web** format, showing the total volume of all inbound, outbound and missed calls for each day.

## My daily activity

2012-05-17 15:44:25

\ TIM Plus \ London \ Accounts \ — About this report




| Day ▲ | Inbound Σ | Total duration | Average duration | Average response | Missed | Outbound Σ | Total duration | Average duration | Cost |
|---|---|---|---|---|---|---|---|---|---|
| **Week 9** | | | | | | | | | |
| 01/03/2012 Thursday | 67 | 01:23:43 | 00:01:14 | 1 | - | 37 | 00:11:15 | 00:00:18 | 1.799 |
| 02/03/2012 Friday | 64 | 01:38:29 | 00:01:32 | 1 | - | 40 | 00:14:01 | 00:00:21 | 2.169 |
| 03/03/2012 Saturday | 57 | 01:17:01 | 00:01:21 | - | - | 39 | 00:13:50 | 00:00:21 | 1.920 |
| 04/03/2012 Sunday | 56 | 01:05:03 | 00:01:09 | 1 | - | 46 | 00:12:45 | 00:00:16 | 1.948 |
| **Week 10** | | | | | | | | | |
| 05/03/2012 Monday | 66 | 01:18:40 | 00:01:11 | 1 | - | 42 | 00:14:16 | 00:00:20 | 2.307 |
| 06/03/2012 Tuesday | 62 | 01:41:42 | 00:01:38 | 1 | - | 34 | 00:08:26 | 00:00:14 | 1.566 |
| 07/03/2012 Wednesday | 60 | 01:44:11 | 00:01:44 | 1 | - | 39 | 00:10:10 | 00:00:15 | 1.919 |
| 08/03/2012 Thursday | 59 | 01:39:05 | 00:01:40 | - | - | 42 | 00:18:10 | 00:00:25 | 2.593 |
| 09/03/2012 Friday | 58 | 01:11:46 | 00:01:14 | 1 | - | 37 | 00:15:11 | 00:00:24 | 2.180 |
| 10/03/2012 Saturday | 58 | 01:22:38 | 00:01:25 | 1 | - | 40 | 00:08:36 | 00:00:12 | 1.512 |
| 11/03/2012 Sunday | 58 | 01:32:13 | 00:01:35 | 1 | - | 37 | 00:09:25 | 00:00:15 | 1.389 |

As with all reports produced by TIM Plus, each page of the report includes the following information:

- the report's title
- the date and time that the report was generated
- the name of the report, if applicable

The **Web** format is the most interactive of all formats: all column headers are click-sortable and most graphical and tabular elements can be drilled down into, allowing deeper analysis of your results. By clicking on the **About this report** link at the top-right corner of the page, you can review any filters and options that have been applied to the report.

The body of the report consists of a table showing a summary of your incoming and outgoing calls for each day during the period you selected. Each row shows the following information:

| Header | Description |
|---|---|
| **Day** | The day of the week that the data covers |
| **Inbound** | • **:** The total volume of calls received<br>• **Total duration:** The total length of time spent on incoming calls<br>• **Average duration:** The average call duration of inbound calls<br>• **Average response:** The average length of time taken to answer a call<br>• **Duration Avg:** The average length of time a caller waited before abandoning the call (in hours, minutes, seconds) |
| **Missed** | The missed calls column is always displayed as red. It allows you to re-order your details based on the total number of missed calls for the date shown. |

| | |
|---|---|
| **Outbound** | ▪ **:** The total volume of outbound calls<br>▪ **Total duration:** The total length of time spent on outbound calls<br>▪ **Average duration:** The average duration of outbound calls<br>▪ **Cost**: The total cost of all calls made, irrespective of each call's local currency |

To modify your report to cover a larger organisational scope, click on an element of the breadcrumb as shown below:

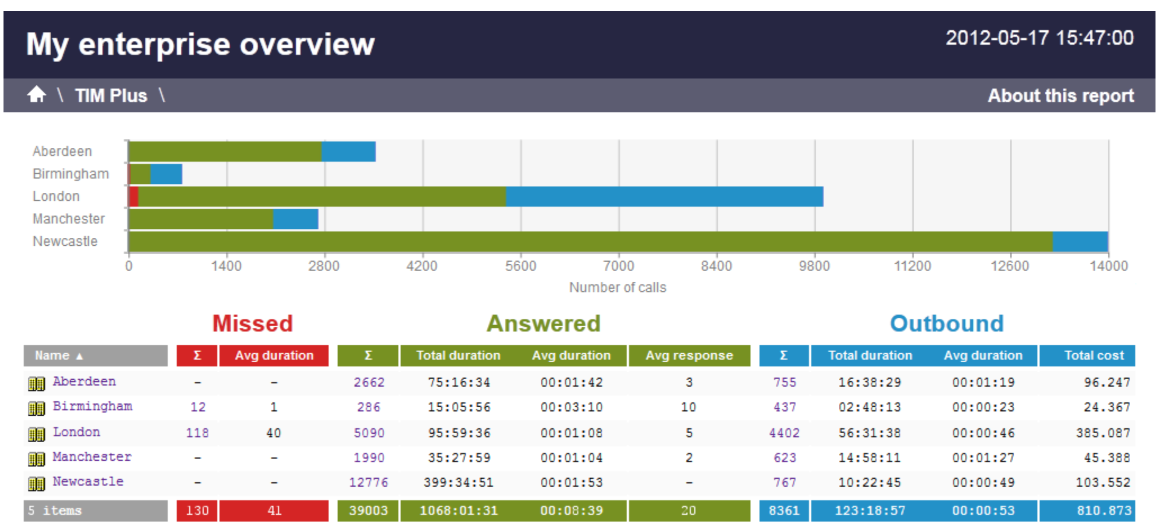

## Enterprise Overview

**The Enterprise Overview report**



### Introduction

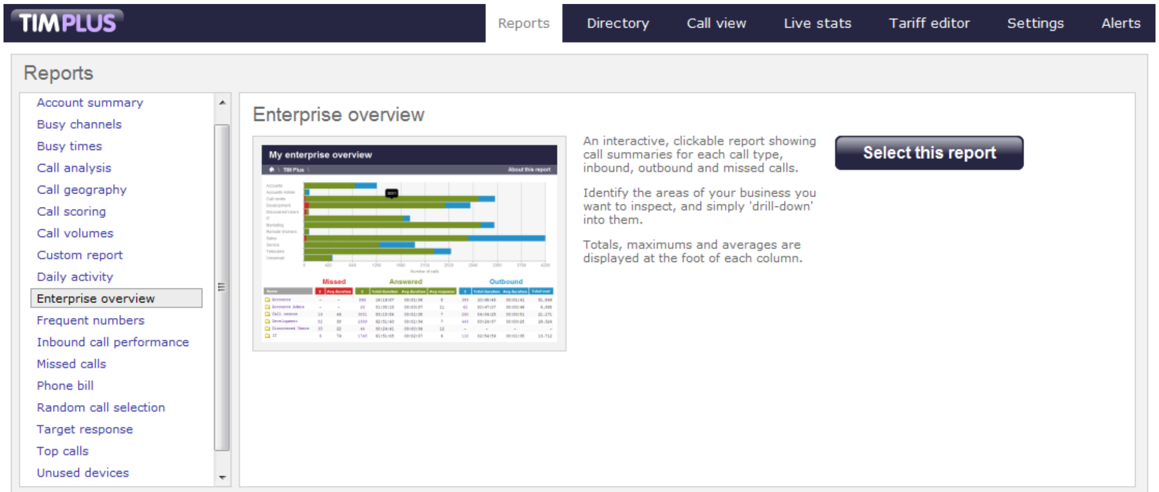
The Enterprise Overview report is an interactive, click-able report, showing call summaries for each type of call - inbound, outbound and missed. The report is useful for comparing call statistics between different parts of your organisation and allows you to drill-down into each value to see the same call information for subsequent groups or users. Totals, maximums and averages are displayed at the foot of each column.




| | Missed | | Answered | | | | Outbound | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Name ▲ | Σ | Avg duration | Σ | Total duration | Avg duration | Avg response | Σ | Total duration | Avg duration | Total cost |
| Aberdeen | – | – | 2662 | 75:16:34 | 00:01:42 | 3 | 755 | 16:38:29 | 00:01:19 | 96.247 |
| Birmingham | 12 | 1 | 286 | 15:05:56 | 00:03:10 | 10 | 437 | 02:48:13 | 00:00:23 | 24.367 |
| London | 118 | 40 | 5090 | 95:59:36 | 00:01:08 | 5 | 4402 | 56:31:38 | 00:00:46 | 385.087 |
| Manchester | – | – | 1990 | 35:27:59 | 00:01:04 | 2 | 623 | 14:58:11 | 00:01:27 | 45.388 |
| Newcastle | – | – | 12776 | 399:34:51 | 00:01:53 | – | 767 | 10:22:45 | 00:00:49 | 103.552 |
| 5 items | 130 | 41 | 39003 | 1068:01:31 | 00:08:39 | 20 | 8361 | 123:18:57 | 00:00:53 | 810.873 |

### Running the report

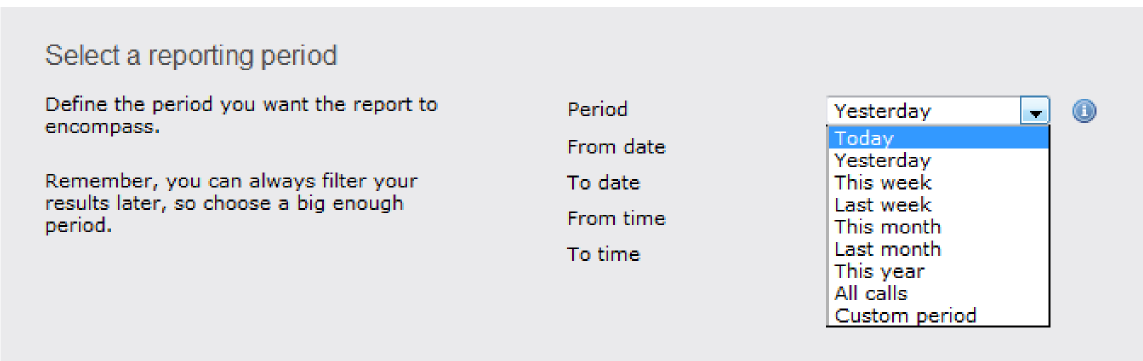
On the `Reports` screen, select the `Enterprise overview` report from the left-hand pane and click the Select this report bu tton.




A new window will appear, where you can set the parameters of your report.

## Selecting the reporting period

For each report, you must specify a time span that covers the calls you want the report to include. This is known as the "reporting period".

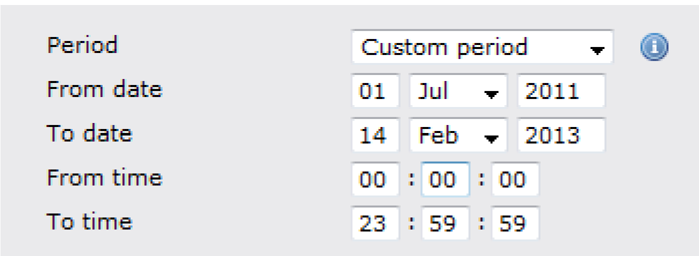



There are several preset reporting periods available for selection, based on the standard Gregorian calendar. The following table describes how the start and end times are defined for each preset period:

| Period | Description |
|---|---|
| **Today** | The start and end dates are set to the current date. The start time is set to `00:00:00` and the end time to `23:59:59`. |
| **Yesterday** | The start and end dates are set to the current date minus one day. The start time is set to `00:00:00` and the end time to `23:59:59`. |
| **This week** | The start date is set to the first day of the current week (normally Monday). The end date is set to the current day. The start time is set to `00:00:00` and the end time to the current time. |
| **Last week** | The start date is set to the date of the last Monday, and the end date is set to the start date plus seven days. The start time is set to `00:00:00` and the end time to `23:59:59`. |
| **This month** | The start date is set to the first day of the current month. The end date is set to the current day. The start time is set to `00:00:00` and the end time to the current time. |

| | |
|---|---|
| **Last month** | The start date for this period is set in three stages: The day is set to the first day of the month. The month is set to the previous month. The year is set to the current year, unless it is currently January, in which case, the previous year is used. The start and end times are set to `00:00:00` and `23:59:59` respectively. |
| **This year** | The start date is set to the first day of the first month of the current year, whilst the end date is set to today's date. The start and end times are set to `00:00:00` and `23:59:59` respectively. |
| **All calls** | The start and end dates and times are set to the dates and times of the first and last call in the entire call database, respectively. |

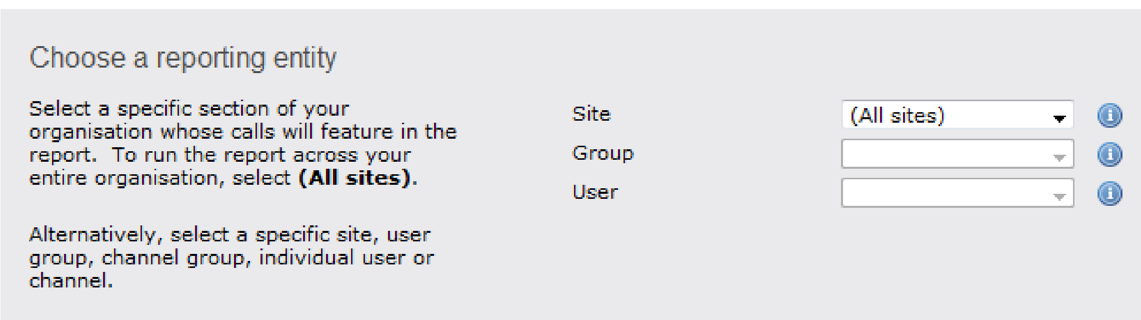
In addition to the presets described above, it is possible to specify a custom reporting period by choosing `Custom period` from the `Period` drop-down list and specifying your own `Start date`, `Start time`, `End date` and `End time` of the period you want to report on.




Once you have set the reporting period, click on the Next button to set additional report parameters and options, or select the Finish button to run the report immediately.

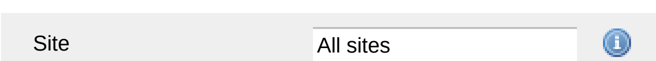
### Selecting the reporting entity

The `Reporting entity` parameter allows you to select the part of your organisation whose calls the report should include, e.g. a site, a group or an individual user.



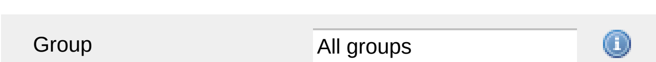

#### Site

To report on a particular site, select it from the drop-down list or select `All sites` .




#### Group

If a site has been selected, you are able to further limit the report's results by selecting a group from the drop-down list.




#### User

If both a site and group have been selected, you can further limit the report's results to include only calls involving a particular user, by selecting that user from the drop-down list.

| | |
|---|---|
| User | All users |

If your web account is restricted to a specific site or group, only those entities to which you have access will be available in the drop-down lists.

Once you have selected the scope of your report, click on the Next button to set additional report parameters and options, or to run the report immediately, click the Finish button.

### Selecting the report filters

You can limit the results of your report by choosing one or more of the following filters:

**Filter the results of the report**

| | | | |
|---|---|---|---|
| Account code | | Dialled number | |
| Call type | All calls | Duration | |
| Carrier | (All carriers) | LCR code | |
| CLI | | Response | |
| Cost | | Start time | |
| Destination | | Trunk access code | |

#### Account code

To produce a report consisting only of calls that were made using a particular account code, enter the account code in the field provided.

| | |
|---|---|
| Account code | 0140 |

To report on more than one account code, separate each code using a comma.

#### Call type

This filter allows you to define the type of call you want to report on, in terms of where the call originated and where it was delivered, e.g. incoming, outgoing, internal etc. To report on all types of call, set this to `All calls`.

| | |
|---|---|
| Call type | All calls |

#### Carrier

If you use more than one carrier, you can limit the results to include only calls that were made using a specific carrier.

| | |
|---|---|
| Carrier | All carriers |

If you use only one carrier, there will be no drop-down list available and no option to choose a carrier.

### CLI

Calling Line Identification (CLI) is the telephone number of the remote caller in an incoming call scenario.

You can report on calls that originate from a specific CLI or those whose CLI matches a particular pattern of digits. For example, to report on all incoming calls from Tri-Line, you could enter **`02072652600`**.

| | |
|---|---|
| CLI | 02072652600 |

You can use the `!` symbol to explicitly exclude a CLI from the report's results, and/or the `*` symbol as a wildcard in digit pattern matching. For example, to exclude calls from Tri-Line, but include all others, you could use **`!020726526*`**. To report on more than one CLI, use a comma to separate each entry.

### Cost

You can define a cost filter to include calls above or below specific values by entering your criteria, as shown below:

| | |
|---|---|
| Cost | <2.00 |

You can specify a cost range by using the `-` symbol; to specify limits, use the comparison operators, **`>`**, **`<`**, and `!` .

### Destination

If you want to filter calls to a specific, known destination, type the name of the destination in the text box provided. This filter accepts the **`!`** and **`*`** symbols for excluding values and specifying partial matches, respectively.

For example, if you wanted to exclude all calls to France, you could enter **`!France*`**, as shown below:

| | |
|---|---|
| Destination | !France* |

### Dialled number

To filter calls to a specific dialled number, type it in the text box provided. The dialled number is defined as the number that is dialled (in the case of an outbound call), or the DDI number that the remote party dialled to reach a particular extension or group (in the case of an inbound call).

To filter calls to a specific area, a partial number can be entered (e.g. **`0033`** for calls to France).

| | |
|---|---|
| Dialled number | 0033 |

You can use the `!` symbol to explicitly exclude a dialled number from the report's results, and/or the `*` symbol as a wildcard in digit pattern matching. For example, to exclude calls to Tri-Line, but include all others, you could use **`!020726526*`**). To report on more than one dialled number, use a comma to separate each entry.

### Duration

To filter calls above or below a particular duration, enter the desired duration in seconds.

| | |
|---|---|
| Duration | >1800 |

You can specify a duration range by using the `-` symbol; to specify limits, use the comparison operators, **`>`**, **`<`**, and `!` .

In the above example, the report will return only calls longer than 1800 seconds (30 minutes).

### LCR code

To filter your results to include only calls that used a Least Cost Routing (LCR) code, enter it in the text box provided.

| | |
|---|---|
| LCR code | 162 |

You can use the `!` symbol to explicitly exclude a LCR code from the report's results, and/or the `*` symbol as a wildcard in digit pattern matching. For example, to exclude calls made using all LCR codes beginning `162`, you could enter `!162*`. To report on more than one LCR code, use a comma to separate each entry.

#### Response

This option allows you to filter calls based on their response time, measured in seconds. Specify the desired response time threshold in the text box provided.

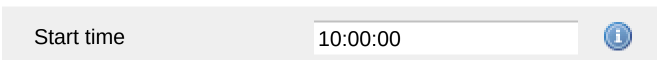

In the above example, the search results will display calls that have a response time greater than 10 seconds.

You can specify a response time range by using the `-` symbol and; to specify limits, use the comparison operators, `>`, `<`, and `!` .

#### Start time

This option allows you to filter calls based on the time the call started. Specify the start time in the text box provided using the `hh:mm:ss` format.

For example, to include only calls that began after 10 am, you could enter `10:00:00` in the `Start time` field, as shown below:



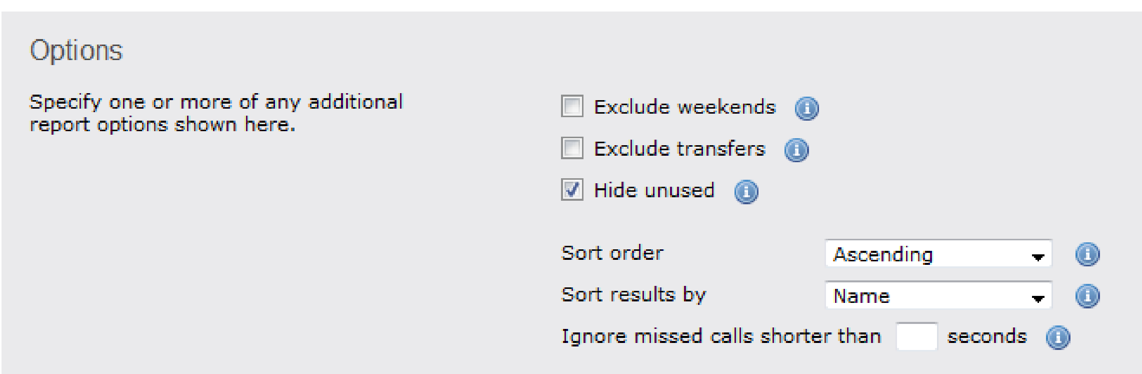

#### Trunk access code

If your telephone system uses trunk access codes to connect calls using specific channels, you can limit your report's results to include only calls made using those codes. Specify the trunk access code in the text box provided.


You can use the `!` symbol to explicitly exclude a trunk access code from the report's results, and/or the `*` symbol as a wildcard in digit pattern matching. For example, to exclude calls made using the `9` trunk access code, you could enter `!9`. To report on more than one trunk access code, use a comma to separate each entry.

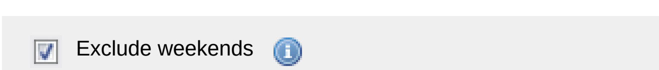
### Selecting the report options

This section enables you to further narrow down your report results, by excluding certain types of calls. It also allows you to sort the report's results in a particular manner.



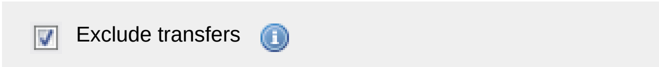

#### Exclude weekends

To exclude weekend calls from your report's results, select the `Exclude weekends` option.



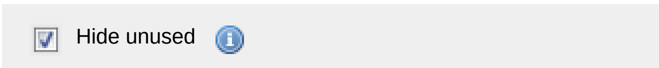

#### Exclude transfers

To exclude transferred calls from your report's results, select the **`Exclude transfers`** option.



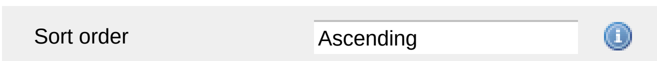

#### Hide unused

To exclude unused extensions from your report's results, select the **`Hide unused`** option.



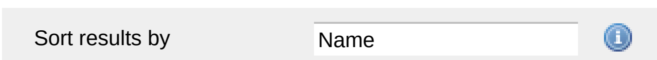

#### Sort order

Choose from the **`Sort order`** drop-down list whether you want the results of the report to appear in ascending or descending order.



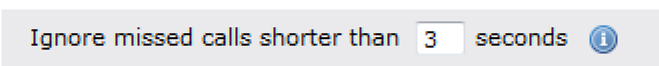

#### Sort results by

To sort your report's results by a particular column, select it from the **`Sort results by`** drop-down list.




#### Ignore short missed calls

Missed calls below a certain duration can sometimes pollute the meaning of a report's results. To exclude such short calls from your report, enter a duration threshold in the text box provided, e.g. to ignore calls below 3 seconds, enter **3** .



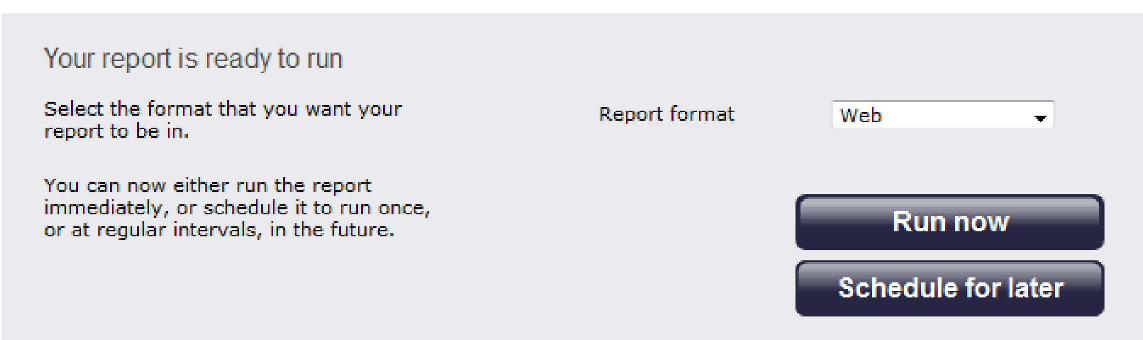

### Selecting the report format

This section allows you to choose the media format of your completed report. The formats available are **`Web`**, **`PDF`**, **`Excel`**, **`CSV`** and **`XML`**.

More details about each report format are available in the Setting the report format section above.

## Creating the report

When you have selected a reporting period and have chosen any filters and options, you can either run the report immediately by clicking on the Run now button, or schedule it for future delivery.



## The report's results

The results of the report show a summary of call volumes - organised by call type - for the report entity you selected. By clicking on the **About this report** link at the top-right corner of the page, you can review any filters and options that have been applied to the report.

As with all reports produced by TIM Plus, each page of the report includes the following information:

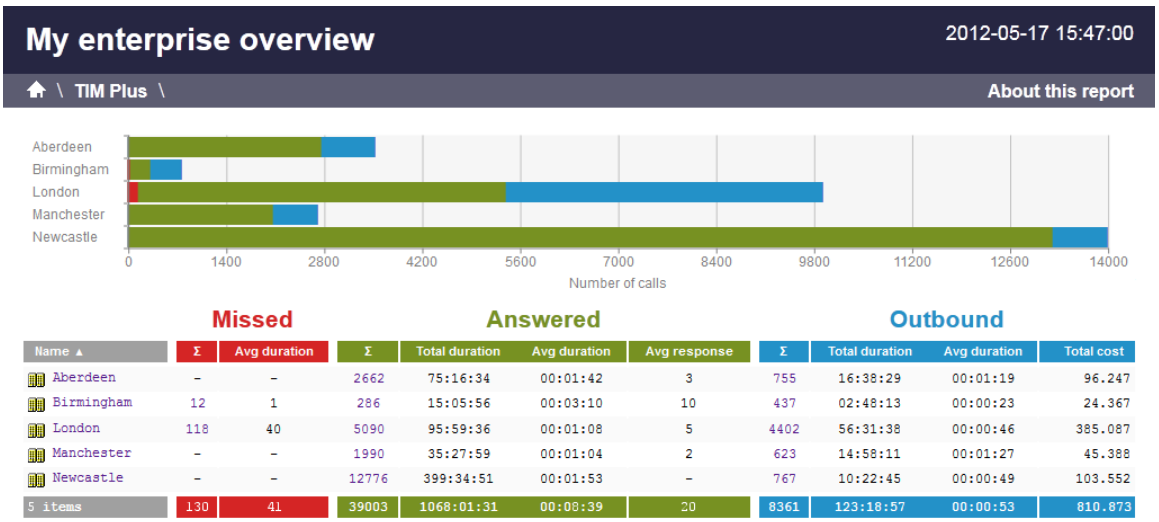
- the report's title
- the date and time that the report was generated
- the name of the report, if applicable

The **Web** format is the most interactive of all formats: all column headers are click-sortable and most graphical and tabular elements can be drilled down into, allowing deeper analysis of your results.

The **Web** format allows you to see the results of the report at different organisational levels: site level, group level, user level and as an itemised list.

### Site level

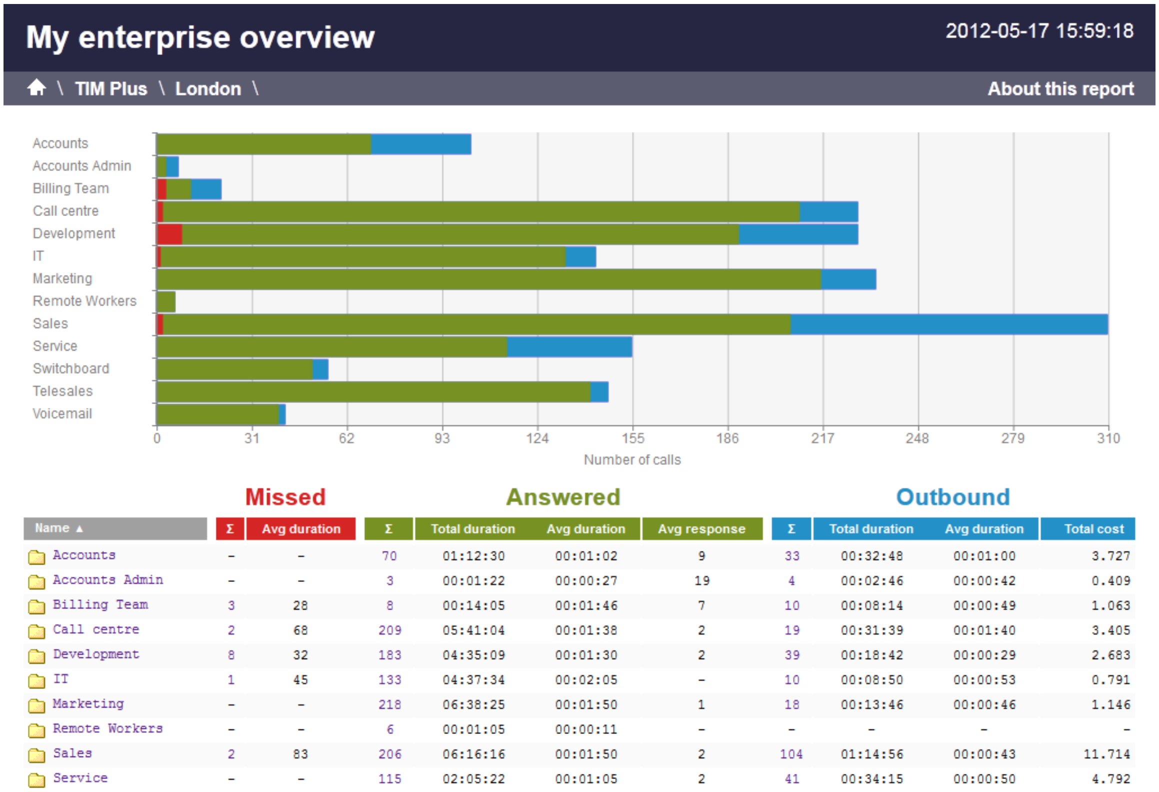
At site level, the report will show call summary information for each site, as shown below:




| Name ▲ | Missed Σ | Missed Avg duration | Answered Σ | Answered Total duration | Answered Avg duration | Answered Avg response | Outbound Σ | Outbound Total duration | Outbound Avg duration | Outbound Total cost |
|---|---|---|---|---|---|---|---|---|---|---|
| Aberdeen | - | - | 2662 | 75:16:34 | 00:01:42 | 3 | 755 | 16:38:29 | 00:01:19 | 96.247 |
| Birmingham | 12 | 1 | 286 | 15:05:56 | 00:03:10 | 10 | 437 | 02:48:13 | 00:00:23 | 24.367 |
| London | 118 | 40 | 5090 | 95:59:36 | 00:01:08 | 5 | 4402 | 56:31:38 | 00:00:46 | 385.087 |
| Manchester | - | - | 1990 | 35:27:59 | 00:01:04 | 2 | 623 | 14:58:11 | 00:01:27 | 45.388 |
| Newcastle | - | - | 12776 | 399:34:51 | 00:01:53 | - | 767 | 10:22:45 | 00:00:49 | 103.552 |
| 5 items | 130 | 41 | 39003 | 1068:01:31 | 00:08:39 | 20 | 8361 | 123:18:57 | 00:00:53 | 810.873 |

### Group level

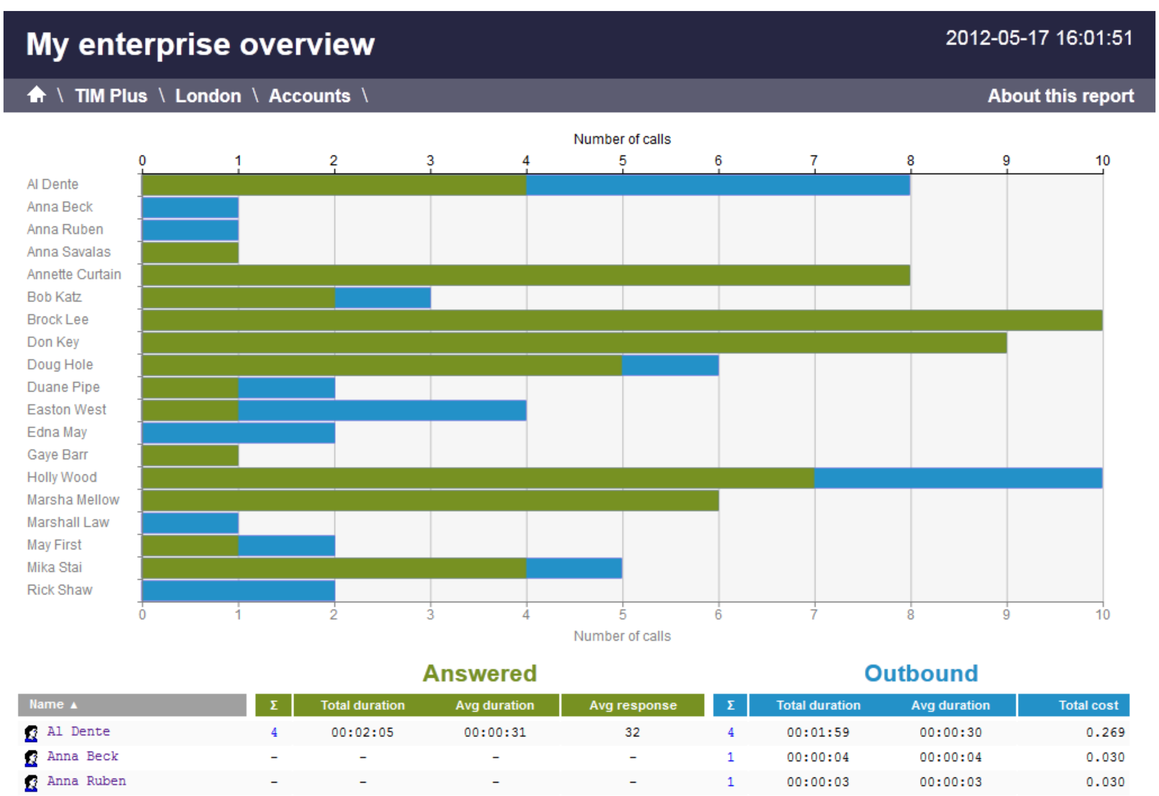
By clicking on a site, you can drill down into group-level information, as shown below:




| Name ▲ | Σ | Avg duration | Σ | Total duration | Avg duration | Avg response | Σ | Total duration | Avg duration | Total cost |
|---|---|---|---|---|---|---|---|---|---|---|
| Accounts | - | - | 70 | 01:12:30 | 00:01:02 | 9 | 33 | 00:32:48 | 00:01:00 | 3.727 |
| Accounts Admin | - | - | 3 | 00:01:22 | 00:00:27 | 19 | 4 | 00:02:46 | 00:00:42 | 0.409 |
| Billing Team | 3 | 28 | 8 | 00:14:05 | 00:01:46 | 7 | 10 | 00:08:14 | 00:00:49 | 1.063 |
| Call centre | 2 | 68 | 209 | 05:41:04 | 00:01:38 | 2 | 19 | 00:31:39 | 00:01:40 | 3.405 |
| Development | 8 | 32 | 183 | 04:35:09 | 00:01:30 | 2 | 39 | 00:18:42 | 00:00:29 | 2.683 |
| IT | 1 | 45 | 133 | 04:37:34 | 00:02:05 | - | 10 | 00:08:50 | 00:00:53 | 0.791 |
| Marketing | - | - | 218 | 06:38:25 | 00:01:50 | 1 | 18 | 00:13:46 | 00:00:46 | 1.146 |
| Remote Workers | - | - | 6 | 00:01:05 | 00:00:11 | - | - | - | - | - |
| Sales | 2 | 83 | 206 | 06:16:16 | 00:01:50 | 2 | 104 | 01:14:56 | 00:00:43 | 11.714 |
| Service | - | - | 115 | 02:05:22 | 00:01:05 | 2 | 41 | 00:34:15 | 00:00:50 | 4.792 |

### User level

When drilling down into a group, a new report is produced, showing the same summary information for each individual user within that group, as shown below:




| Name ▲ | Σ | Total duration | Avg duration | Avg response | Σ | Total duration | Avg duration | Total cost |
|---|---|---|---|---|---|---|---|---|
| Al Dente | 4 | 00:02:05 | 00:00:31 | 32 | 4 | 00:01:59 | 00:00:30 | 0.269 |
| Anna Beck | - | - | - | - | 1 | 00:00:04 | 00:00:04 | 0.030 |
| Anna Ruben | - | - | - | - | 1 | 00:00:03 | 00:00:03 | 0.030 |

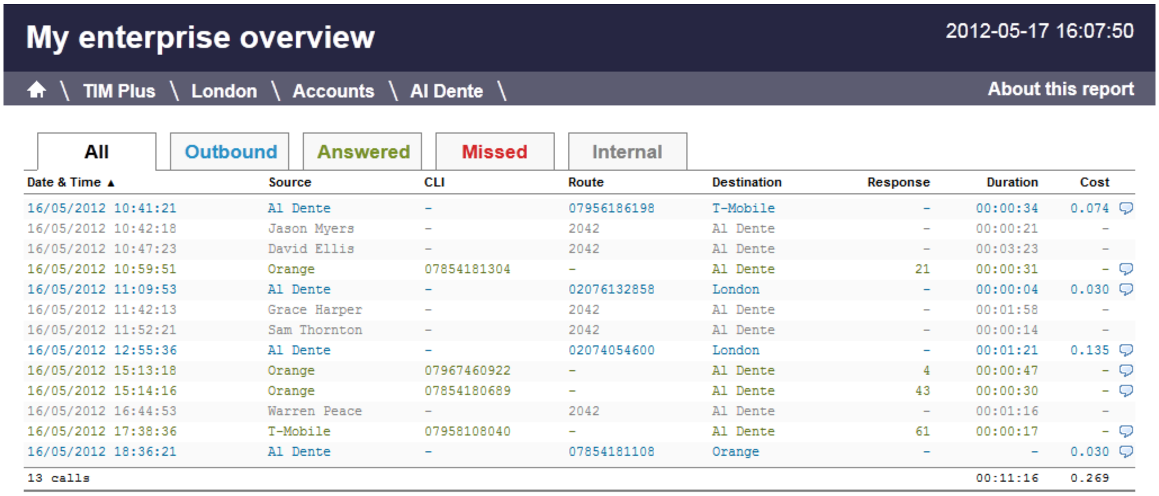
At all organisational levels, the body of the report consists of a table containing call summary information about each entity. The column headers of this table are described below:

| Header | Description |
|---|---|
| **Name** | The name of the entity for each line of data |
| **Missed** | ▪ **:** The total number of missed calls<br>▪ **Avg duration:** The average duration of all missed calls (in seconds) |
| **Answered** | ▪ **:** The number of incoming calls answered by extensions within the selected entity, including transferred calls<br>▪ **Total duration:** The total duration of all incoming calls (in hours, minutes and seconds)<br>▪ **Avg duration:** The average duration of all incoming calls (in hours, minutes and seconds)<br>▪ **Avg response:** The average time taken to respond to all incoming calls (in seconds) |
| **Outbound** | ▪ **:** The number of outbound calls<br>▪ **Total duration:** The total duration of all outgoing calls (in hours, minutes and seconds)<br>▪ **Avg duration:** The average duration of all outgoing calls (in hours, minutes and seconds)<br>▪ **Total cost:** The total aggregate cost of all outbound calls |

In addition to summary information, totals and averages for each call type are shown in the footer of each column.

### Itemised list

By clicking on the hyperlink of a particular user, a new report is produced that shows - in chronological order - an itemised list of calls made or received by that user, as shown below:


My enterprise overview
2012-05-17 16:07:50
\ TIM Plus \ London \ Accounts \ Al Dente \
About this report
All
Outbound
Answered
Missed
Internal

| Date & Time ▲ | Source | CLI | Route | Destination | Response | Duration | Cost |
|---|---|---|---|---|---|---|---|
| 16/05/2012 10:41:21 | Al Dente | - | 07956186198 | T-Mobile | - | 00:00:34 | 0.074 |
| 16/05/2012 10:42:18 | Jason Myers | - | 2042 | Al Dente | - | 00:00:21 | - |
| 16/05/2012 10:47:23 | David Ellis | - | 2042 | Al Dente | - | 00:03:23 | - |
| 16/05/2012 10:59:51 | Orange | 07854181304 | - | Al Dente | 21 | 00:00:31 | - |
| 16/05/2012 11:09:53 | Al Dente | - | 02076132858 | London | - | 00:00:04 | 0.030 |
| 16/05/2012 11:42:13 | Grace Harper | - | 2042 | Al Dente | - | 00:01:58 | - |
| 16/05/2012 11:52:21 | Sam Thornton | - | 2042 | Al Dente | - | 00:00:14 | - |
| 16/05/2012 12:55:36 | Al Dente | - | 02074054600 | London | - | 00:01:21 | 0.135 |
| 16/05/2012 15:13:18 | Orange | 07967460922 | - | Al Dente | 4 | 00:00:47 | - |
| 16/05/2012 15:14:16 | Orange | 07854180689 | - | Al Dente | 43 | 00:00:30 | - |
| 16/05/2012 16:44:53 | Warren Peace | - | 2042 | Al Dente | - | 00:01:16 | - |
| 16/05/2012 17:38:36 | T-Mobile | 07958108040 | - | Al Dente | 61 | 00:00:17 | - |
| 16/05/2012 18:36:21 | Al Dente | - | 07854181108 | Orange | - | - | 0.030 |
| 13 calls | | | | | | 00:11:16 | 0.269 |

The headers of the itemised call table are described below:

| Header | Description |
|---|---|
| **Date & Time** | The date and time the call started |
| **Source** | The place from where the call originated |
| **CLI** | The telephone number of the remote caller for inbound calls |
| **Route** | The information displayed in this field is determined by the type of call:<br>▪ for incoming calls, this shows the CLI of the caller<br>▪ for incoming internal calls, this shows either the caller's username or extension number<br>▪ for outgoing calls, this shows the dialled number |
| **Destination** | The information displayed in this field is determined by the type of call:<br>▪ for incoming calls, this shows the name of the user whose extension answered the call, or the extension number if not available<br>▪ for outgoing calls, this shows the geographical location that was dialled, or an alias if defined in your contacts list<br>▪ for internal calls, this shows the extension that was dialled, enclosed in square brackets [ ] |
| **Response** | The length of time it took for the call to be answered (i.e. the response time) |
| **Duration** | The duration of the call (in hours, minutes and seconds) |
| **Cost** | The cost of the call |

To modify your report to cover a larger organisational scope, click on an element of the breadcrumb as shown below:


## Frequent Numbers

**The Frequent Numbers report**



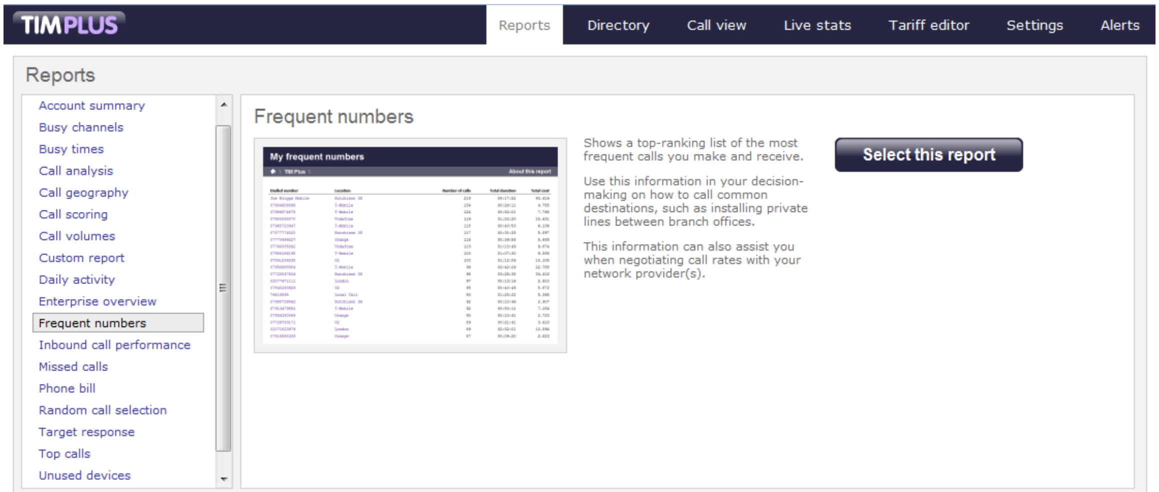
### Introduction

The Frequent Numbers report shows a top-ranking list of the numbers that you call, or are called by, most frequently. By highlighting your most frequently-called destinations, the report can help you to determine if private circuits to your commonly-called destinations would be beneficial; it can also help you negotiate call rates with your network provider.


| Dialled number ▲ | Location | Number of calls | Total duration | Total cost |
|---|---|---|---|---|
| 07966465332 | Orange | 11 | 00:01:07 | 0.330 |
| 07932138688 | T-Mobile | 9 | 00:00:53 | 0.270 |
| 07985980159 | T-Mobile | 16 | 00:04:52 | 0.715 |
| 07722702388 | T-Mobile | 10 | 00:01:21 | 0.300 |
| 02087355100 | London | 14 | 00:01:21 | 0.420 |
| 07958048138 | T-Mobile | 8 | 00:10:00 | 1.302 |
| 07867996393 | Vodafone | 11 | 00:00:59 | 0.330 |
| 02075849901 | London | 9 | 00:02:05 | 0.271 |
| 07849093682 | O2 | 12 | 00:01:52 | 0.367 |
| 07867525709 | Vodafone | 19 | 00:07:11 | 1.095 |
| 01342833313 | East Grinstead | 14 | 00:01:11 | 0.420 |
| 02075362601 | London | 8 | 00:00:40 | 0.240 |
| 02085977789 | London | 9 | 00:05:07 | 0.418 |
| 02074787000 | London | 9 | 00:01:02 | 0.270 |
| 07852616027 | T-Mobile | 14 | 00:08:53 | 1.191 |
| 07786276358 | Vodafone | 16 | 00:05:55 | 0.826 |
| 07968385191 | Orange | 10 | 00:03:03 | 0.437 |
| 00972525456330 | Israel Mobile | 9 | 00:02:27 | 2.646 |
| 07944789366 | T-Mobile | 13 | 00:09:00 | 1.243 |
| 07779599573 | Orange | 9 | 00:00:57 | 0.270 |
| 07957357127 | T-Mobile | 10 | 00:02:39 | 0.430 |
| 07854180071 | Orange | 12 | 00:01:14 | 0.360 |
| 02077497500 | London | 7 | 00:02:36 | 0.279 |
| 02088705151 | London | 12 | 00:02:46 | 0.396 |
| 07930410804 | T-Mobile | 14 | 00:06:52 | 0.910 |
| 07785546623 | Vodafone | 16 | 00:01:17 | 0.480 |
| 02080801502 | London | 9 | 00:03:23 | 0.346 |

### Running the report

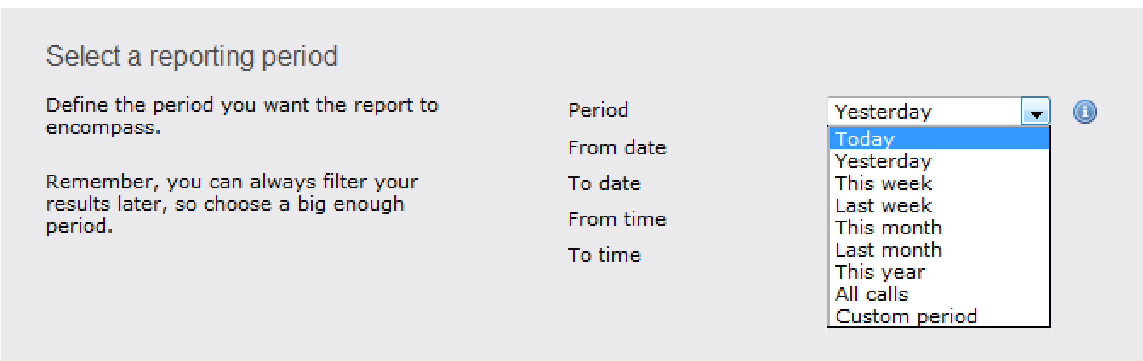
On the `Reports` screen, select the `Frequent numbers` report from the left-hand pane and click the Select this report button
.




A new window will appear, where you can set the parameters of your report.

## Selecting the reporting period

For each report, you must specify a time span that covers the calls you want the report to include. This is known as the "reporting period".

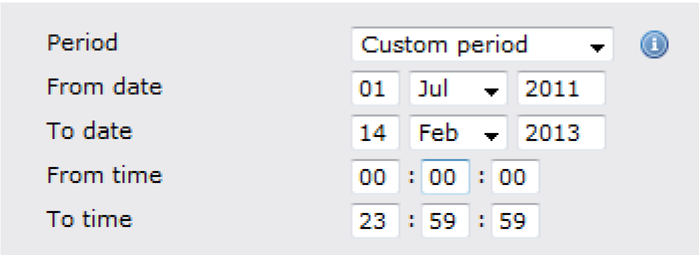



There are several preset reporting periods available for selection, based on the standard Gregorian calendar. The following table describes how the start and end times are defined for each preset period:

| Period | Description |
|---|---|
| **Today** | The start and end dates are set to the current date. The start time is set to `00:00:00` and the end time to `23:59:59`. |
| **Yesterday** | The start and end dates are set to the current date minus one day. The start time is set to `00:00:00` and the end time to `23:59:59`. |
| **This week** | The start date is set to the first day of the current week (normally Monday). The end date is set to the current day. The start time is set to `00:00:00` and the end time to the current time. |
| **Last week** | The start date is set to the date of the last Monday, and the end date is set to the start date plus seven days. The start time is set to `00:00:00` and the end time to `23:59:59`. |
| **This month** | The start date is set to the first day of the current month. The end date is set to the current day. The start time is set to `00:00:00` and the end time to the current time. |
| **Last month** | The start date for this period is set in three stages: The day is set to the first day of the month. The month is set to the previous month. The year is set to the current year, unless it is currently January, in which case, the previous year is used. The start and end times are set to `00:00:00` and `23:59:59` respectively. |

| | |
|---|---|
| **This year** | The start date is set to the first day of the first month of the current year, whilst the end date is set to today's date. The start and end times are set to `00:00:00` and `23:59:59` respectively. |
| **All calls** | The start and end dates and times are set to the dates and times of the first and last call in the entire call database, respectively. |

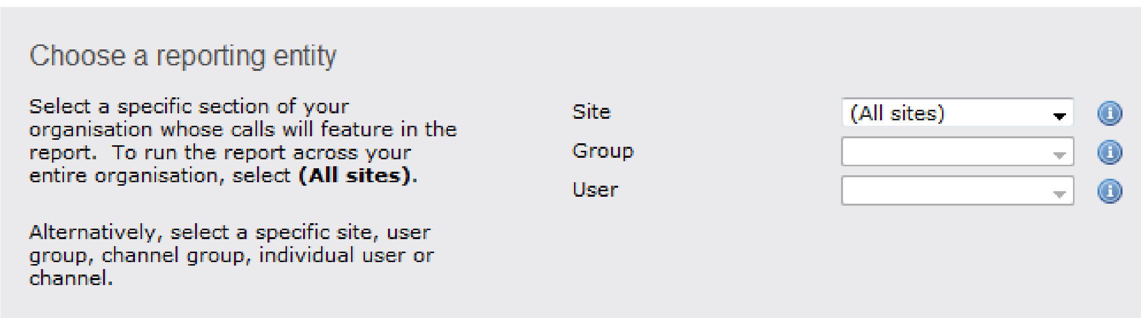
In addition to the presets described above, it is possible to specify a custom reporting period by choosing `Custom period` from the `Period` drop-down list and specifying your own `Start date`, `Start time`, `End date` and `End time` of the period you want to report on.




Once you have set the reporting period, click on the Next button to set additional report parameters and options, or select the Finish button to run the report immediately.

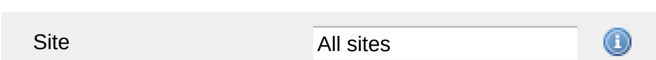
### Selecting the reporting entity

The `Reporting entity` parameter allows you to select the part of your organisation whose calls the report should include, e.g. a site, a group or an individual user.



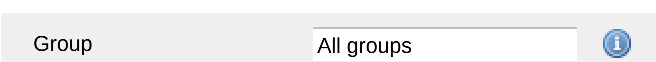

#### Site

To report on a particular site, select it from the drop-down list or select `All sites` .



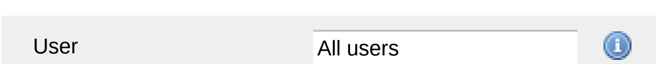

#### Group

If a site has been selected, you are able to further limit the report's results by selecting a group from the drop-down list.




#### User

If both a site and group have been selected, you can further limit the report's results to include only calls involving a particular user, by selecting that user from the drop-down list.

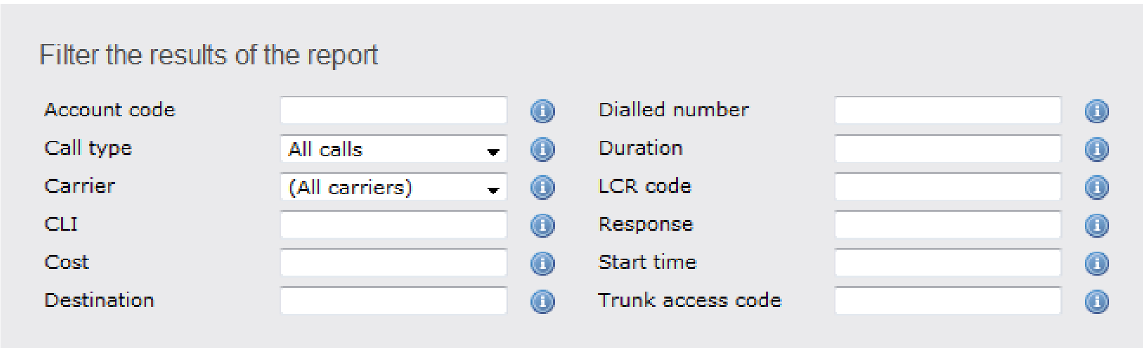


If your web account is restricted to a specific site or group, only those entities to which you have access will be available in the drop-down lists.

Once you have selected the scope of your report, click on the Next button to set additional report parameters and options, or to run the report immediately, click the Finish button.

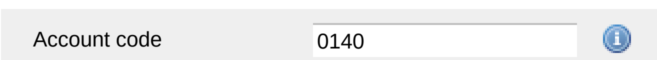
## Selecting the report filters

You can limit the results of your report by choosing one or more of the following filters:




### Account code

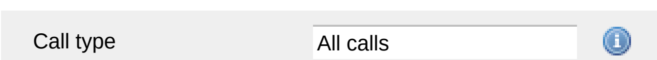
To produce a report consisting only of calls that were made using a particular account code, enter the account code in the field provided.




To report on more than one account code, separate each code using a comma.

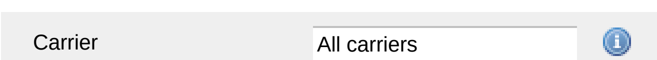
### Call type

This filter allows you to define the type of call you want to report on, in terms of where the call originated and where it was delivered, e.g. incoming, outgoing, internal etc.  To report on all types of call, set this to `All calls`.




### Carrier

If you use more than one carrier, you can limit the results to include only calls that were made using a specific carrier.




If you use only one carrier, there will be no drop-down list available and no option to choose a carrier.

### CLI

Calling Line Identification (CLI) is the telephone number of the remote caller in an incoming call scenario.

You can report on calls that originate from a specific CLI or those whose CLI matches a particular pattern of digits. For example, to report on all incoming calls from Tri-Line, you could enter **`02072652600`**.

| | |
|---|---|
| CLI | 02072652600 |

You can use the **`!`** symbol to explicitly exclude a CLI from the report's results, and/or the **`*`** symbol as a wildcard in digit pattern matching. For example, to exclude calls from Tri-Line, but include all others, you could use **`!020726526*`**. To report on more than one CLI, use a comma to separate each entry.

### Cost

You can define a cost filter to include calls above or below specific values by entering your criteria, as shown below:

| | |
|---|---|
| Cost | <2.00 |

You can specify a cost range by using the **`-`** symbol; to specify limits, use the comparison operators, **`>`**, **`<`**, and **`!`** .

### Destination

If you want to filter calls to a specific, known destination, type the name of the destination in the text box provided. This filter accepts the **`!`** and **`*`** symbols for excluding values and specifying partial matches, respectively.

For example, if you wanted to exclude all calls to France, you could enter **`!France*`**, as shown below:

| | |
|---|---|
| Destination | !France* |

### Dialled number

To filter calls to a specific dialled number, type it in the text box provided. The dialled number is defined as the number that is dialled (in the case of an outbound call), or the DDI number that the remote party dialled to reach a particular extension or group (in the case of an inbound call).

To filter calls to a specific area, a partial number can be entered (e.g. **`0033`** for calls to France).

| | |
|---|---|
| Dialled number | 0033 |

You can use the **`!`** symbol to explicitly exclude a dialled number from the report's results, and/or the **`*`** symbol as a wildcard in digit pattern matching. For example, to exclude calls to Tri-Line, but include all others, you could use **`!020726526*`**). To report on more than one dialled number, use a comma to separate each entry.

### Duration

To filter calls above or below a particular duration, enter the desired duration in seconds.

| | |
|---|---|
| Duration | >1800 |

You can specify a duration range by using the **`-`** symbol; to specify limits, use the comparison operators, **`>`**, **`<`**, and **`!`** .

In the above example, the report will return only calls longer than 1800 seconds (30 minutes).

### LCR code

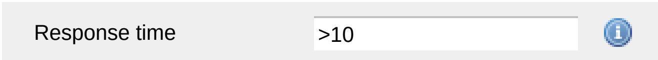
To filter your results to include only calls that used a Least Cost Routing (LCR) code, enter it in the text box provided.

| | |
|---|---|
| LCR code | 162 |

You can use the **`!`** symbol to explicitly exclude a LCR code from the report's results, and/or the **`*`** symbol as a wildcard in digit pattern matching. For example, to exclude calls made using all LCR codes beginning **`162`**, you could enter **`!162*`**. To report on more than one LCR code, use a comma to separate each entry.

### Response

This option allows you to filter calls based on their response time, measured in seconds. Specify the desired response time threshold in the text box provided.



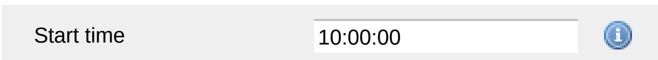

In the above example, the search results will display calls that have a response time greater than 10 seconds.

You can specify a response time range by using the `-` symbol and; to specify limits, use the comparison operators, `>`, `<`, and `!` .

### Start time

This option allows you to filter calls based on the time the call started. Specify the start time in the text box provided using the `hh:mm:ss` format.

For example, to include only calls that began after 10 am, you could enter `10:00:00` in the `Start time` field, as shown below:



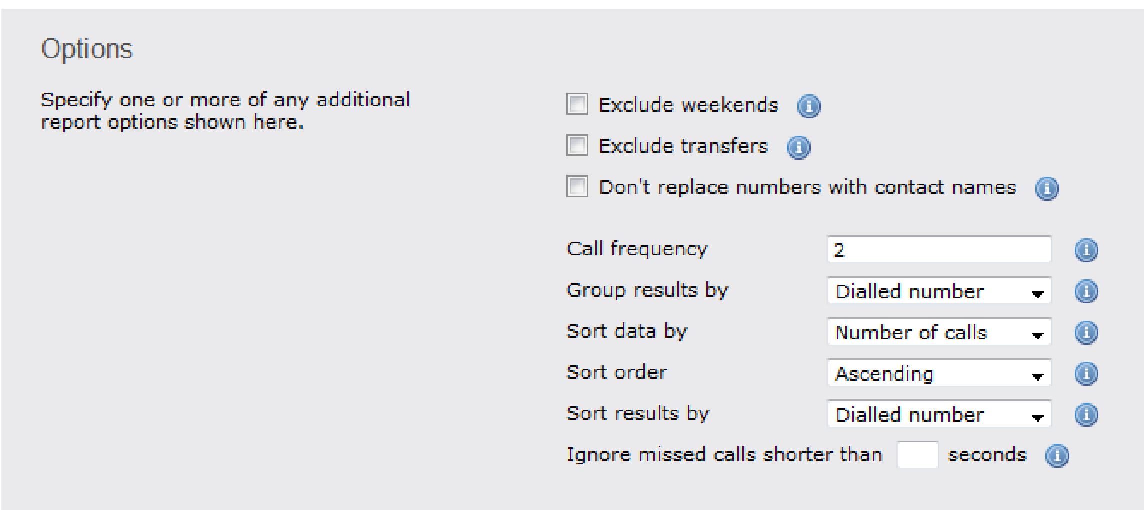

### Trunk access code

If your telephone system uses trunk access codes to connect calls using specific channels, you can limit your report's results to include only calls made using those codes. Specify the trunk access code in the text box provided.


You can use the `!` symbol to explicitly exclude a trunk access code from the report's results, and/or the `*` symbol as a wildcard in digit pattern matching. For example, to exclude calls made using the `9` trunk access code, you could enter `!9`. To report on more than one trunk access code, use a comma to separate each entry.

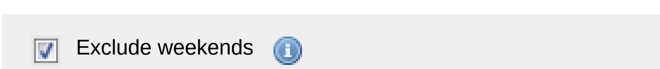
## Selecting the report options

This section enables you to further narrow down your report results, by excluding certain types of calls. It also allows you to sort the report's results in a particular manner.



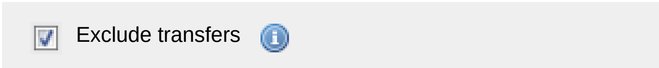

### Exclude weekends

To exclude weekend calls from your report's results, select the `Exclude weekends` option.



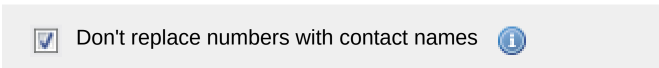
### Exclude transfers

To exclude transferred calls from your report's results, select the `Exclude transfers` option.




### Don't replace numbers with contact names

Tick this option if you do not want to replace dialled numbers, CLIs and account codes with their associated names, as defined in your web user's contacts list.




### Call frequency

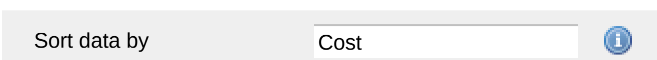
This option determines how frequently a call must have been dialled in order to feature in the results of this report. For example, to include only phone numbers that have been dialled twenty times or more, enter **`20`** as the minimum frequency, as shown below:


### Group results by

Choose from the drop-down list whether to group your results by CLI or dialled number.

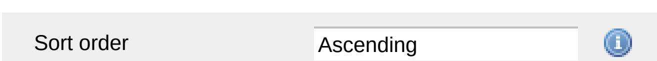

### Sort data by

To choose the criteria that is used in determining the most frequent calls, select a field from the `Sort data by` drop-down list.



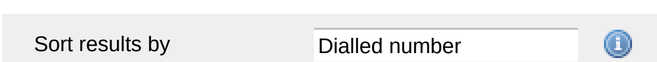

### Sort order

Choose from the `Sort order` drop-down list whether you want the results of the report to appear in ascending or descending order.



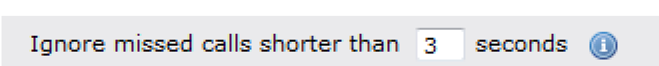

### Sort results by

To sort your report's results by a particular column, select it from the `Sort results by` drop-down list.




### Ignore short missed calls

Missed calls below a certain duration can sometimes pollute the meaning of a report's results. To exclude such short calls from your report, enter a duration threshold in the text box provided, e.g. to ignore calls below 3 seconds, enter **`3`** .



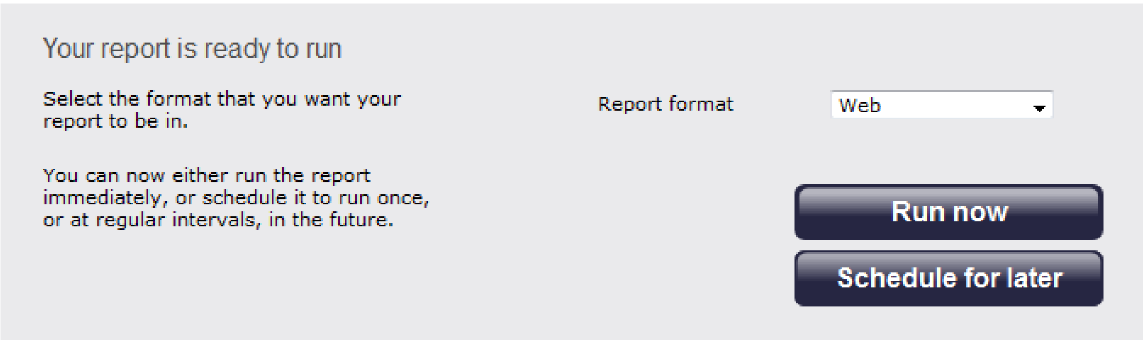

## Selecting the report format

This section allows you to choose the media format of your completed report. The formats available are **Web**, **PDF**, **Excel**, **CSV** and **XML**.

More details about each report format are available in the Setting the report format section above.

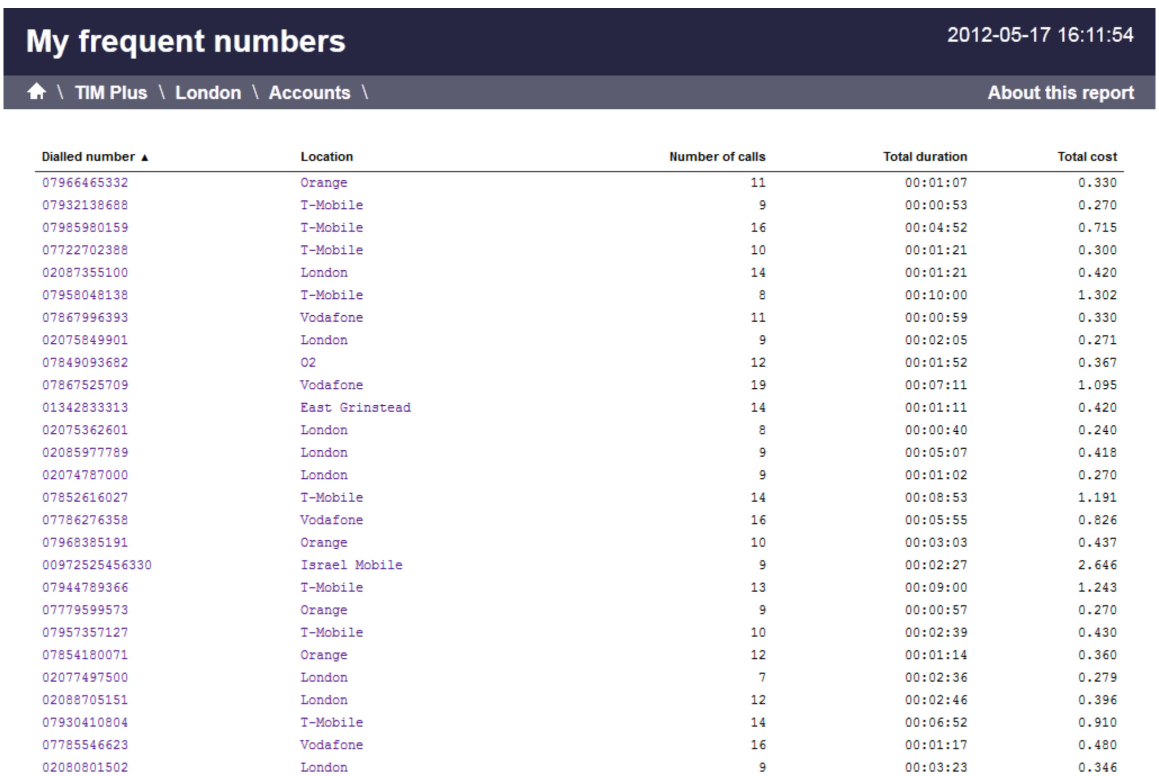
## Creating the report

When you have selected a reporting period and have chosen any filters and options, you can either run the report immediately by clicking on the Run now button, or schedule it for future delivery.




## The report's results

Below is an example of this report's output in **Web** format. By clicking on the **About this report** link at the top-right corner of the page, you can review any filters and options that have been applied to the report.



My frequent numbers 2012-05-17 16:11:54

\ TIM Plus \ London \ Accounts \ About this report

| Dialled number ▲ | Location | Number of calls | Total duration | Total cost |
|---|---|---|---|---|
| 07966465332 | Orange | 11 | 00:01:07 | 0.330 |
| 07932138688 | T-Mobile | 9 | 00:00:53 | 0.270 |
| 07985980159 | T-Mobile | 16 | 00:04:52 | 0.715 |
| 07722702388 | T-Mobile | 10 | 00:01:21 | 0.300 |
| 02087355100 | London | 14 | 00:01:21 | 0.420 |
| 07958048138 | T-Mobile | 8 | 00:10:00 | 1.302 |
| 07867996393 | Vodafone | 11 | 00:00:59 | 0.330 |
| 02075849901 | London | 9 | 00:02:05 | 0.271 |
| 07849093682 | O2 | 12 | 00:01:52 | 0.367 |
| 07867525709 | Vodafone | 19 | 00:07:11 | 1.095 |
| 01342833313 | East Grinstead | 14 | 00:01:11 | 0.420 |
| 02075362601 | London | 8 | 00:00:40 | 0.240 |
| 02085977789 | London | 9 | 00:05:07 | 0.418 |
| 02074787000 | London | 9 | 00:01:02 | 0.270 |
| 07852616027 | T-Mobile | 14 | 00:08:53 | 1.191 |
| 07786276358 | Vodafone | 16 | 00:05:55 | 0.826 |
| 07968385191 | Orange | 10 | 00:03:03 | 0.437 |
| 00972525456330 | Israel Mobile | 9 | 00:02:27 | 2.646 |
| 07944789366 | T-Mobile | 13 | 00:09:00 | 1.243 |
| 07779599573 | Orange | 9 | 00:00:57 | 0.270 |
| 07957357127 | T-Mobile | 10 | 00:02:39 | 0.430 |
| 07854180071 | Orange | 12 | 00:01:14 | 0.360 |
| 02077497500 | London | 7 | 00:02:36 | 0.279 |
| 02088705151 | London | 12 | 00:02:46 | 0.396 |
| 07930410804 | T-Mobile | 14 | 00:06:52 | 0.910 |
| 07785546623 | Vodafone | 16 | 00:01:17 | 0.480 |
| 02080801502 | London | 9 | 00:03:23 | 0.346 |

As with all reports produced by TIM Plus, each page of the report includes the following information:

- the report's title
- the date and time that the report was generated

- the name of the report, if applicable

The **Web** format is the most interactive of all formats: all column headers are click-sortable and most graphical and tabular elements can be drilled down into, allowing deeper analysis of your results.

The body of the report contains a table showing a summary of each frequently dialled number or CLI along with their associated destinations. The column headers of the table are described below:

| Header | Description |
|---|---|
| **Dialled number** | The telephone number that was dialled |
| **Location** | The location name associated with the dialled number or CLI |
| **Number of calls** | The total number of calls made to each unique dialled number or from each unique CLI |
| **Total duration** | The total time spent on calls to each dialled number or from each CLI, displayed in **hh:mm:ss** format |
| **Total cost** | The total cost of calls for each unique dialled number |

All dialled numbers, CLIs and locations in the table are shown as hyperlinks; clicking on any of them displays an itemised list of calls to/from each one.

To modify your report to cover a larger organisational scope, click on an element of the breadcrumb as shown below:


## Inbound Call Performance

**The Inbound Call Performance report**



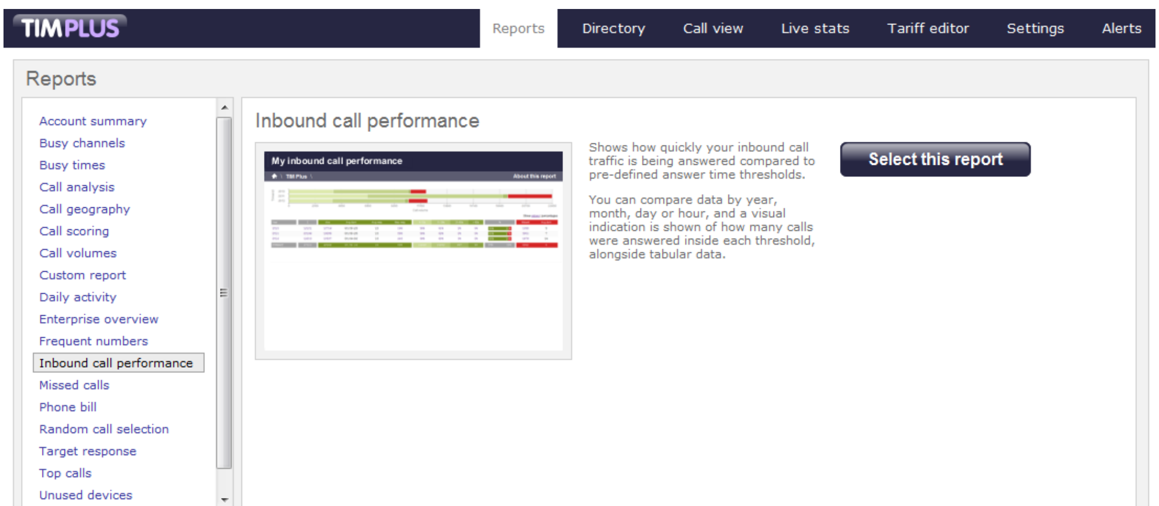
### Introduction

The Inbound Call Performance report displays how quickly your inbound calls are being answered, compared to your target thresholds, grouped by year, month, day or hour.  A visual representation of how well each target is met is shown alongside a table containing the actual response time values.


| Day | Σ | Ans | Avg durn | Avg resp | Max resp | 0-10s | 11-30s | 31-60s | > 60s | % | | Missed | Avg durn |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 1424 | 1413 | 00:01:36 | 1 | 112 | 96% | 3% | 1% | 0% | 99% | 1% | 11 | 38 |
| 2 | 1396 | 1382 | 00:01:37 | 1 | 154 | 96% | 4% | 0% | 0% | 99% | 1% | 14 | 38 |
| 3 | 1361 | 1349 | 00:01:43 | 1 | 143 | 97% | 2% | 0% | 0% | 99% | 1% | 12 | 42 |
| 4 | 1343 | 1327 | 00:01:37 | 1 | 77 | 97% | 2% | 0% | 0% | 99% | 1% | 16 | 33 |
| 5 | 1367 | 1355 | 00:01:38 | 1 | 131 | 96% | 3% | 1% | 0% | 99% | 1% | 12 | 33 |
| 6 | 1408 | 1394 | 00:01:35 | 1 | 168 | 97% | 3% | 1% | 0% | 99% | 1% | 14 | 45 |
| 7 | 1414 | 1400 | 00:01:38 | 1 | 71 | 97% | 3% | 0% | 0% | 99% | 1% | 14 | 36 |
| SUMMARY | 9713 | 9620 | 00:01:38 | 1 | 168 | 9282 | 280 | 39 | 19 | 99% | 1% | 93 | 38 |

## Running the report

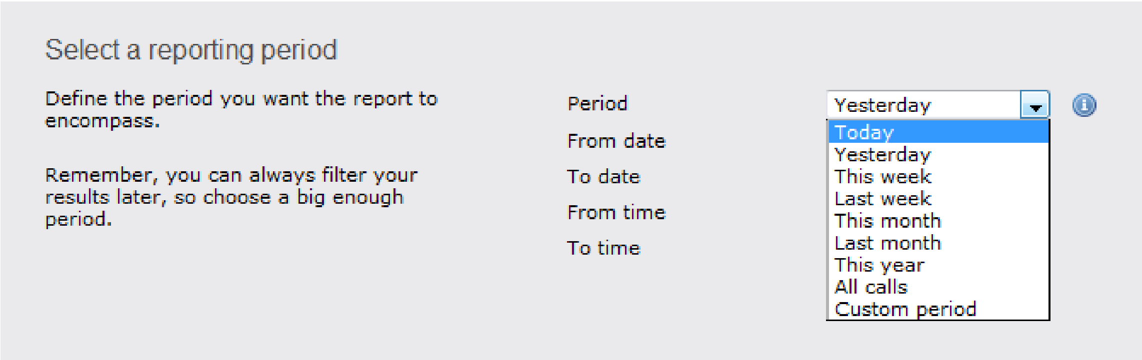
On the **Reports** screen, select the **Inbound call performance** report from the left-hand pane and click the Select this report button.




A new window will appear, where you can set the parameters of your report.

### Selecting the reporting period

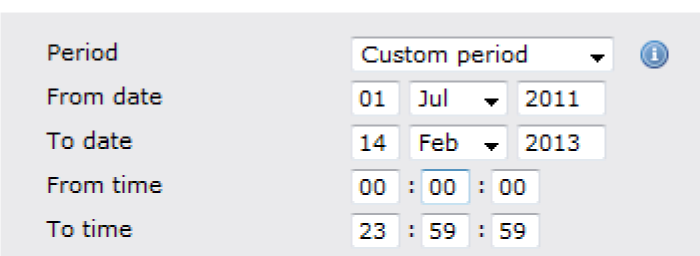
For each report, you must specify a time span that covers the calls you want the report to include. This is known as the "reporting period".




There are several preset reporting periods available for selection, based on the standard Gregorian calendar. The following table describes how the start and end times are defined for each preset period:

| Period | Description |
|---|---|
| **Today** | The start and end dates are set to the current date. The start time is set to `00:00:00` and the end time to `23:59:59`. |
| **Yesterday** | The start and end dates are set to the current date minus one day. The start time is set to `00:00:00` and the end time to `23:59:59`. |
| **This week** | The start date is set to the first day of the current week (normally Monday). The end date is set to the current day. The start time is set to `00:00:00` and the end time to the current time. |
| **Last week** | The start date is set to the date of the last Monday, and the end date is set to the start date plus seven days. The start time is set to `00:00:00` and the end time to `23:59:59`. |
| **This month** | The start date is set to the first day of the current month. The end date is set to the current day. The start time is set to `00:00:00` and the end time to the current time. |
| **Last month** | The start date for this period is set in three stages: The day is set to the first day of the month. The month is set to the previous month. The year is set to the current year, unless it is currently January, in which case, the previous year is used. The start and end times are set to `00:00:00` and `23:59:59` respectively. |
| **This year** | The start date is set to the first day of the first month of the current year, whilst the end date is set to today's date. The start and end times are set to `00:00:00` and `23:59:59` respectively. |
| **All calls** | The start and end dates and times are set to the dates and times of the first and last call in the entire call database, respectively. |

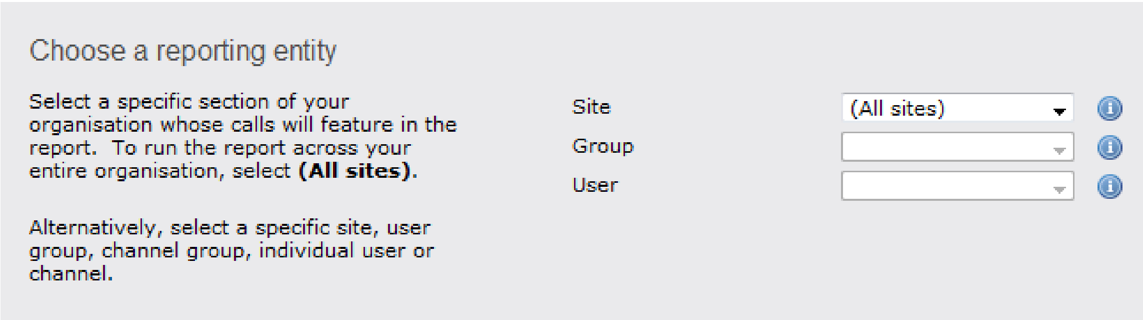
In addition to the presets described above, it is possible to specify a custom reporting period by choosing `Custom period` from the `Period` drop-down list and specifying your own `Start date`, `Start time`, `End date` and `End time` of the period you want to report on.




Once you have set the reporting period, click on the Next button to set additional report parameters and options, or select the Finish button to run the report immediately.

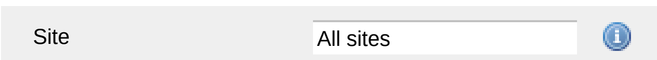
### Selecting the reporting entity

The **`Reporting entity`** parameter allows you to select the part of your organisation whose calls the report should include, e.g. a site, a group or an individual user.



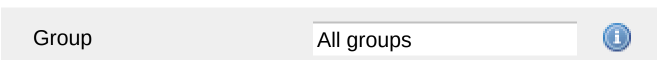

#### Site

To report on a particular site, select it from the drop-down list or select **`All sites`** .



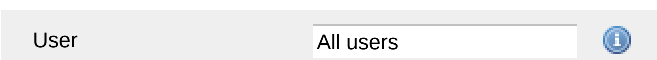

#### Group

If a site has been selected, you are able to further limit the report's results by selecting a group from the drop-down list.




#### User

If both a site and group have been selected, you can further limit the report's results to include only calls involving a particular user, by selecting that user from the drop-down list.

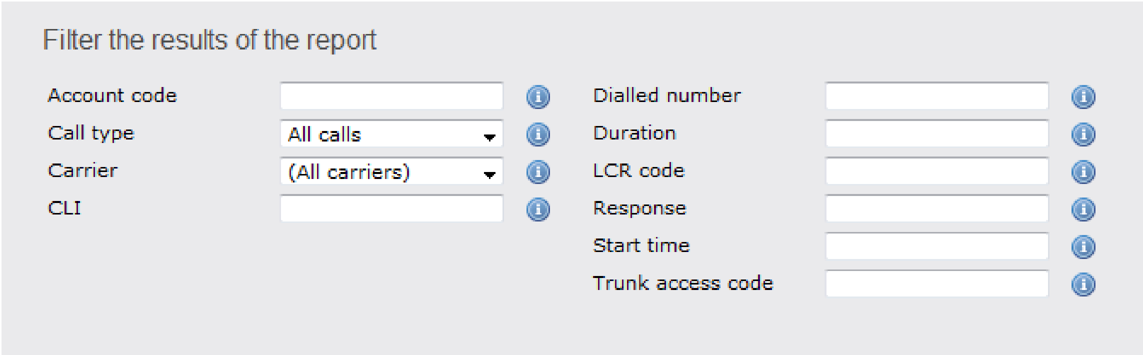



If your web account is restricted to a specific site or group, only those entities to which you have access will be available in the drop-down lists.

Once you have selected the scope of your report, click on the **Next** button to set additional report parameters and options, or to run the report immediately, click the **Finish** button.

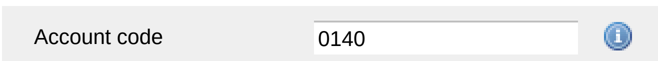
### Selecting the report filters

You can limit the results of your report by choosing one or more of the following filters:




### Account code

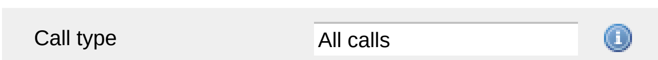
To produce a report consisting only of calls that were made using a particular account code, enter the account code in the field provided.




To report on more than one account code, separate each code using a comma.

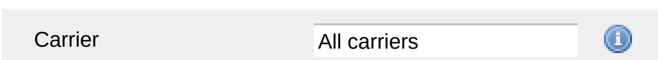
### Call type

This filter allows you to define the type of call you want to report on, in terms of where the call originated and where it was delivered, e.g. incoming, outgoing, internal etc.  To report on all types of call, set this to `All calls`.




### Carrier

If you use more than one carrier, you can limit the results to include only calls that were made using a specific carrier.

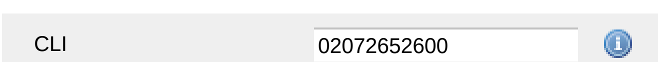



> If you use only one carrier, there will be no drop-down list available and no option to choose a carrier.

### CLI

Calling Line Identification (CLI) is the telephone number of the remote caller in an incoming call scenario.

You can report on calls that originate from a specific CLI or those whose CLI matches a particular pattern of digits. For example, to report on all incoming calls from Tri-Line, you could enter `02072652600`.




You can use the `!` symbol to explicitly exclude a CLI from the report's results, and/or the `*` symbol as a wildcard in digit pattern matching.  For example, to exclude calls from Tri-Line, but include all others, you could use `!020726526*`. To report on more than one CLI, use a comma to separate each entry.

### Dialled number

To filter calls to a specific dialled number, type it in the text box provided. The dialled number is defined as the number that is dialled (in the case of an outbound call), or the DDI number that the remote party dialled to reach a particular extension or group (in the case of an inbound call).

To filter calls to a specific area, a partial number can be entered (e.g. **`0033`** for calls to France).

| | |
|---|---|
| Dialled number | 0033 |

You can use the `!` symbol to explicitly exclude a dialled number from the report's results, and/or the `*` symbol as a wildcard in digit pattern matching.  For example, to exclude calls to Tri-Line, but include all others, you could use **`!020726526*`**). To report on more than one dialled number, use a comma to separate each entry.

### Duration

To filter calls above or below a particular duration, enter the desired duration in seconds.

| | |
|---|---|
| Duration | >1800 |

You can specify a duration range by using the `-` symbol; to specify limits, use the comparison operators, **`>`**, **`<`**, and `!` .

In the above example, the report will return only calls longer than 1800 seconds (30 minutes).

### LCR code

To filter your results to include only calls that used a Least Cost Routing (LCR) code, enter it in the text box provided.

| | |
|---|---|
| LCR code | 162 |

You can use the `!` symbol to explicitly exclude a LCR code from the report's results, and/or the `*` symbol as a wildcard in digit pattern matching.  For example, to exclude calls made using all LCR codes beginning `162`, you could enter **`!162*`**. To report on more than one LCR code, use a comma to separate each entry.

### Response

This option allows you to filter calls based on their response time, measured in seconds. Specify the desired response time threshold in the text box provided.

| | |
|---|---|
| Response time | >10 |

In the above example, the search results will display calls that have a response time greater than 10 seconds.

You can specify a response time range by using the `-` symbol and; to specify limits, use the comparison operators, **`>`**, **`<`**, and `!` .

### Start time

This option allows you to filter calls based on the time the call started. Specify the start time in the text box provided using the **`hh:mm:ss`** format.

For example, to include only calls that began after 10 am, you could enter **`10:00:00`** in the `Start time` field, as shown below:

| | |
|---|---|
| Start time | 10:00:00 |

### Trunk access code

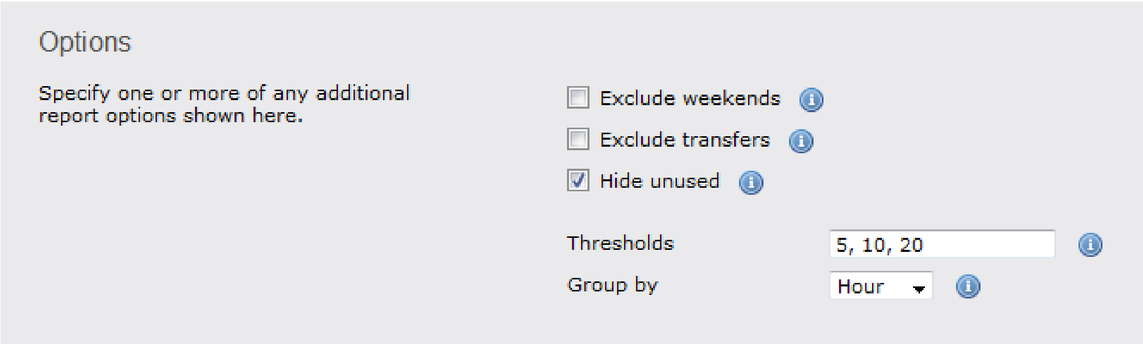
If your telephone system uses trunk access codes to connect calls using specific channels, you can limit your report's results to include only calls made using those codes. Specify the trunk access code in the text box provided.

| | |
|---|---|
| Trunk access code | 9 |

You can use the `!` symbol to explicitly exclude a trunk access code from the report's results, and/or the `*` symbol as a wildcard in digit pattern matching. For example, to exclude calls made using the `9` trunk access code, you could enter **`!9`**. To report on more than one trunk access code, use a comma to separate each entry.

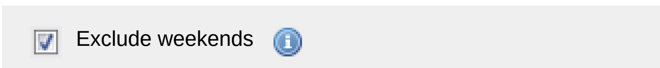
## Selecting the report options

This section enables you to further narrow down your report results, by excluding certain types of calls. It also allows you to sort the report's results in a particular manner.



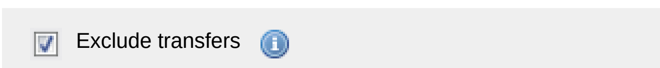

### Exclude weekends

To exclude weekend calls from your report's results, select the **`Exclude weekends`** option.



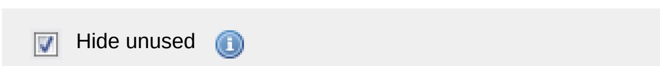

### Exclude transfers

To exclude transferred calls from your report's results, select the **`Exclude transfers`** option.




### Hide unused

To exclude unused extensions from your report's results, select the **`Hide unused`** option.

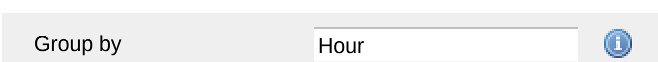



### Thresholds

Define your response target threshold(s) by entering comma-separated values in the text box provided. The example below shows response time targets for calls answered within 5, 10 and 20 seconds, respectively.


### Group by

Select the time period by which you want to group your calls.



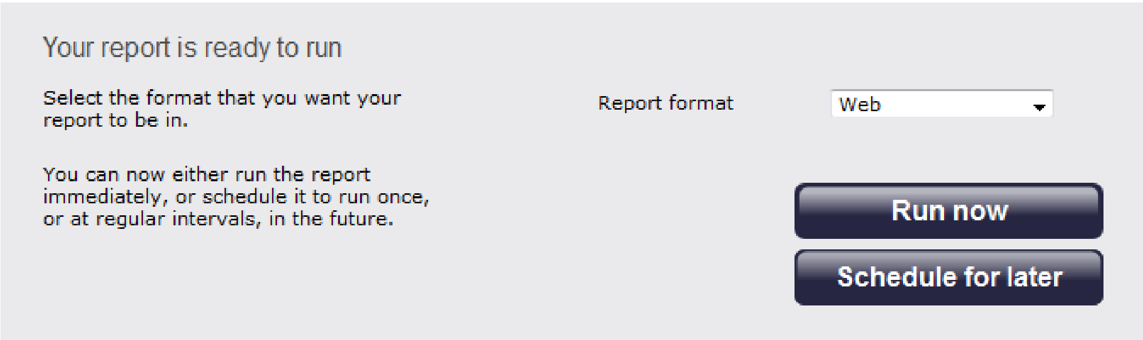

## Selecting the report format

This section allows you to choose the media format of your completed report. The formats available are **`Web`**, **`PDF`**, **`Excel`**, **`CSV`** and **`XML`**.

More details about each report format are available in the Setting the report format section above.

## Creating the report

When you have selected a reporting period and have chosen any filters and options, you can either run the report immediately by clicking on the Run now button, or schedule it for future delivery.




## The report's results

Below is an example of this report's output in `Web` format. By clicking on the `About this report` link at the top-right corner of the page, you can review any filters and options that have been applied to the report.


| Day | Σ | Ans | Avg durn | Avg resp | Max resp | 0-10s | 11-30s | 31-60s | > 60s | % | | Missed | Avg durn |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 1424 | 1413 | 00:01:36 | 1 | 112 | 96% | 3% | 1% | 0% | 99% | 1% | 11 | 38 |
| 2 | 1396 | 1382 | 00:01:37 | 1 | 154 | 96% | 4% | 0% | 0% | 99% | 1% | 14 | 38 |
| 3 | 1361 | 1349 | 00:01:43 | 1 | 143 | 97% | 2% | 0% | 0% | 99% | 1% | 12 | 42 |
| 4 | 1343 | 1327 | 00:01:37 | 1 | 77 | 97% | 2% | 0% | 0% | 99% | 1% | 16 | 33 |
| 5 | 1367 | 1355 | 00:01:38 | 1 | 131 | 96% | 3% | 1% | 0% | 99% | 1% | 12 | 33 |
| 6 | 1408 | 1394 | 00:01:35 | 1 | 168 | 97% | 3% | 1% | 0% | 99% | 1% | 14 | 45 |
| 7 | 1414 | 1400 | 00:01:38 | 1 | 71 | 97% | 3% | 0% | 0% | 99% | 1% | 14 | 36 |
| SUMMARY | 9713 | 9620 | 00:01:38 | 1 | 168 | 9282 | 280 | 39 | 19 | 99% | 1% | 93 | 38 |

As with all reports produced by TIM Plus, each page of the report includes the following information:

- the report's title
- the date and time that the report was generated
- the name of the report, if applicable

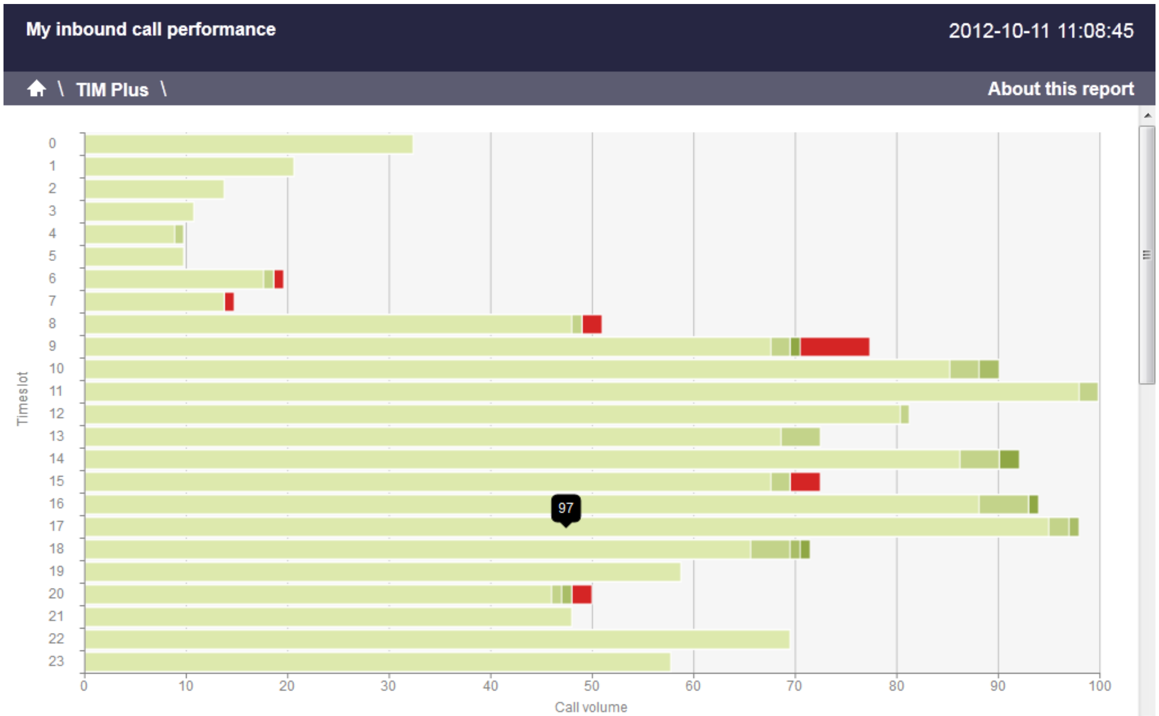
The `Web` format is the most interactive of all formats: all column headers are click-sortable and most graphical and tabular elements can be drilled down into, allowing deeper analysis of your results.

The achievement of each response time target is displayed as either percentages or actual values, and can be toggled using the link at the top-right of the graph.

The body of the report consists of a table showing a summary of your incoming calls, grouped by the period you selected. A description of the column headers are shown below:

| Header | Description |
| --- | --- |
| **Hour / Day / Month / Year** | The time period. |
| | The total number of calls in each period. |
| **Answered** | ▪ **Ans:** The total number of answered calls in each period.<br>▪ **Avg durn:** The average length of time of all answered calls in each period.<br>▪ **Avg resp:** The average response time of all answered calls in each period.<br>▪ **Max resp:** The maximum time it took to answer a call in each period.<br>▪ **x-xx s:** The percentage of calls that were answered within each predefined target, e.g. if `50%` is displayed under the `0-5s` heading, means that half of all calls were answered within 5 seconds. |
| % | The number of answered versus missed calls within each period, expressed as a percentage. |
| **Missed** | ▪ **:** The total number of missed calls in each period.<br>▪ **Avg durn:** The average length of time that missed calls rang before they were abandoned. |

Each period is shown as a hyperlink which, if clicked on, re-runs the report using a more granular period.




Show values | percentages

| Hour | Σ | Ans | Avg durn | Avg resp | Max resp | 0-10s | 11-30s | 31-60s | > 60s | % | Missed | Avg durn |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 00:00 | 33 | 33 | 00:01:19 | – | – | 100% | – | – | – | 100% | – | – |
| 01:00 | 21 | 21 | 00:01:48 | – | – | 100% | – | – | – | 100% | – | – |
| 02:00 | 14 | 14 | 00:01:37 | – | 6 | 100% | – | – | – | 100% | – | – |
| 03:00 | 11 | 11 | 00:01:08 | – | – | 100% | – | – | – | 100% | – | – |
| 04:00 | 10 | 10 | 00:00:24 | 4 | 20 | 90% | 10% | – | – | 100% | – | – |
| 05:00 | 10 | 10 | 00:01:12 | 1 | 6 | 100% | – | – | – | 100% | – | – |
| 06:00 | 20 | 19 | 00:01:08 | 2 | 22 | 95% | 5% | – | – | 95% 5% | 1 | 35 |
| 07:00 | 15 | 14 | 00:00:51 | – | – | 100% | – | – | – | 93% 7% | 1 | 1 |
| 08:00 | 52 | 50 | 00:01:30 | 1 | 21 | 98% | 2% | – | – | 96% 4% | 2 | 22 |
| 09:00 | 79 | 72 | 00:01:37 | 2 | 67 | 96% | 3% | – | 1% | 91% 9% | 7 | 48 |
| 10:00 | 92 | 92 | 00:01:47 | 2 | 38 | 95% | 3% | 2% | – | 100% | – | – |
| 11:00 | 102 | 102 | 00:01:30 | 1 | 14 | 98% | 2% | – | – | 100% | – | – |
| 12:00 | 83 | 83 | 00:01:33 | – | 11 | 99% | 1% | – | – | 100% | – | – |
| 13:00 | 74 | 74 | 00:02:23 | 1 | 27 | 95% | 5% | – | – | 100% | – | – |
| 14:00 | 94 | 94 | 00:01:23 | 3 | 70 | 94% | 4% | – | 2% | 100% | – | – |
| 15:00 | 74 | 71 | 00:01:34 | 1 | 15 | 97% | 3% | – | – | 96% 4% | 3 | 29 |
| 16:00 | 96 | 96 | 00:01:38 | 2 | 64 | 94% | 5% | – | 1% | 100% | – | – |
| 17:00 | 100 | 100 | 00:01:50 | 1 | 34 | 97% | 2% | 1% | – | 100% | – | – |
| 18:00 | 73 | 73 | 00:02:11 | 3 | 77 | 92% | 5% | 1% | 1% | 100% | – | – |
| 19:00 | 60 | 60 | 00:01:46 | – | 5 | 100% | – | – | – | 100% | – | – |
| 20:00 | 51 | 49 | 00:01:36 | 1 | 31 | 96% | 2% | 2% | – | 96% 4% | 2 | 13 |
| 21:00 | 49 | 49 | 00:01:30 | – | 6 | 100% | – | – | – | 100% | – | – |
| 22:00 | 71 | 71 | 00:01:16 | – | – | 100% | – | – | – | 100% | – | – |
| 23:00 | 59 | 59 | 00:01:20 | – | 9 | 100% | – | – | – | 100% | – | – |
| SUMMARY | 1343 | 1327 | 00:01:37 | 1 | 77 | 1284 | 33 | 5 | 5 | 99% 1% | 16 | 33 |

To modify your report to cover a larger organisational scope, click on an element of the breadcrumb as shown below:

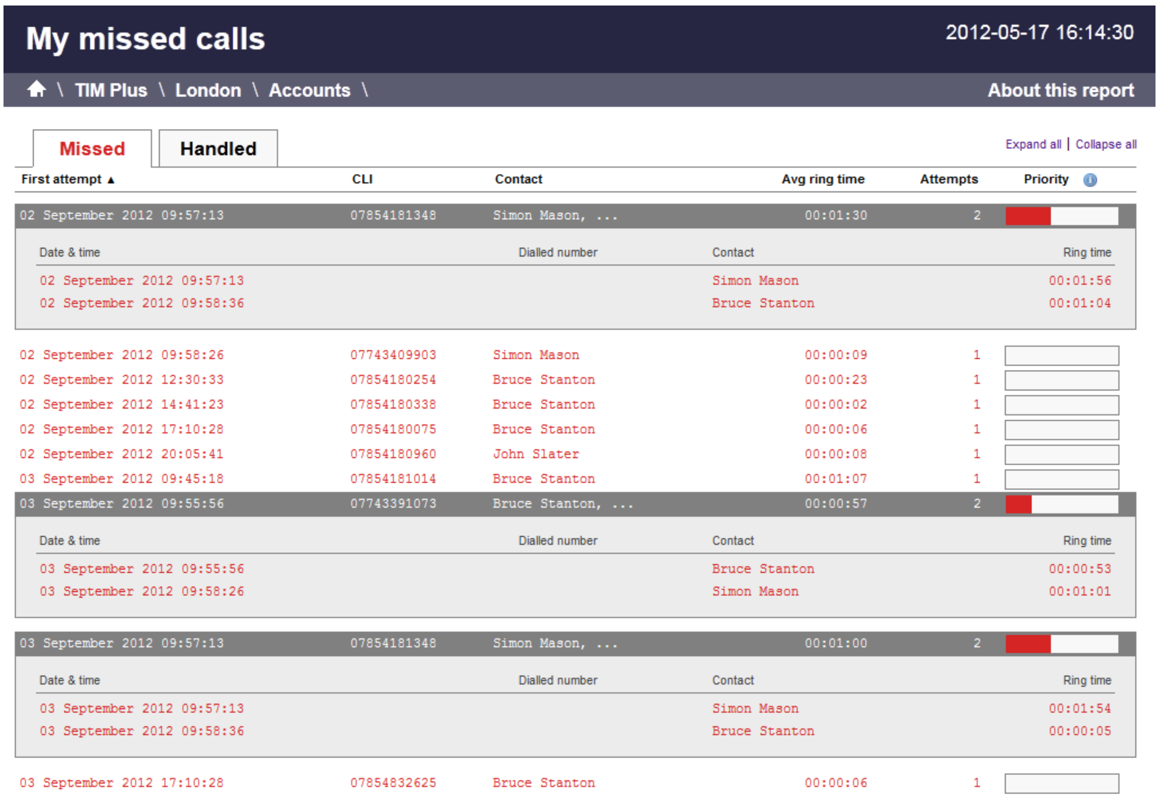

## Missed Calls

**The Missed Calls report**



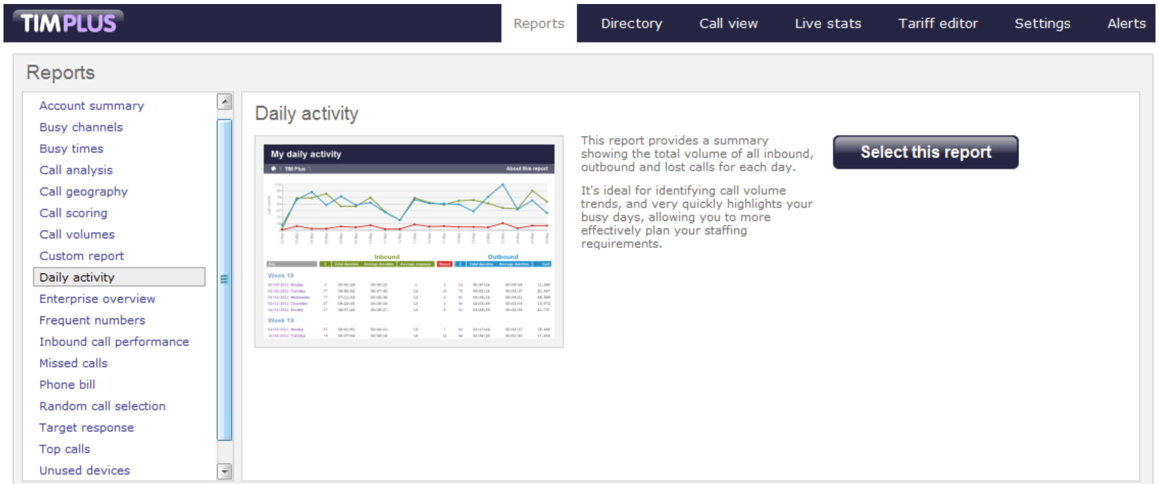
## Introduction

The Missed Calls report analyses your missed calls in order to highlight which callers have and haven't been responded to. Each missed call is given a priority rating depending on how many times and how often the caller attempted to make contact. The time window in which a call must be responded to, if it is to be considered handled, is user-definable.




## Running the report

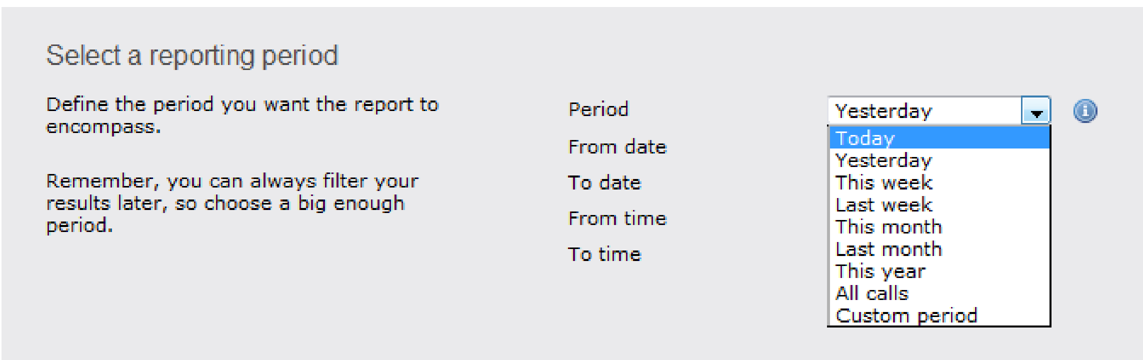
On the **Reports** screen, select the **Missed calls** report from the left-hand pane and click the Select this report button.




A new window will appear, where you can set the parameters of your report.

## Selecting the reporting period

For each report, you must specify a time span that covers the calls you want the report to include. This is known as the "reporting period".

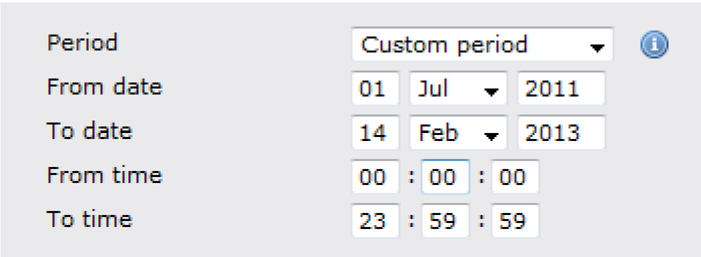



There are several preset reporting periods available for selection, based on the standard Gregorian calendar. The following table describes how the start and end times are defined for each preset period:

| Period | Description |
|---|---|
| **Today** | The start and end dates are set to the current date. The start time is set to `00:00:00` and the end time to `23:59:59`. |
| **Yesterday** | The start and end dates are set to the current date minus one day. The start time is set to `00:00:00` and the end time to `23:59:59`. |
| **This week** | The start date is set to the first day of the current week (normally Monday). The end date is set to the current day. The start time is set to `00:00:00` and the end time to the current time. |
| **Last week** | The start date is set to the date of the last Monday, and the end date is set to the start date plus seven days. The start time is set to `00:00:00` and the end time to `23:59:59`. |
| **This month** | The start date is set to the first day of the current month. The end date is set to the current day. The start time is set to `00:00:00` and the end time to the current time. |
| **Last month** | The start date for this period is set in three stages: The day is set to the first day of the month. The month is set to the previous month. The year is set to the current year, unless it is currently January, in which case, the previous year is used. The start and end times are set to `00:00:00` and `23:59:59` respectively. |

| | |
|---|---|
| **This year** | The start date is set to the first day of the first month of the current year, whilst the end date is set to today's date. The start and end times are set to **`00:00:00`** and **`23:59:59`** respectively. |
| **All calls** | The start and end dates and times are set to the dates and times of the first and last call in the entire call database, respectively. |

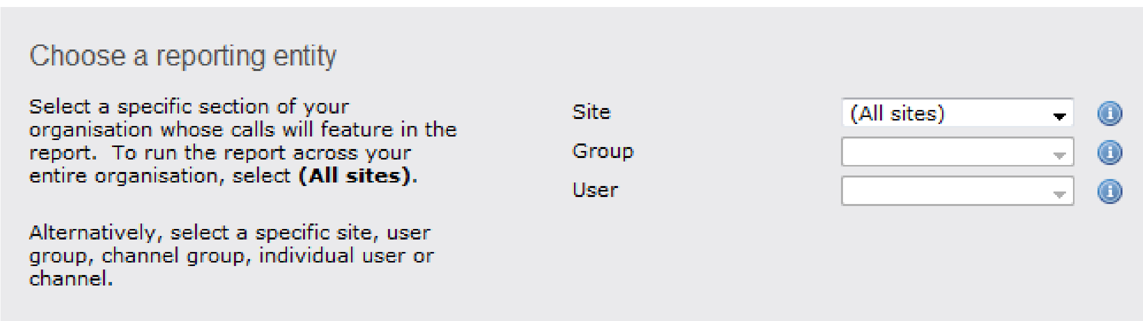
In addition to the presets described above, it is possible to specify a custom reporting period by choosing **`Custom period`** from the **`Period`** drop-down list and specifying your own **`Start date`**, **`Start time`**, **`End date`** and **`End time`** of the period you want to report on.




Once you have set the reporting period, click on the Next button to set additional report parameters and options, or select the Finish button to run the report immediately.

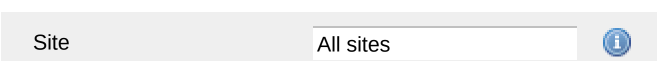
## Selecting the reporting entity

The **`Reporting entity`** parameter allows you to select the part of your organisation whose calls the report should include, e.g. a site, a group or an individual user.



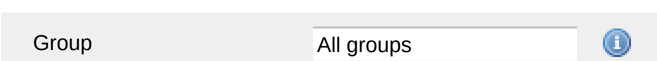

### Site

To report on a particular site, select it from the drop-down list or select **`All sites`** .



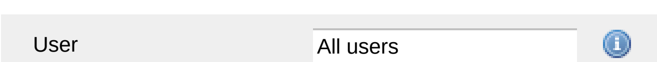

### Group

If a site has been selected, you are able to further limit the report's results by selecting a group from the drop-down list.




### User

If both a site and group have been selected, you can further limit the report's results to include only calls involving a particular user, by selecting that user from the drop-down list.

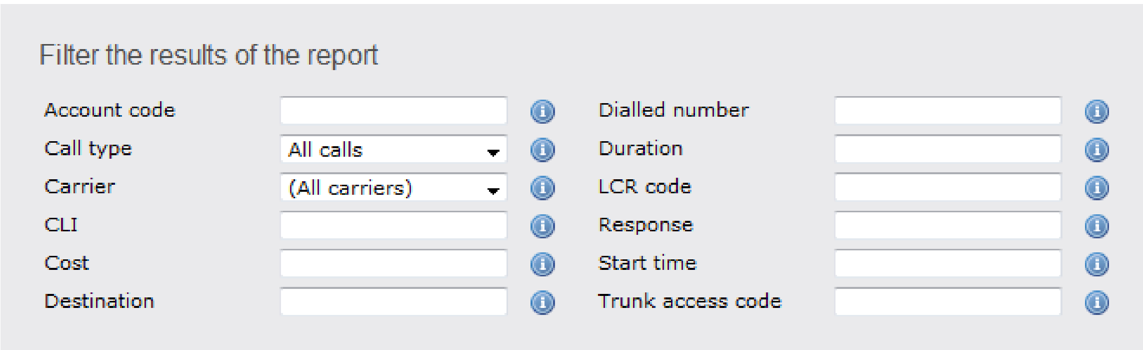


If your web account is restricted to a specific site or group, only those entities to which you have access will be available in the drop-down lists.

Once you have selected the scope of your report, click on the Next button to set additional report parameters and options, or to run the report immediately, click the Finish button.

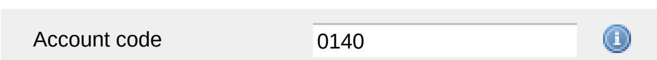
## Selecting the report filters

You can limit the results of your report by choosing one or more of the following filters:




### Account code

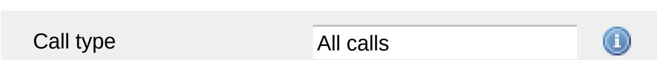
To produce a report consisting only of calls that were made using a particular account code, enter the account code in the field provided.




To report on more than one account code, separate each code using a comma.

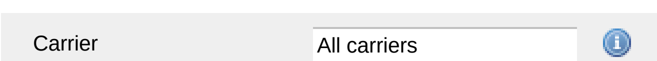
### Call type

This filter allows you to define the type of call you want to report on, in terms of where the call originated and where it was delivered, e.g. incoming, outgoing, internal, etc.  To report on all types of call, set this to **`All calls`**.




### Carrier

If you use more than one carrier, you can limit the results to include only calls that were made using a specific carrier.




If you use only one carrier, there will be no drop-down list available and no option to choose a carrier.

### CLI

Calling Line Identification (CLI) is the telephone number of the remote caller in an incoming call scenario.

You can report on calls that originate from a specific CLI or those whose CLI matches a particular pattern of digits. For example, to report on all incoming calls from Tri-Line, you could enter `02072652600`.

| | |
|---|---|
| CLI | 02072652600 |

You can use the `!` symbol to explicitly exclude a CLI from the report's results, and/or the `*` symbol as a wildcard in digit pattern matching.  For example, to exclude calls from Tri-Line, but include all others, you could use `!020726526*`. To report on more than one CLI, use a comma to separate each entry.

### Cost

You can define a cost filter to include calls above or below specific values by entering your criteria, as shown below:

| | |
|---|---|
| Cost | <2.00 |

You can specify a cost range by using the `-` symbol; to specify limits, use the comparison operators, `>`, `<`, and `!` .

### Destination

If you want to filter calls to a specific, known destination, type the name of the destination in the text box provided. This filter accepts the `!` and `*` symbols for excluding values and specifying partial matches, respectively.

For example, if you wanted to exclude all calls to France, you could enter `!France*`, as shown below:

| | |
|---|---|
| Destination | !France* |

### Dialled number

To filter calls to a specific dialled number, type it in the text box provided. The dialled number is defined as the number that is dialled (in the case of an outbound call), or the DDI number that the remote party dialled to reach a particular extension or group (in the case of an inbound call).

To filter calls to a specific area, a partial number can be entered (e.g. `0033` for calls to France).

| | |
|---|---|
| Dialled number | 0033 |

You can use the `!` symbol to explicitly exclude a dialled number from the report's results, and/or the `*` symbol as a wildcard in digit pattern matching.  For example, to exclude calls to Tri-Line, but include all others, you could use `!020726526*`). To report on more than one dialled number, use a comma to separate each entry.

### Duration

To filter calls above or below a particular duration, enter the desired duration in seconds.

| | |
|---|---|
| Duration | >1800 |

You can specify a duration range by using the `-` symbol; to specify limits, use the comparison operators, `>`, `<`, and `!` .

In the above example, the report will return only calls longer than 1800 seconds (30 minutes).

### LCR code

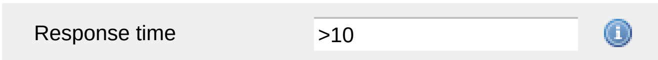
To filter your results to include only calls that used a Least Cost Routing (LCR) code, enter it in the text box provided.

| | |
|---|---|
| LCR code | 162 |

You can use the `!` symbol to explicitly exclude a LCR code from the report's results, and/or the `*` symbol as a wildcard in digit pattern matching.  For example, to exclude calls made using all LCR codes beginning `162`, you could enter `!162*`. To report on more than one LCR code, use a comma to separate each entry.

#### Response

This option allows you to filter calls based on their response time, measured in seconds. Specify the desired response time threshold in the text box provided.



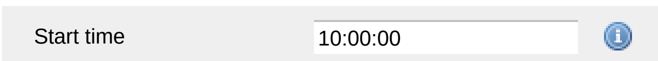

In the above example, the search results will display calls that have a response time greater than 10 seconds.

You can specify a response time range by using the `-` symbol and; to specify limits, use the comparison operators, **>**, **<**, and **!** .

#### Start time

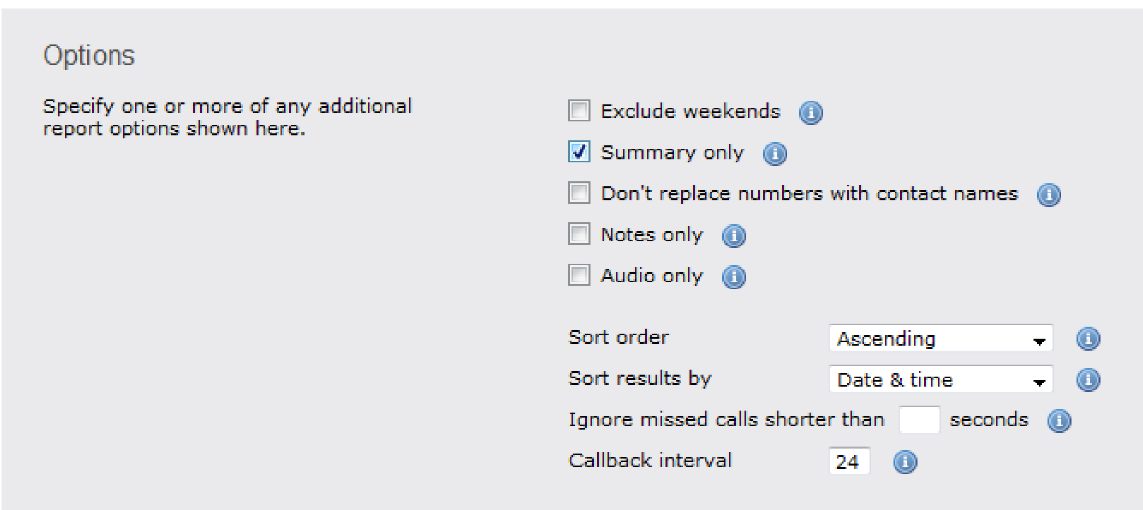
This option allows you to filter calls based on the time the call started. Specify the start time in the text box provided using the **hh:mm:ss** format.

For example, to include only calls that began after 10 am, you could enter **10:00:00** in the **Start time** field, as shown below:



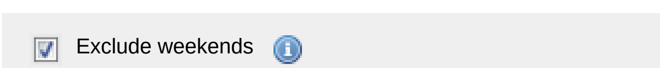

### Selecting the report options

This section enables you to further narrow down your report results, by excluding certain types of calls. It also allows you to sort the report's results in a particular manner.



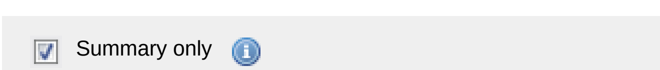

#### Exclude weekends

To exclude weekend calls from your report's results, select the **Exclude weekends** option.



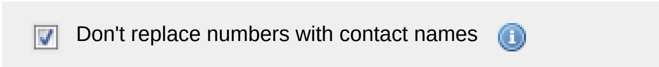

### Summary only

To show only a summary of your missed calls, instead of an itemised list, tick the box **Summary only**, as shown below:



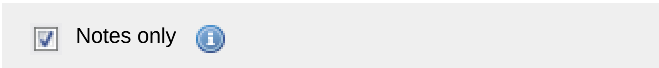

#### Don't replace numbers with contact names

Tick this option if you do not want to replace dialled numbers, CLIs and account codes with their associated names, as defined in your web user's contacts list.



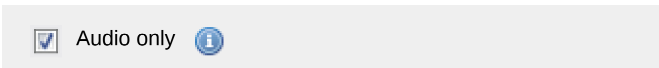

#### Notes only

Tick this option if you want your search results to include only calls that have notes associated with them.



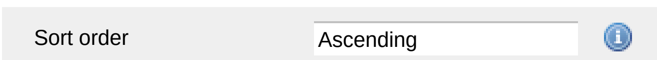

#### Audio only

Tick this option if you want your search results to include only calls that have an associated voice recording.



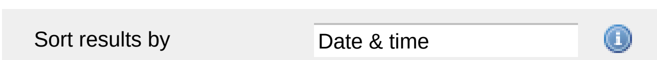

#### Sort order

Choose from the `Sort order` drop-down list whether you want the results of your report to appear in ascending or descending order.



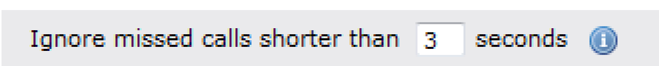

#### Sort results by

To sort your report's results by a particular column, select it from the `Sort results by` drop-down list.




#### Ignore short missed calls

Missed calls below a certain duration can sometimes pollute the meaning of a report's results. To exclude such short calls from your report, enter a duration threshold in the text box provided, e.g. to ignore calls below 3 seconds, enter **3** .




#### Callback interval

This option allows you to define, in hours, the time window in which a call must be responded to, in order to be considered handled. The default callback interval is 24 (hours), but you may enter your own value, as shown below:

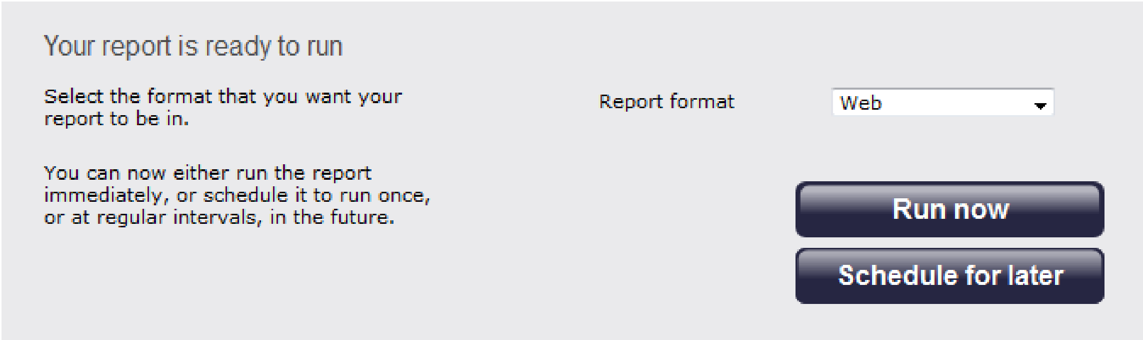
### Selecting the report format

This section allows you to choose the media format of your completed report. The formats available are **`Web`**, **`PDF`**, **`Excel`**, **`CSV`** and **`XML`**.

More details about each report format are available in the Setting the report format section above.

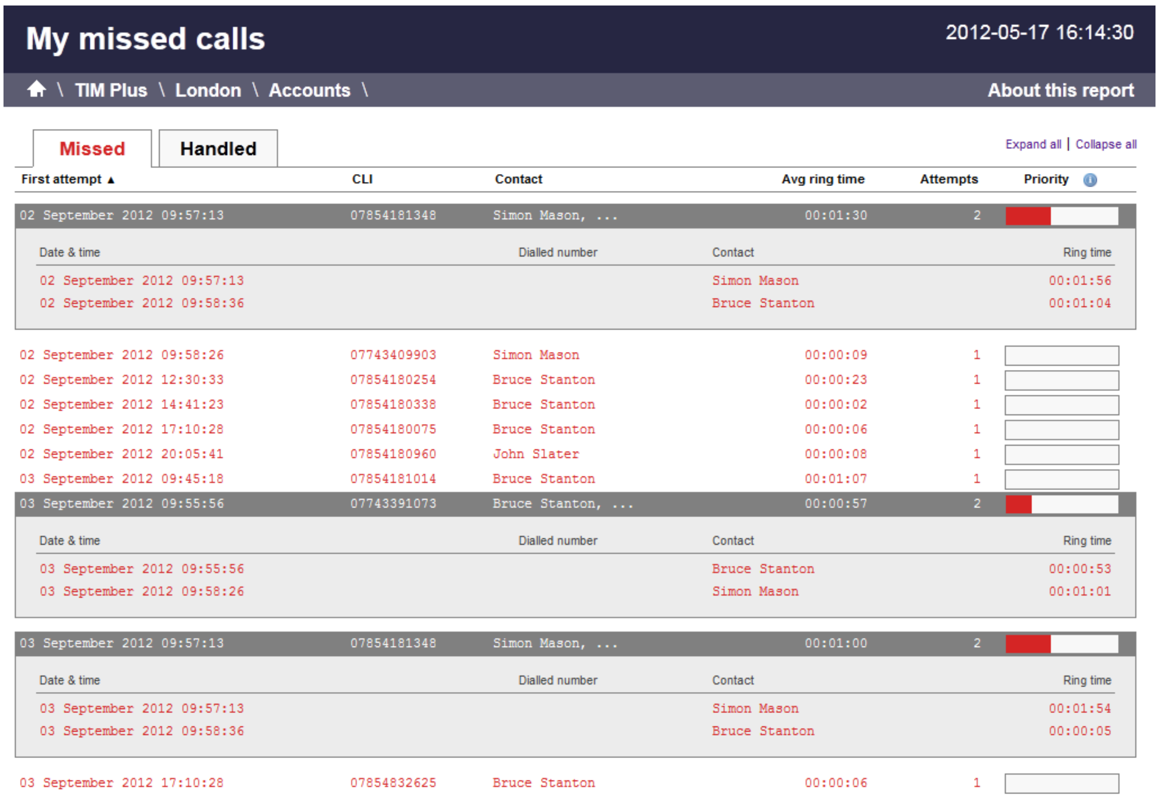
## Creating the report

When you have selected a reporting period and have chosen any filters and options, you can either run the report immediately by clicking on the Run now button, or schedule it for future delivery.




## The report's results

Below is an example of this report's output in **`Web`** format. By clicking on the **`About this report`** link at the top-right corner of the page, you can review any filters and options that have been applied to the report.




| First attempt ▲ | CLI | Contact | Avg ring time | Attempts | Priority |
|---|---|---|---|---|---|
| 02 September 2012 09:57:13 | 07854181348 | Simon Mason, ... | 00:01:30 | 2 | |
| 02 September 2012 09:58:26 | 07743409903 | Simon Mason | 00:00:09 | 1 | |
| 02 September 2012 12:30:33 | 07854180254 | Bruce Stanton | 00:00:23 | 1 | |
| 02 September 2012 14:41:23 | 07854180338 | Bruce Stanton | 00:00:02 | 1 | |
| 02 September 2012 17:10:28 | 07854180075 | Bruce Stanton | 00:00:06 | 1 | |
| 02 September 2012 20:05:41 | 07854180960 | John Slater | 00:00:08 | 1 | |
| 03 September 2012 09:45:18 | 07854181014 | Bruce Stanton | 00:01:07 | 1 | |
| 03 September 2012 09:55:56 | 07743391073 | Bruce Stanton, ... | 00:00:57 | 2 | |
| 03 September 2012 09:57:13 | 07854181348 | Simon Mason, ... | 00:01:00 | 2 | |
| 03 September 2012 17:10:28 | 07854832625 | Bruce Stanton | 00:00:06 | 1 | |

| Date & time | Dialled number | Contact | Ring time |
|---|---|---|---|
| 02 September 2012 09:57:13 | | Simon Mason | 00:01:56 |
| 02 September 2012 09:58:36 | | Bruce Stanton | 00:01:04 |

| Date & time | Dialled number | Contact | Ring time |
|---|---|---|---|
| 03 September 2012 09:55:56 | | Bruce Stanton | 00:00:53 |
| 03 September 2012 09:58:26 | | Simon Mason | 00:01:01 |

| Date & time | Dialled number | Contact | Ring time |
|---|---|---|---|
| 03 September 2012 09:57:13 | | Simon Mason | 00:01:54 |
| 03 September 2012 09:58:36 | | Bruce Stanton | 00:00:05 |

As with all reports produced by TIM Plus, each page of the report includes the following information:

- the report's title
- the date and time that the report was generated
- the name of the report, if applicable

The **`Web`** format is the most interactive of all formats: all column headers are click-sortable and most graphical and tabular elements can be drilled down into, allowing deeper analysis of your results.

The report consists of two sections: **`Missed`** calls and **`Handled`** calls.

### Missed calls

The Missed calls tab displays a table containing the calls that were missed and not responded to. Each column header of the table is described below:

| Header | Description |
|---|---|
| **First attempt** | The date and time of the first missed call |
| **CLI** | The telephone number of the remote caller |
| **Contact** | The person who missed the call. If several people were called, the field will display the caption, `Various` |
| **Avg ring time** | The average length of time a missed call rang before being abandoned |
| **Attempts** | The number of times the caller attempted to reach the specified contact without success |
| **Priority** | The priority is calculated by dividing the difference in time between the first and last call attempt by the total number of call attempts |

#### Handled calls

The Handled calls tab displays a table containing the calls that were initially missed but eventually responded to. Each column header of the table is described below:

| Header | Description |
|---|---|
| **Handled** | The date and time the call was handled |
| **CLI** | The telephone number of the remote caller |
| **Contact** | The person who eventually handled the call |
| **Duration** | The duration of the handled call |
| **Attempts** | The number of call attempts made before the call was eventually handled |
| **Priority** | The priority is calculated by dividing the difference in time between the first and last call attempt by the total number of call attempts |

Clicking on an individual call will show an itemised list of all call attempts made by that same caller; clicking on the `Expand all` link at the top-right corner of the screen will show this itemised list for all missed calls on the page.

To modify your report to cover a larger organisational scope, click on an element of the breadcrumb as shown below:


## Phone Bill

**The Phone Bill report**



## Introduction

The Phone Bill report produces a fully itemised telephone bill for billing back telephone usage to your clients, with the option of adding a percentage markup to each phone call. These bills can also include fixed charges for items other than phone calls, such as room rental, internet services and additional sundry items. You can fully customise the style of the report's output to reflect your own brand, including a company logo, for example.

**My phone bill** 2012-05-17 16:17:44

\ TIM Plus \ London \ Accounts \ **About this report**

**Mary Quant (4329)**

Call charges

| Date & time ▲ | Dialled number | Destination | Duration | Cost |
|---|---|---|---|---|
| 02/03/2012 14:50:26 | 07904910757 | T-Mobile | 00:01:30 | 0.195 |
| 03/03/2012 14:50:26 | 07904910757 | T-Mobile | 00:00:34 | 0.074 |
| 05/03/2012 14:50:26 | 07904691257 | T-Mobile | 00:00:58 | 0.126 |
| 07/03/2012 14:50:26 | 07904691337 | T-Mobile | 00:00:11 | 0.030 |
| 08/03/2012 14:50:26 | 07904028757 | T-Mobile | 00:01:42 | 0.221 |
| 10/03/2012 14:50:26 | 07904671427 | T-Mobile | 00:01:58 | 0.256 |
| 11/03/2012 14:50:26 | 07904910757 | T-Mobile | 00:01:11 | 0.154 |
| 19/03/2012 14:50:26 | 07904390957 | T-Mobile | 00:00:03 | 0.030 |
| 19/03/2012 14:50:26 | 07904910757 | T-Mobile | 00:01:37 | 0.210 |
| 22/03/2012 14:50:26 | 07904910757 | T-Mobile | 00:00:16 | 0.035 |
| 23/03/2012 14:50:26 | 07904910757 | T-Mobile | 00:02:00 | 0.260 |
| 11 calls | | | 00:12:00 | 1.591 |

**Subtotal** **1.590**

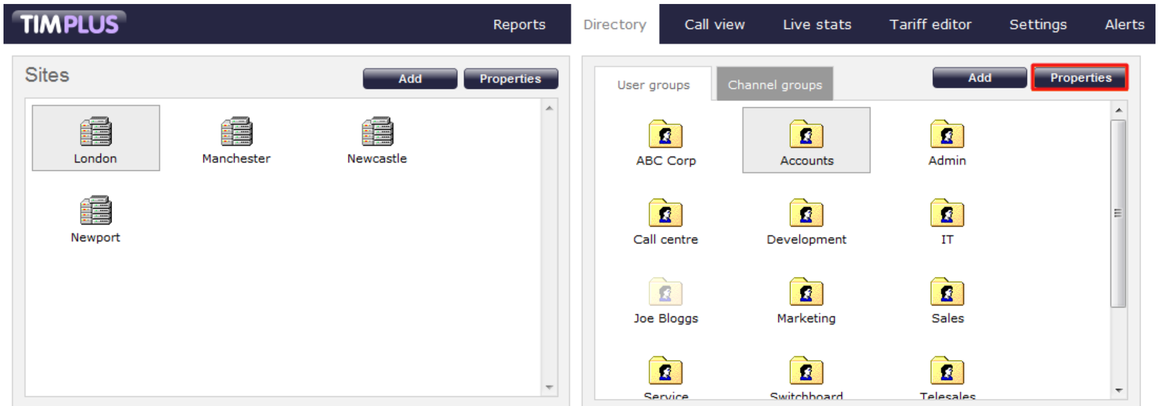
**Summary of bill**

| | |
|---|---|
| **Bill total** | **572.06** |
| Tax (20.0%) | 114.41 |
| **Total payable** | **686.47** |

### Marking up calls

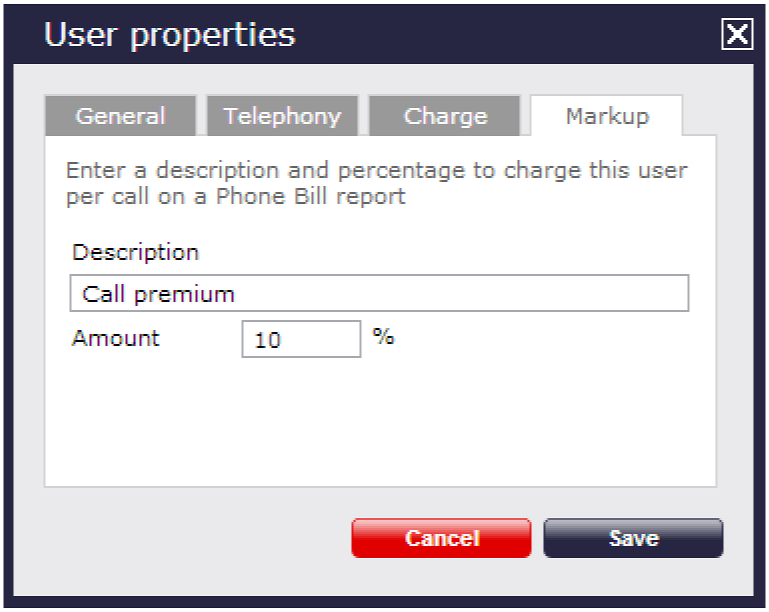
You can apply a call markup at both user group and individual user level, by setting a charge value inside the Directory.

To apply a markup for a user group, navigate to the Directory tab, select the user group and click the Properties button.




In the **Group properties** window that appears, select the Charge tab and enter a percentage markup in the box provided, then click on the Save button. In the example below, a 50% charge would be added to all calls in the selected group.

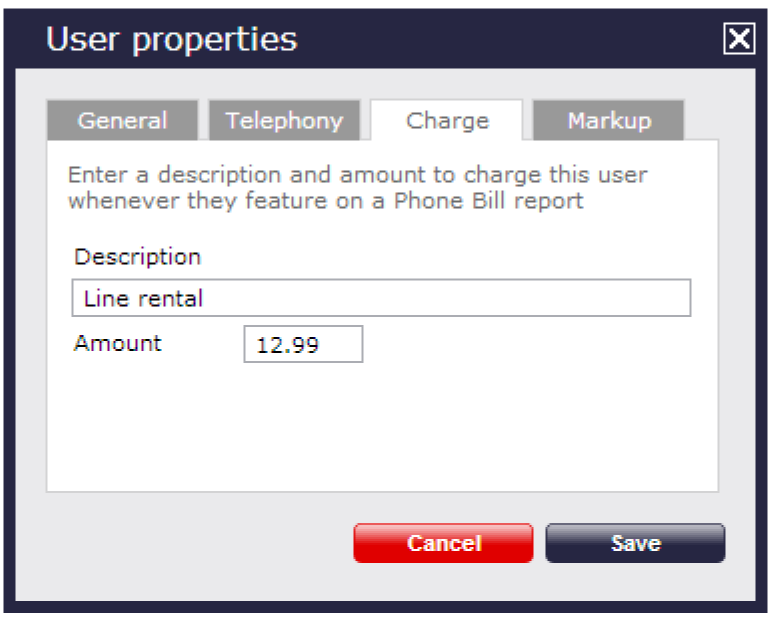

To apply a markup for an individual user, navigate to the Directory tab, locate the user you are interested in and click the Properties button. In the **User properties** window that appears, select the Markup tab and enter a description and percentage markup in the boxes provided, then click on the Save button.




### Adding a fixed charge

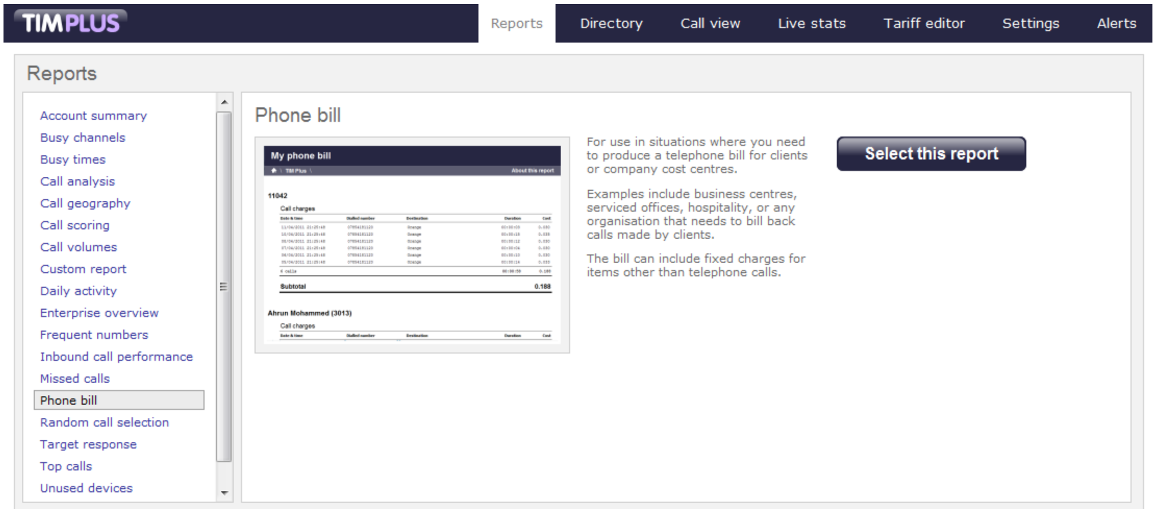
You can also add a fixed charge for items other than phone calls for each individual user that will feature in your bill.

To add a fixed charge, navigate to the Directory tab, select the user and click the Properties button. On the **User properties** window that appears, select the Charge tab and enter a description and a charge in the boxes provided, then click on the Save button.




## Running the report

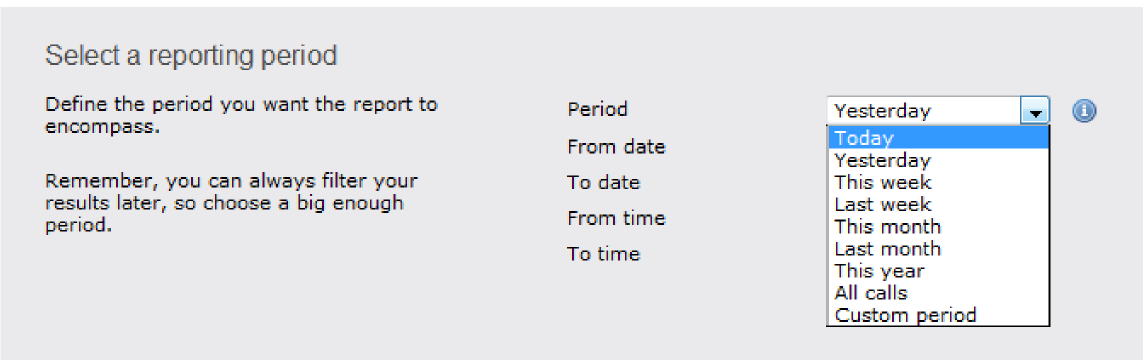
On the **Reports** screen, select the **Phone bill** report from the left-hand pane and click the Select this report button.




A new window will appear, where you can set the parameters of your report.

## Selecting the reporting period

For each report, you must specify a time span that covers the calls you want the report to include. This is known as the "reporting period".

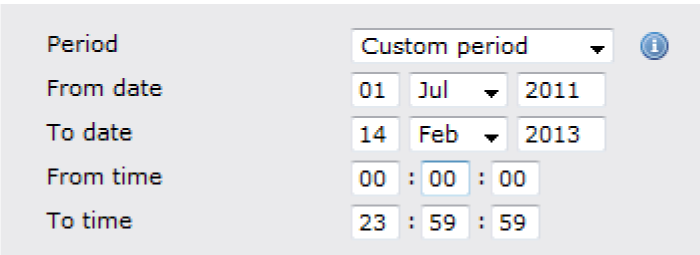



There are several preset reporting periods available for selection, based on the standard Gregorian calendar. The following table describes how the start and end times are defined for each preset period:

| Period | Description |
|---|---|
| **Today** | The start and end dates are set to the current date. The start time is set to `00:00:00` and the end time to `23:59:59`. |
| **Yesterday** | The start and end dates are set to the current date minus one day. The start time is set to `00:00:00` and the end time to `23:59:59`. |
| **This week** | The start date is set to the first day (normally Monday) of the current week. The end date is set to the current day. The start time is set to `00:00:00` and the end time to the current time. |
| **Last week** | The start date is set to the date of the last Monday, and the end date is set to the start date plus seven days. The start time is set to `00:00:00` and the end time to `23:59:59`. |
| **This month** | The start date is set to the first day of the current month. The end date is set to the current day. The start time is set to `00:00:00` and the end time to the current time. |

| | |
|---|---|
| **Last month** | The start date for this period is set in three stages: The day is set to the first day of the month. The month is set to the previous month. The year is set to the current year, unless it is currently January, in which case, the previous year is used. The start and end times are set to `00:00:00` and `23:59:59` respectively. |
| **This year** | The start date is set to the first day of the first month of the current year, whilst the end date is set to today's date. The start and end times are set to `00:00:00` and `23:59:59` respectively. |
| **All calls** | The start and end dates and times are set to the dates and times of the first and last call in the entire call database, respectively. |

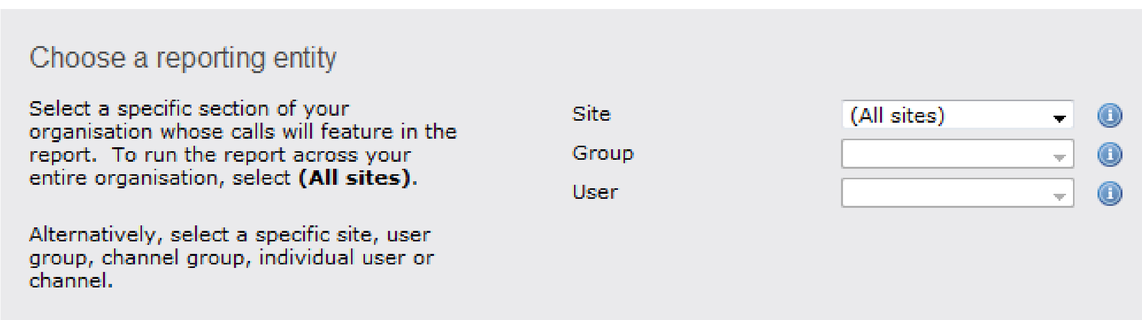
In addition to the presets described above, it is possible to specify a custom reporting period by choosing `Custom period` from the `Period` drop-down list and specifying your own `Start date`, `Start time`, `End date` and `End time` of the period you want to report on.




Once you have set the reporting period, click on the Next button to set additional report parameters and options, or select the Finish button to run the report immediately.

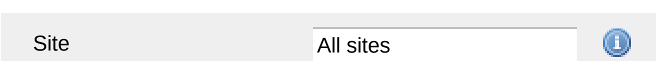
### Selecting the reporting entity

The `Reporting entity` parameter allows you to select the part of your organisation whose calls the report should include, e.g. a site, a group or an individual user.



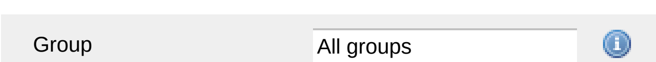

#### Site

To report on a particular site, select it from the drop-down list or select `All sites` .



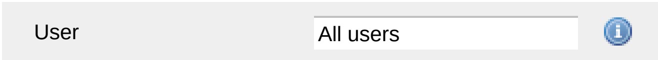

#### Group

If a site has been selected, you are able to further limit the report's results by selecting a group from the drop-down list.




#### User

If both a site and group have been selected, you can further limit the report's results to include only calls involving a particular user, by selecting that user from the drop-down list.

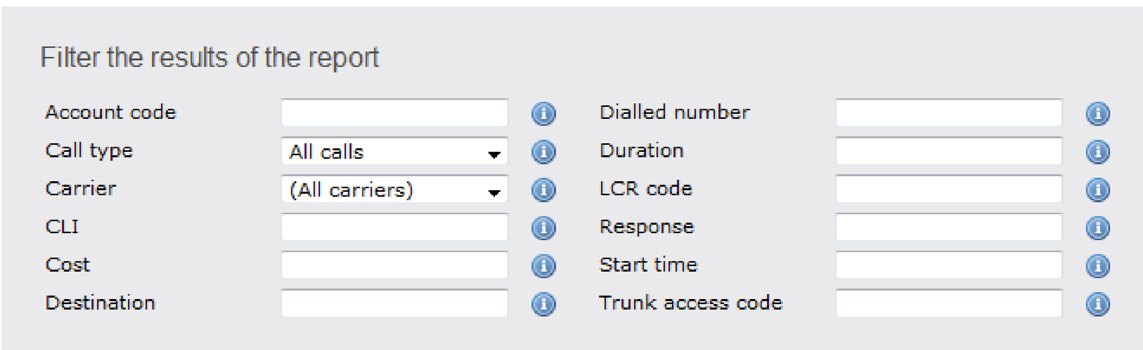



If your web account is restricted to a specific site or group, only those entities to which you have access will be available in the drop-down lists.

Once you have selected the scope of your report, click on the Next button to set additional report parameters and options, or to run the report immediately, click the Finish button.

### Selecting the report filters

You can limit the results of your report by choosing one or more of the following filters:



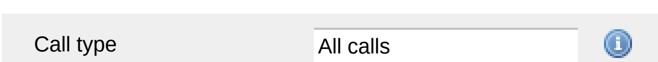

#### Account code

To produce a report consisting only of calls that were made using a particular account code, enter the account code in the field provided.


To report on more than one account code, separate each code using a comma.

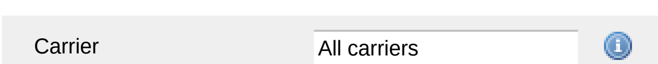
#### Call type

This filter allows you to define the type of call you want to report on, in terms of where the call originated and where it was delivered, e.g. incoming, outgoing, internal etc.  To report on all types of call, set this to **`All calls`**.




#### Carrier

If you use more than one carrier, you can limit the results to include only calls that were made using a specific carrier.

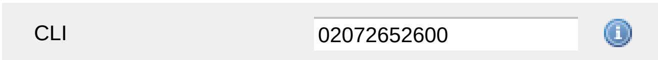



If you use only one carrier, there will be no drop-down list available and no option to choose a carrier.

### CLI

Calling Line Identification (CLI) is the telephone number of the remote caller in an incoming call scenario.

You can report on calls that originate from a specific CLI or those whose CLI matches a particular pattern of digits. For example, to report on all incoming calls from Tri-Line, you could enter **02072652600**.




You can use the `!` symbol to explicitly exclude a CLI from the report's results, and/or the `*` symbol as a wildcard in digit pattern matching.  For example, to exclude calls from Tri-Line, but include all others, you could use **!020726526***. To report on more than one CLI, use a comma to separate each entry.

### Cost

You can define a cost filter to include calls above or below specific values by entering your criteria, as shown below:


You can specify a cost range by using the `-` symbol; to specify limits, use the comparison operators, **>**, **<**, and **!** .

### Destination

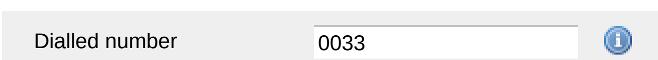
If you want to filter calls to a specific, known destination, type the name of the destination in the text box provided. This filter accepts the **!** and ***** symbols for excluding values and specifying partial matches, respectively.

For example, if you wanted to exclude all calls to France, you could enter **!France***, as shown below:


### Dialled number

To filter calls to a specific dialled number, type it in the text box provided. The dialled number is defined as the number that is dialled (in the case of an outbound call), or the DDI number that the remote party dialled to reach a particular extension or group (in the case of an inbound call).

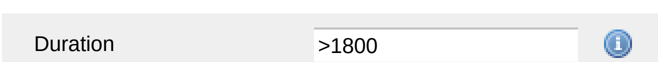
To filter calls to a specific area, a partial number can be entered (e.g. **0033** for calls to France).




You can use the `!` symbol to explicitly exclude a dialled number from the report's results, and/or the `*` symbol as a wildcard in digit pattern matching.  For example, to exclude calls to Tri-Line, but include all others, you could use **!020726526***). To report on more than one dialled number, use a comma to separate each entry.

### Duration

To filter calls above or below a particular duration, enter the desired duration in seconds.




You can specify a duration range by using the `-` symbol; to specify limits, use the comparison operators, **>**, **<**, and **!** .

In the above example, the report will return only calls longer than 1800 seconds (30 minutes).

### LCR code

To filter your results to include only calls that used a Least Cost Routing (LCR) code, enter it in the text box provided.

You can use the `!` symbol to explicitly exclude a LCR code from the report's results, and/or the `*` symbol as a wildcard in digit pattern matching. For example, to exclude calls made using all LCR codes beginning `162`, you could enter `!162*`. To report on more than one LCR code, use a comma to separate each entry.

#### Response

This option allows you to filter calls based on their response time, measured in seconds. Specify the desired response time threshold in the text box provided.

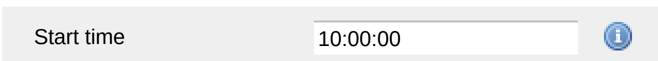

In the above example, the search results will display calls that have a response time greater than 10 seconds.

You can specify a response time range by using the `-` symbol and; to specify limits, use the comparison operators, `>`, `<`, and `!` .

#### Start time

This option allows you to filter calls based on the time the call started. Specify the start time in the text box provided using the `hh:mm:ss` format.

For example, to include only calls that began after 10 am, you could enter `10:00:00` in the `Start time` field, as shown below:



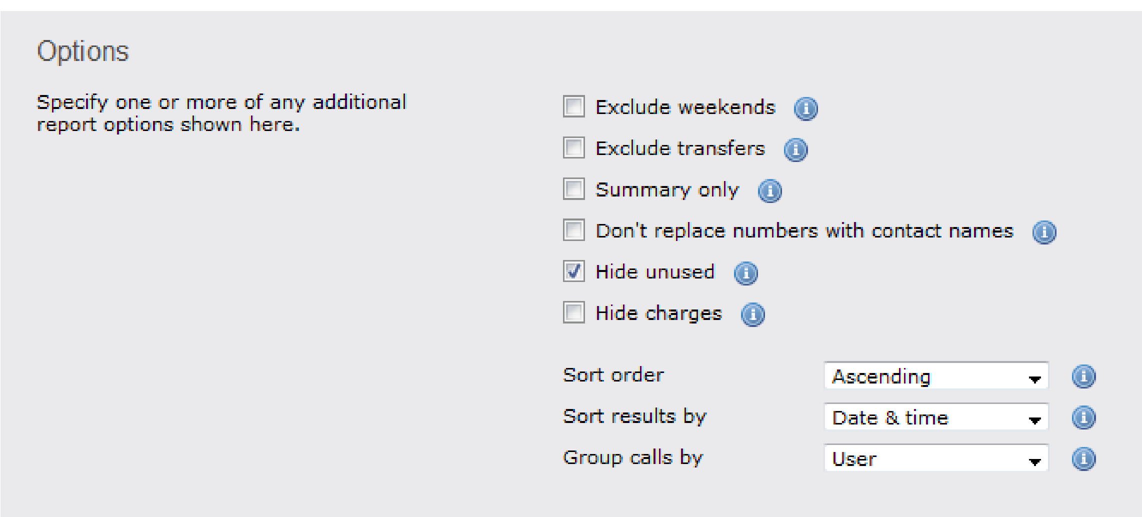

#### Trunk access code

If your telephone system uses trunk access codes to connect calls using specific channels, you can limit your report's results to include only calls made using those codes. Specify the trunk access code in the text box provided.


You can use the `!` symbol to explicitly exclude a trunk access code from the report's results, and/or the `*` symbol as a wildcard in digit pattern matching. For example, to exclude calls made using the `9` trunk access code, you could enter `!9`. To report on more than one trunk access code, use a comma to separate each entry.

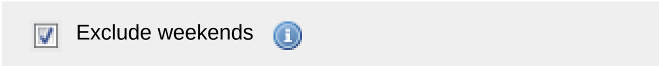
### Selecting the report options

This section enables you to further narrow down your report results, by excluding certain types of calls. It also allows you to sort the report's results in a particular manner.



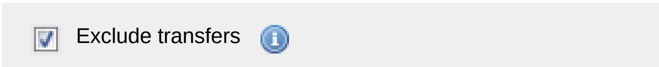

#### Exclude weekends

To exclude weekend calls from your report's results, select the `Exclude weekends` option.



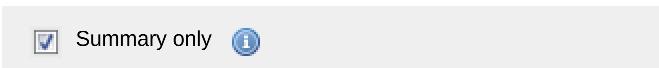

### Exclude transfers

To exclude transferred calls from your report's results, select the `Exclude transfers` option.



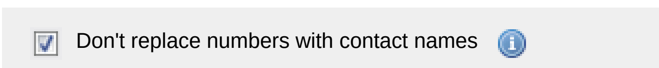

### Summary only

To show only a summary of calls, instead of an itemised list, tick the box `Summary only`, as shown below:



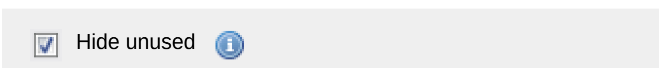

### Don't replace numbers with contact names

Tick this option if you do not want to replace dialled numbers, CLIs and account codes with their associated names, as defined in your web user's contacts list.



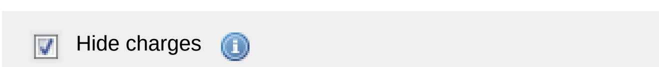

### Hide unused

To exclude unused extensions from your report's results, select the `Hide unused` option.



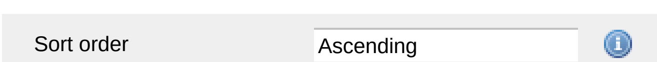

### Hide charges

To hide the charges applied to this report, select the `Hide charges` option:



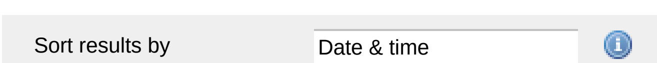

### Sort order

Choose from the `Sort order` drop-down list whether you want the results of the report to appear in ascending or descending order.



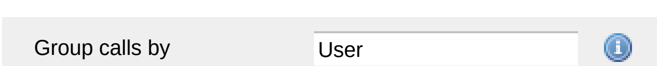

### Sort results by

To sort your report's results by a particular column, select it from the `Sort results by` drop-down list.




### Group calls by

Choose from the `Group calls by` drop-down list how you want to group your results:



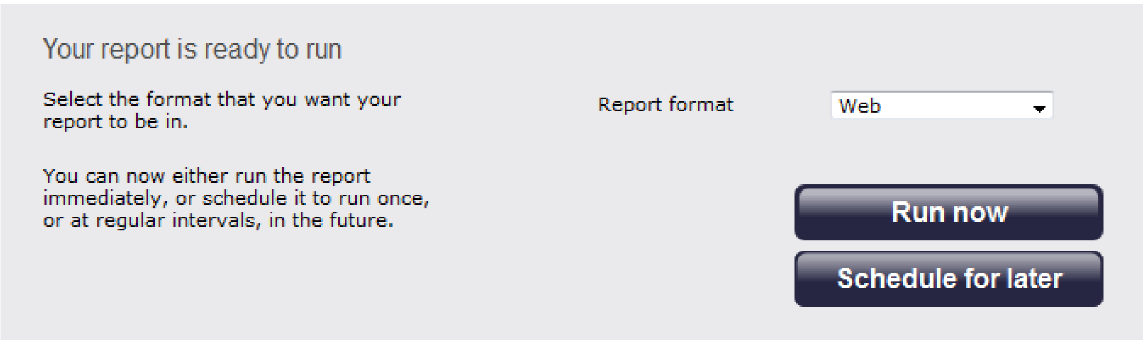
### Selecting the report format

This section allows you to choose the media format of your completed report. The formats available are **`Web`**, **`PDF`**, **`Excel`**, **`CSV`** and **`XML`**.

More details about each report format are available in the Setting the report format section above.

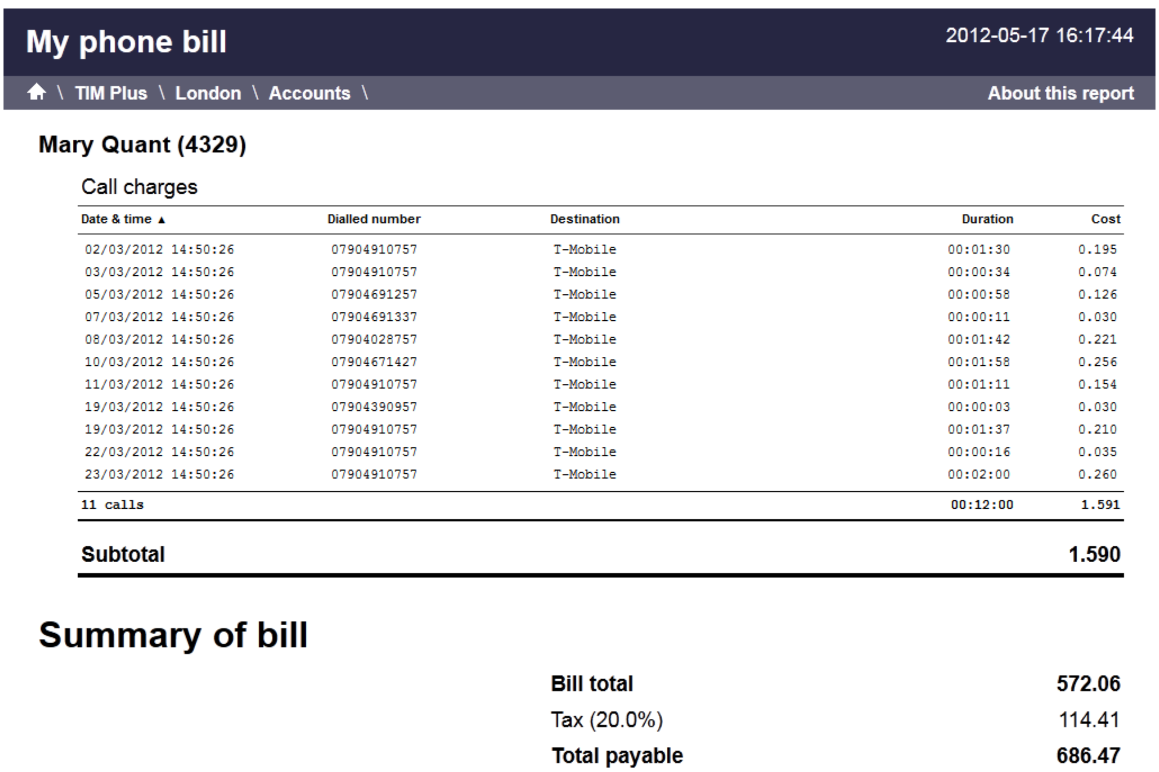
## Creating the report

When you have selected a reporting period and have chosen any filters and options, you can either run the report immediately by clicking on the Run now button, or schedule it for future delivery.




## The report's results

Below is an example of this report's output in **`Web`** format. By clicking on the **`About this report`** link at the top-right corner of the page, you can review any filters and options that have been applied to the report.



**My phone bill** 2012-05-17 16:17:44

\ TIM Plus \ London \ Accounts \ About this report

**Mary Quant (4329)**

Call charges

| Date & time ▲ | Dialled number | Destination | Duration | Cost |
|---|---|---|---|---|
| 02/03/2012 14:50:26 | 07904910757 | T-Mobile | 00:01:30 | 0.195 |
| 03/03/2012 14:50:26 | 07904910757 | T-Mobile | 00:00:34 | 0.074 |
| 05/03/2012 14:50:26 | 07904691257 | T-Mobile | 00:00:58 | 0.126 |
| 07/03/2012 14:50:26 | 07904691337 | T-Mobile | 00:00:11 | 0.030 |
| 08/03/2012 14:50:26 | 07904028757 | T-Mobile | 00:01:42 | 0.221 |
| 10/03/2012 14:50:26 | 07904671427 | T-Mobile | 00:01:58 | 0.256 |
| 11/03/2012 14:50:26 | 07904910757 | T-Mobile | 00:01:11 | 0.154 |
| 19/03/2012 14:50:26 | 07904390957 | T-Mobile | 00:00:03 | 0.030 |
| 19/03/2012 14:50:26 | 07904910757 | T-Mobile | 00:01:37 | 0.210 |
| 22/03/2012 14:50:26 | 07904910757 | T-Mobile | 00:00:16 | 0.035 |
| 23/03/2012 14:50:26 | 07904910757 | T-Mobile | 00:02:00 | 0.260 |
| **11 calls** | | | **00:12:00** | **1.591** |

**Subtotal** **1.590**

**Summary of bill**

| | |
|---|---|
| **Bill total** | **572.06** |
| Tax (20.0%) | 114.41 |
| **Total payable** | **686.47** |

As with all reports produced by TIM Plus, each page of the report includes the following information:

- the report's title
- the date and time that the report was generated
- the name of the report, if applicable

The **Web** format is the most interactive of all formats: all column headers are click-sortable and most graphical and tabular elements can be drilled down into, allowing deeper analysis of your results.

The body of the report consists of an itemised call list for each billed user. Each itemised list has the following column headers:

| Header | Description |
|---|---|
| **Date & Time** | The date and time the call started. |
| **Dialled number** | The telephone number that was dialled. |
| **Destination** | The location name associated with the dialled number. |
| **Duration** | The total time spent on the call, in **hh:mm:ss** format. |
| **Cost** | The cost of the call(s). |
| **Subtotal** | The total cost of all outgoing calls for each user. |
| **Bill total** | The total cost of all outgoing calls for all users. |
| **Tax** | The sales tax to apply to the bill (if applicable). |
| **Total payable** | The total amount payable, including taxes. |

To modify your report to cover a larger organisational scope, click on an element of the breadcrumb as shown below:

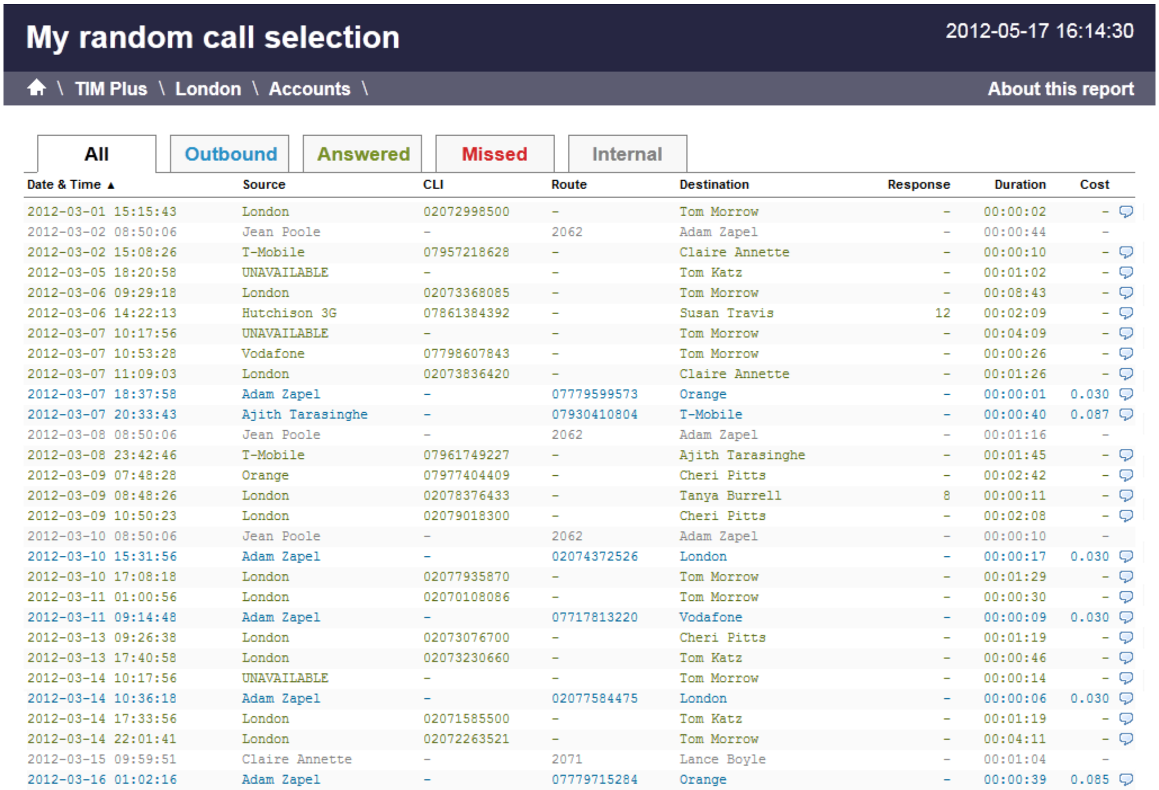

## Random Call Selection

**The Random Call Selection report**



### Introduction

The Random Call Selection report is useful for obtaining a sample of phone calls from across your organisation for the purposes of call auditing and quality control, especially when coupled with the integrated call recording features of TIM Plus. You can annotate, score, or listen to any of the calls that appear in the report's results.



My random call selection

2012-05-17 16:14:30

TIM Plus \ London \ Accounts \

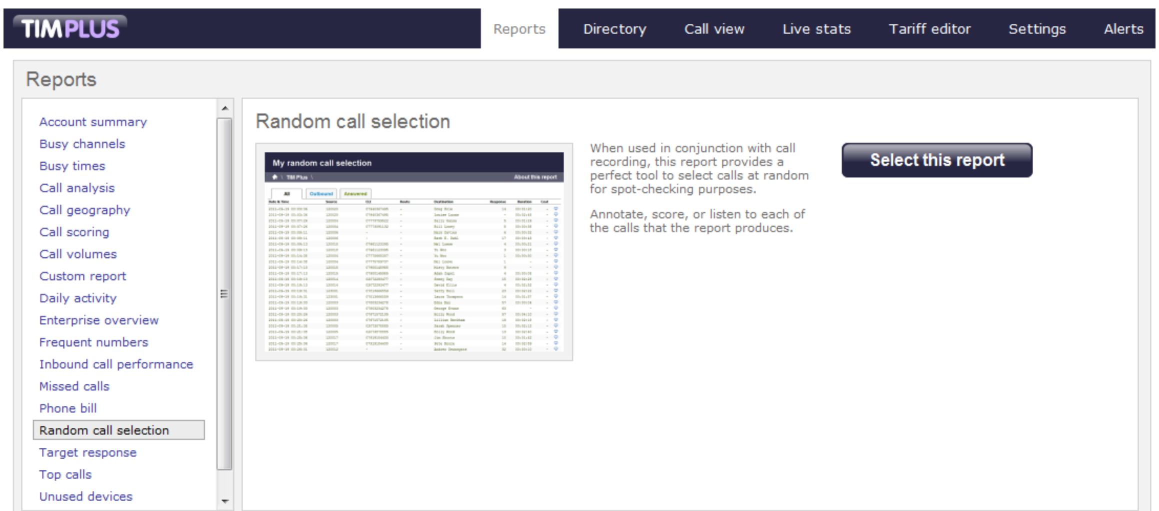
About this report

All | Outbound | Answered | Missed | Internal

| Date & Time ▲ | Source | CLI | Route | Destination | Response | Duration | Cost |
|---|---|---|---|---|---|---|---|
| 2012-03-01 15:15:43 | London | 02072998500 | - | Tom Morrow | - | 00:00:02 | - |
| 2012-03-02 08:50:06 | Jean Poole | - | 2062 | Adam Zapel | - | 00:00:44 | - |
| 2012-03-02 15:08:26 | T-Mobile | 07957218628 | - | Claire Annette | - | 00:00:10 | - |
| 2012-03-05 18:20:58 | UNAVAILABLE | - | - | Tom Katz | - | 00:01:02 | - |
| 2012-03-06 09:29:18 | London | 02073368085 | - | Tom Morrow | - | 00:08:43 | - |
| 2012-03-06 14:22:13 | Hutchison 3G | 07861384392 | - | Susan Travis | 12 | 00:02:09 | - |
| 2012-03-07 10:17:56 | UNAVAILABLE | - | - | Tom Morrow | - | 00:04:09 | - |
| 2012-03-07 10:53:28 | Vodafone | 07798607843 | - | Tom Morrow | - | 00:00:26 | - |
| 2012-03-07 11:09:03 | London | 02073836420 | - | Claire Annette | - | 00:01:26 | - |
| 2012-03-07 18:37:58 | Adam Zapel | - | 07779599573 | Orange | - | 00:00:01 | 0.030 |
| 2012-03-07 20:33:43 | Ajith Tarasinghe | - | 07930410804 | T-Mobile | - | 00:00:40 | 0.087 |
| 2012-03-08 08:50:06 | Jean Poole | - | 2062 | Adam Zapel | - | 00:01:16 | - |
| 2012-03-08 23:42:46 | T-Mobile | 07961749227 | - | Ajith Tarasinghe | - | 00:01:45 | - |
| 2012-03-09 07:48:28 | Orange | 07977404409 | - | Cheri Pitts | - | 00:02:42 | - |
| 2012-03-09 08:48:26 | London | 02078376433 | - | Tanya Burrell | 8 | 00:00:11 | - |
| 2012-03-09 10:50:23 | London | 02079018300 | - | Cheri Pitts | - | 00:02:08 | - |
| 2012-03-10 08:50:06 | Jean Poole | - | 2062 | Adam Zapel | - | 00:00:10 | - |
| 2012-03-10 15:31:56 | Adam Zapel | - | 02074372526 | London | - | 00:00:17 | 0.030 |
| 2012-03-10 17:08:18 | London | 02077935870 | - | Tom Morrow | - | 00:01:29 | - |
| 2012-03-11 01:00:56 | London | 02070108086 | - | Tom Morrow | - | 00:00:30 | - |
| 2012-03-11 09:14:48 | Adam Zapel | - | 07717813220 | Vodafone | - | 00:00:09 | 0.030 |
| 2012-03-13 09:26:38 | London | 02073076700 | - | Cheri Pitts | - | 00:01:19 | - |
| 2012-03-13 17:40:58 | London | 02073230660 | - | Tom Katz | - | 00:00:46 | - |
| 2012-03-14 10:17:56 | UNAVAILABLE | - | - | Tom Morrow | - | 00:00:14 | - |
| 2012-03-14 10:36:18 | Adam Zapel | - | 02077584475 | London | - | 00:00:06 | 0.030 |
| 2012-03-14 17:33:56 | London | 02071585500 | - | Tom Katz | - | 00:01:19 | - |
| 2012-03-14 22:01:41 | London | 02072263521 | - | Tom Morrow | - | 00:04:11 | - |
| 2012-03-15 09:59:51 | Claire Annette | - | 2071 | Lance Boyle | - | 00:01:04 | - |
| 2012-03-16 01:02:16 | Adam Zapel | - | 07779715284 | Orange | - | 00:00:39 | 0.085 |

## Running the report

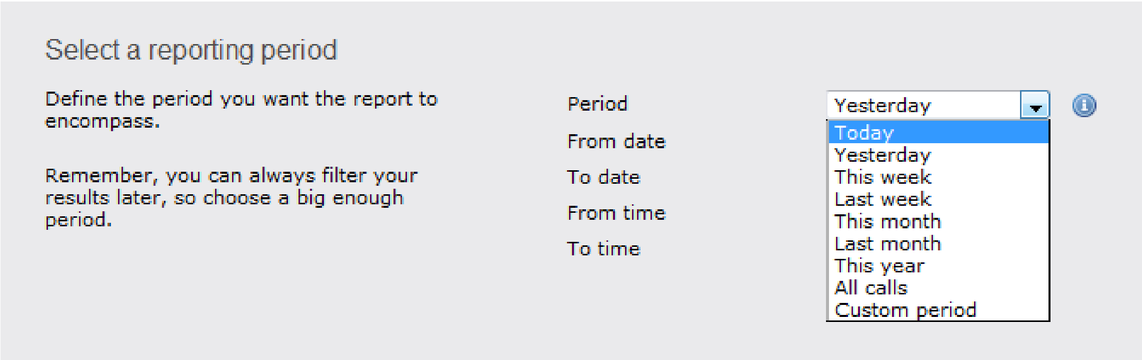
On the **Reports** screen, select the **Random call selection** report from the left-hand pane and click the Select this report button.




A new window will appear, where you can set the parameters of your report.

### Selecting the reporting period

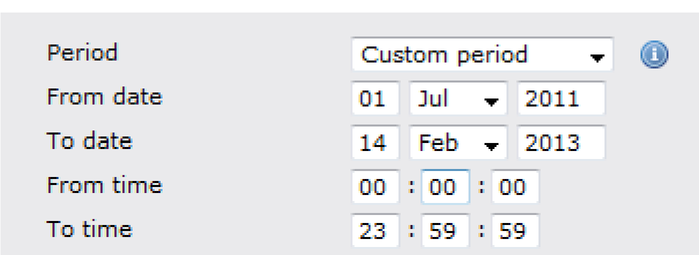
For each report, you must specify a time span that covers the calls you want the report to include. This is known as the "reporting period".




There are several preset reporting periods available for selection, based on the standard Gregorian calendar. The following table describes how the start and end times are defined for each preset period:

| Period | Description |
|---|---|
| **Today** | The start and end dates are set to the current date. The start time is set to **00:00:00** and the end time to **23:59:59**. |
| **Yesterday** | The start and end dates are set to the current date minus one day. The start time is set to **00:00:00** and the end time to **23:59:59**. |
| **This week** | The start date is set to the first day of the current week (normally Monday). The end date is set to the current day. The start time is set to **00:00:00** and the end time to the current time. |
| **Last week** | The start date is set to the date of the last Monday, and the end date is set to the start date plus seven days. The start time is set to **00:00:00** and the end time to **23:59:59**. |
| **This month** | The start date is set to the first day of the current month. The end date is set to the current day. The start time is set to **00:00:00** and the end time to the current time. |
| **Last month** | The start date for this period is set in three stages: The day is set to the first day of the month. The month is set to the previous month. The year is set to the current year, unless it is currently January, in which case, the previous year is used. The start and end times are set to **00:00:00** and **23:59:59** respectively. |
| **This year** | The start date is set to the first day of the first month of the current year, whilst the end date is set to today's date. The start and end times are set to **00:00:00** and **23:59:59** respectively. |
| **All calls** | The start and end dates and times are set to the dates and times of the first and last call in the entire call database, respectively. |

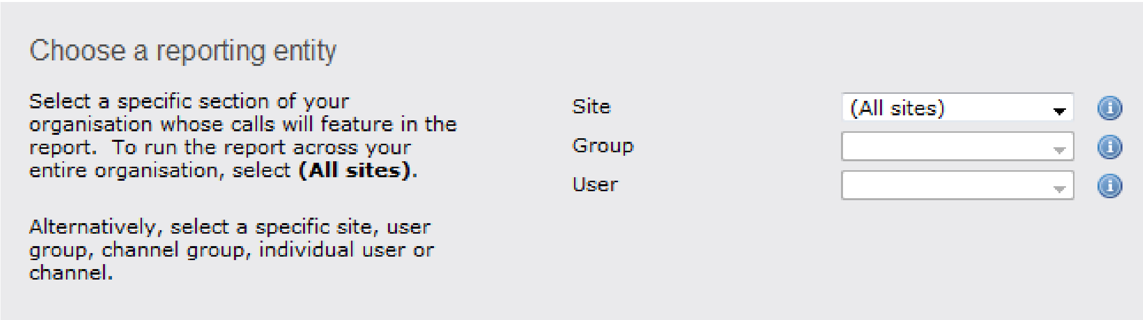
In addition to the presets described above, it is possible to specify a custom reporting period by choosing **Custom period** from the **Period** drop-down list and specifying your own **Start date**, **Start time**, **End date** and **End time** of the period you want to report on.




Once you have set the reporting period, click on the Next button to set additional report parameters and options, or select the Finish button to run the report immediately.

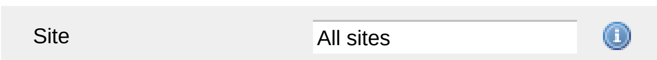
### Selecting the reporting entity

The `Reporting entity` parameter allows you to select the part of your organisation whose calls the report should include, e.g. a site, a group or an individual user.



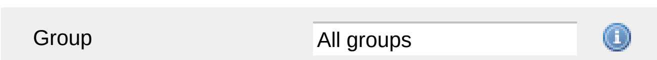

#### Site

To report on a particular site, select it from the drop-down list or select **`All sites`** .



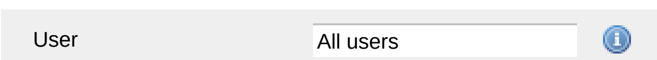

#### Group

If a site has been selected, you are able to further limit the report's results by selecting a group from the drop-down list.




#### User

If both a site and group have been selected, you can further limit the report's results to include only calls involving a particular user, by selecting that user from the drop-down list.

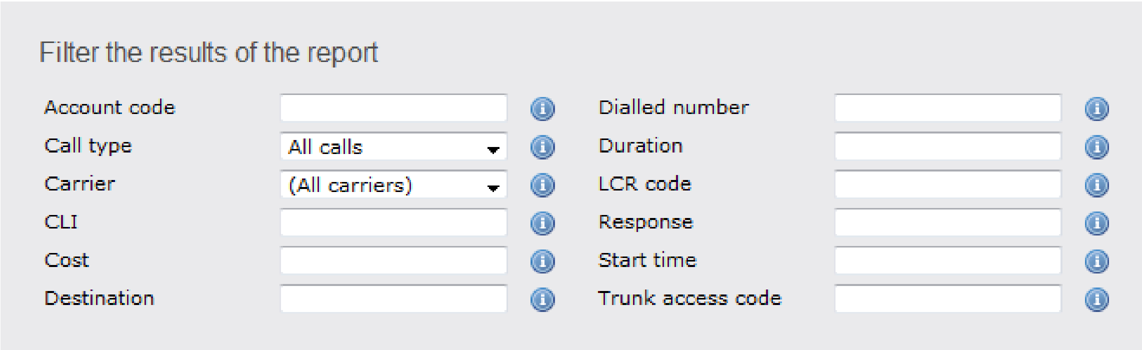



If your web account is restricted to a specific site or group, only those entities to which you have access will be available in the drop-down lists.

Once you have selected the scope of your report, click on the Next button to set additional report parameters and options, or to run the report immediately, click the Finish button.

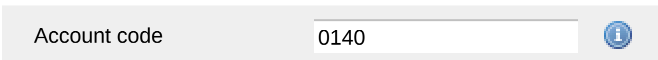
### Selecting the report filters

You can limit the results of your report by choosing one or more of the following filters:




### Account code

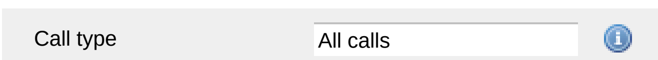
To produce a report consisting only of calls that were made using a particular account code, enter the account code in the field provided.




To report on more than one account code, separate each code using a comma.

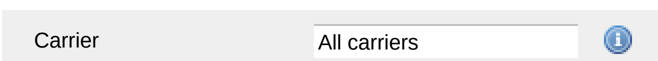
### Call type

This filter allows you to define the type of call you want to report on, in terms of where the call originated and where it was delivered, e.g. incoming, outgoing, internal, etc.  To report on all types of call, set this to `All calls`.




### Carrier

If you use more than one carrier, you can limit the results to include only calls that were made using a specific carrier.

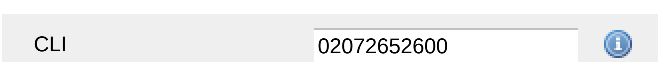



> If you use only one carrier, there will be no drop-down list available and no option to choose a carrier.

### CLI

Calling Line Identification (CLI) is the telephone number of the remote caller in an incoming call scenario.

You can report on calls that originate from a specific CLI or those whose CLI matches a particular pattern of digits. For example, to report on all incoming calls from Tri-Line, you could enter `02072652600`.




You can use the `!` symbol to explicitly exclude a CLI from the report's results, and/or the `*` symbol as a wildcard in digit pattern matching.  For example, to exclude calls from Tri-Line, but include all others, you could use `!020726526*`. To report on more than one CLI, use a comma to separate each entry.

### Cost

You can define a cost filter to include calls above or below specific values by entering your criteria, as shown below:

| | |
|---|---|
| Cost | <2.00 |

You can specify a cost range by using the `-` symbol; to specify limits, use the comparison operators, **>**, **<**, and **!** .

### Destination

If you want to filter calls to a specific, known destination, type the name of the destination in the text box provided. This filter accepts the **!** and ***** symbols for excluding values and specifying partial matches, respectively.

For example, if you wanted to exclude all calls to France, you could enter **`!France*`**, as shown below:

| | |
|---|---|
| Destination | !France* |

### Dialled number

To filter calls to a specific dialled number, type it in the text box provided. The dialled number is defined as the number that is dialled (in the case of an outbound call), or the DDI number that the remote party dialled to reach a particular extension or group (in the case of an inbound call).

To filter calls to a specific area, a partial number can be entered (e.g. **`0033`** for calls to France).

| | |
|---|---|
| Dialled number | 0033 |

You can use the `!` symbol to explicitly exclude a dialled number from the report's results, and/or the `*` symbol as a wildcard in digit pattern matching.  For example, to exclude calls to Tri-Line, but include all others, you could use **`!020726526*`**). To report on more than one dialled number, use a comma to separate each entry.

### Duration

To filter calls above or below a particular duration, enter the desired duration in seconds.

| | |
|---|---|
| Duration | >1800 |

You can specify a duration range by using the `-` symbol; to specify limits, use the comparison operators, **>**, **<**, and **!** .

In the above example, the report will return only calls longer than 1800 seconds (30 minutes).

### LCR code

To filter your results to include only calls that used a Least Cost Routing (LCR) code, enter it in the text box provided.

| | |
|---|---|
| LCR code | 162 |

You can use the `!` symbol to explicitly exclude a LCR code from the report's results, and/or the `*` symbol as a wildcard in digit pattern matching.  For example, to exclude calls made using all LCR codes beginning **`162`**, you could enter **`!162*`**. To report on more than one LCR code, use a comma to separate each entry.

### Response

This option allows you to filter calls based on their response time, measured in seconds. Specify the desired response time threshold in the text box provided.

| | |
|---|---|
| Response time | >10 |

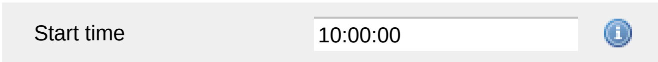
In the above example, the search results will display calls that have a response time greater than 10 seconds.

You can specify a response time range by using the `-` symbol and; to specify limits, use the comparison operators, **>**, **<**, and **!** .

### Start time

This option allows you to filter calls based on the time the call started. Specify the start time in the text box provided using the **`hh:mm:ss`** format.

For example, to include only calls that began after 10 am, you could enter `10:00:00` in the `Start time` field, as shown below:



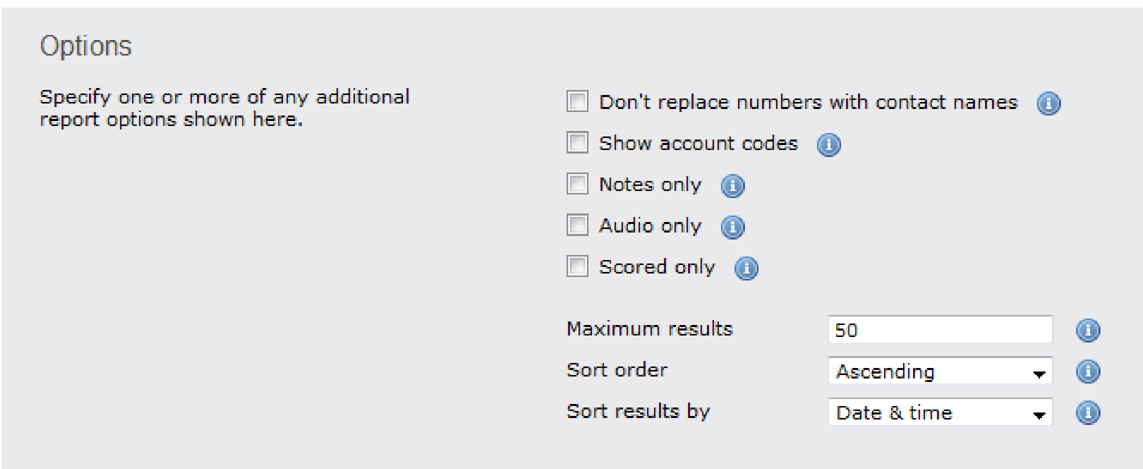

#### Trunk access code

If your telephone system uses trunk access codes to connect calls using specific channels, you can limit your report's results to include only calls made using those codes. Specify the trunk access code in the text box provided.


You can use the `!` symbol to explicitly exclude a trunk access code from the report's results, and/or the `*` symbol as a wildcard in digit pattern matching. For example, to exclude calls made using the `9` trunk access code, you could enter `!9`. To report on more than one trunk access code, use a comma to separate each entry.

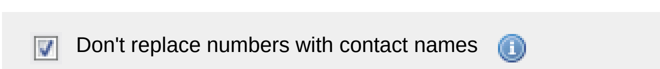
### Selecting the report options

This section enables you to further narrow down your report results, by excluding certain types of calls. It also allows you to sort the report's results in a particular manner.




#### Don't replace numbers with contact names

Tick this option if you do not want to replace dialled numbers, CLIs and account codes with their associated names, as defined in your web user's contacts list.

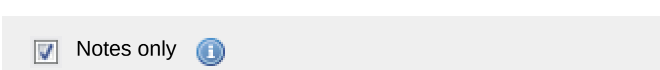



#### Show account codes

Select this option if you would like to display any associated account codes as an additional column in this report.

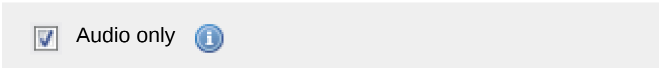

#### Notes only

Tick this option if you want your search results to include only calls that have notes associated with them.



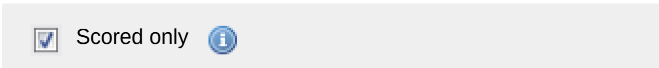

#### Audio only

Tick this option if you want your search results to include only calls that have an associated voice recording.




### Scored only

Tick this option to include only calls that have been previously scored.

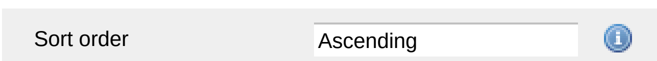



### Maximum results

To limit the report's results, enter the maximum number of results you want the report to display in the `Maximum results` option, e.g. if you enter **50** in the text box provided, only 50 results will be displayed.

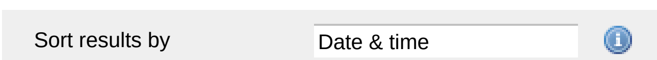

### Sort order

Choose from the `Sort order` drop-down list whether you want the results of your report to appear in ascending or descending order.




### Sort results by

To sort your report's results by a particular column, select it from the `Sort results by` drop-down list.



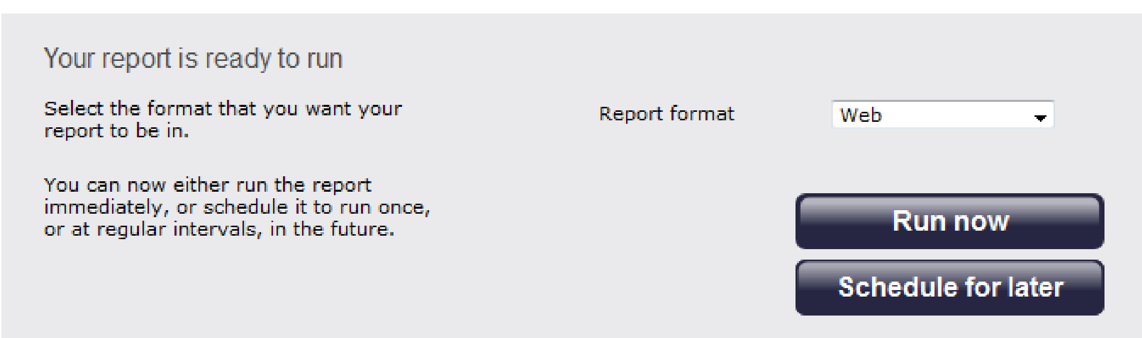

## Selecting the report format

This section allows you to choose the media format of your completed report. The formats available are `Web`, `PDF`, `Excel`, `CSV` and `XML`.

More details about each report format are available in the Setting the report format section above.

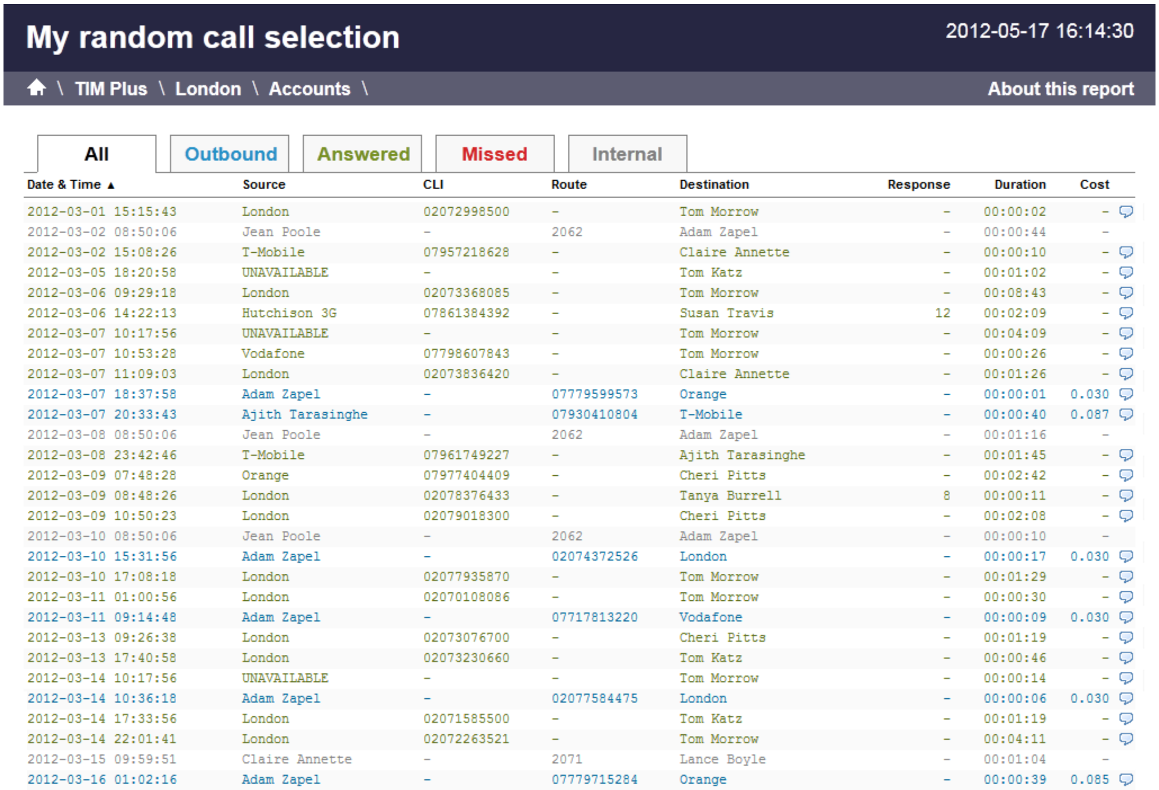
## Creating the report

When you have selected a reporting period and have chosen any filters and options, you can either run the report immediately by clicking on the Run now button, or schedule it for future delivery.




## The report's results

Below is an example of this report's output in **Web** format. By clicking on the **About this report** link at the top-right corner of the page, you can review any filters and options that have been applied to the report.


My random call selection
2012-05-17 16:14:30
\ TIM Plus \ London \ Accounts \
About this report
All | Outbound | Answered | Missed | Internal

| Date & Time ▲ | Source | CLI | Route | Destination | Response | Duration | Cost |
|---|---|---|---|---|---|---|---|
| 2012-03-01 15:15:43 | London | 02072998500 | - | Tom Morrow | - | 00:00:02 | - |
| 2012-03-02 08:50:06 | Jean Poole | - | 2062 | Adam Zapel | - | 00:00:44 | - |
| 2012-03-02 15:08:26 | T-Mobile | 07957218628 | - | Claire Annette | - | 00:00:10 | - |
| 2012-03-05 18:20:58 | UNAVAILABLE | - | - | Tom Katz | - | 00:01:02 | - |
| 2012-03-06 09:29:18 | London | 02073368085 | - | Tom Morrow | - | 00:08:43 | - |
| 2012-03-06 14:22:13 | Hutchison 3G | 07861384392 | - | Susan Travis | 12 | 00:02:09 | - |
| 2012-03-07 10:17:56 | UNAVAILABLE | - | - | Tom Morrow | - | 00:04:09 | - |
| 2012-03-07 10:53:28 | Vodafone | 07798607843 | - | Tom Morrow | - | 00:00:26 | - |
| 2012-03-07 11:09:03 | London | 02073836420 | - | Claire Annette | - | 00:01:26 | - |
| 2012-03-07 18:37:58 | Adam Zapel | - | 07779599573 | Orange | - | 00:00:01 | 0.030 |
| 2012-03-07 20:33:43 | Ajith Tarasinghe | - | 07930410804 | T-Mobile | - | 00:00:40 | 0.087 |
| 2012-03-08 08:50:06 | Jean Poole | - | 2062 | Adam Zapel | - | 00:01:16 | - |
| 2012-03-08 23:42:46 | T-Mobile | 07961749227 | - | Ajith Tarasinghe | - | 00:01:45 | - |
| 2012-03-09 07:48:28 | Orange | 07977404409 | - | Cheri Pitts | - | 00:02:42 | - |
| 2012-03-09 08:48:26 | London | 02078376433 | - | Tanya Burrell | 8 | 00:00:11 | - |
| 2012-03-09 10:50:23 | London | 02079018300 | - | Cheri Pitts | - | 00:02:08 | - |
| 2012-03-10 08:50:06 | Jean Poole | - | 2062 | Adam Zapel | - | 00:00:10 | - |
| 2012-03-10 15:31:56 | Adam Zapel | - | 02074372526 | London | - | 00:00:17 | 0.030 |
| 2012-03-10 17:08:18 | London | 02077935870 | - | Tom Morrow | - | 00:01:29 | - |
| 2012-03-11 01:00:56 | London | 02070108086 | - | Tom Morrow | - | 00:00:30 | - |
| 2012-03-11 09:14:48 | Adam Zapel | - | 07717813220 | Vodafone | - | 00:00:09 | 0.030 |
| 2012-03-13 09:26:38 | London | 02073076700 | - | Cheri Pitts | - | 00:01:19 | - |
| 2012-03-13 17:40:58 | London | 02073230660 | - | Tom Katz | - | 00:00:46 | - |
| 2012-03-14 10:17:56 | UNAVAILABLE | - | - | Tom Morrow | - | 00:00:14 | - |
| 2012-03-14 10:36:18 | Adam Zapel | - | 02077584475 | London | - | 00:00:06 | 0.030 |
| 2012-03-14 17:33:56 | London | 02071585500 | - | Tom Katz | - | 00:01:19 | - |
| 2012-03-14 22:01:41 | London | 02072263521 | - | Tom Morrow | - | 00:04:11 | - |
| 2012-03-15 09:59:51 | Claire Annette | - | 2071 | Lance Boyle | - | 00:01:04 | - |
| 2012-03-16 01:02:16 | Adam Zapel | - | 07779715284 | Orange | - | 00:00:39 | 0.085 |

As with all reports produced by TIM Plus, each page of the report includes the following information:

- the report's title
- the date and time that the report was generated
- the name of the report, if applicable

The **Web** format is the most interactive of all formats: all column headers are click-sortable and most graphical and tabular elements can be drilled down into, allowing deeper analysis of your results.

The body of the report consists of a table showing a randomly-chosen summary of calls for the period you selected. Each column header of the table is described below:

| Header | Description |
|---|---|
| **Date & Time** | The date and time the call started. |
| **Source** | The place from where the call originated. |
| **CLI** | The telephone number of the remote caller, for inbound calls. |
| **Route** | The information displayed in this field is determined by the type of call:<br>■ for incoming calls, this shows the CLI of the caller;<br>■ for incoming internal calls, this shows either the caller's username or extension number;<br>■ for outgoing calls, this shows the dialled number. |

| | |
|---|---|
| **Destination** | The information displayed in this field is determined by the type of call:<br>▪ for incoming calls, this shows the name of the user whose extension answered the call, or the extension number if not available;<br>▪ for outgoing calls, this shows the geographical location that was dialled, or an alias if defined in your contacts list;<br>▪ for internal calls, this shows the extension that was dialled, enclosed in square brackets [ ]. |
| **Response** | The length of time it took for the call to be answered (i.e. the response time). |
| **Duration** | The duration of the call (in hours, minutes and seconds). |
| **Cost** | The cost of the call. |

To modify your report to cover a larger organisational scope, click on an element of the breadcrumb as shown below:

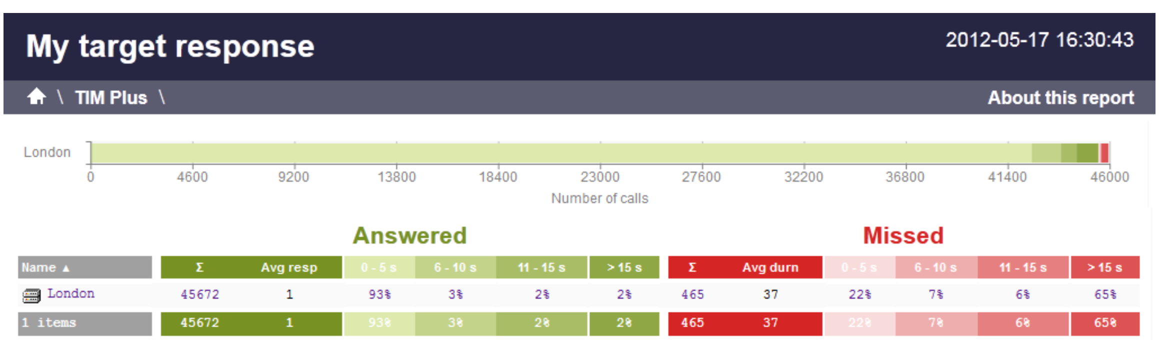

## Target Response

**The Target Response report**



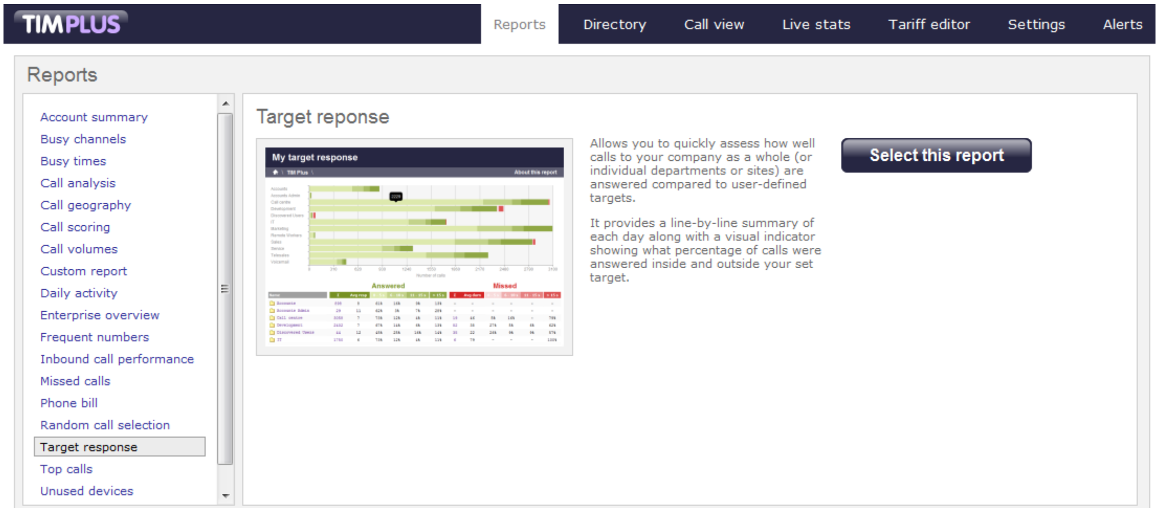
### Introduction

The Target Response report enables you to assess how well calls to your company are answered, compared to user-defined targets. The report provides a visual representation as well as a line-by-line summary of the proportion of calls answered inside and outside your set targets.



## Running the report

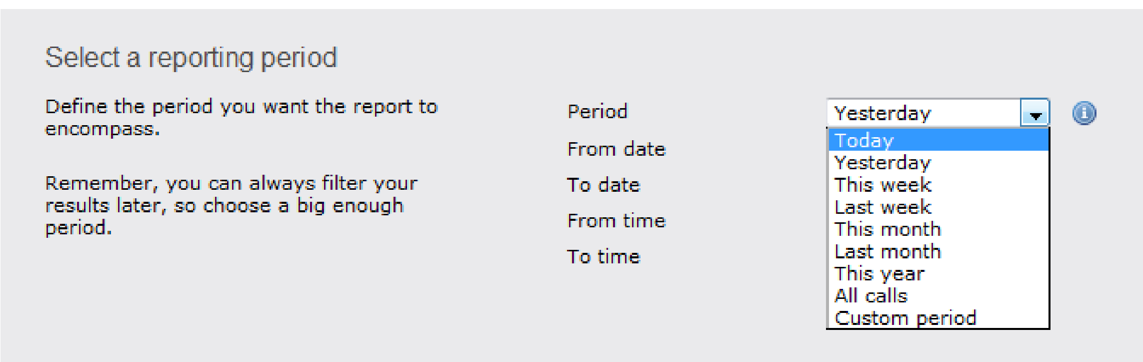
On the **Reports** screen, select the **Target response** report from the left-hand pane and click the Select this report button.




A new window will appear, where you can set the parameters of your report.

### Selecting the reporting period

For each report, you must specify a time span that covers the calls you want the report to include. This is known as the "reporting period".

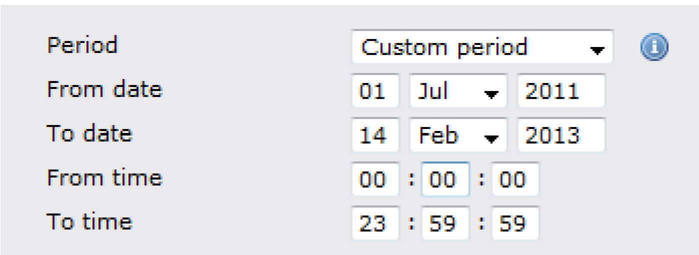



There are several preset reporting periods available for selection, based on the standard Gregorian calendar. The following table describes how the start and end times are defined for each preset period:

| Period | Description |
|---|---|
| **Today** | The start and end dates are set to the current date. The start time is set to **00:00:00** and the end time to **23:59:59**. |
| **Yesterday** | The start and end dates are set to the current date minus one day. The start time is set to **00:00:00** and the end time to **23:59:59**. |
| **This week** | The start date is set to the first day of the current week (normally Monday). The end date is set to the current day. The start time is set to **00:00:00** and the end time to the current time. |
| **Last week** | The start date is set to the date of the last Monday, and the end date is set to the start date plus seven days. The start time is set to **00:00:00** and the end time to **23:59:59**. |

| | |
|---|---|
| **This month** | The start date is set to the first day of the current month. The end date is set to the current day. The start time is set to `00:00:00` and the end time to the current time. |
| **Last month** | The start date for this period is set in three stages: The day is set to the first day of the month. The month is set to the previous month. The year is set to the current year, unless it is currently January, in which case, the previous year is used. The start and end times are set to `00:00:00` and `23:59:59` respectively. |
| **This year** | The start date is set to the first day of the first month of the current year, whilst the end date is set to today's date. The start and end times are set to `00:00:00` and `23:59:59` respectively. |
| **All calls** | The start and end dates and times are set to the dates and times of the first and last call in the entire call database, respectively. |

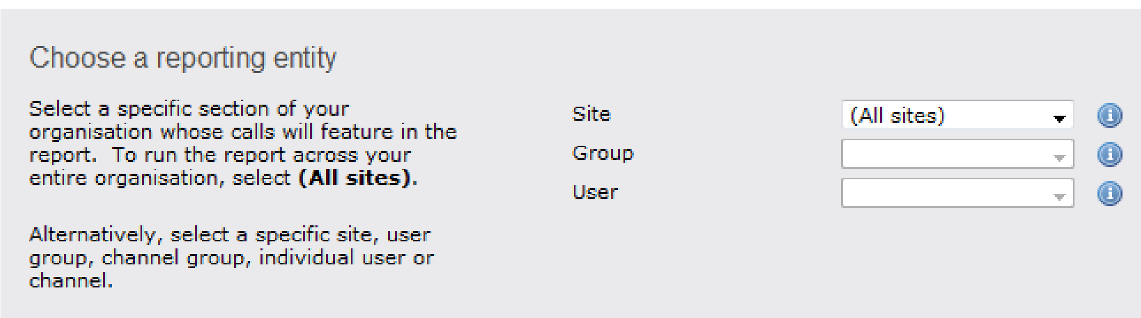
In addition to the presets described above, it is possible to specify a custom reporting period by choosing **`Custom period`** from the **`Period`** drop-down list and specifying your own **`Start date`**, **`Start time`**, **`End date`** and **`End time`** of the period you want to report on.




Once you have set the reporting period, click on the Next button to set additional report parameters and options, or select the Finish button to run the report immediately.

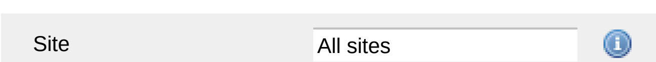
### Selecting the reporting entity

The **`Reporting entity`** parameter allows you to select the part of your organisation whose calls the report should include, e.g. a site, a group or an individual user.



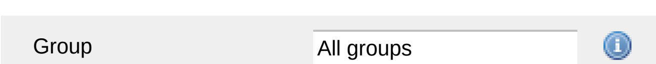

#### Site

To report on a particular site, select it from the drop-down list or select **`All sites`** .



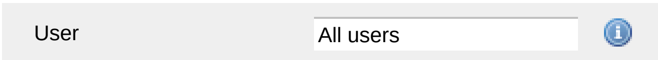

#### Group

If a site has been selected, you are able to further limit the report's results by selecting a group from the drop-down list.



### User

If both a site and group have been selected, you can further limit the report's results to include only calls involving a particular user, by selecting that user from the drop-down list.

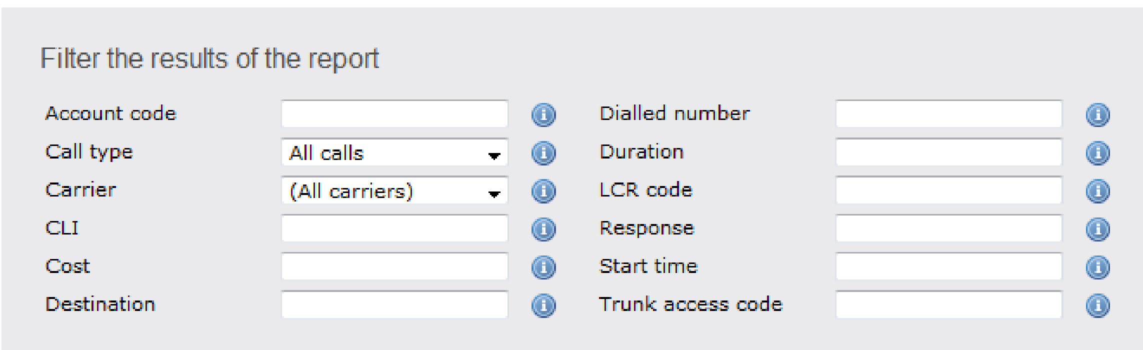



If your web account is restricted to a specific site or group, only those entities to which you have access will be available in the drop-down lists.

Once you have selected the scope of your report, click on the Next button to set additional report parameters and options, or to run the report immediately, click the Finish button.

## Selecting the report filters

You can limit the results of your report by choosing one or more of the following filters:



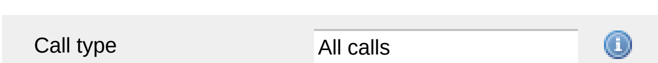

### Account code

To produce a report consisting only of calls that were made using a particular account code, enter the account code in the field provided.


To report on more than one account code, separate each code using a comma.

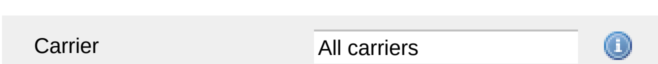
### Call type

This filter allows you to define the type of call you want to report on, in terms of where the call originated and where it was delivered, e.g. incoming, outgoing, internal, etc.  To report on all types of call, set this to **`All calls`**.




### Carrier

If you use more than one carrier, you can limit the results to include only calls that were made using a specific carrier.



> If you use only one carrier, there will be no drop-down list available and no option to choose a carrier.

### CLI

Calling Line Identification (CLI) is the telephone number of the remote caller in an incoming call scenario.

You can report on calls that originate from a specific CLI or those whose CLI matches a particular pattern of digits. For example, to report on all incoming calls from Tri-Line, you could enter **`02072652600`**.

| | |
|---|---|
| CLI | 02072652600 |

You can use the `!` symbol to explicitly exclude a CLI from the report's results, and/or the `*` symbol as a wildcard in digit pattern matching. For example, to exclude calls from Tri-Line, but include all others, you could use **`!020726526*`**. To report on more than one CLI, use a comma to separate each entry.

### Cost

You can define a cost filter to include calls above or below specific values by entering your criteria, as shown below:

| | |
|---|---|
| Cost | <2.00 |

You can specify a cost range by using the `-` symbol; to specify limits, use the comparison operators, **`>`**, **`<`**, and `!` .

### Destination

If you want to filter calls to a specific, known destination, type the name of the destination in the text box provided. This filter accepts the **`!`** and **`*`** symbols for excluding values and specifying partial matches, respectively.

For example, if you wanted to exclude all calls to France, you could enter **`!France*`**, as shown below:

| | |
|---|---|
| Destination | !France* |

### Dialled number

To filter calls to a specific dialled number, type it in the text box provided. The dialled number is defined as the number that is dialled (in the case of an outbound call), or the DDI number that the remote party dialled to reach a particular extension or group (in the case of an inbound call).

To filter calls to a specific area, a partial number can be entered (e.g. **`0033`** for calls to France).

| | |
|---|---|
| Dialled number | 0033 |

You can use the `!` symbol to explicitly exclude a dialled number from the report's results, and/or the `*` symbol as a wildcard in digit pattern matching. For example, to exclude calls to Tri-Line, but include all others, you could use **`!020726526*`**). To report on more than one dialled number, use a comma to separate each entry.

### Duration

To filter calls above or below a particular duration, enter the desired duration in seconds.

| | |
|---|---|
| Duration | >1800 |

You can specify a duration range by using the `-` symbol; to specify limits, use the comparison operators, **`>`**, **`<`**, and `!` .

In the above example, the report will return only calls longer than 1800 seconds (30 minutes).

### LCR code

To filter your results to include only calls that used a Least Cost Routing (LCR) code, enter it in the text box provided.

| | |
|---|---|
| LCR code | 162 |

You can use the `!` symbol to explicitly exclude a LCR code from the report's results, and/or the `*` symbol as a wildcard in digit pattern matching.  For example, to exclude calls made using all LCR codes beginning **`162`**, you could enter **`!162*`**. To report on more than one LCR code, use a comma to separate each entry.

### Response

This option allows you to filter calls based on their response time, measured in seconds. Specify the desired response time threshold in the text box provided.

| | |
|---|---|
| Response time | >10 |

In the above example, the search results will display calls that have a response time greater than 10 seconds.

You can specify a response time range by using the `-` symbol and; to specify limits, use the comparison operators, **`>`**, **`<`**, and **`!`** .

### Start time

This option allows you to filter calls based on the time the call started. Specify the start time in the text box provided using the **`hh:mm:ss`** format.

For example, to include only calls that began after 10 am, you could enter **`10:00:00`** in the **`Start time`** field, as shown below:

| | |
|---|---|
| Start time | 10:00:00 |

### Trunk access code

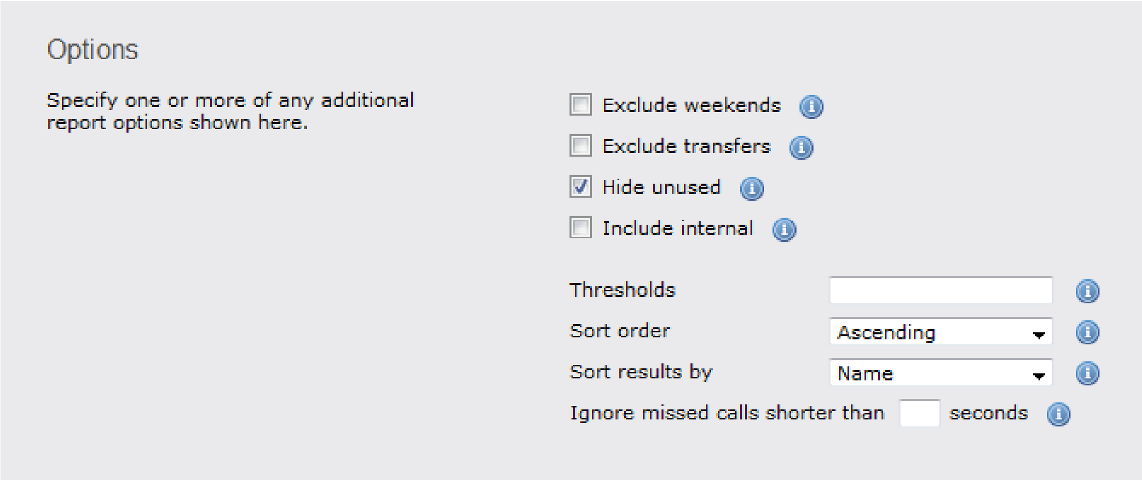
If your telephone system uses trunk access codes to connect calls using specific channels, you can limit your report's results to include only calls made using those codes. Specify the trunk access code in the text box provided.

| | |
|---|---|
| Trunk access code | 9 |

You can use the `!` symbol to explicitly exclude a trunk access code from the report's results, and/or the `*` symbol as a wildcard in digit pattern matching. For example, to exclude calls made using the **`9`** trunk access code, you could enter **`!9`**. To report on more than one trunk access code, use a comma to separate each entry.

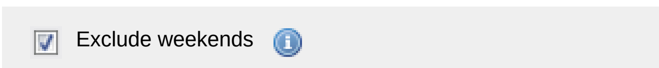
## Selecting the report options

This section enables you to further narrow down your report results, by excluding certain types of calls. It also allows you to sort the report's results in a particular manner.



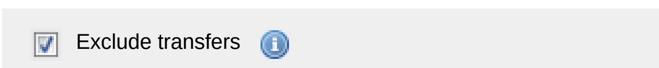

### Exclude weekends

To exclude weekend calls from your report's results, select the `Exclude weekends` option.



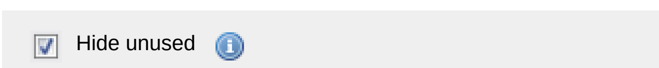

### Exclude transfers

To exclude transferred calls from your report's results, select the `Exclude transfers` option.



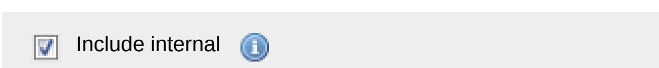

### Hide unused

To exclude unused extensions from your report's results, select the `Hide unused` option.




### Include internal

Tick this box if you want to include internal calls in your report's results.

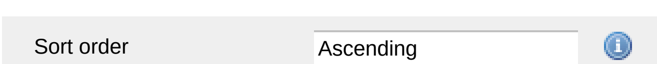



### Thresholds

Use this option to define your response time target thresholds. The example below shows response time targets of 5, 10 and 20 seconds.

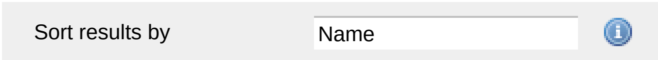

### Sort order

Choose from the `Sort order` drop-down list whether you want the results of your report to appear in ascending or descending order.



#### Sort results by

To sort your report's results by a particular column, select it from the `Sort results by` drop-down list.




#### Ignore short missed calls

Missed calls below a certain duration can sometimes pollute the meaning of a report's results. To exclude such short calls from your report, enter a duration threshold in the text box provided, e.g. to ignore calls below 3 seconds, enter **3** .

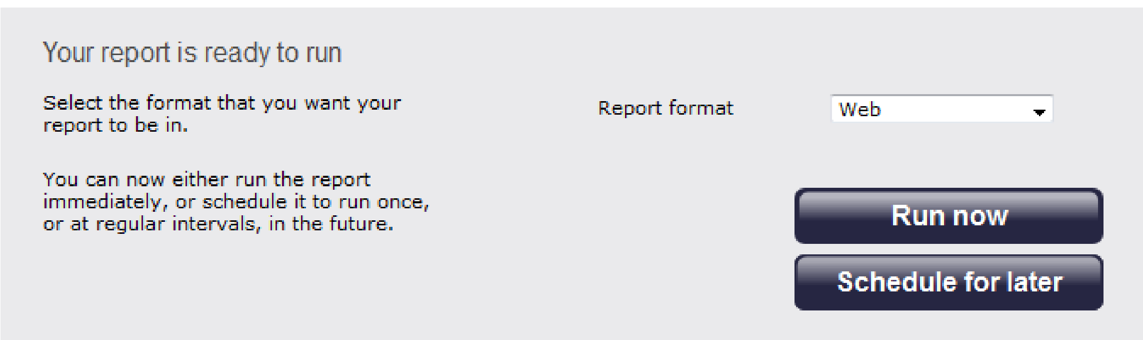
## Selecting the report format

This section allows you to choose the media format of your completed report. The formats available are `Web`, `PDF`, `Excel`, `CSV` and `XML`.

More details about each report format are available in the Setting the report format section above.

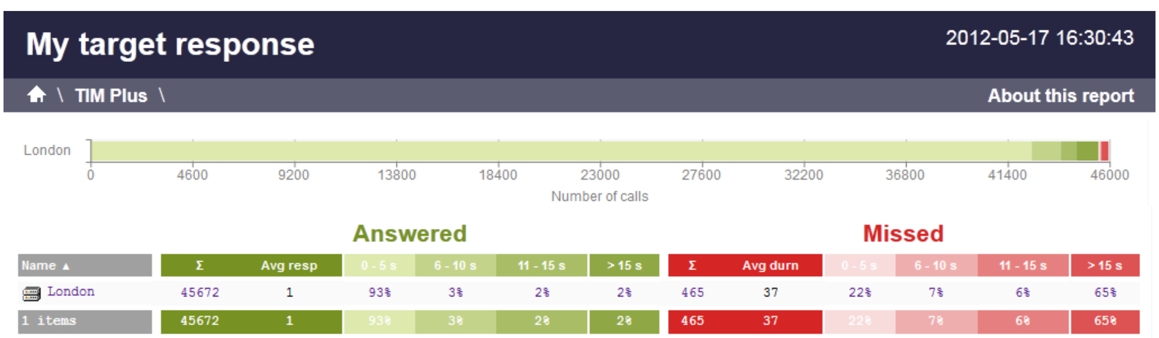
### Creating the report

When you have selected a reporting period and have chosen any filters and options, you can either run the report immediately by clicking on the Run now button, or schedule it for future delivery.




### The report's results

Below is an example of this report's output in `Web` format. By clicking on the `About this report` link at the top-right corner of the page, you can review any filters and options that have been applied to the report.




| Name ▲ | Σ | Avg resp | 0 - 5 s | 6 - 10 s | 11 - 15 s | > 15 s | Σ | Avg durn | 0 - 5 s | 6 - 10 s | 11 - 15 s | > 15 s |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| London | 45672 | 1 | 93% | 3% | 2% | 2% | 465 | 37 | 22% | 7% | 6% | 65% |
| 1 items | 45672 | 1 | 93% | 3% | 2% | 2% | 465 | 37 | 22% | 7% | 6% | 65% |

As with all reports produced by TIM Plus, each page of the report includes the following information:

- the report's title
- the date and time that the report was generated

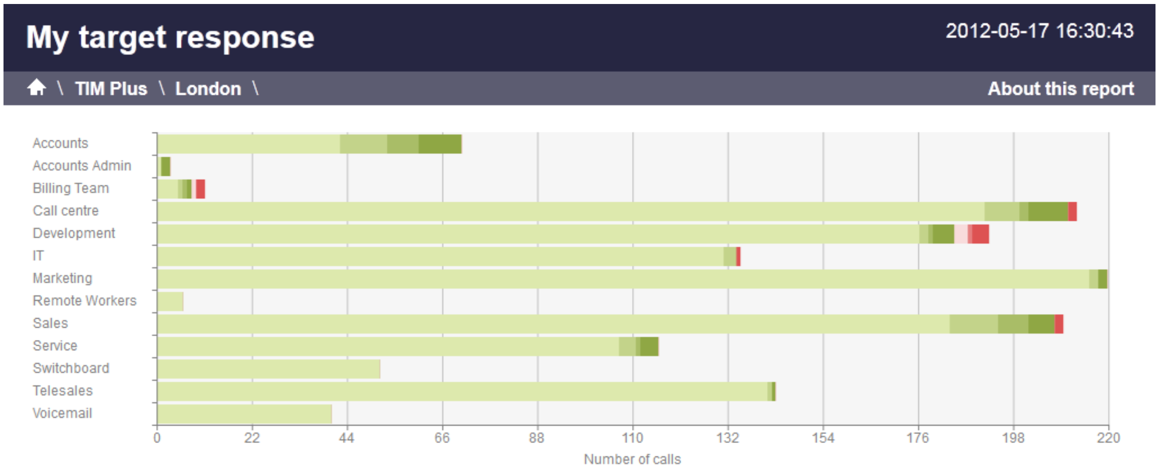
- the name of the report, if applicable

The **Web** format is the most interactive of all formats: all column headers are click-sortable and most graphical and tabular elements can be drilled down into, allowing deeper analysis of your results.

The body of the report consists of a table showing a summary of call information for the period you selected, grouped by entity. Each column header of the table is described below:

| Header | Description |
|---|---|
| **Name** | The name of the entity for each line of data |
| **Answered** | ▪ **:** The total volume of calls received for each entity<br>▪ **Avg resp:** The average response time of all answered calls in each period<br>▪ **x-xx s:** The percentage of calls that were answered within each predefined target, e.g. if **50%** is displayed under the **0-5s** heading, half of all calls were answered sooner than 5 seconds<br>You can define your own thresholds in the **Options** section of the report wizard (above) |
| **Missed** | ▪ **:** The total number of missed calls for each entity<br>▪ **Avg durn:** The average length of time a missed call rang before being abandoned<br>▪ **x-xx s:** The percentage of calls that were abandoned within each predefined target, e.g. if **50%** is displayed under the **0-5s** heading, half of all calls were abandoned sooner than 5 seconds<br>You can define your own thresholds in the **Options**section of the report wizard (above) |

Each entity is shown as a hyperlink which, if clicked on, re-runs the report to include only call information pertaining to that entity, allowing you to inspect the performance of specific teams and individual users.




| Name ▲ | Answered Σ | Avg resp | 0 - 5 s | 6 - 10 s | 11 - 15 s | > 15 s | Missed Σ | Avg durn | 0 - 5 s | 6 - 10 s | 11 - 15 s | > 15 s |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Accounts | 70 | 9 | 60% | 16% | 10% | 14% | - | - | - | - | - | - |
| Accounts Admin | 3 | 19 | 33% | - | - | 67% | - | - | - | - | - | - |
| Billing Team | 8 | 7 | 63% | 13% | 13% | 13% | 3 | 28 | 33% | - | - | 67% |
| Call centre | 209 | 2 | 91% | 4% | 1% | 4% | 2 | 68 | - | - | - | 100% |
| Development | 183 | 2 | 96% | 1% | 1% | 3% | 8 | 32 | 38% | - | 13% | 50% |
| IT | 133 | - | 98% | 2% | - | - | 1 | 45 | - | - | - | 100% |
| Marketing | 218 | 1 | 98% | 1% | - | 1% | - | - | - | - | - | - |
| Remote Workers | 6 | - | 100% | - | - | - | - | - | - | - | - | - |
| Sales | 206 | 2 | 88% | 5% | 3% | 3% | 2 | 83 | - | - | - | 100% |
| Service | 115 | 2 | 92% | 3% | 1% | 3% | - | - | - | - | - | - |

To modify your report to cover a larger organisational scope, click on an element of the breadcrumb as shown below:

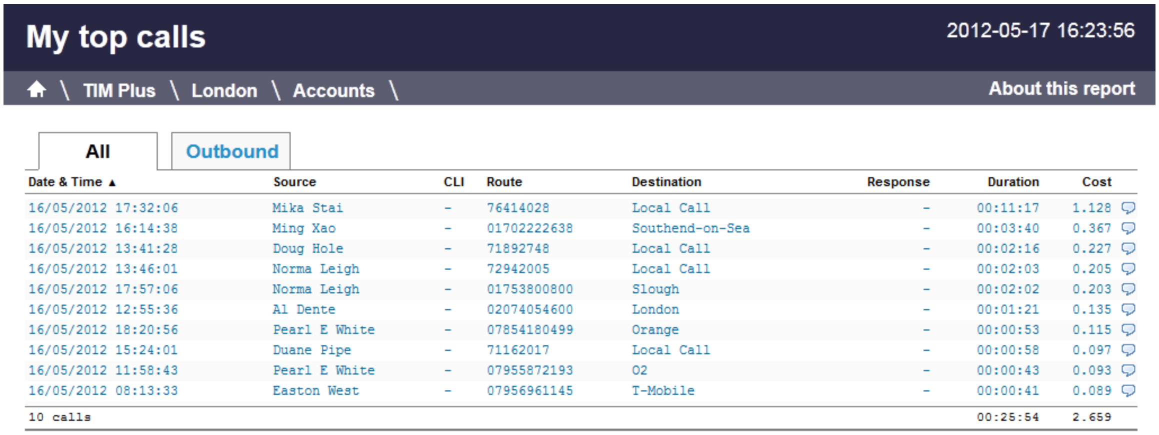

## Top Calls

**The Top Calls report**



### Introduction

The Top Calls report is useful for discovering unusual calling patterns and identifying potential abuse, by highlighting the longest and most costly calls made by people in your organisation.



# My top calls

2012-05-17 16:23:56

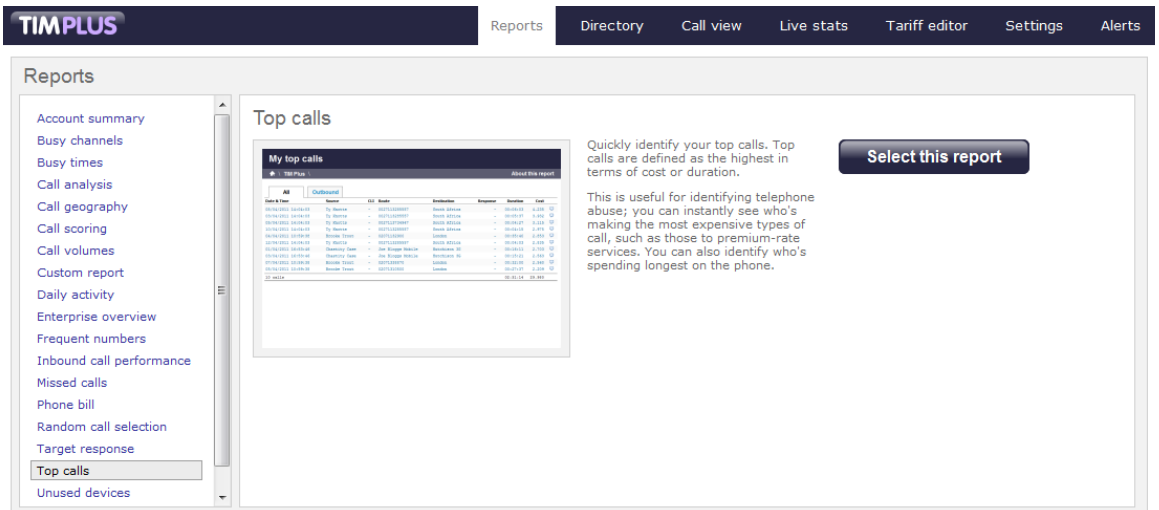
TIM Plus \ London \ Accounts \ About this report

All | Outbound

| Date & Time ▲ | Source | CLI | Route | Destination | Response | Duration | Cost |
|---|---|---|---|---|---|---|---|
| 16/05/2012 17:32:06 | Mika Stai | - | 76414028 | Local Call | - | 00:11:17 | 1.128 |
| 16/05/2012 16:14:38 | Ming Xao | - | 01702222638 | Southend-on-Sea | - | 00:03:40 | 0.367 |
| 16/05/2012 13:41:28 | Doug Hole | - | 71892748 | Local Call | - | 00:02:16 | 0.227 |
| 16/05/2012 13:46:01 | Norma Leigh | - | 72942005 | Local Call | - | 00:02:03 | 0.205 |
| 16/05/2012 17:57:06 | Norma Leigh | - | 01753800800 | Slough | - | 00:02:02 | 0.203 |
| 16/05/2012 12:55:36 | Al Dente | - | 02074054600 | London | - | 00:01:21 | 0.135 |
| 16/05/2012 18:20:56 | Pearl E White | - | 07854180499 | Orange | - | 00:00:53 | 0.115 |
| 16/05/2012 15:24:01 | Duane Pipe | - | 71162017 | Local Call | - | 00:00:58 | 0.097 |
| 16/05/2012 11:58:43 | Pearl E White | - | 07955872193 | O2 | - | 00:00:43 | 0.093 |
| 16/05/2012 08:13:33 | Easton West | - | 07956961145 | T-Mobile | - | 00:00:41 | 0.089 |
| 10 calls | | | | | | 00:25:54 | 2.659 |

## Running the report

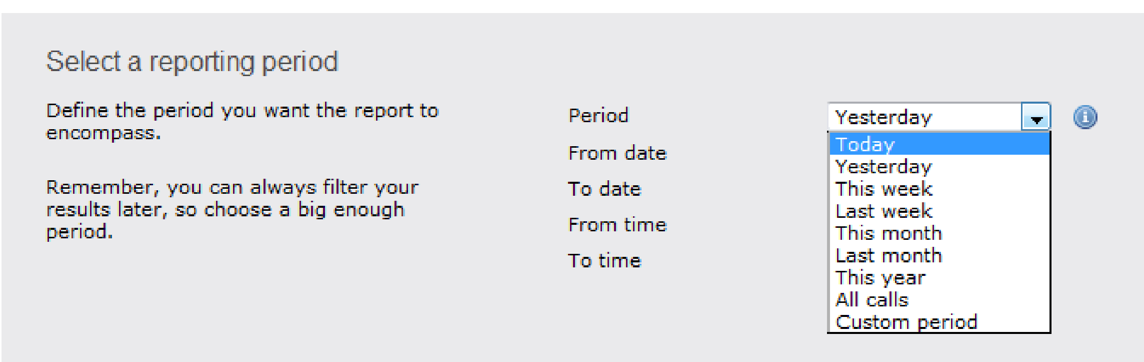
On the **Reports** screen, select the **Top calls** report from the left-hand pane and click the Select this report button.




A new window will appear, where you can set the parameters of your report.

### Selecting the reporting period

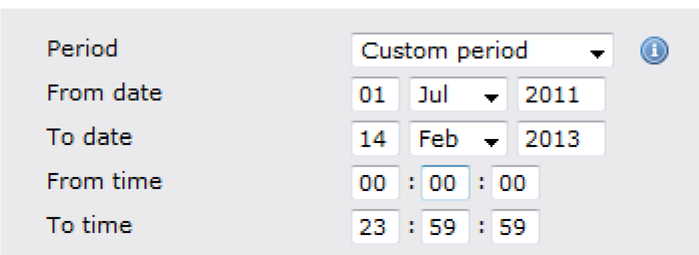
For each report, you must specify a time span that covers the calls you want the report to include. This is known as the "reporting period".




There are several preset reporting periods available for selection, based on the standard Gregorian calendar. The following table describes how the start and end times are defined for each preset period:

| Period | Description |
|---|---|
| **Today** | The start and end dates are set to the current date. The start time is set to **00:00:00** and the end time to **23:59:59**. |
| **Yesterday** | The start and end dates are set to the current date minus one day. The start time is set to **00:00:00** and the end time to **23:59:59**. |
| **This week** | The start date is set to the first day of the current week (normally Monday). The end date is set to the current day. The start time is set to **00:00:00** and the end time to the current time. |
| **Last week** | The start date is set to the date of the last Monday, and the end date is set to the start date plus seven days. The start time is set to **00:00:00** and the end time to **23:59:59**. |
| **This month** | The start date is set to the first day of the current month. The end date is set to the current day. The start time is set to **00:00:00** and the end time to the current time. |
| **Last month** | The start date for this period is set in three stages: The day is set to the first day of the month. The month is set to the previous month. The year is set to the current year, unless it is currently January, in which case, the previous year is used. The start and end times are set to **00:00:00** and **23:59:59** respectively. |
| **This year** | The start date is set to the first day of the first month of the current year, whilst the end date is set to today's date. The start and end times are set to **00:00:00** and **23:59:59** respectively. |
| **All calls** | The start and end dates and times are set to the dates and times of the first and last call in the entire call database, respectively. |

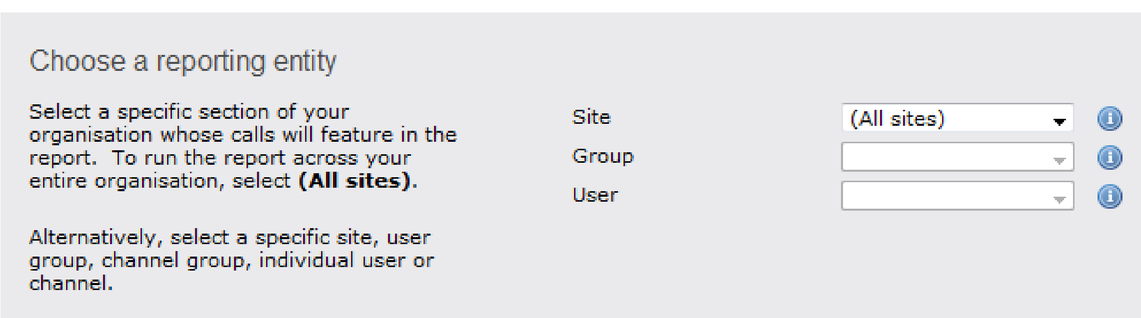
In addition to the presets described above, it is possible to specify a custom reporting period by choosing **Custom period** from the **Period** drop-down list and specifying your own **Start date**, **Start time**, **End date** and **End time** of the period you want to report on.




Once you have set the reporting period, click on the Next button to set additional report parameters and options, or select the Finish button to run the report immediately.

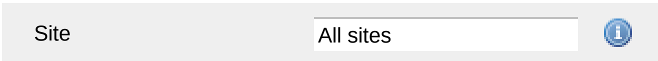
### Selecting the reporting entity

The **Reporting entity** parameter allows you to select the part of your organisation whose calls the report should include, e.g. a site, a group or an individual user.



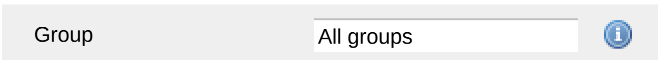
### Site

To report on a particular site, select it from the drop-down list or select `All sites` .




### Group

If a site has been selected, you are able to further limit the report's results by selecting a group from the drop-down list.




### User

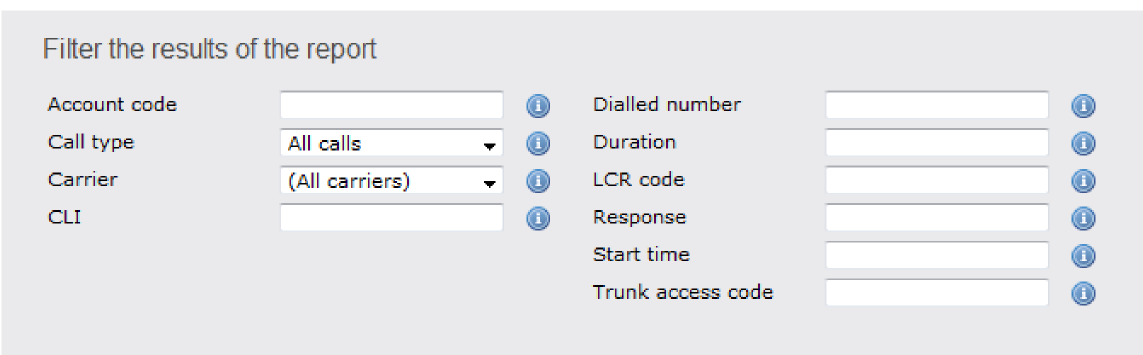
If both a site and group have been selected, you can further limit the report's results to include only calls involving a particular user, by selecting that user from the drop-down list.


If your web account is restricted to a specific site or group, only those entities to which you have access will be available in the drop-down lists.

Once you have selected the scope of your report, click on the Next button to set additional report parameters and options, or to run the report immediately, click the Finish button.

## Selecting the report filters

You can limit the results of your report by choosing one or more of the following filters:




### Account code

To produce a report consisting only of calls that were made using a particular account code, enter the account code in the field provided.


To report on more than one account code, separate each code using a comma.

### Call type

This filter allows you to define the type of call you want to report on, in terms of where the call originated and where it was delivered, e.g. incoming, outgoing, internal etc.  To report on all types of call, set this to **`All calls`**.

| | |
|---|---|
| Call type | All calls |

**Carrier**

If you use more than one carrier, you can limit the results to include only calls that were made using a specific carrier.

| | |
|---|---|
| Carrier | All carriers |

> If you use only one carrier, there will be no drop-down list available and no option to choose a carrier.

**CLI**

Calling Line Identification (CLI) is the telephone number of the remote caller in an incoming call scenario.

You can report on calls that originate from a specific CLI or those whose CLI matches a particular pattern of digits. For example, to report on all incoming calls from Tri-Line, you could enter **`02072652600`**.

| | |
|---|---|
| CLI | 02072652600 |

You can use the **`!`** symbol to explicitly exclude a CLI from the report's results, and/or the `*` symbol as a wildcard in digit pattern matching.  For example, to exclude calls from Tri-Line, but include all others, you could use **`!020726526*`**. To report on more than one CLI, use a comma to separate each entry.

**Dialled number**

To filter calls to a specific dialled number, type it in the text box provided. The dialled number is defined as the number that is dialled (in the case of an outbound call), or the DDI number that the remote party dialled to reach a particular extension or group (in the case of an inbound call).

To filter calls to a specific area, a partial number can be entered (e.g. **`0033`** for calls to France).

| | |
|---|---|
| Dialled number | 0033 |

You can use the **`!`** symbol to explicitly exclude a dialled number from the report's results, and/or the `*` symbol as a wildcard in digit pattern matching.  For example, to exclude calls to Tri-Line, but include all others, you could use **`!020726526*`**. To report on more than one dialled number, use a comma to separate each entry.

**Duration**

To filter calls above or below a particular duration, enter the desired duration in seconds.

| | |
|---|---|
| Duration | >1800 |

You can specify a duration range by using the `-` symbol; to specify limits, use the comparison operators, **`>`**, **`<`**, and **`!`** .

In the above example, the report will return only calls longer than 1800 seconds (30 minutes).

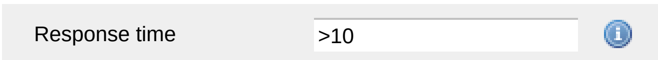
**LCR code**

To filter your results to include only calls that used a Least Cost Routing (LCR) code, enter it in the text box provided.


You can use the `!` symbol to explicitly exclude a LCR code from the report's results, and/or the `*` symbol as a wildcard in digit pattern matching.  For example, to exclude calls made using all LCR codes beginning **162**, you could enter **!162***. To report on more than one LCR code, use a comma to separate each entry.

### Response

This option allows you to filter calls based on their response time, measured in seconds. Specify the desired response time threshold in the text box provided.



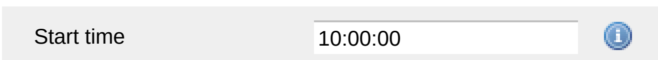

In the above example, the search results will display calls that have a response time greater than 10 seconds.

You can specify a response time range by using the `-` symbol and; to specify limits, use the comparison operators, **>**, **<**, and **!** .

### Start time

This option allows you to filter calls based on the time the call started. Specify the start time in the text box provided using the **hh:mm:ss** format.

For example, to include only calls that began after 10 am, you could enter **10:00:00** in the **Start time** field, as shown below:



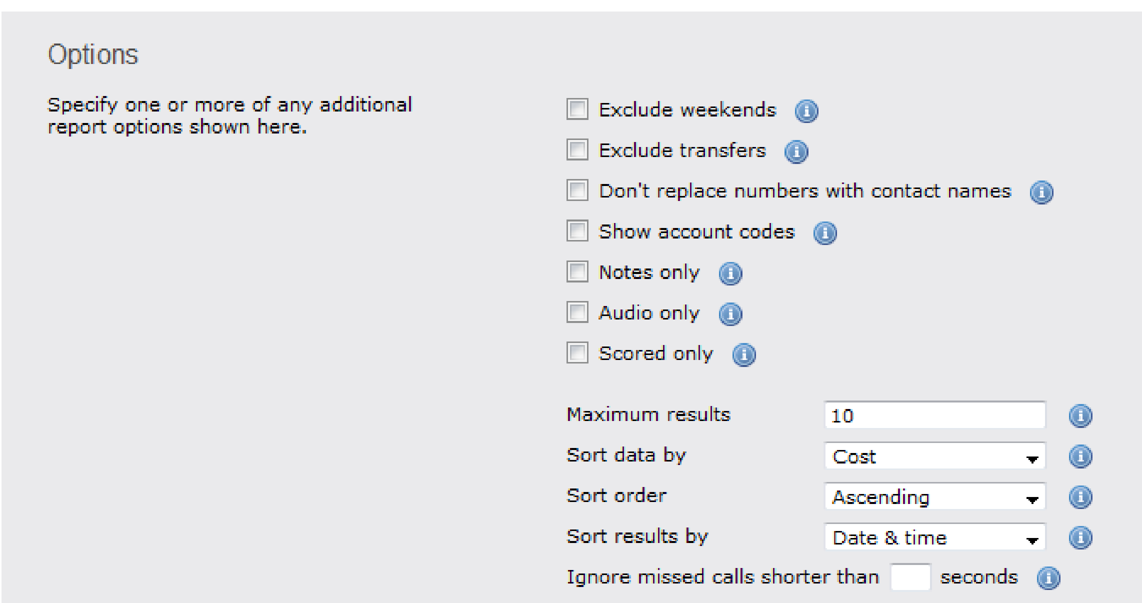

### Trunk access code

If your telephone system uses trunk access codes to connect calls using specific channels, you can limit your report's results to include only calls made using those codes. Specify the trunk access code in the text box provided.


You can use the `!` symbol to explicitly exclude a trunk access code from the report's results, and/or the `*` symbol as a wildcard in digit pattern matching. For example, to exclude calls made using the **9** trunk access code, you could enter **!9**. To report on more than one trunk access code, use a comma to separate each entry.

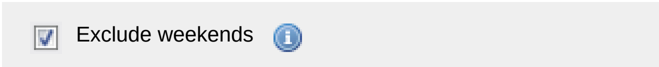
## Selecting the report options

This section enables you to further narrow down your report results, by excluding certain types of calls. It also allows you to sort the report's results in a particular manner.



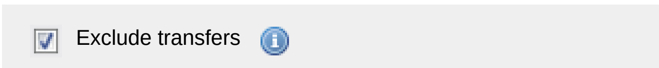
### Exclude weekends

To exclude weekend calls from your report's results, select the `Exclude weekends` option.



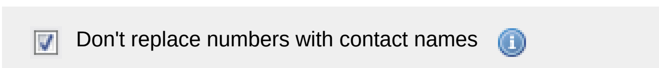

### Exclude transfers

To exclude transferred calls from your report's results, select the `Exclude transfers` option.




### Don't replace numbers with contact names

Tick this option if you do not want to replace dialled numbers, CLIs and account codes with their associated names, as defined in your web user's contacts list.

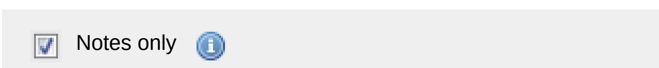



### Show account codes

Select this option to display any associated account codes as an additional column in this report.

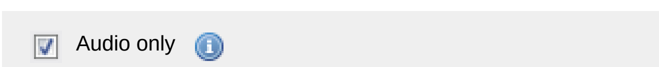

### Notes only

Tick this option if you want your search results to include only calls that have notes associated with them.



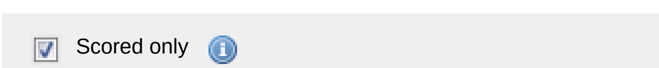

### Audio only

Tick this option if you want your search results to include only calls that have an associated voice recording.




### Scored only

Tick this option to include only calls that have a score associated with them, e.g. calls that have already been listened to and scored

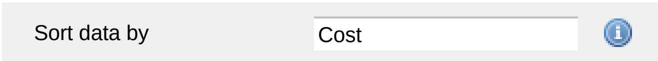



### Maximum results

To limit the report's results, enter the maximum number of results you want the report to display in the `Maximum results` option, e.g. if you enter **`50`** in the text box provided, only 50 results will be displayed.

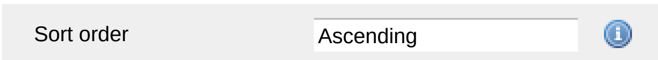

### Sort data by

To choose the criteria that is used in determining the top calls, select a field from the **`Sort data by`** drop-down list.



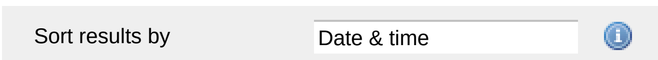

### Sort order

Choose from the **`Sort order`** drop-down list whether you want the results of your report to appear in ascending or descending order.




### Sort results by

To sort your report's results by a particular column, select it from the **`Sort results by`** drop-down list.




### Ignore short missed calls

Missed calls below a certain duration can sometimes pollute the meaning of a report's results. To exclude such short calls from your report, enter a duration threshold in the text box provided, e.g. to ignore calls below 3 seconds, enter **3** .

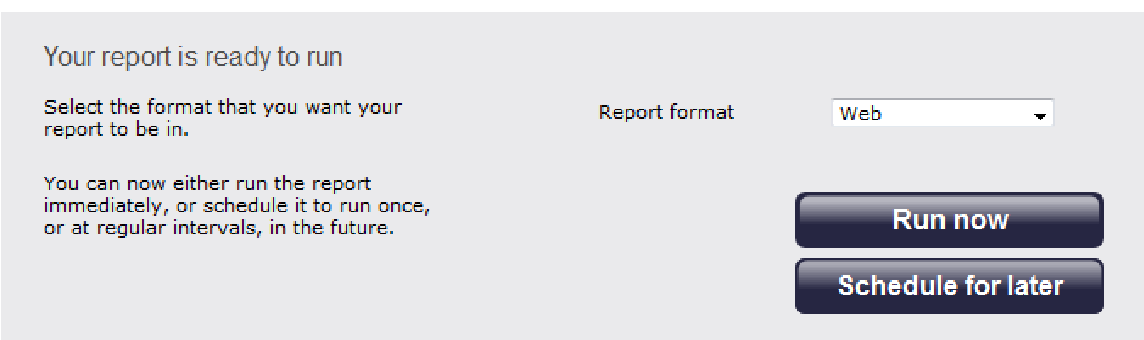
## Selecting the report format

This section allows you to choose the media format of your completed report. The formats available are **`Web`**, **`PDF`**, **`Excel`**, **`CSV`** and **`XML`**.

More details about each report format are available in the Setting the report format section above.

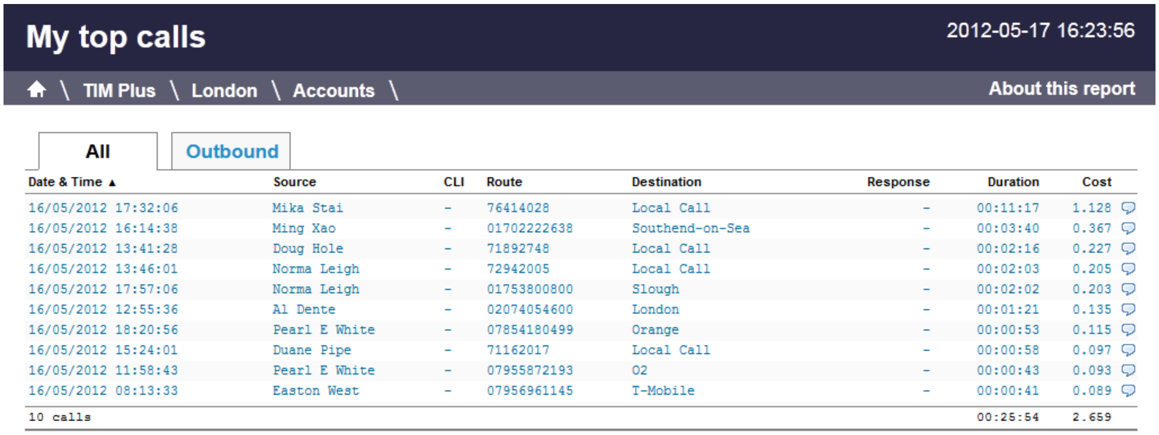
## Creating the report

When you have selected a reporting period and have chosen any filters and options, you can either run the report immediately by clicking on the Run now button, or schedule it for future delivery.




## The report's results

Below is an example of this report's output in **`Web`** format:



My top calls 2012-05-17 16:23:56

TIM Plus \ London \ Accounts \ About this report

All | Outbound

| Date & Time ▲ | Source | CLI | Route | Destination | Response | Duration | Cost |
|---|---|---|---|---|---|---|---|
| 16/05/2012 17:32:06 | Mika Stai | - | 76414028 | Local Call | - | 00:11:17 | 1.128 |
| 16/05/2012 16:14:38 | Ming Xao | - | 01702222638 | Southend-on-Sea | - | 00:03:40 | 0.367 |
| 16/05/2012 13:41:28 | Doug Hole | - | 71892748 | Local Call | - | 00:02:16 | 0.227 |
| 16/05/2012 13:46:01 | Norma Leigh | - | 72942005 | Local Call | - | 00:02:03 | 0.205 |
| 16/05/2012 17:57:06 | Norma Leigh | - | 01753800800 | Slough | - | 00:02:02 | 0.203 |
| 16/05/2012 12:55:36 | Al Dente | - | 02074054600 | London | - | 00:01:21 | 0.135 |
| 16/05/2012 18:20:56 | Pearl E White | - | 07854180499 | Orange | - | 00:00:53 | 0.115 |
| 16/05/2012 15:24:01 | Duane Pipe | - | 71162017 | Local Call | - | 00:00:58 | 0.097 |
| 16/05/2012 11:58:43 | Pearl E White | - | 07955872193 | O2 | - | 00:00:43 | 0.093 |
| 16/05/2012 08:13:33 | Easton West | - | 07956961145 | T-Mobile | - | 00:00:41 | 0.089 |
| 10 calls | | | | | | 00:25:54 | 2.659 |

The **Web** format is the most interactive of all formats: all column headers are click-sortable and most graphical and tabular elements can be drilled down into, allowing deeper analysis of your results. By clicking on the **About this report** link at the top-right corner of the page, you can review any filters and options that have been applied to the report.

As with all reports produced by TIM Plus, each page of the report includes the following information:

- the report's title
- the date and time that the report was generated
- the name of the report, if applicable

The report consists of a table containing a list of your top calls, as defined by your selection criteria. Each column header of the table is described below:

| Header | Description |
|---|---|
| **Date & Time** | The date and time the call started |
| **Source** | The place from where the call originated |
| **CLI** | The telephone number of the remote caller for inbound calls |
| **Route** | The information displayed in this field is determined by the type of call:<br>▪ for incoming calls, this shows the CLI of the caller<br>▪ for incoming internal calls, this shows either the caller's username or extension number<br>▪ for outgoing calls, this shows the dialled number |
| **Destination** | The information displayed in this field is determined by the type of call:<br>▪ for incoming calls, this shows the name of the user whose extension answered the call, or the extension number if not available<br>▪ for outgoing calls, this shows the geographical location that was dialled, or an alias if defined in your contacts list<br>▪ for internal calls, this shows the extension that was dialled, enclosed in square brackets [ ] |

| | |
|---|---|
| **Response** | The length of time it took for the call to be answered (i.e. the response time) |
| **Duration** | The duration of the call (in hours, minutes and seconds) |
| **Cost** | The cost of the call |

To modify your report to cover a larger organisational scope, click on an element of the breadcrumb as shown below:

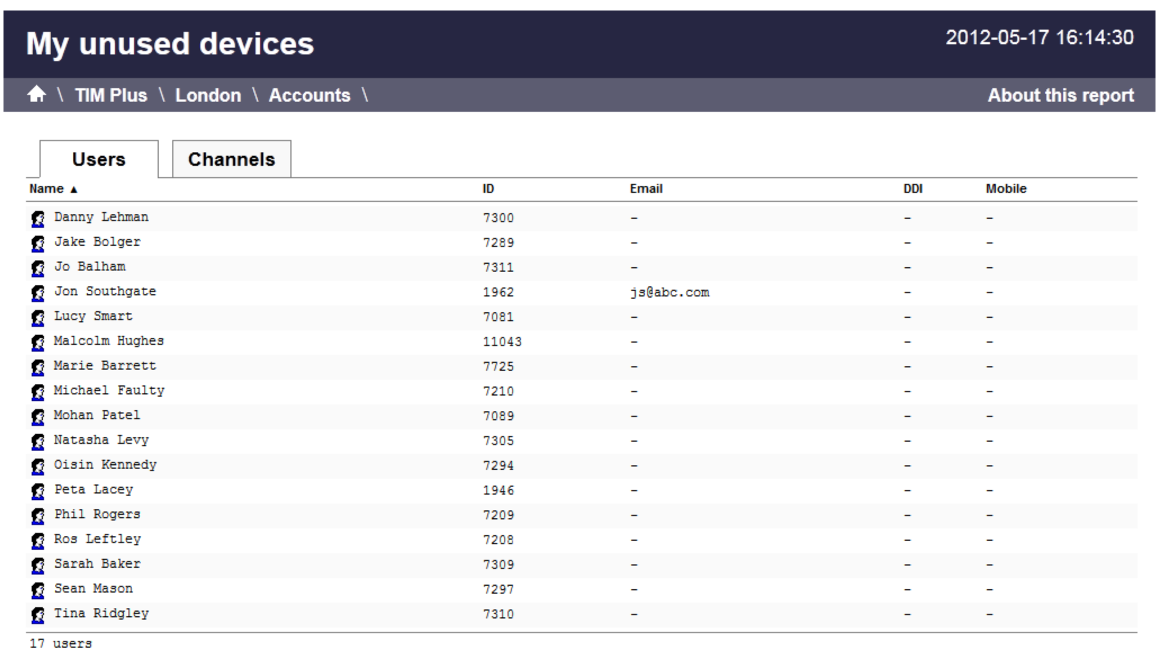

## Unused Devices

**The Unused Devices report**



### Introduction

The Unused Devices report identifies any users and channels that haven't been utilised in a given period of time. It is useful for identifying telephone handsets that can be safely reallocated to other users or which channels are no longer used.

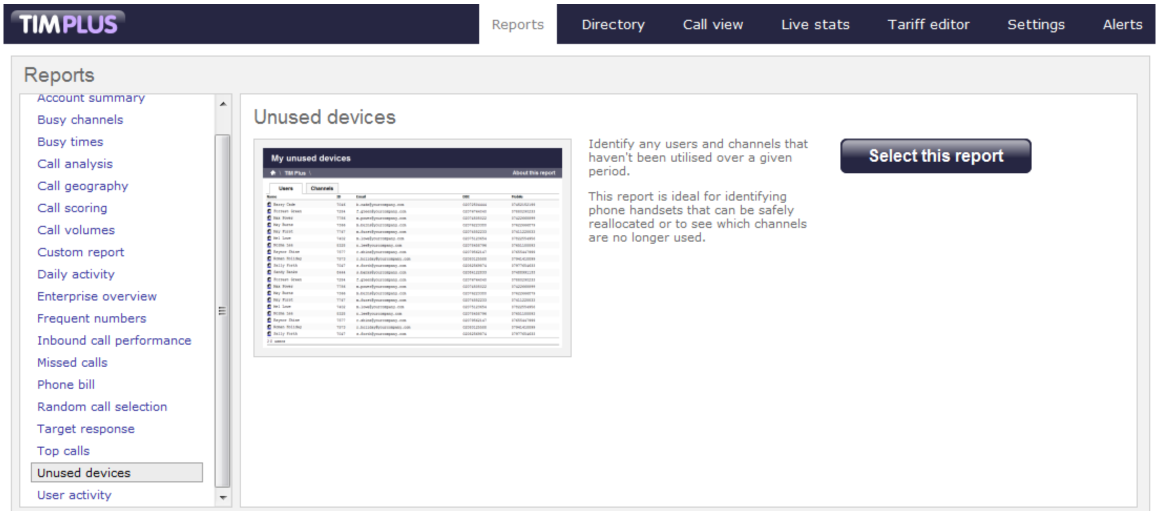



| Name ▲ | ID | Email | DDI | Mobile |
|---|---|---|---|---|
| Danny Lehman | 7300 | - | - | - |
| Jake Bolger | 7289 | - | - | - |
| Jo Balham | 7311 | - | - | - |
| Jon Southgate | 1962 | js@abc.com | - | - |
| Lucy Smart | 7081 | - | - | - |
| Malcolm Hughes | 11043 | - | - | - |
| Marie Barrett | 7725 | - | - | - |
| Michael Faulty | 7210 | - | - | - |
| Mohan Patel | 7089 | - | - | - |
| Natasha Levy | 7305 | - | - | - |
| Oisin Kennedy | 7294 | - | - | - |
| Peta Lacey | 1946 | - | - | - |
| Phil Rogers | 7209 | - | - | - |
| Ros Leftley | 7208 | - | - | - |
| Sarah Baker | 7309 | - | - | - |
| Sean Mason | 7297 | - | - | - |
| Tina Ridgley | 7310 | - | - | - |

17 users

### Running the report

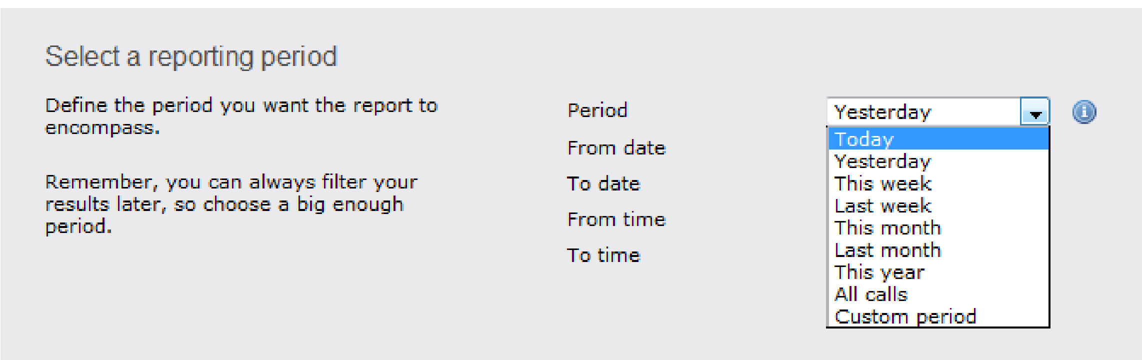
On the **Reports** screen, select the **Unused devices** report from the left-hand pane and click the Select this report button.




A new window will appear, where you can set the parameters of your report.

### Selecting the reporting period

For each report, you must specify a time span that covers the calls you want the report to include. This is known as the "reporting period".

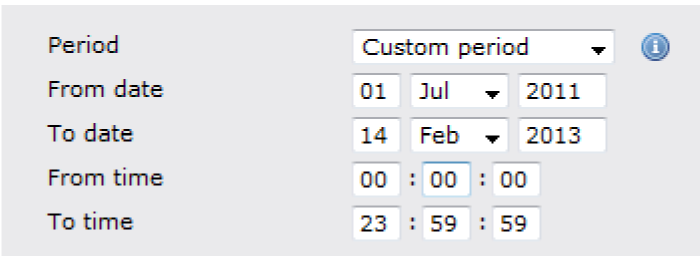



There are several preset reporting periods available for selection, based on the standard Gregorian calendar. The following table describes how the start and end times are defined for each preset period:

| Period | Description |
|---|---|
| **Today** | The start and end dates are set to the current date. The start time is set to **00:00:00** and the end time to **23:59:59**. |
| **Yesterday** | The start and end dates are set to the current date minus one day. The start time is set to **00:00:00** and the end time to **23:59:59**. |
| **This week** | The start date is set to the first day of the current week (normally Monday). The end date is set to the current day. The start time is set to **00:00:00** and the end time to the current time. |
| **Last week** | The start date is set to the date of the last Monday, and the end date is set to the start date plus seven days. The start time is set to **00:00:00** and the end time to **23:59:59**. |
| **This month** | The start date is set to the first day of the current month. The end date is set to the current day. The start time is set to **00:00:00** and the end time to the current time. |

| | |
|---|---|
| **Last month** | The start date for this period is set in three stages: The day is set to the first day of the month. The month is set to the previous month. The year is set to the current year, unless it is currently January, in which case, the previous year is used. The start and end times are set to `00:00:00` and `23:59:59` respectively. |
| **This year** | The start date is set to the first day of the first month of the current year, whilst the end date is set to today's date. The start and end times are set to `00:00:00` and `23:59:59` respectively. |
| **All calls** | The start and end dates and times are set to the dates and times of the first and last call in the entire call database, respectively. |

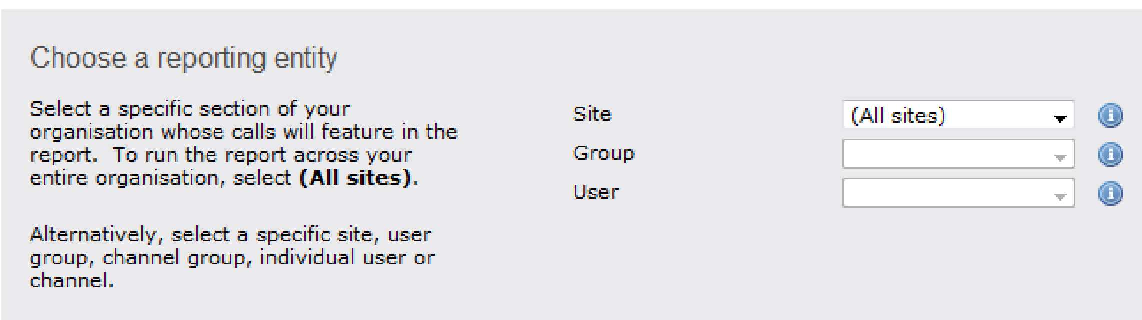
In addition to the presets described above, it is possible to specify a custom reporting period by choosing `Custom period` from the `Period` drop-down list and specifying your own `Start date`, `Start time`, `End date` and `End time` of the period you want to report on.




Once you have set the reporting period, click on the Next button to set additional report parameters and options, or select the Finish button to run the report immediately.

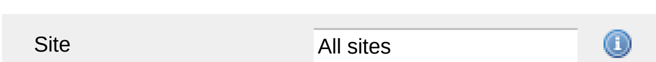
### Selecting the reporting entity

The `Reporting entity` parameter allows you to select the part of your organisation whose calls the report should include, e.g. a site, a group or an individual user.



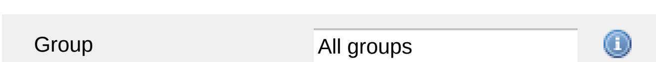

#### Site

To report on a particular site, select it from the drop-down list or select `All sites` .




#### Group

If a site has been selected, you are able to further limit the report's results by selecting a group from the drop-down list.




#### User

If both a site and group have been selected, you can further limit the report's results to include only calls involving a particular user, by selecting that user from the drop-down list.

User | All users

If your web account is restricted to a specific site or group, only those entities to which you have access will be available in the drop-down lists.

Once you have selected the scope of your report, click on the Next button to set additional report parameters and options, or to run the report immediately, click the Finish button.

### Selecting the report options

You can limit the results of your report by choosing one or more of the following filters:

Options

Specify one or more of any additional report options shown here.

Show "Do not log" devices

Sort order | Ascending

Sort results by | Name

#### Show "Do not log" devices

Tick this box if you would like to include devices whose status is set to not log calls.

Show "Do not log" devices

#### Sort order

Choose from the `Sort order` drop-down list whether you want the results of your report to appear in ascending or descending order.

Sort order | Ascending

#### Sort results by

To sort your report's results by a particular column, select it from the `Sort results by` drop-down list.

Sort results by | Date & time

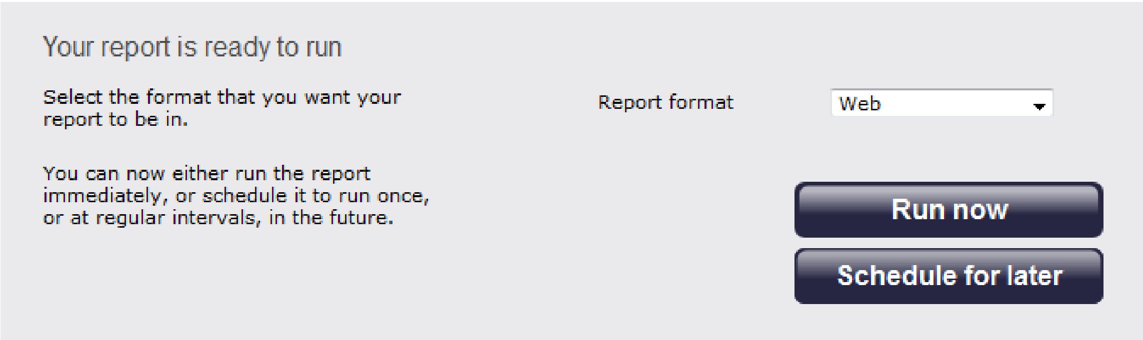
## Selecting the report format

This section allows you to choose the media format of your completed report. The formats available are `Web`, `PDF`, `Excel`, `CSV` and `XML`.

More details about each report format are available in the Setting the report format section above.

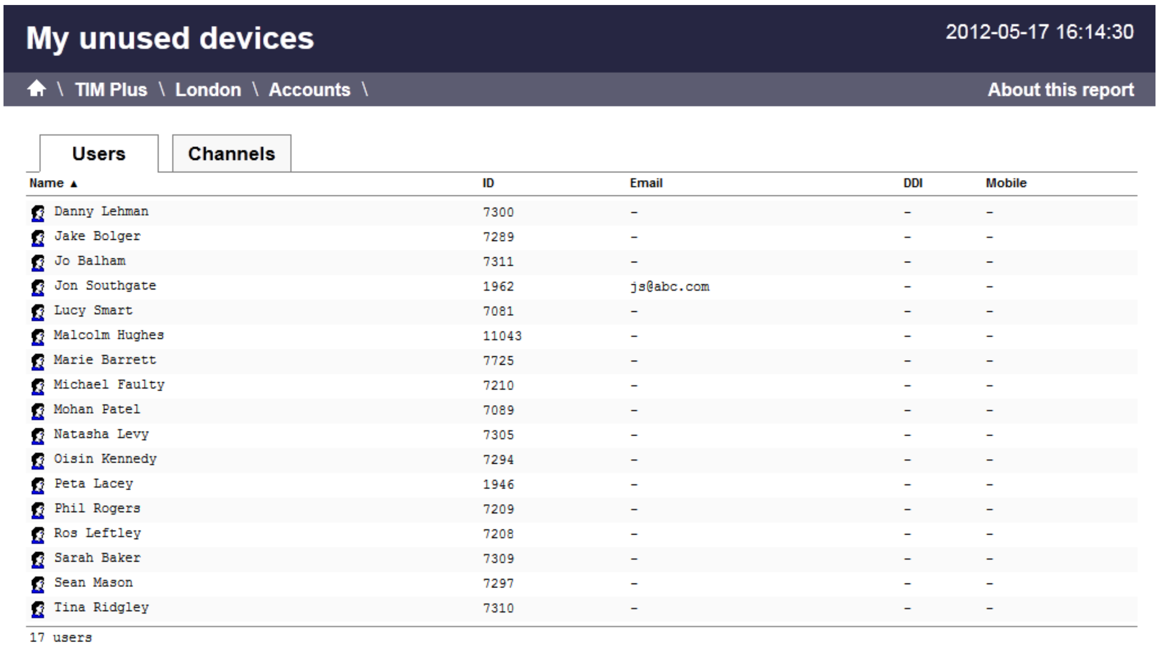
### Creating the report

When you have selected a reporting period and have chosen any filters and options, you can either run the report immediately by clicking on the Run now button, or schedule it for future delivery.




## The report's results

Below is an example of this report's output in **Web** format, showing both unused users and unused channels:



My unused devices

2012-05-17 16:14:30

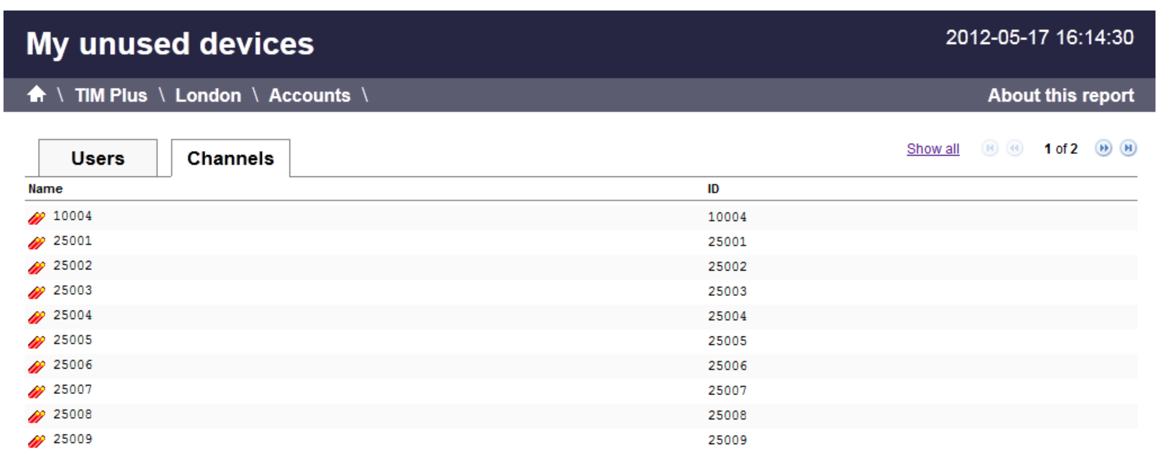
\ TIM Plus \ London \ Accounts \

About this report

Users | Channels

| Name ▲ | ID | Email | DDI | Mobile |
|---|---|---|---|---|
| Danny Lehman | 7300 | - | - | - |
| Jake Bolger | 7289 | - | - | - |
| Jo Balham | 7311 | - | - | - |
| Jon Southgate | 1962 | js@abc.com | - | - |
| Lucy Smart | 7081 | - | - | - |
| Malcolm Hughes | 11043 | - | - | - |
| Marie Barrett | 7725 | - | - | - |
| Michael Faulty | 7210 | - | - | - |
| Mohan Patel | 7089 | - | - | - |
| Natasha Levy | 7305 | - | - | - |
| Oisin Kennedy | 7294 | - | - | - |
| Peta Lacey | 1946 | - | - | - |
| Phil Rogers | 7209 | - | - | - |
| Ros Leftley | 7208 | - | - | - |
| Sarah Baker | 7309 | - | - | - |
| Sean Mason | 7297 | - | - | - |
| Tina Ridgley | 7310 | - | - | - |

17 users



My unused devices

2012-05-17 16:14:30

\ TIM Plus \ London \ Accounts \

About this report

Users | Channels

Show all 1 of 2

| Name | ID |
|---|---|
| 10004 | 10004 |
| 25001 | 25001 |
| 25002 | 25002 |
| 25003 | 25003 |
| 25004 | 25004 |
| 25005 | 25005 |
| 25006 | 25006 |
| 25007 | 25007 |
| 25008 | 25008 |
| 25009 | 25009 |

The **Web** format is the most interactive of all formats: all column headers are click-sortable and most graphical and tabular elements can be drilled down into, allowing deeper analysis of your results. By clicking on the **About this report** link at the top-right corner of the page, you can review any filters and options that have been applied to the report.

As with all reports produced by TIM Plus, each page of the report includes the following information:

- the report's title
- the date and time that the report was generated
- the name of the report, if applicable

The results will display as a paginated list of unused devices with each type of device being grouped in its own tab:

The Users tab shows the following information:

| Header | Description |
| --- | --- |
| **Name** | The name of the user |
| **ID** | The extension number associated with the user |
| **Email** | The e-mail address associated with the user |
| **DDI** | The DDI associated with the user, if available |
| **Mobile** | The mobile number associated with the user, if available |

The Channels tab shows the following information:

| Header | Description |
| --- | --- |
| **Name** | The name of the channel |
| **ID** | The ID associated with the channel |

To modify your report to cover a larger organisational scope, click on an element of the breadcrumb as shown below:

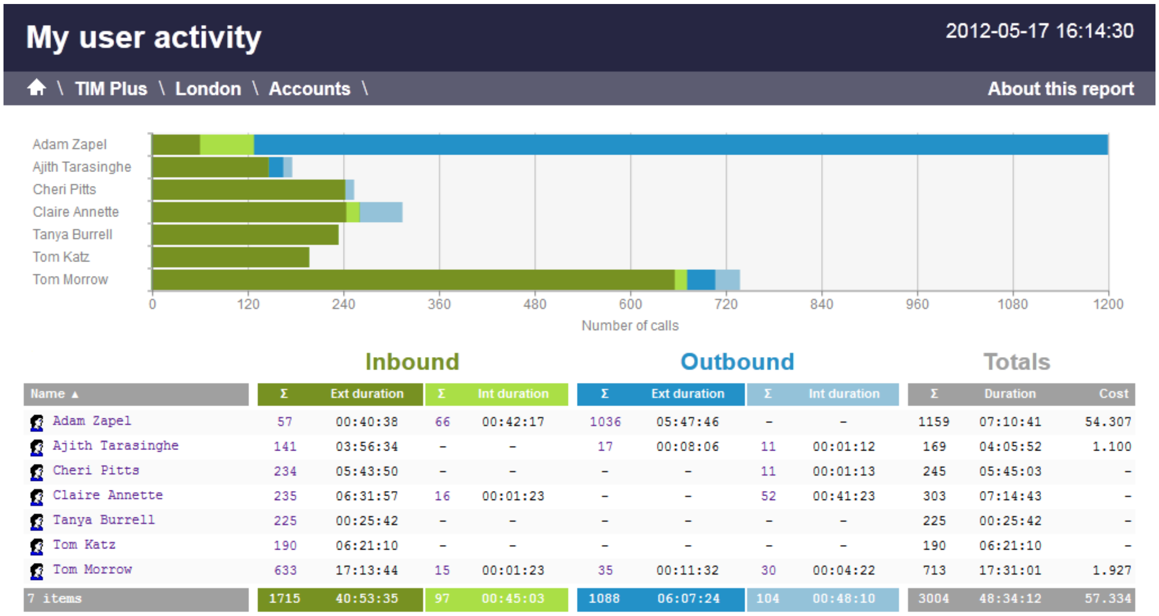

## User Activity

**The User Activity report**



### Introduction

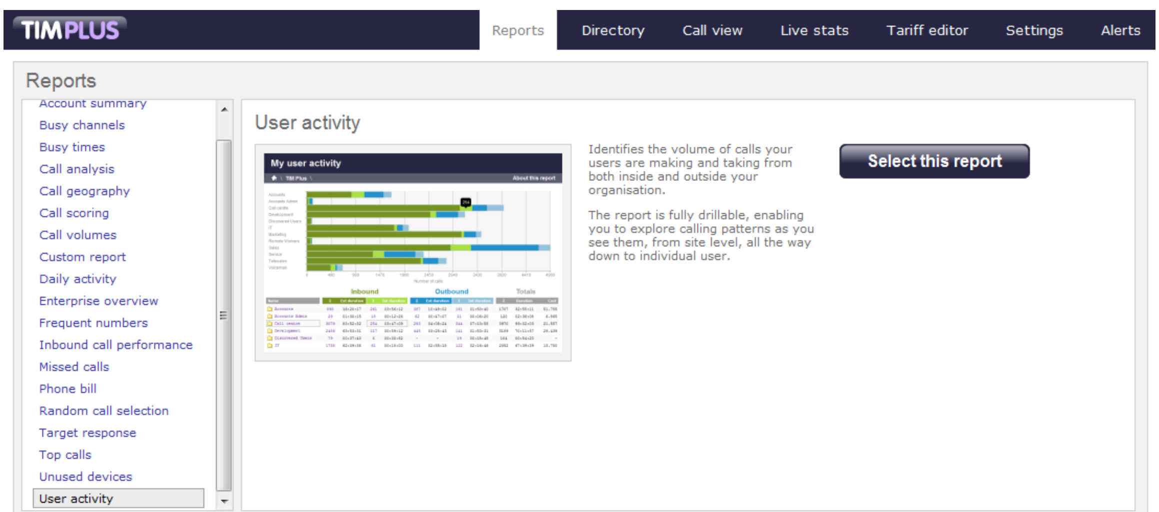
The User Activity report provides a comprehensive summary of internal and external call activity - both inbound and outbound - for each site, group or user. It is also possible to drill down into each entity to obtain the same call information at a more detailed level.




| Name ▲ | Inbound Σ | Inbound Ext duration | Inbound Σ | Inbound Int duration | Outbound Σ | Outbound Ext duration | Outbound Σ | Outbound Int duration | Totals Σ | Totals Duration | Totals Cost |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Adam Zapel | 57 | 00:40:38 | 66 | 00:42:17 | 1036 | 05:47:46 | - | - | 1159 | 07:10:41 | 54.307 |
| Ajith Tarasinghe | 141 | 03:56:34 | - | - | 17 | 00:08:06 | 11 | 00:01:12 | 169 | 04:05:52 | 1.100 |
| Cheri Pitts | 234 | 05:43:50 | - | - | - | - | 11 | 00:01:13 | 245 | 05:45:03 | - |
| Claire Annette | 235 | 06:31:57 | 16 | 00:01:23 | - | - | 52 | 00:41:23 | 303 | 07:14:43 | - |
| Tanya Burrell | 225 | 00:25:42 | - | - | - | - | - | - | 225 | 00:25:42 | - |
| Tom Katz | 190 | 06:21:10 | - | - | - | - | - | - | 190 | 06:21:10 | - |
| Tom Morrow | 633 | 17:13:44 | 15 | 00:01:23 | 35 | 00:11:32 | 30 | 00:04:22 | 713 | 17:31:01 | 1.927 |
| 7 items | 1715 | 40:53:35 | 97 | 00:45:03 | 1088 | 06:07:24 | 104 | 00:48:10 | 3004 | 48:34:12 | 57.334 |

## Running the report

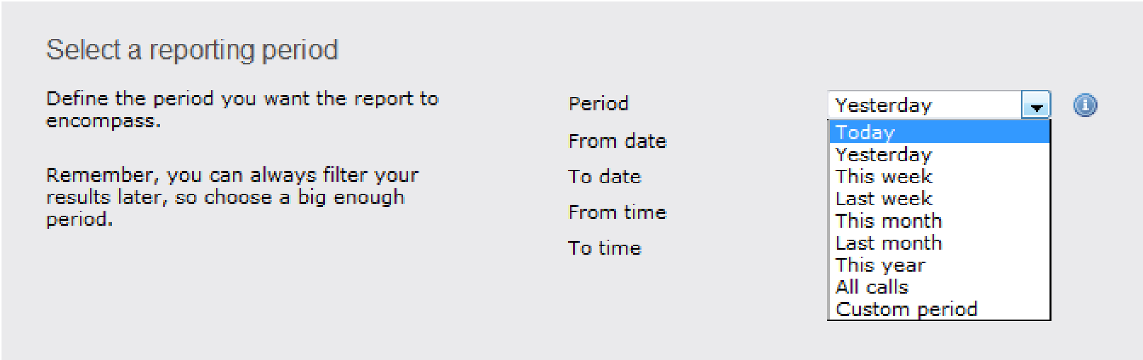
On the **Reports** screen, select the **Enterprise overview** report from the left-hand pane and click the Select this report button.




A new window will appear, where you can set the parameters of your report.

### Selecting the reporting period

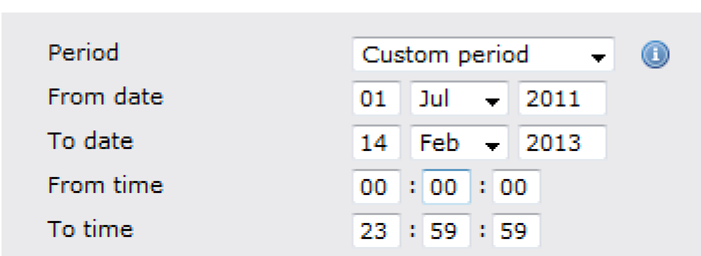
For each report, you must specify a time span that covers the calls you want the report to include. This is known as the "reporting period".




There are several preset reporting periods available for selection, based on the standard Gregorian calendar. The following table describes how the start and end times are defined for each preset period:

| Period | Description |
|---|---|
| **Today** | The start and end dates are set to the current date. The start time is set to **00:00:00** and the end time to **23:59:59**. |
| **Yesterday** | The start and end dates are set to the current date minus one day. The start time is set to **00:00:00** and the end time to **23:59:59**. |
| **This week** | The start date is set to the first day of the current week (normally Monday). The end date is set to the current day. The start time is set to **00:00:00** and the end time to the current time. |
| **Last week** | The start date is set to the date of the last Monday, and the end date is set to the start date plus seven days. The start time is set to **00:00:00** and the end time to **23:59:59**. |
| **This month** | The start date is set to the first day of the current month. The end date is set to the current day. The start time is set to **00:00:00** and the end time to the current time. |
| **Last month** | The start date for this period is set in three stages: The day is set to the first day of the month. The month is set to the previous month. The year is set to the current year, unless it is currently January, in which case, the previous year is used. The start and end times are set to **00:00:00** and **23:59:59** respectively. |
| **This year** | The start date is set to the first day of the first month of the current year, whilst the end date is set to today's date. The start and end times are set to **00:00:00** and **23:59:59** respectively. |
| **All calls** | The start and end dates and times are set to the dates and times of the first and last call in the entire call database, respectively. |

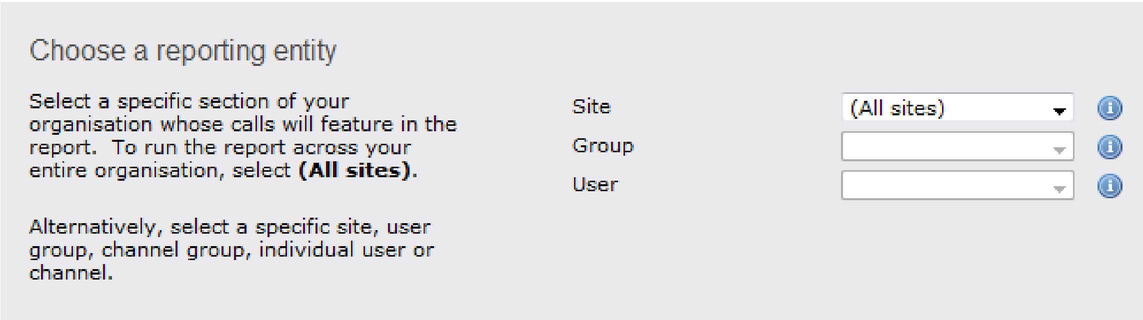
In addition to the presets described above, it is possible to specify a custom reporting period by choosing **Custom period** from the **Period** drop-down list and specifying your own **Start date**, **Start time**, **End date** and **End time** of the period you want to report on.




Once you have set the reporting period, click on the Next button to set additional report parameters and options, or select the Finish button to run the report immediately.

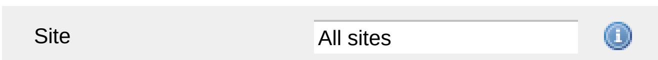
## Selecting the reporting entity

The **`Reporting entity`** parameter allows you to select the part of your organisation whose calls the report should include, e.g. a site, a group or an individual user.



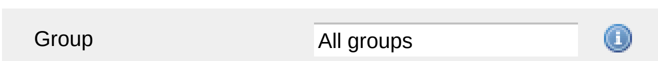

### Site

To report on a particular site, select it from the drop-down list or select **`All sites`** .



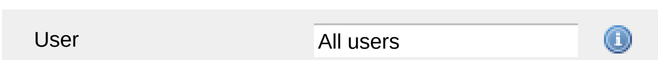

### Group

If a site has been selected, you are able to further limit the report's results by selecting a group from the drop-down list.




### User

If both a site and group have been selected, you can further limit the report's results to include only calls involving a particular user, by selecting that user from the drop-down list.

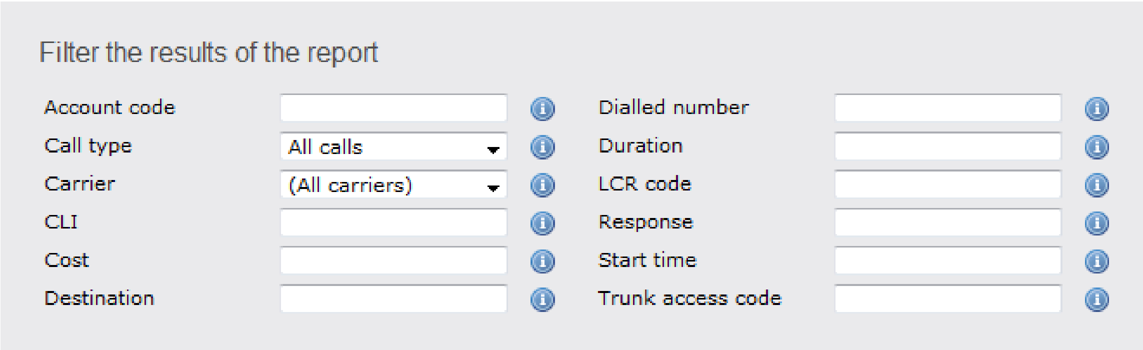



If your web account is restricted to a specific site or group, only those entities to which you have access will be available in the drop-down lists.

Once you have selected the scope of your report, click on the Next button to set additional report parameters and options, or to run the report immediately, click the Finish button.

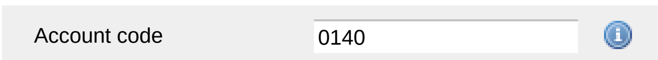
## Selecting the report filters

You can limit the results of your report by choosing one or more of the following filters:




### Account code

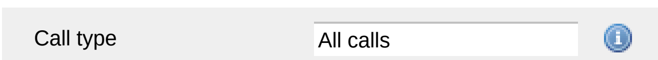
To produce a report consisting only of calls that were made using a particular account code, enter the account code in the field provided.




To report on more than one account code, separate each code using a comma.

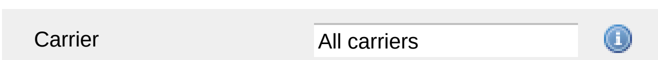
### Call type

This filter allows you to define the type of call you want to report on, in terms of where the call originated and where it was delivered, e.g. incoming, outgoing, internal etc.  To report on all types of call, set this to **`All calls`**.




### Carrier

If you use more than one carrier, you can limit the results to include only calls that were made using a specific carrier.

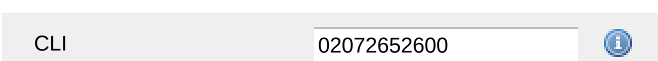



> If you use only one carrier, there will be no drop-down list available and no option to choose a carrier.

### CLI

Calling Line Identification (CLI) is the telephone number of the remote caller in an incoming call scenario.

You can report on calls that originate from a specific CLI or those whose CLI matches a particular pattern of digits. For example, to report on all incoming calls from Tri-Line, you could enter **`02072652600`**.




You can use the `!` symbol to explicitly exclude a CLI from the report's results, and/or the `*` symbol as a wildcard in digit pattern matching.  For example, to exclude calls from Tri-Line, but include all others, you could use **`!020726526*`**. To report on more than one CLI, use a comma to separate each entry.

### Cost

You can define a cost filter to include calls above or below specific values by entering your criteria, as shown below:

| | |
|---|---|
| Cost | <2.00 |

You can specify a cost range by using the `-` symbol; to specify limits, use the comparison operators, `>`, `<`, and `!` .

### Destination

If you want to filter calls to a specific, known destination, type the name of the destination in the text box provided. This filter accepts the `!` and `*` symbols for excluding values and specifying partial matches, respectively.

For example, if you wanted to exclude all calls to France, you could enter `!France*`, as shown below:

| | |
|---|---|
| Destination | !France* |

### Dialled number

To filter calls to a specific dialled number, type it in the text box provided. The dialled number is defined as the number that is dialled (in the case of an outbound call), or the DDI number that the remote party dialled to reach a particular extension or group (in the case of an inbound call).

To filter calls to a specific area, a partial number can be entered (e.g. `0033` for calls to France).

| | |
|---|---|
| Dialled number | 0033 |

You can use the `!` symbol to explicitly exclude a dialled number from the report's results, and/or the `*` symbol as a wildcard in digit pattern matching. For example, to exclude calls to Tri-Line, but include all others, you could use `!020726526*`). To report on more than one dialled number, use a comma to separate each entry.

### Duration

To filter calls above or below a particular duration, enter the desired duration in seconds.

| | |
|---|---|
| Duration | >1800 |

You can specify a duration range by using the `-` symbol; to specify limits, use the comparison operators, `>`, `<`, and `!` .

In the above example, the report will return only calls longer than 1800 seconds (30 minutes).

### LCR code

To filter your results to include only calls that used a Least Cost Routing (LCR) code, enter it in the text box provided.

| | |
|---|---|
| LCR code | 162 |

You can use the `!` symbol to explicitly exclude a LCR code from the report's results, and/or the `*` symbol as a wildcard in digit pattern matching. For example, to exclude calls made using all LCR codes beginning `162`, you could enter `!162*`. To report on more than one LCR code, use a comma to separate each entry.

### Response

This option allows you to filter calls based on their response time, measured in seconds. Specify the desired response time threshold in the text box provided.

| | |
|---|---|
| Response time | >10 |

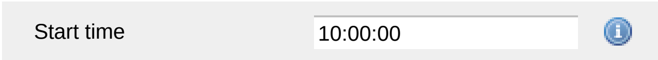
In the above example, the search results will display calls that have a response time greater than 10 seconds.

You can specify a response time range by using the `-` symbol and; to specify limits, use the comparison operators, `>`, `<`, and `!` .

### Start time

This option allows you to filter calls based on the time the call started. Specify the start time in the text box provided using the `hh:mm:ss` format.

For example, to include only calls that began after 10 am, you could enter **`10:00:00`** in the **`Start time`** field, as shown below:



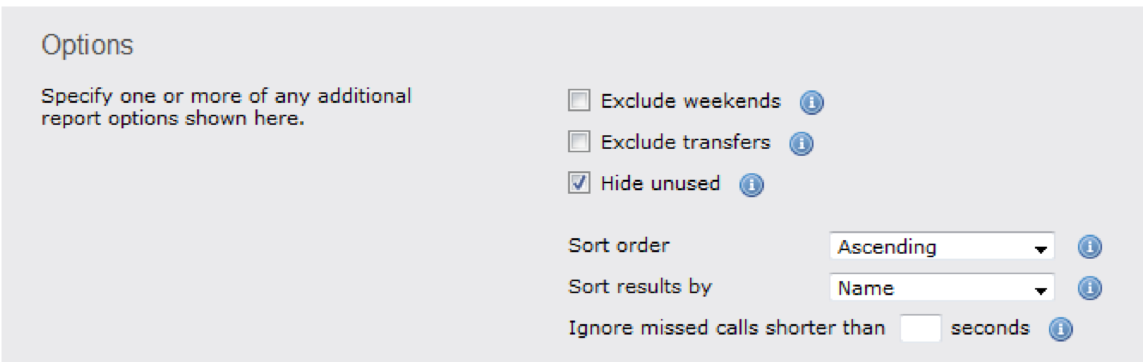

### Trunk access code

If your telephone system uses trunk access codes to connect calls using specific channels, you can limit your report's results to include only calls made using those codes. Specify the trunk access code in the text box provided.


You can use the `!` symbol to explicitly exclude a trunk access code from the report's results, and/or the `*` symbol as a wildcard in digit pattern matching. For example, to exclude calls made using the `9` trunk access code, you could enter **`!9`**. To report on more than one trunk access code, use a comma to separate each entry.

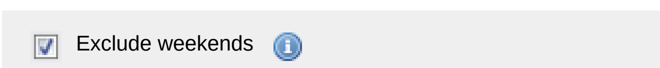
## Selecting the report options

This section enables you to further narrow down your report results, by excluding certain types of calls. It also allows you to sort the report's results in a particular manner.



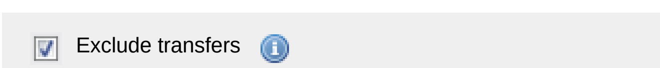

### Exclude weekends

To exclude weekend calls from your report's results, select the **`Exclude weekends`** option.



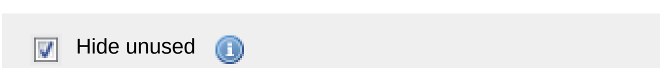

### Exclude transfers

To exclude transferred calls from your report's results, select the **`Exclude transfers`** option.



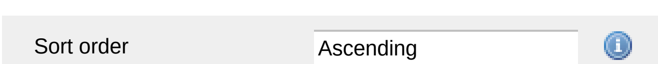

### Hide unused

To exclude unused extensions from your report's results, select the **`Hide unused`** option.



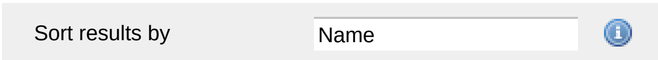

### Sort order

Choose from the **`Sort order`** drop-down list whether you want the results of the report to appear in ascending or descending order.



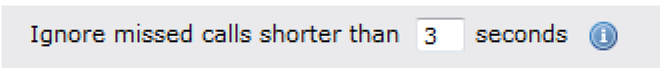
#### Sort results by

To sort your report's results by a particular column, select it from the **`Sort results by`** drop-down list.




#### Ignore short missed calls

Missed calls below a certain duration can sometimes pollute the meaning of a report's results. To exclude such short calls from your report, enter a duration threshold in the text box provided, e.g. to ignore calls below 3 seconds, enter **`3`** .



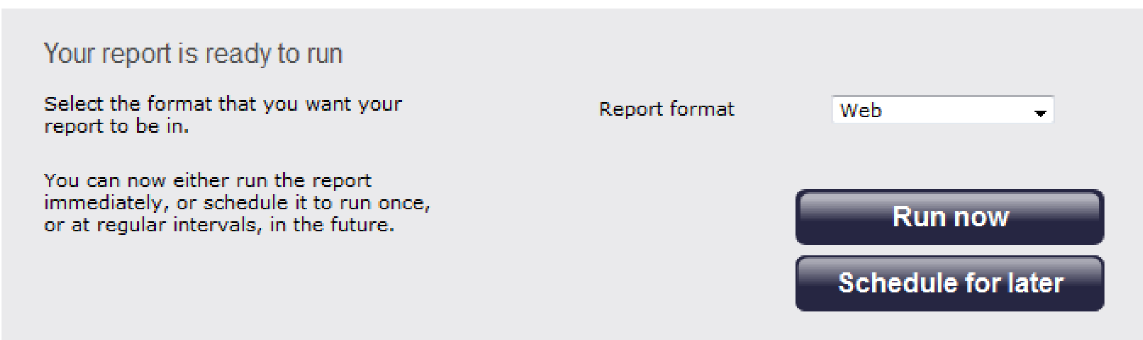

## Selecting the report format

This section allows you to choose the media format of your completed report. The formats available are **`Web`**, **`PDF`**, **`Excel`**, **`CSV`** and **`XML`**.

More details about each report format are available in the Setting the report format section above.

### Creating the report

When you have selected a reporting period and have chosen any filters and options, you can either run the report immediately by clicking on the Run now button, or schedule it for future delivery.




### The report's results

The results of the report show comprehensive call summary information - organised by call type - for the report entity you selected. By clicking on the **`About this report`** link at the top-right corner of the page, you can review any filters and options that have been applied to the report.

As with all reports produced by TIM Plus, each page of the report includes the following information:

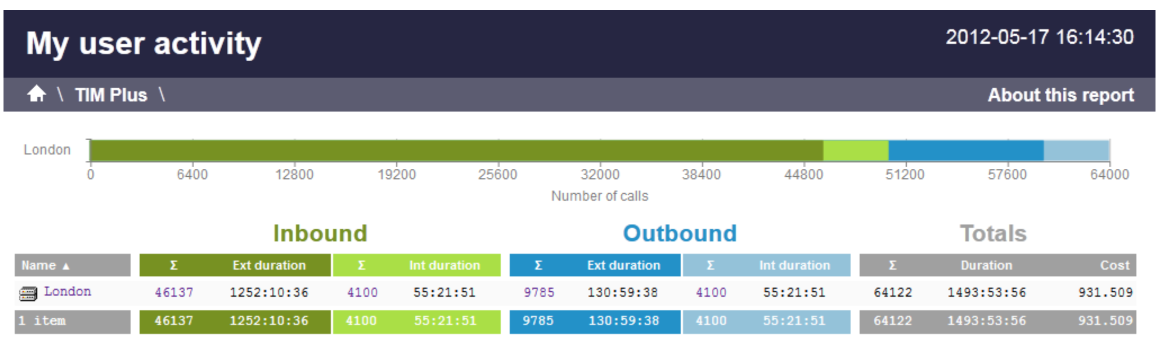
- the report's title
- the date and time that the report was generated
- the name of the report, if applicable

The **`Web`** format is the most interactive of all formats: all column headers are click-sortable and most graphical and tabular elements can be drilled down into, allowing deeper analysis of your results.

Results are shown for each organisational level: site, group and individual user, where a table is shown with the following headers:

| Header | Description |
|---|---|
| **Name** | The name of the entity for each line of data |
| **Inbound** | ▪ **:** The number of inbound answered calls, including transferred calls<br>▪ **Ext duration:** The total duration of all inbound external calls (in hours, minutes and seconds)<br>▪ **Int duration:** The total duration of all inbound internal calls (in hours, minutes and seconds) |
| **Outbound** | ▪ **:** The number of outbound calls made<br>▪ **Ext duration:** The total duration of all outbound external calls (in hours, minutes and seconds)<br>▪ **Int duration:** The total duration of all outbound internal calls (in hours, minutes and seconds) |
| **Totals** | ▪ **:** The total number of calls including all inbound and outbound, both internal and external<br>▪ **Duration:** The total duration of time spent on all inbound and outbound calls<br>▪ **Cost:** The total cost of all calls |

### Site Level

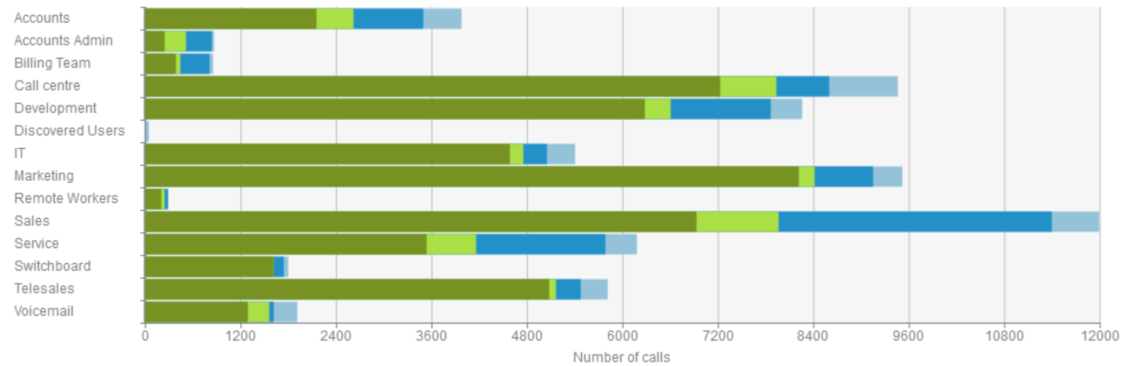



### Group level

# My user activity

2012-05-17 16:14:30

\ TIM Plus \ London \ | About this report



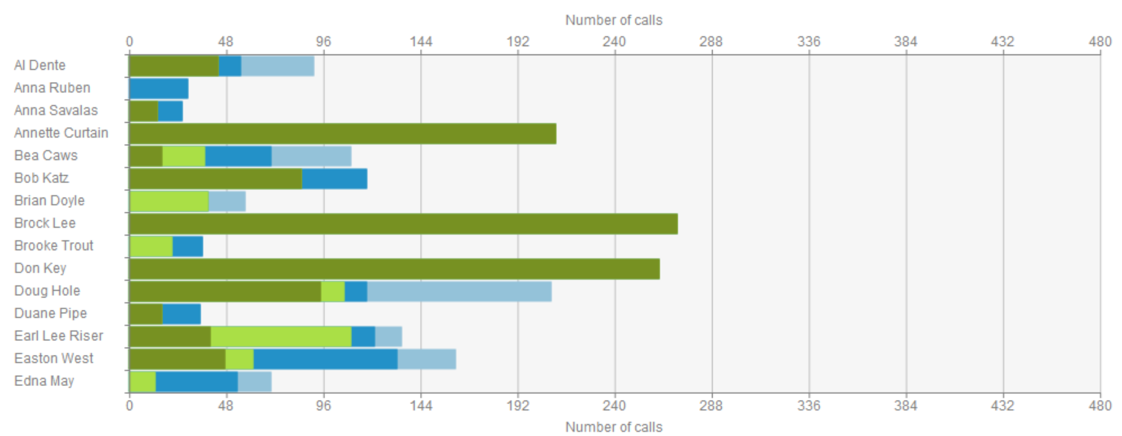

| Name ▲ | Inbound Σ | Ext duration | Σ | Int duration | Outbound Σ | Ext duration | Σ | Int duration | Totals Σ | Duration | Cost |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Accounts | 2077 | 39:14:02 | 455 | 04:43:24 | 852 | 20:42:23 | 457 | 04:34:54 | 3841 | 69:14:43 | 114.224 |
| Accounts Admin | 226 | 05:29:02 | 271 | 05:51:20 | 305 | 05:21:51 | 28 | 00:14:04 | 830 | 16:56:17 | 34.801 |
| Billing Team | 374 | 05:32:41 | 53 | 00:48:13 | 354 | 03:04:10 | 34 | 00:21:31 | 815 | 09:46:35 | 23.187 |
| Call centre | 6983 | 185:34:44 | 682 | 09:27:18 | 648 | 10:26:12 | 840 | 16:20:27 | 9153 | 221:48:41 | 58.739 |
| Development | 6072 | 153:01:03 | 314 | 03:03:38 | 1221 | 09:32:01 | 376 | 04:52:50 | 7983 | 170:29:32 | 76.876 |
| Discovered Users | - | - | - | - | - | - | 46 | 00:46:03 | 46 | 00:46:03 | - |
| IT | 4431 | 154:24:48 | 161 | 01:02:56 | 290 | 07:46:17 | 336 | 04:54:17 | 5218 | 168:08:18 | 44.065 |
| Marketing | 7942 | 245:38:46 | 192 | 02:00:30 | 709 | 11:19:41 | 355 | 03:54:53 | 9198 | 262:53:50 | 61.085 |
| Remote Workers | 194 | 00:59:28 | 45 | 00:14:29 | 29 | 00:12:20 | - | - | 268 | 01:26:17 | 1.128 |

### Individual user level

# My user activity

2012-05-17 16:14:30

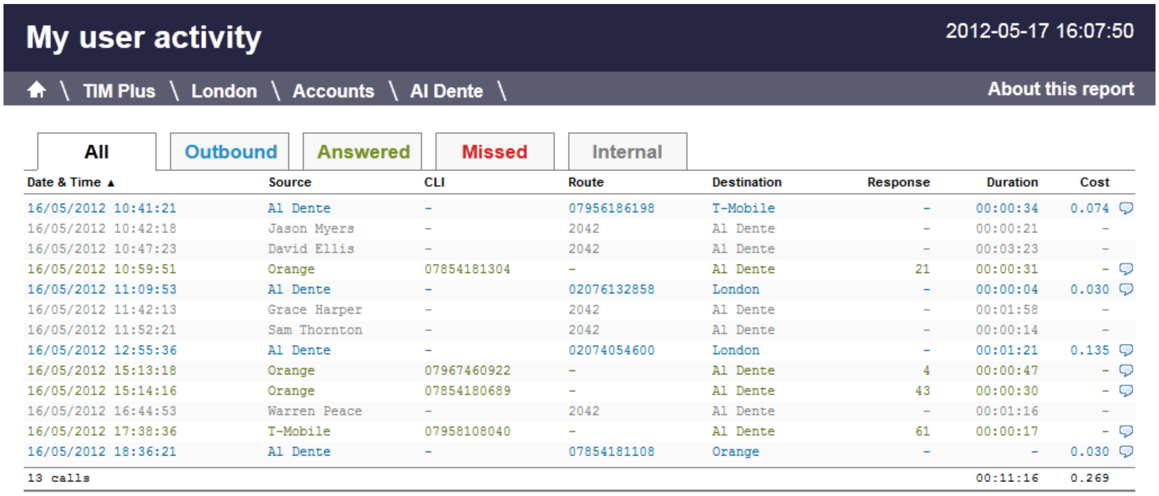
\ TIM Plus \ London \ Accounts \ | About this report




| Name ▲ | Inbound Σ | Ext duration | Σ | Int duration | Outbound Σ | Ext duration | Σ | Int duration | Totals Σ | Duration | Cost |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Al Dente | 44 | 01:14:58 | - | - | 11 | 00:00:50 | 36 | 00:09:29 | 91 | 01:25:17 | 0.330 |
| Anna Ruben | - | - | - | - | 29 | 00:06:16 | - | - | 29 | 00:06:16 | 1.084 |
| Anna Savalas | 14 | 00:21:48 | - | - | 12 | 02:15:05 | - | - | 26 | 02:36:53 | 9.091 |
| Annette Curtain | 210 | 07:31:55 | - | - | - | - | - | - | 210 | 07:31:55 | - |
| Bea Caws | 16 | 00:10:25 | 21 | 00:02:16 | 33 | 01:17:00 | 39 | 00:11:02 | 109 | 01:40:43 | 5.228 |
| Bob Katz | 85 | 01:24:58 | - | - | 32 | 00:12:51 | - | - | 117 | 01:37:49 | 1.620 |
| Brian Doyle | - | - | 39 | 00:05:11 | - | - | 18 | 00:12:11 | 57 | 00:17:22 | - |

### Itemised call list

When drilling down into an individual user, the report style changes to an itemised call list rather than a call summary table:


My user activity
2012-05-17 16:07:50
TIM Plus \ London \ Accounts \ Al Dente \
About this report
All | Outbound | Answered | Missed | Internal

| Date & Time ▲ | Source | CLI | Route | Destination | Response | Duration | Cost |
|---|---|---|---|---|---|---|---|
| 16/05/2012 10:41:21 | Al Dente | - | 07956186198 | T-Mobile | - | 00:00:34 | 0.074 |
| 16/05/2012 10:42:18 | Jason Myers | - | 2042 | Al Dente | - | 00:00:21 | - |
| 16/05/2012 10:47:23 | David Ellis | - | 2042 | Al Dente | - | 00:03:23 | - |
| 16/05/2012 10:59:51 | Orange | 07854181304 | - | Al Dente | 21 | 00:00:31 | - |
| 16/05/2012 11:09:53 | Al Dente | - | 02076132858 | London | - | 00:00:04 | 0.030 |
| 16/05/2012 11:42:13 | Grace Harper | - | 2042 | Al Dente | - | 00:01:58 | - |
| 16/05/2012 11:52:21 | Sam Thornton | - | 2042 | Al Dente | - | 00:00:14 | - |
| 16/05/2012 12:55:36 | Al Dente | - | 02074054600 | London | - | 00:01:21 | 0.135 |
| 16/05/2012 15:13:18 | Orange | 07967460922 | - | Al Dente | 4 | 00:00:47 | - |
| 16/05/2012 15:14:16 | Orange | 07854180689 | - | Al Dente | 43 | 00:00:30 | - |
| 16/05/2012 16:44:53 | Warren Peace | - | 2042 | Al Dente | - | 00:01:16 | - |
| 16/05/2012 17:38:36 | T-Mobile | 07958108040 | - | Al Dente | 61 | 00:00:17 | - |
| 16/05/2012 18:36:21 | Al Dente | - | 07854181108 | Orange | - | - | 0.030 |
| 13 calls | | | | | | 00:11:16 | 0.269 |

The column headers of the itemised call list are as follows:

| Header | Description |
|---|---|
| **Date & Time** | The date and time the call started |
| **Source** | The place from where the call originated |
| **CLI** | The telephone number of the remote caller for inbound calls |
| **Route** | The information displayed in this field is determined by the type of call:<br>■ for incoming calls, this shows the CLI of the caller<br>■ for incoming internal calls, this shows either the caller's username or extension number<br>■ for outgoing calls, this shows the dialled number |
| **Destination** | The information displayed in this field is determined by the type of call:<br>■ for incoming calls, this shows the name of the user whose extension answered the call, or the extension number if not available<br>■ for outgoing calls, this shows the geographical location that was dialled, or an alias if defined in your contacts list<br>■ for internal calls, this shows the extension that was dialled, enclosed in square brackets [ ] |
| **Response** | The length of time it took for the call to be answered (i.e. the response time) |
| **Duration** | The duration of the call (in hours, minutes and seconds) |
| **Cost** | The cost of the call |

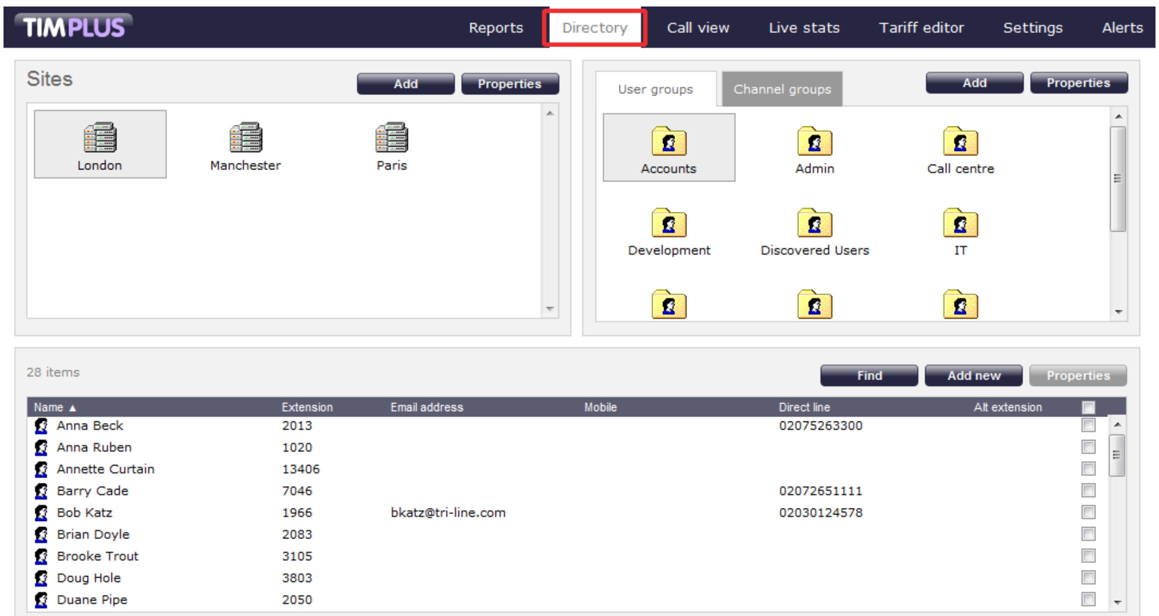
To modify your report to cover a larger organisational scope, click on an element of the breadcrumb as shown below:


# Directory

## Directory overview

The Directory is the place where all of your sites, groups, users and channels are configured. In here, objects can be added, moved around your organisation and be inspected and modified.

To access the Directory, select the Directory tab from the main menu, as shown below:

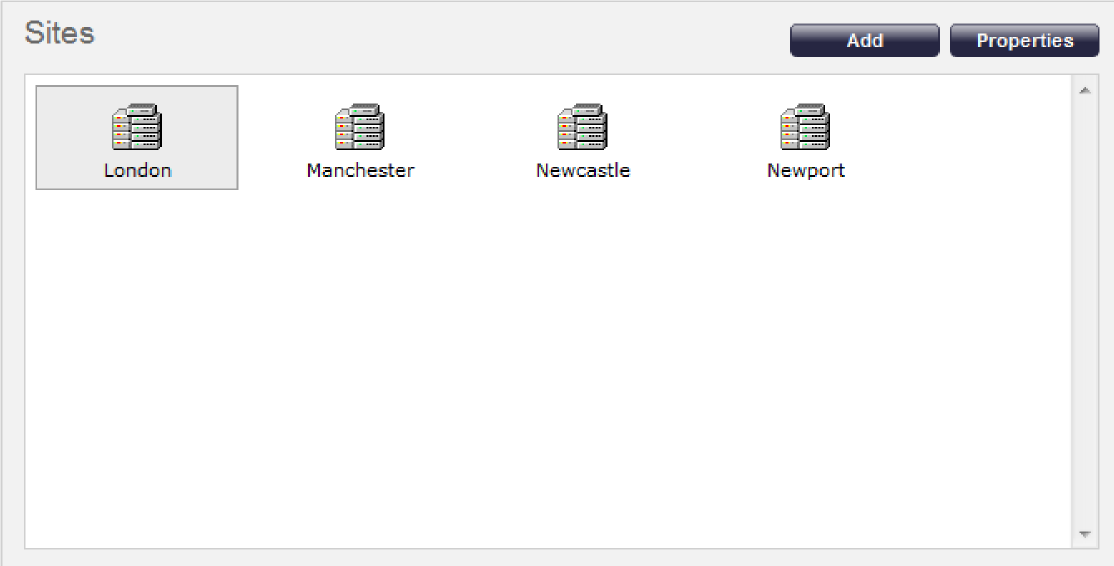



If you are logged in as a standard web user whose access is restricted to a specific group, the Directory tab will not be displayed. For administrative privileges, contact your system maintainer.

The Directory screen contains three panels, as detailed below:

### Sites

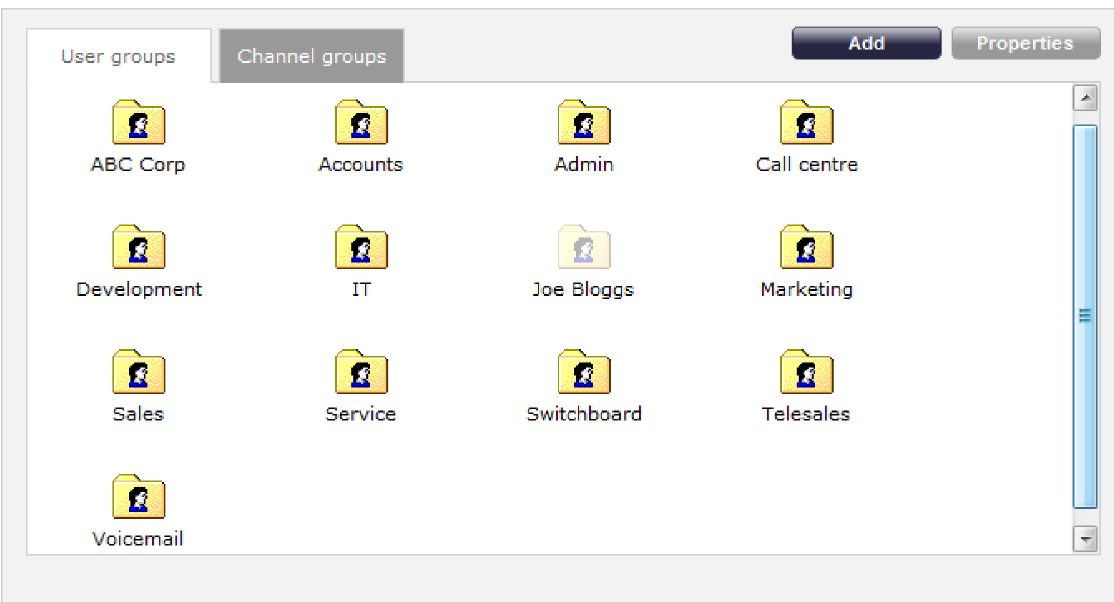
The **`Sites`** panel is located at the top-left of the Directory screen. The function of a site object is to acquire call logging data from a telephone system, as well as serving as a representation of a hierarchical level in your organisation. TIM Plus allows the logging of data from up to five telephone systems and a site object must be configured for each one.




For more information, click on the Sites page.

## Groups

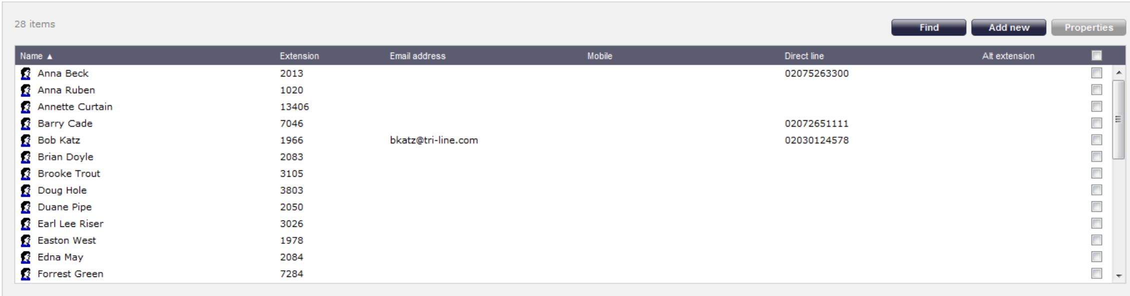
The **Groups** panel is located at the top-right of the Directory screen and contains groups of users (extensions) and channels (trunks), with each type of group divided into separate tabs. By selecting a tab, all of the groups of that type will be displayed in the panel.




For more information, click on the Groups page.

## Contents

The **Contents** panel is located at the bottom-half of the Directory screen. This contains the individual objects belonging to the previously-selected user or channel group.


28 items

Find | Add new | Properties

| Name ▲ | Extension | Email address | Mobile | Direct line | Alt extension |
|---|---|---|---|---|---|
| Anna Beck | 2013 | | | 02075263300 | |
| Anna Ruben | 1020 | | | | |
| Annette Curtain | 13406 | | | | |
| Barry Cade | 7046 | | | 02072651111 | |
| Bob Katz | 1966 | bkatz@tri-line.com | | 02030124578 | |
| Brian Doyle | 2083 | | | | |
| Brooke Trout | 3105 | | | | |
| Doug Hole | 3803 | | | | |
| Duane Pipe | 2050 | | | | |
| Earl Lee Riser | 3026 | | | | |
| Easton West | 1978 | | | | |
| Edna May | 2084 | | | | |
| Forrest Green | 7284 | | | | |

For more information, click on the Contents page.

# Sites

## Sites overview

**Sites overview**

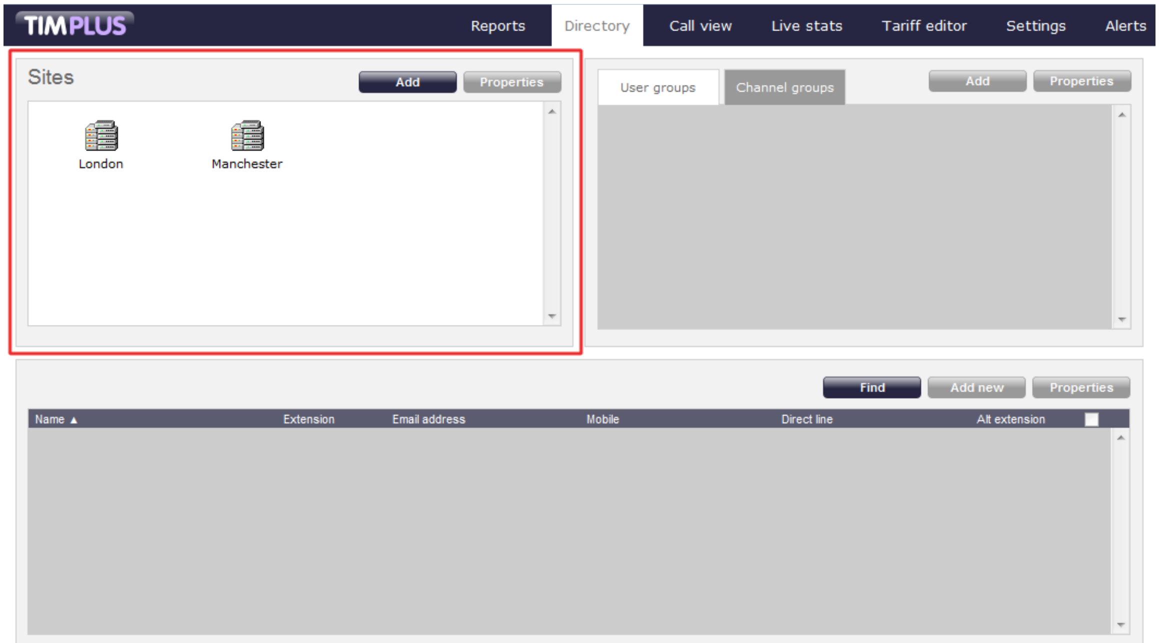


### What is a site?

The function of a site object is to acquire call logging data from a telephone system, as well as serving as a representation of a hierarchical level in your organisation. TIM Plus allows the logging of data from up to five telephone systems and a site object must be configured for each one.

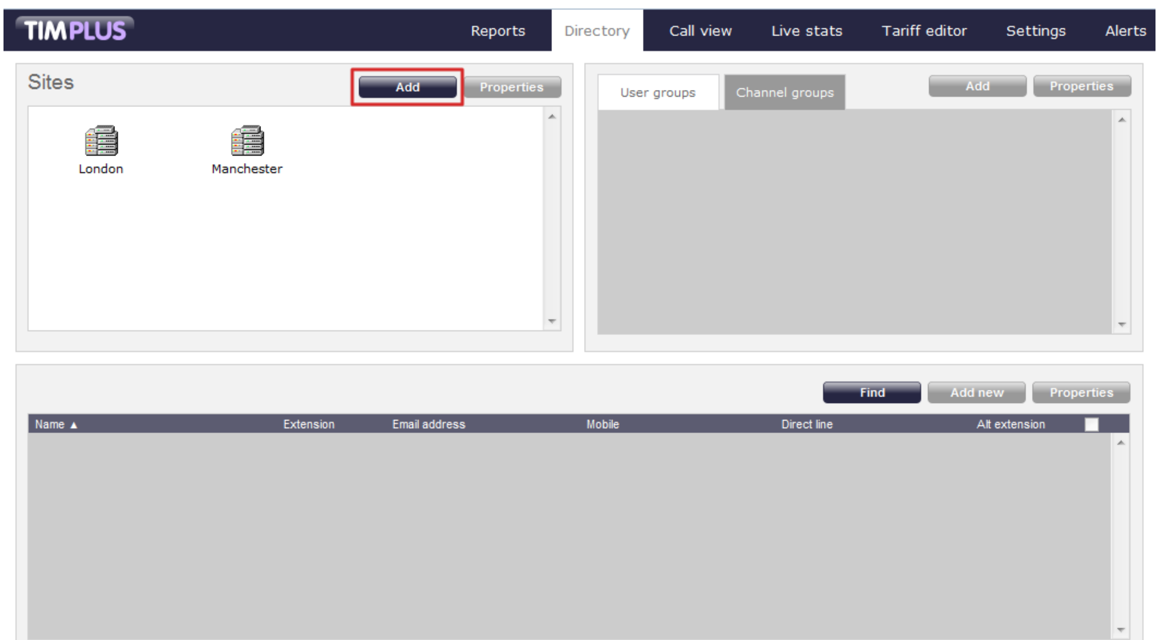
> If your organisation makes use of more than five telephone systems, you should upgrade to the TIM Enterprise pr oduct.

The `Sites` panel is located on the top-left side of the Directory screen.

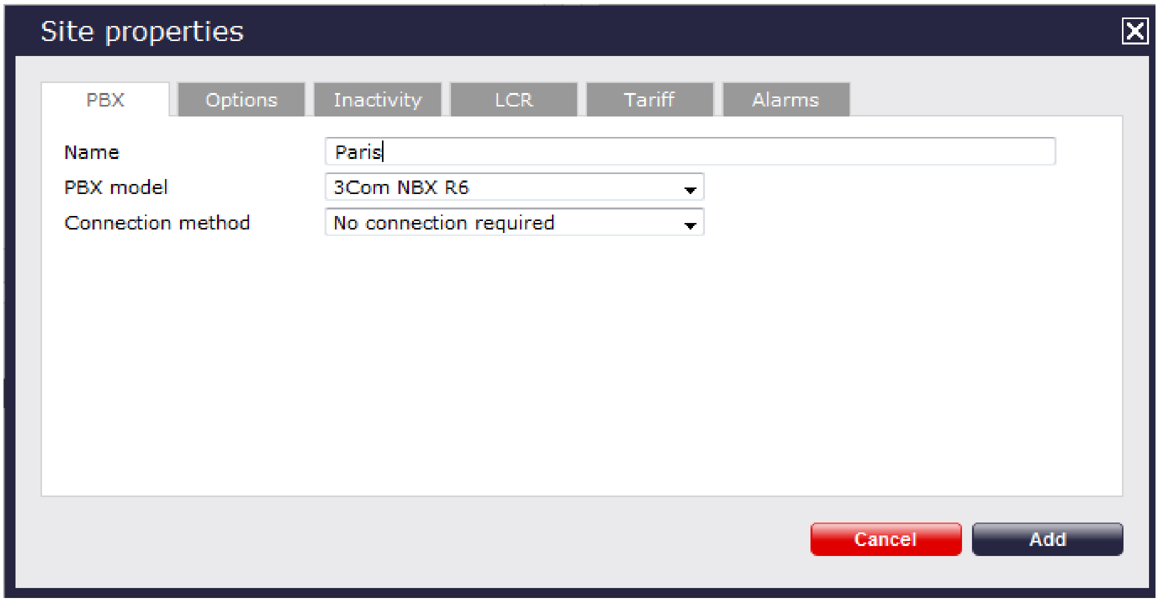



## Adding a site

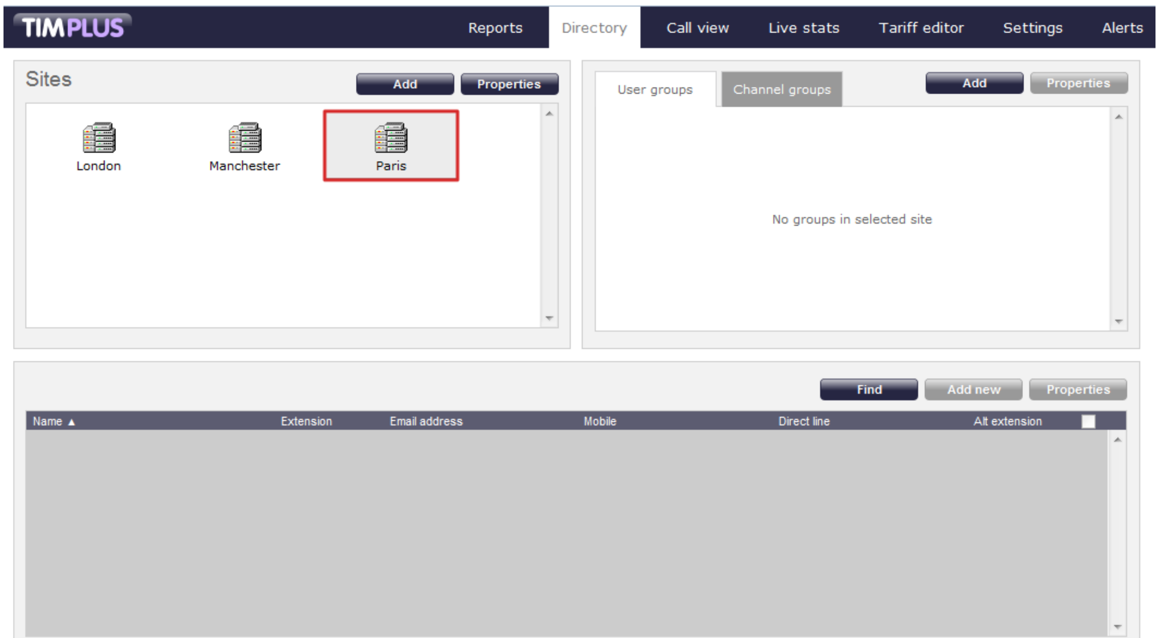
To add a site to the Directory, click on the Add button at the top-left of the panel, as shown below:




The **Site properties** window will appear, where you can enter the site's name, the PBX make and model, as well as the connection method used by your telephone system to deliver call logging data. For information on how to configure the rest of the site's properties, refer to the Configuring a site section.



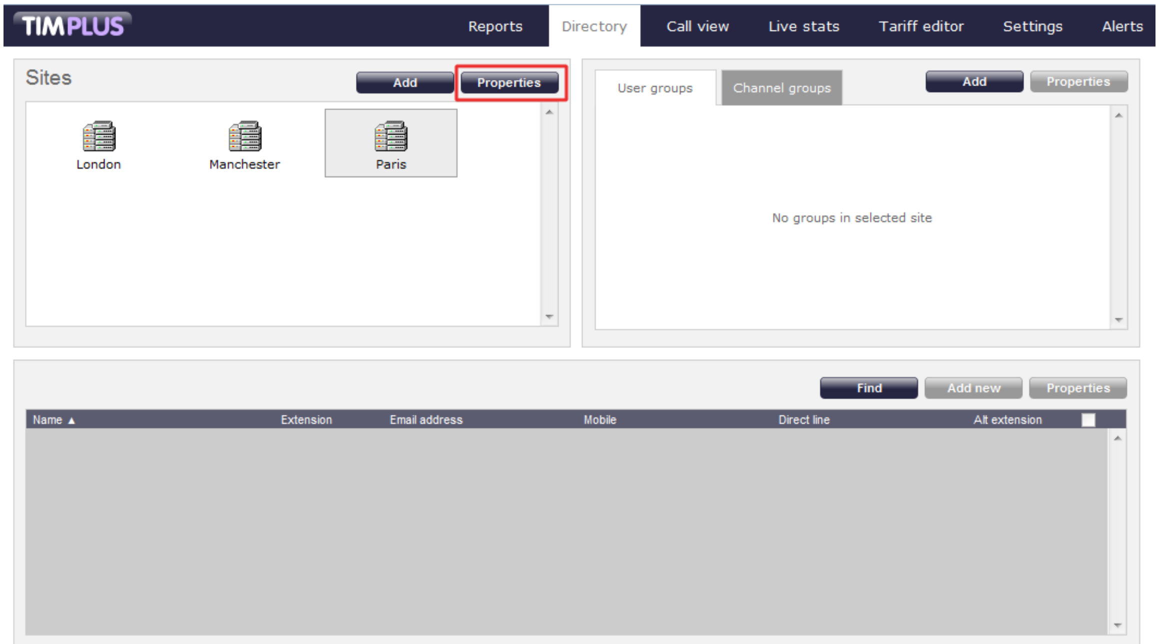

When you have configured the site's properties, click on the Add button to add the site to the Directory.



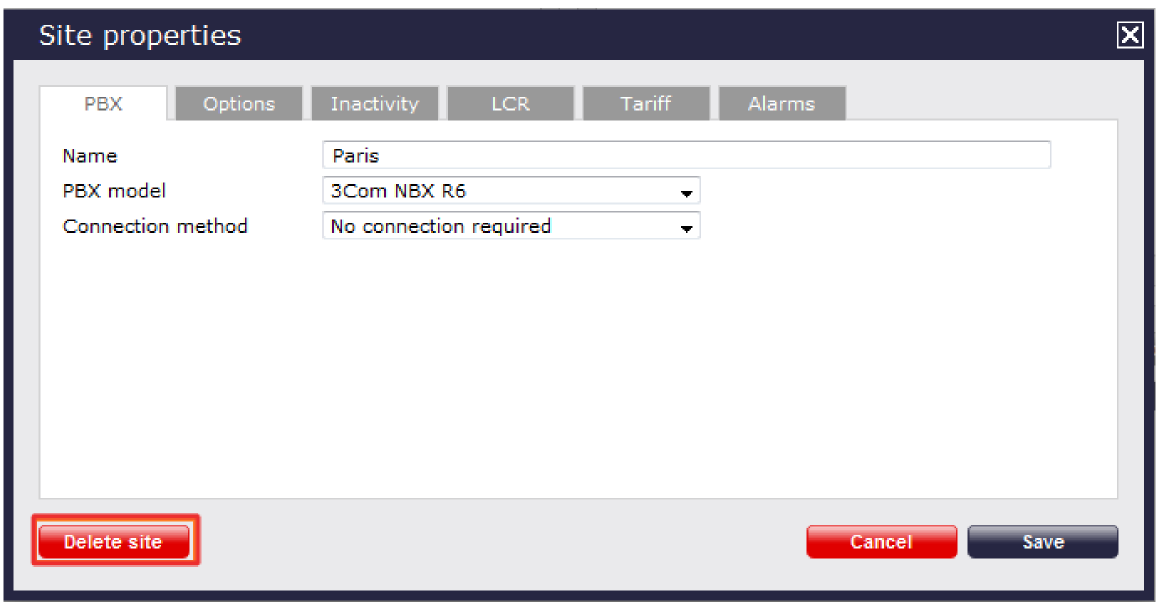

## Deleting a site

When you delete a site, you are deleting all the information contained within that site, including its users and channels, and any calls associated with those items!

To delete a site from the Directory, select the site you want to remove, then click on the Properties button, as shown below:




The **`Site Properties`** window will appear. Click on the Delete site tab at the bottom-left of the window to remove the site from the Directory; a confirmation will be required, to prevent the site being deleted accidentally.



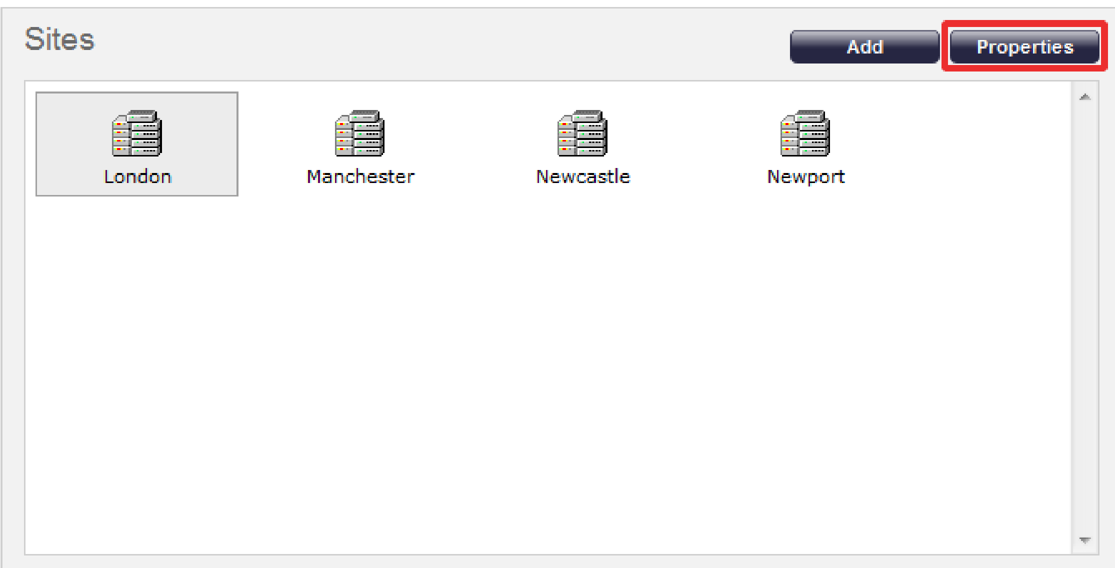

## Configuring a site

**Configuring a site**

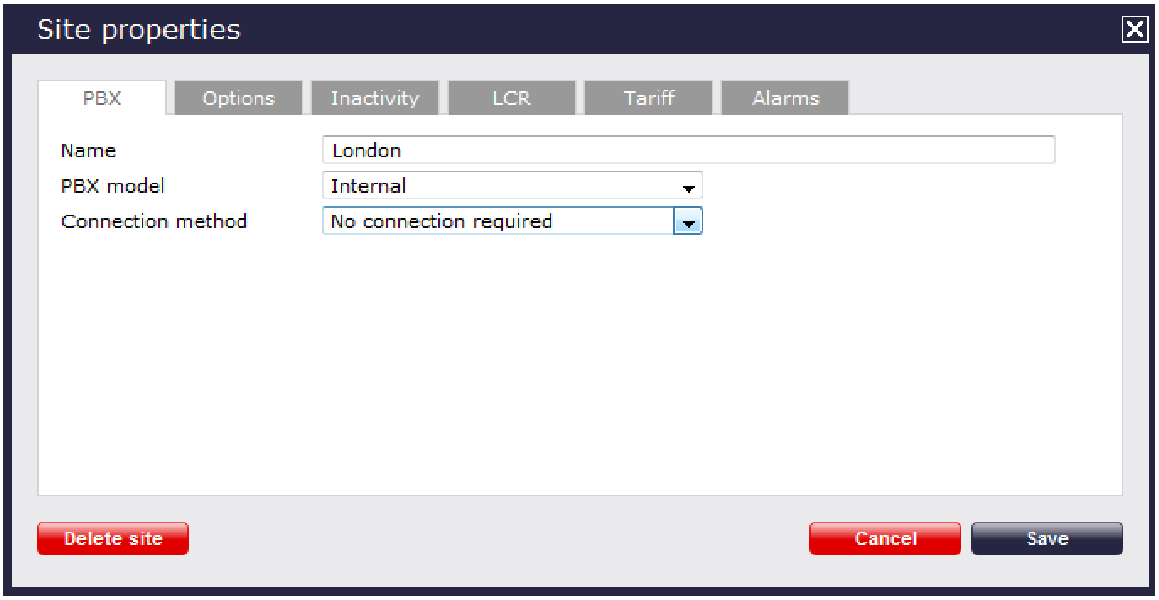
- Overview
- PBX
- Options
- Inactivity
- LCR
- Tariff
- Alarms

## Overview

To configure a site, go to the Directory screen, select the site you want to configure and click on the Properties button at the top-right of the panel, as shown below:




The following window will appear, where you can configure the properties of your site:

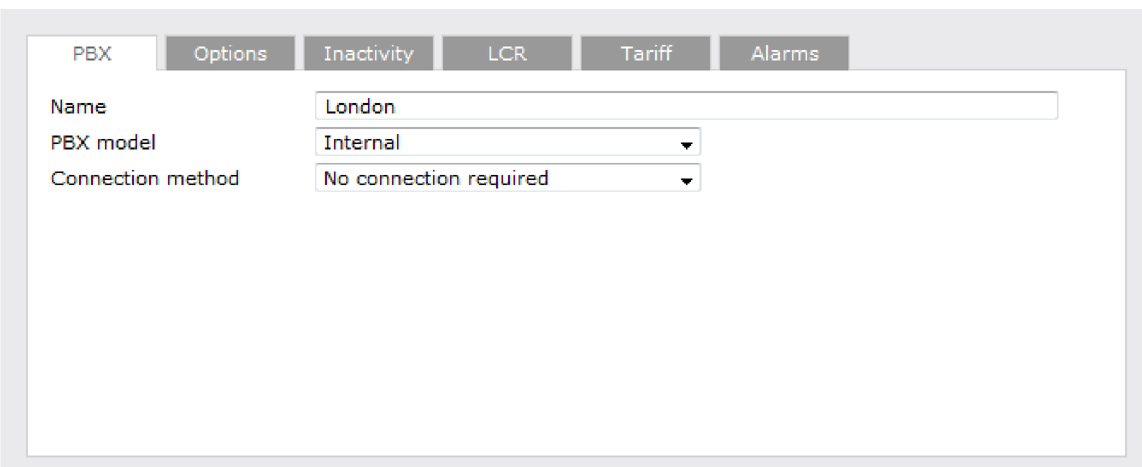



Each tab in the `Site properties` window are described below:

## PBX

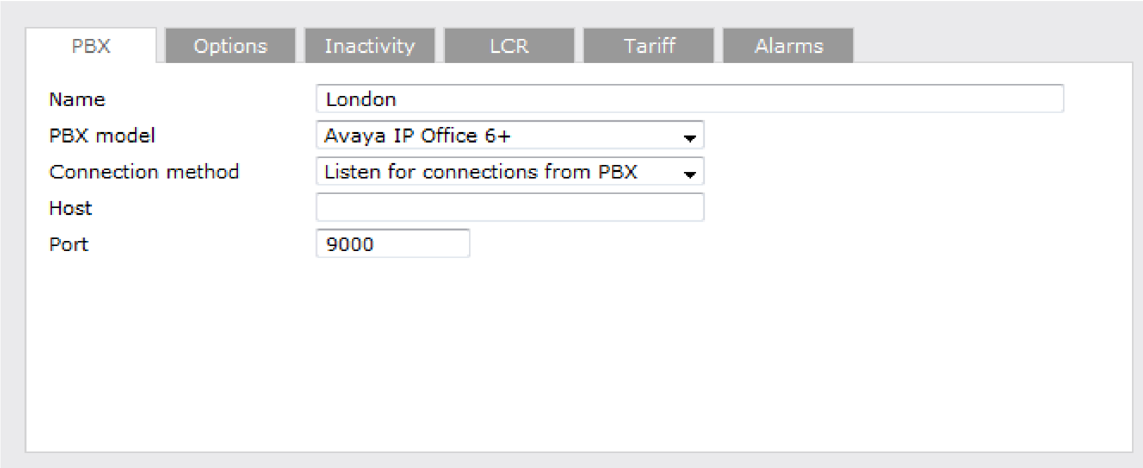
The PBX tab allows you to configure the properties of your telephone system. The properties presented in this tab will vary, depending on the connection method used by your telephone system to provide call logging data.

### For all connection types



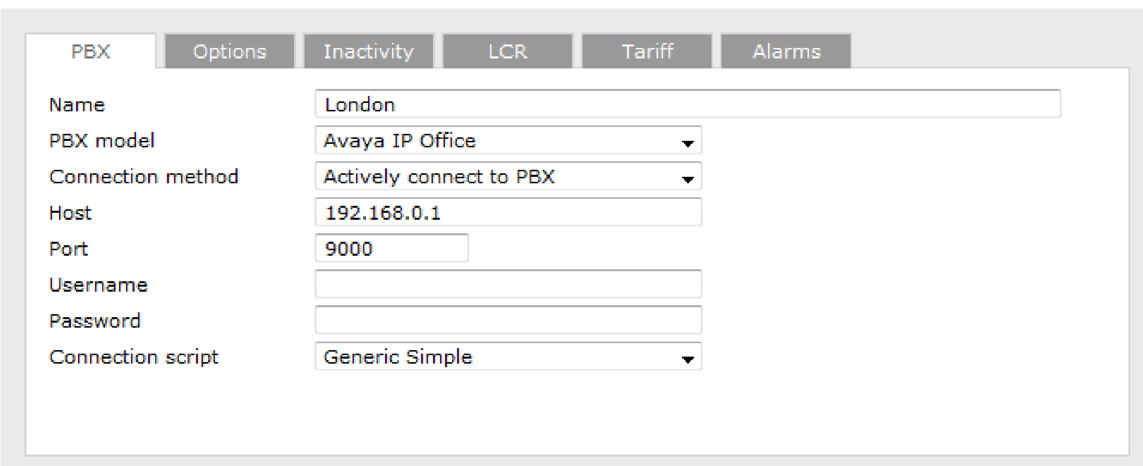

| Field | Description |
|---|---|
| **Name** | The name by which you want your site to be identified. |
| **PBX model** | The name of your telephone system. |
| **Connection method** | The connection method used by your telephone system to provide call logging data. |

### For listening connections



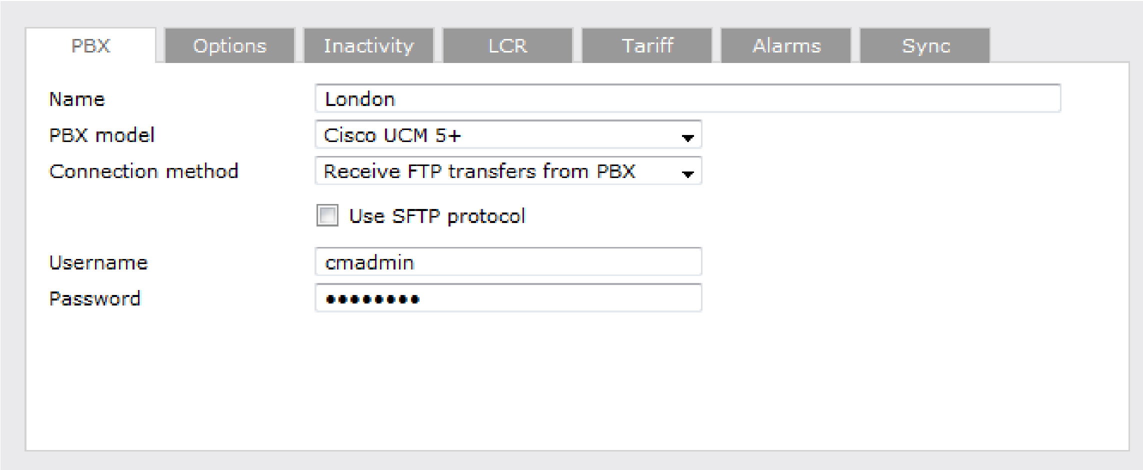

| Field | Description |
|---|---|
| **Host** | Specify the IP address of your PBX to only allow data to be sent from that address. You may leave this field blank to accept data from any IP address. |
| **Port** | The port number that TIM Plus should listen on for call logging data. |

### For active connections



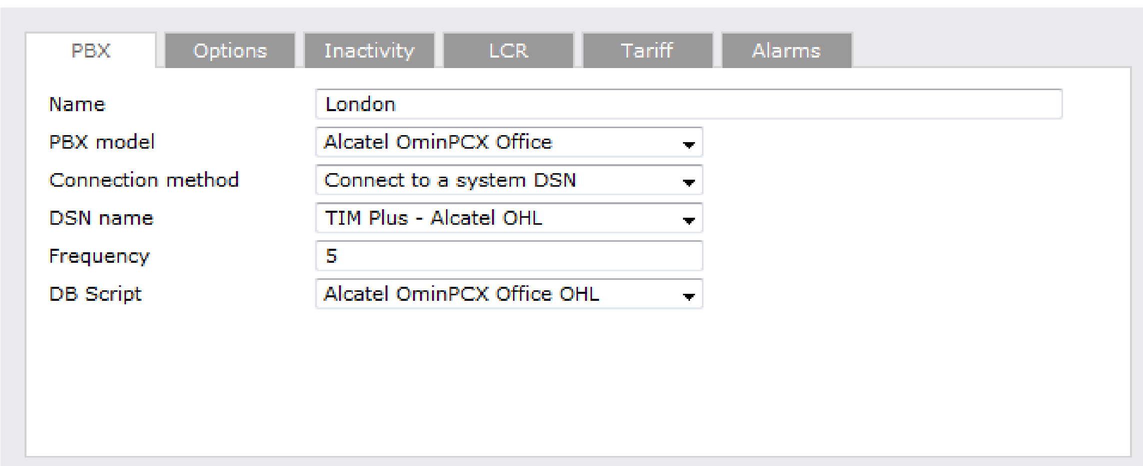

| Field | Description |
|---|---|
| **Host** | The IP address of the telephone system. |
| **Port** | The port number that your telephone system listens on. |
| **Username** | The username required to log in to your telephone system, if applicable. |
| **Password** | The password required to log in to your telephone system, if applicable. |

### For FTP transfer connections



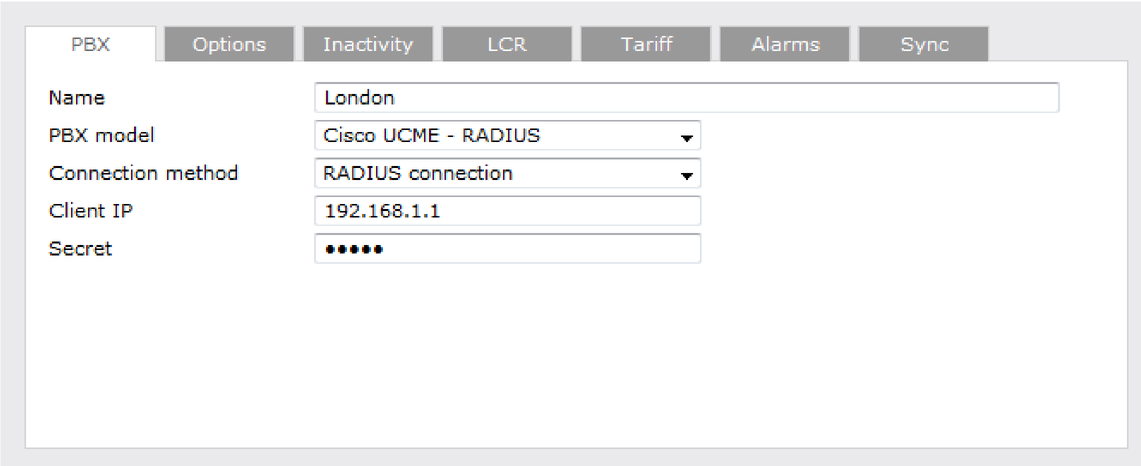

| Field | Description |
| --- | --- |
| **Username** | The username of the FTP account on your telephone system. |
| **Password** | The password of the FTP account on your telephone system. |

#### For DSN connections



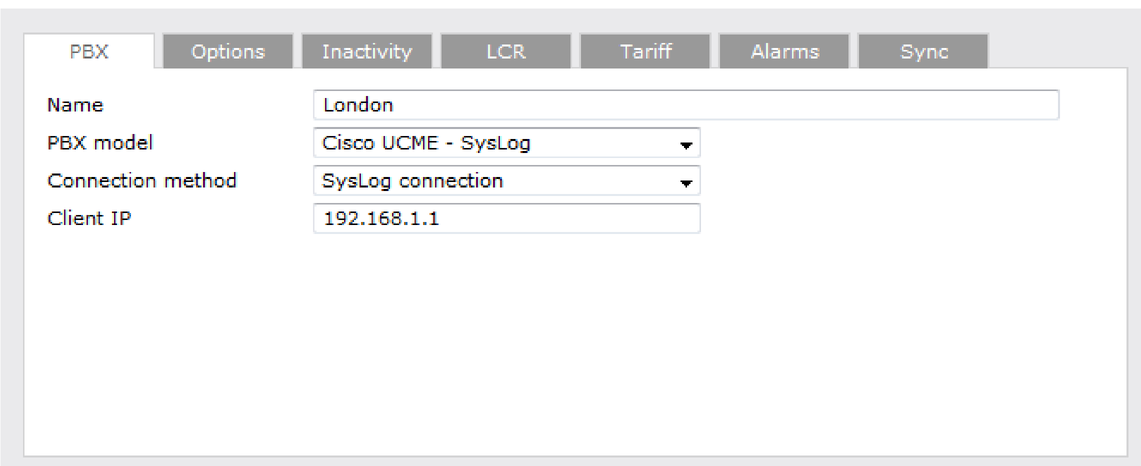

| Field | Description |
| --- | --- |
| **DSN name** | The name of the system DSN connection to use when connecting to your telephone system's database. |
| **Frequency** | The frequency, in seconds, of the checks that TIM Plus makes when connecting to the database to determine if new data is available. |
| **DB Script** | The database script that TIM Plus uses when checking for new data. |

#### For RADIUS connections




| Field | Description |
|---|---|
| **Client IP** | The IP address of your telephone system responsible for sending RADIUS packets. |
| **Secret** | The secret key used in RADIUS authentication between TIM Plus and your telephone system. |

#### For SysLog connections




| Field | Description |
|---|---|
| **Client IP** | The IP address of your telephone system responsible for sending SysLog events to TIM Plus. |

For detailed information about connecting to all makes/models of PBX, refer to the Connecting to your PBX secti
on.

## Options

The Options tab enables you to keep a backup of any call logging data received, timestamp incoming call records and delay processing of call records. These options are explained below in more detail:


#### Save a backup of any data received from this PBX

TIM Plus allows you to save a backup of any call logging data received from your telephone system(s).

To enable backups, tick the `Save a backup of any data received from this PBX` box and enter the location of the folder you want to store the files in. The default path is `{app}\backup\backup-{year}-{month}-{day}.{uiv}` and can contain dynamic variables, as detailed below:

| Item | Description |
|---|---|
| `app` | The full installation path of TIM Plus |
| `year` | The year the data was captured in `yyyy` format |
| `month` | The month the data was captured in `mm` format |
| `day` | The day of the month when data was captured in `dd` format |
| `uiv` | A unique ID representing each site in the Directory |

#### Timestamp received data

TIM Plus can timestamp call records from your telephone system as they are received, if they do not already include dates and times.

#### Binary data

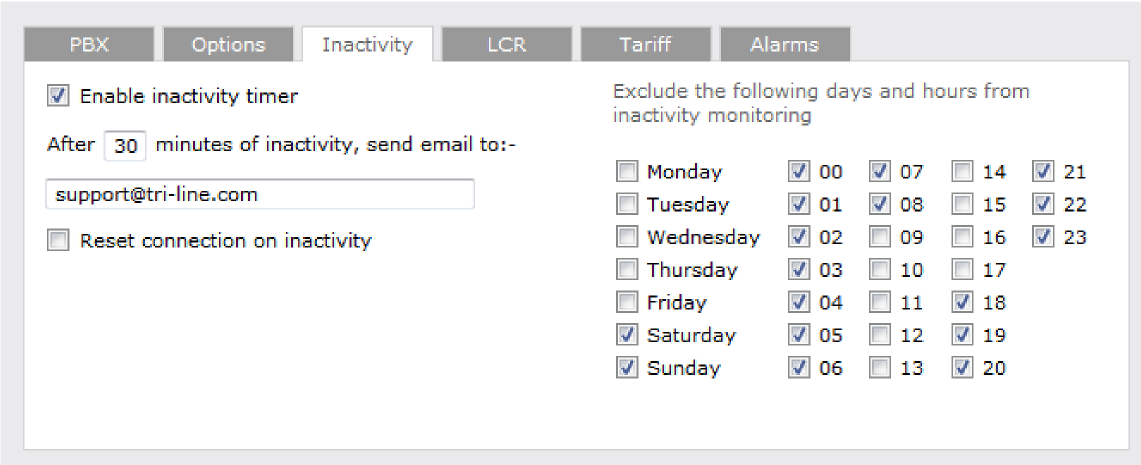
Select this option if your telephone system sends call records in a non-textual format.

#### Delay processing of received data

Enable this option and enter a time delay, in milliseconds, if call records are sent from your telephone system over a slow connection. This helps to prevent data loss when call records are processed before they are fully received.

## Inactivity

The Inactivity tab allows you to set up an inactivity timer, which can notify you by e-mail when TIM Plus has not received data from your telephone system for a given amount of time.




### Enable inactivity timer

Select this option to enable inactivity monitoring for the site you are configuring. Enter the amount of time, in minutes, that must pass with no call activity, before an e-mail is sent. Next, enter the e-mail address that will receive inactivity alerts for this site.

### Reset connection on inactivity

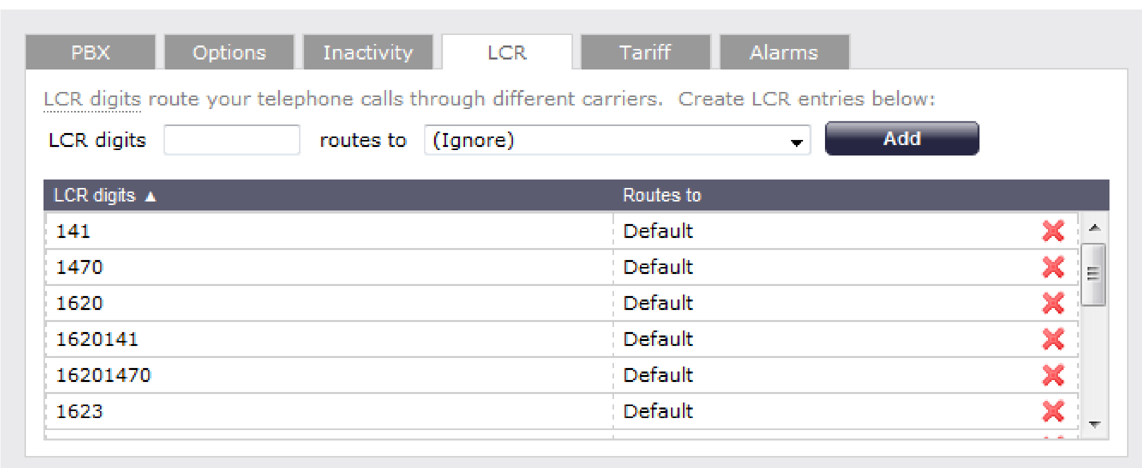
TIM Plus can reset the network connection to your telephone system when an inactivity alert is sent, in order to cause the telephone system to restart its connection.

### Exclude days and hours from inactivity monitoring

Tick the box alongside the days and hours when it is legitimate that no call activity takes place, such as at night or at weekends, so as not to receive unnecessary e-mail notifications for those periods.

## LCR

The LCR tab allows you to administer any least cost routing (LCR) codes you may use to route calls via different carriers.




### Adding LCR codes

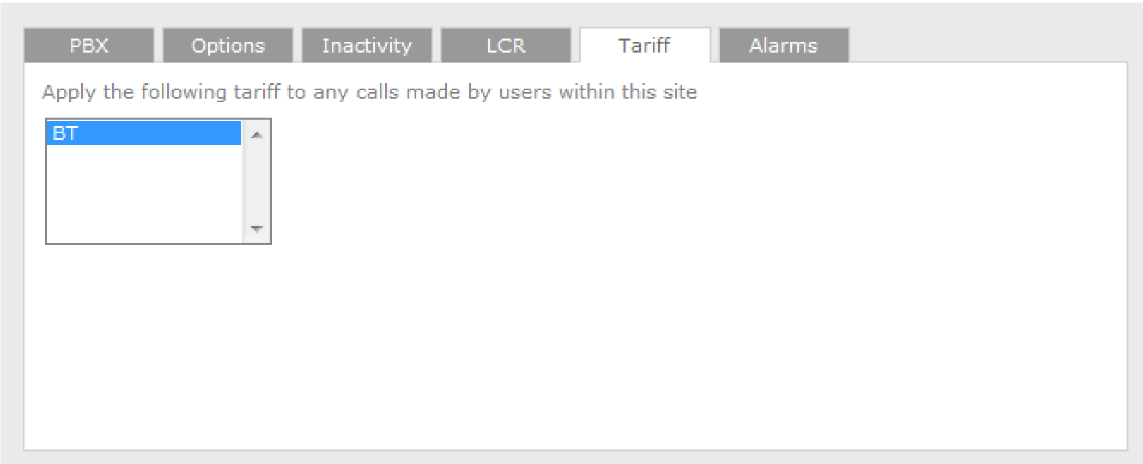
To add an LCR code, enter it in the **`LCR digits`** field and select its associated tariff table from the drop-down list, as shown above.

### Removing LCR codes

To remove an LCR code, click on the icon alongside it.

## Tariff

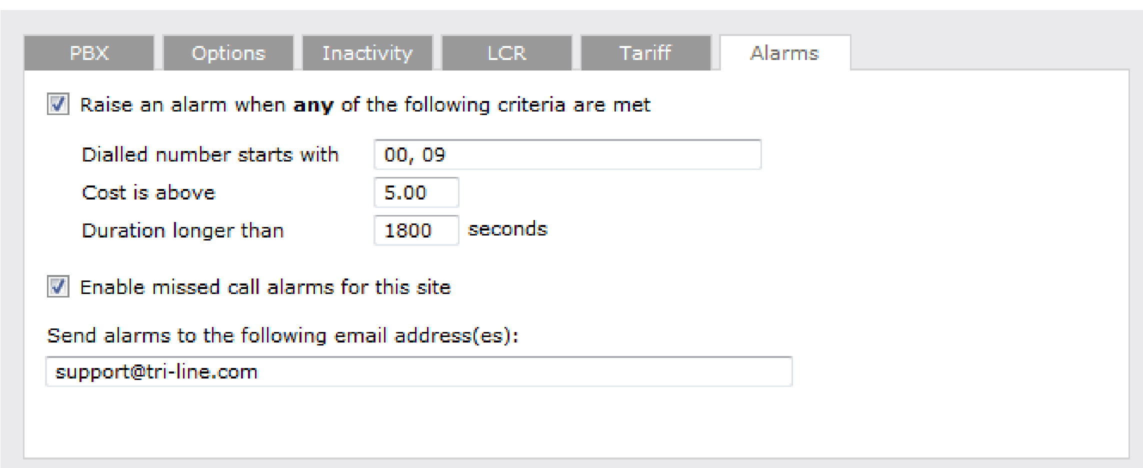
The Tariff tab allows you to select a default tariff table to use when costing calls made by users from this site.




By default, TIM Plus is supplied with a standard tariff table for the country of installation, which automatically includes details of national, international and mobile/cellphone dial codes. Bespoke tariffs can also be provided on request.

## Alarms

TIM Plus can send e-mail alerts when calls whose properties match certain criteria have happened, such as calls above a particular duration, calls to specific phone numbers, or when user-defined cost thresholds are exceeded.




### Dialled number alarm

An alarm can be activated when a full or partial number is dialled. To add a series of full or partial numbers, separate each one with a comma, as shown above. An example might be `00, 020, 020726526, 02072652600`.

### Cost alarm

An alarm can be activated when a call exceeds a specific cost.

#### Duration alarm

An alarm can be activated when a call exceeds a predetermined duration, specified in seconds.

#### Missed call alarm

E-mail notifications of missed calls can be activated, by ticking the `Enable missed call alarms for this site` option.

#### Delivering the alarm notification

To receive an e-mail notification from TIM Plus about any of the aforementioned alarms, enter the address of the e-mail recipient in the box provided; to send alerts to multiple email addresses, separate each one with a semicolon.

# Groups

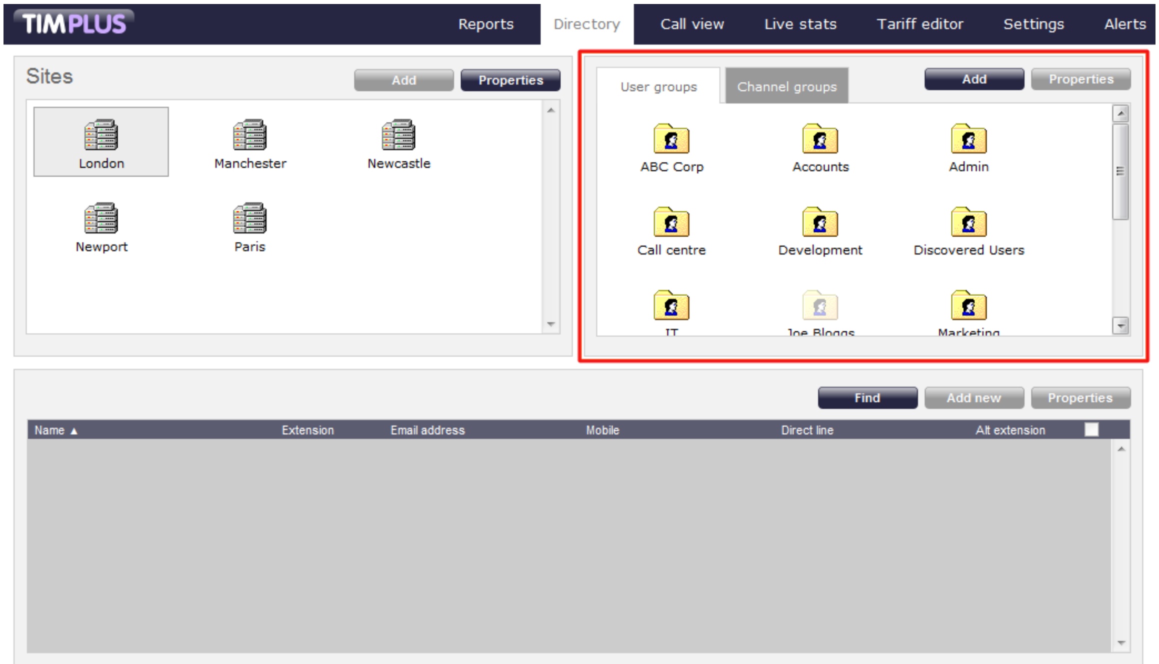
## User groups

**User groups**



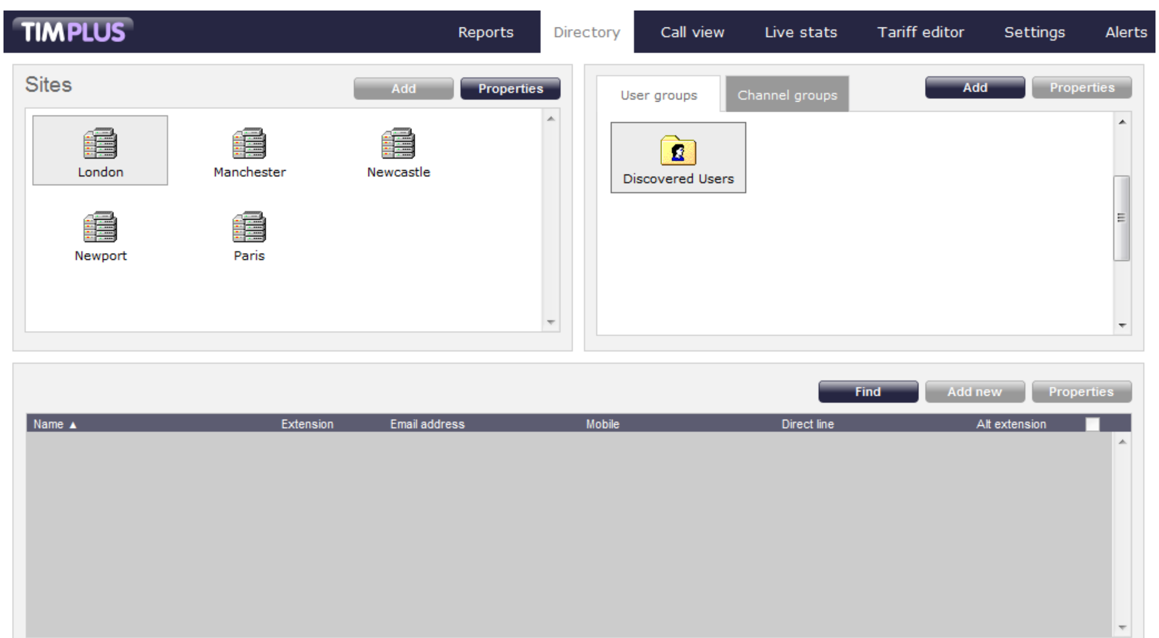
### What is a user group?

A user group is a container of individual users, and together they mimic the organisational structure of your company, enabling you to run reports on, and restrict access to, parts of the TIM Plus directory.



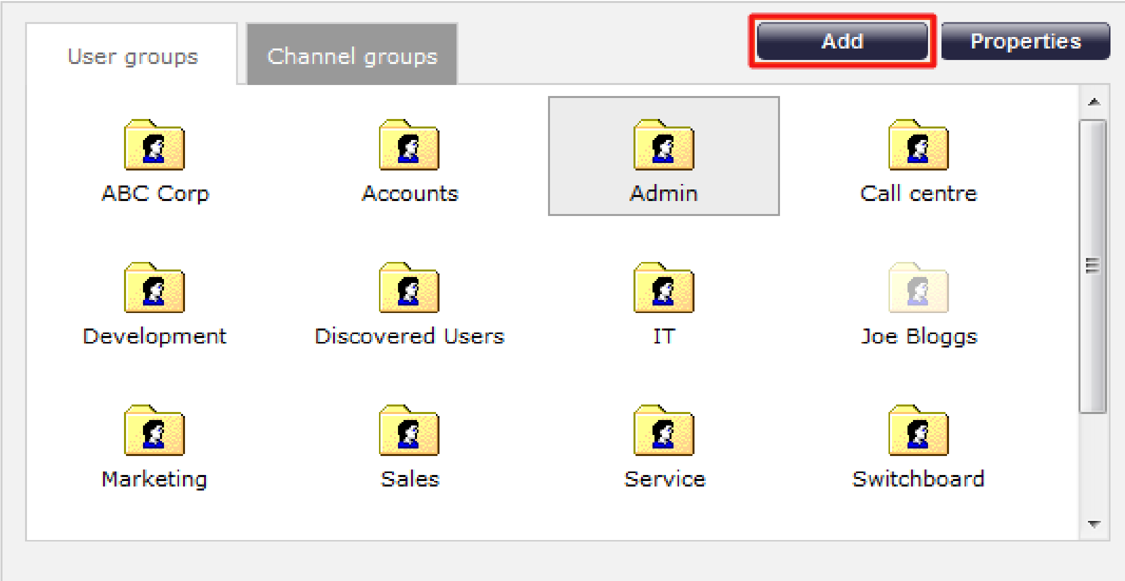

### The Discovered Users folder

A special user group, `Discovered Users`, is automatically created in TIM Plus to harvest hitherto-unknown user information from the call data received from your telephone system. Over time, when all possible users have been collected by the Discovered Users folder, you can create your own user groups based on the structure of your organisation, and move users into these new groups.

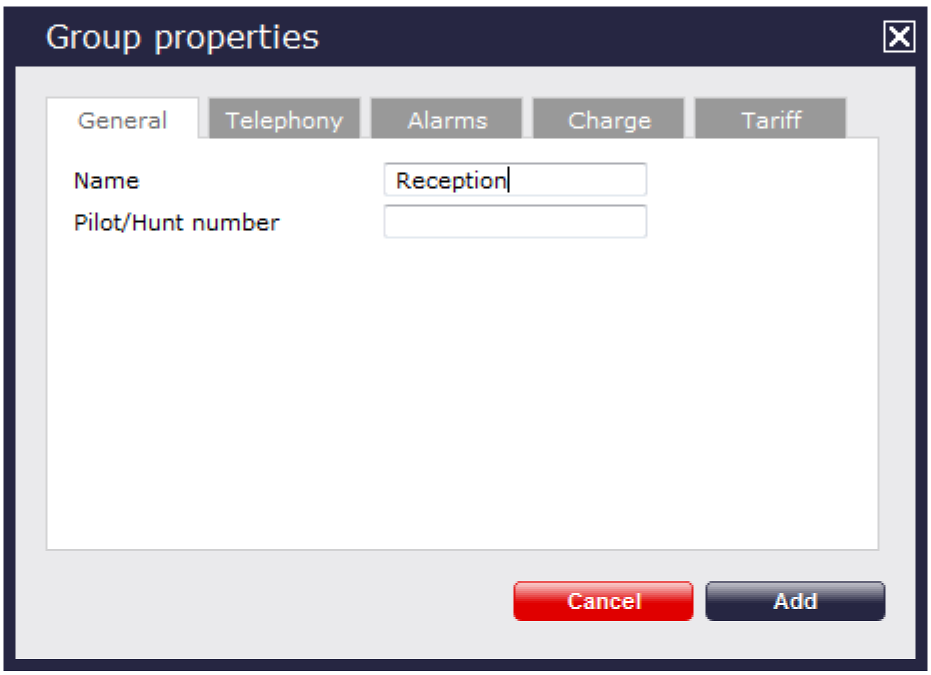



### Adding a user group

To add a new user group to the Directory, select the User groups tab from the Groups panel and click on the Add bu tton.




A new window will appear, allowing you to add the name of the group and its associated pilot/hunt group number, if applicable.

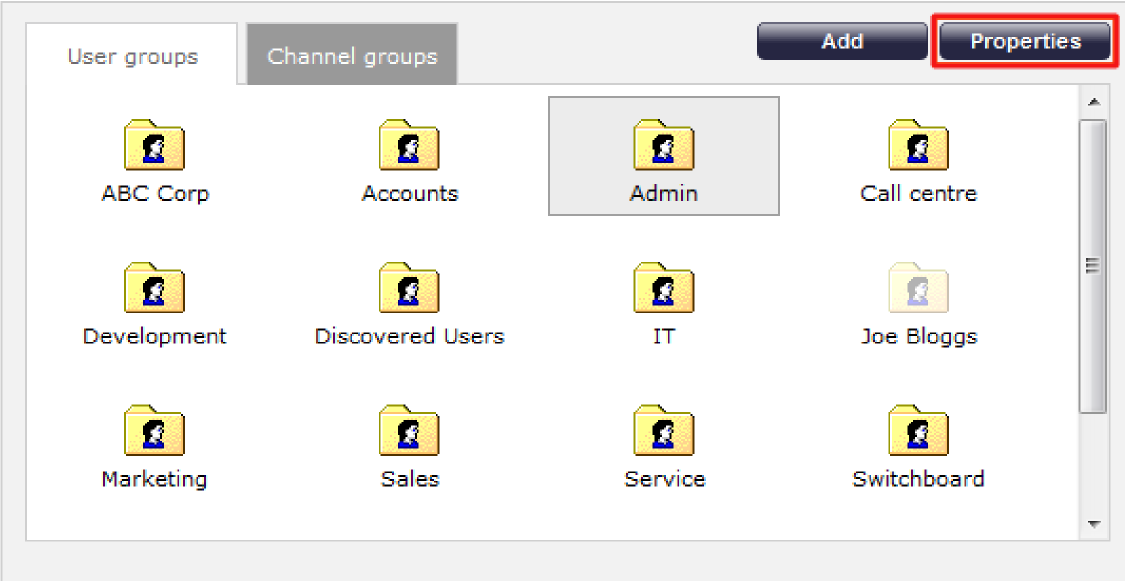



Click on the Add button to add the new group to the Directory.

> If you use synchronisation, such as Cisco AXL, you need not manually configure user groups, since TIM Plus automatically imports users from your telephone system, placing them in their respective groups.

## Configuring a user group

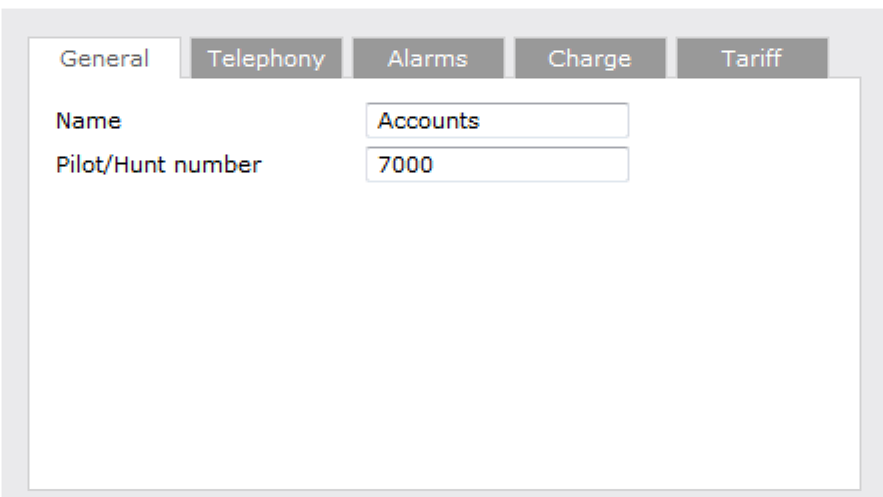
To configure the properties of a user group, highlight the group you want to configure and click on the Properties button at the top-right corner of the panel:




A new window will open, where you can configure the properties of the user group. Each tab in the `Group properties` window is described below:

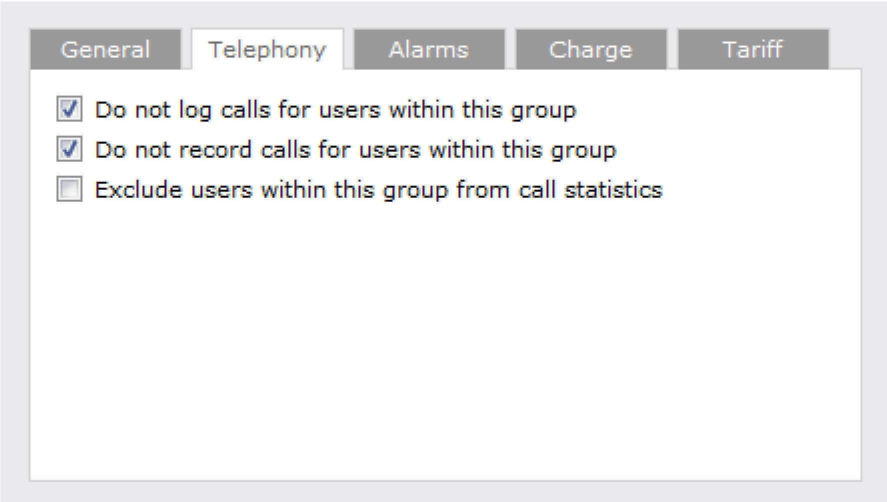
### General

In the General tab you can edit the name of the user group and its associated pilot/hunt group number, if applicable.




### Telephony

The Telephony tab gives you the option to exclude the currently-selected group from being logged by TIM Plus. If call recording integration is enabled, you can also exclude calls from being recorded.



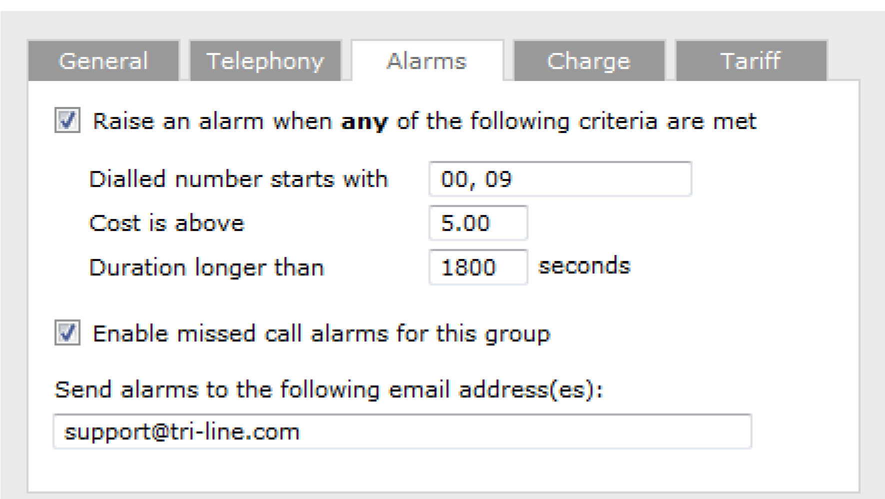

The following options can be enabled or disabled in this panel:

| Option | Description |
|---|---|
| Do not log | Calls to and from this user group will not be logged by TIM Plus. In addition, if integrated call recording is used, no audio recordings will be available |
| Do not record calls | Calls to and from this user group will not be recorded, if integrated call recording is in use |
| Exclude users from call statistics | Collection of statistics will not be performed for calls to and from this user group |

Your software license user capacity does not include users inside groups whose `Do not log` option is enabled.

### Alarms

TIM Plus can send e-mail alerts when calls whose properties match certain criteria have happened, such as calls above a particular duration, calls to specific phone numbers, or when user-defined cost thresholds are exceeded.



### Dialled number alarm

An alarm can be activated when a full or partial number is dialled by any user within the selected group. To add a series of full or partial numbers, separate each one with a comma, as shown above. An example might be **`00, 020, 020726526, 02072652600`**.

### Cost alarm

An alarm can be activated when a call made by any user within the selected group exceeds a specific cost.

### Duration alarm

An alarm can be activated when a call made by any user within the selected group exceeds a predetermined duration, measured in seconds.

### Missed call alarm

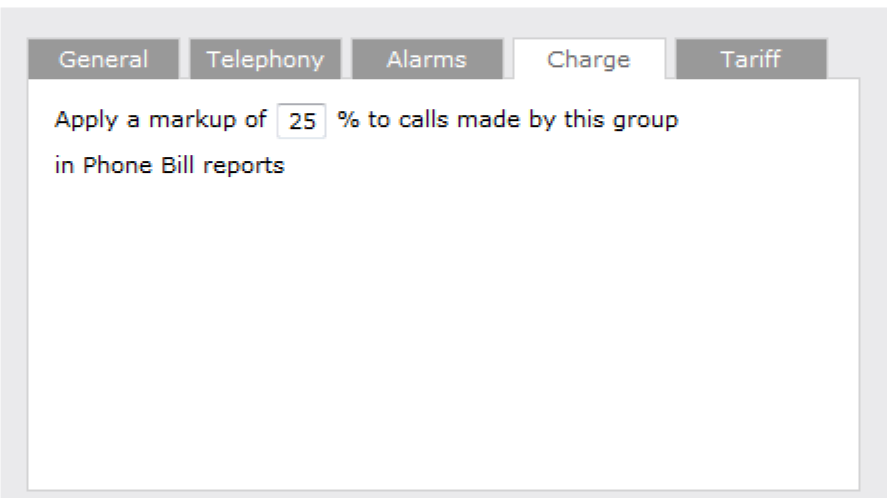
E-mail notifications of missed calls can be activated for users in the selected group, by ticking the **`Enable missed call alarms for this site`** option.

### Delivering the alarm notification

To receive an e-mail notification from TIM Plus about any of the aforementioned alarms, enter the address of the e-mail recipient in the box provided; to send alerts to multiple e-mail addresses, separate each one with a semicolon.

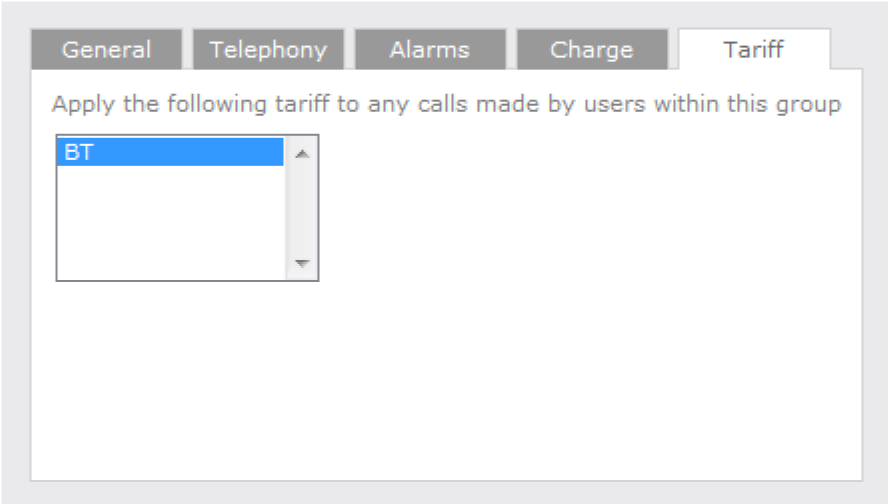
## Charge

The Charge tab gives you the ability to add a percentage markup to all calls in the selected group. To apply the charge, enter the percentage by which you would like to mark up calls, as shown below:




## Tariff

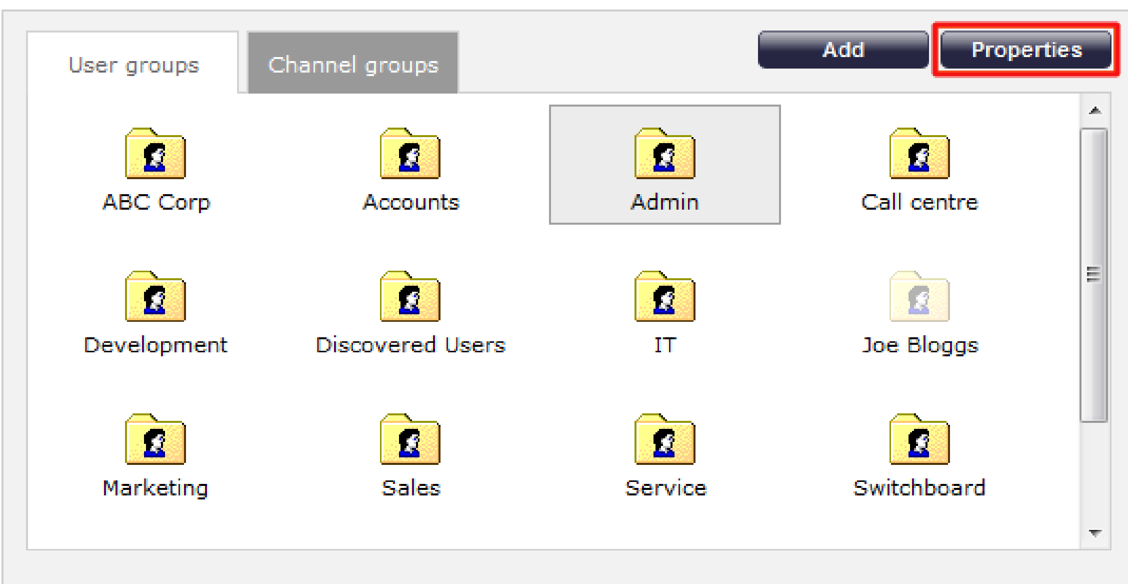
The Tariff tab gives you the ability to select a default tariff table to use when costing calls made by users in this group.



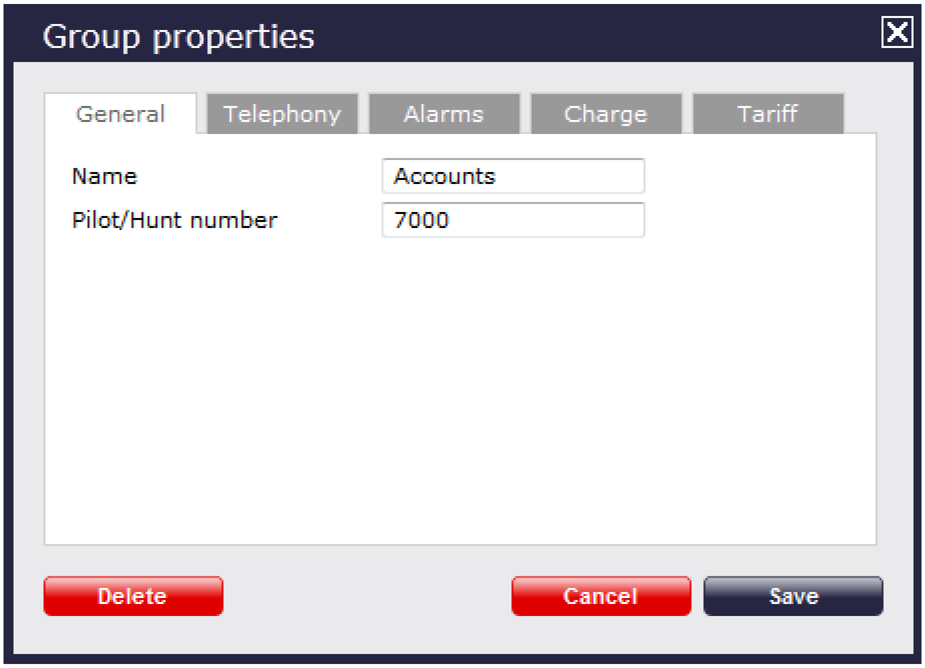

By default, TIM Plus is supplied with a standard tariff table for the country of installation, which automatically includes details of national, international and mobile/cellphone dial codes. Bespoke tariffs can also be provided on request.

## Renaming a user group

To rename a user group, locate it in the Directory and click on the Properties button.



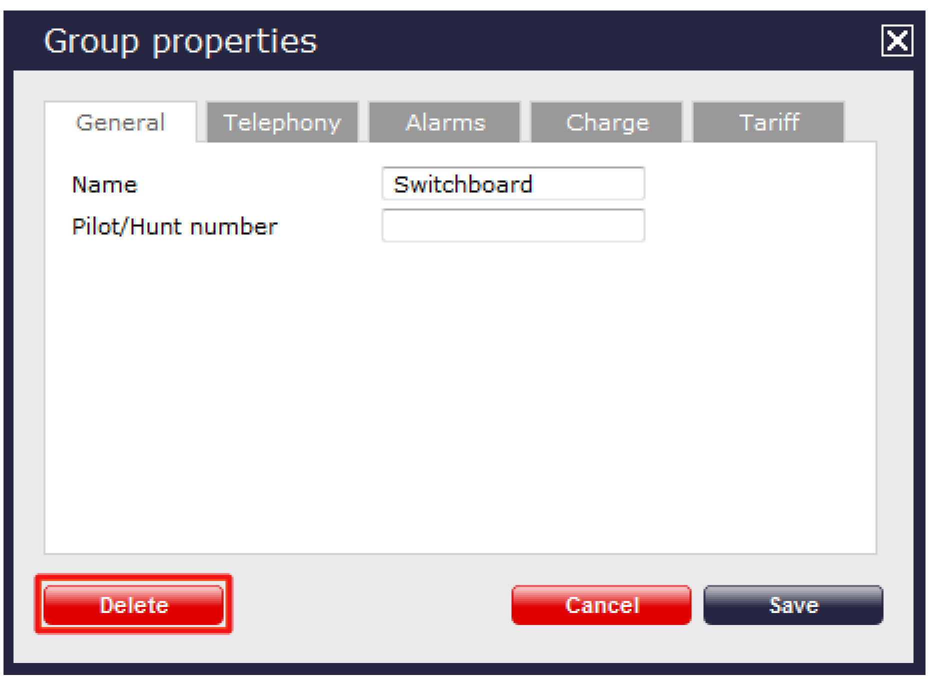

A new window will open, where you can specify a new name for the group. Click Save to apply the changes.




## Deleting a user group

When you delete a user group, you are deleting all the information contained within that group, including all users and calls associated with those users!

To delete a user group from the Directory, select the group you want to remove and click on the Properties button.




The `Group properties` window will appear. Click on the Delete site tab at the bottom-left of the window to remove the group from the Directory; a confirmation will be required, to prevent the group being deleted accidentally.

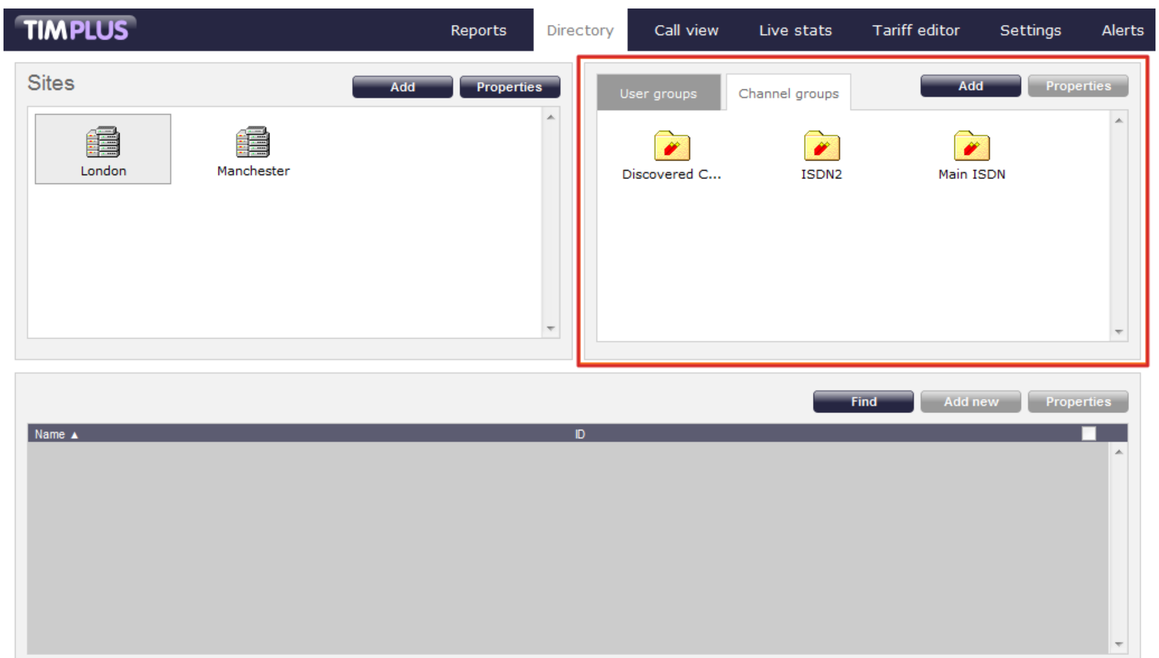
# Channel groups

**Channel groups**



## What is a channel group?

A channel group is a container of individual channels and is normally named to reflect the type of channel it contains, such as ISDN30, ISDN2, Analogue, etc.

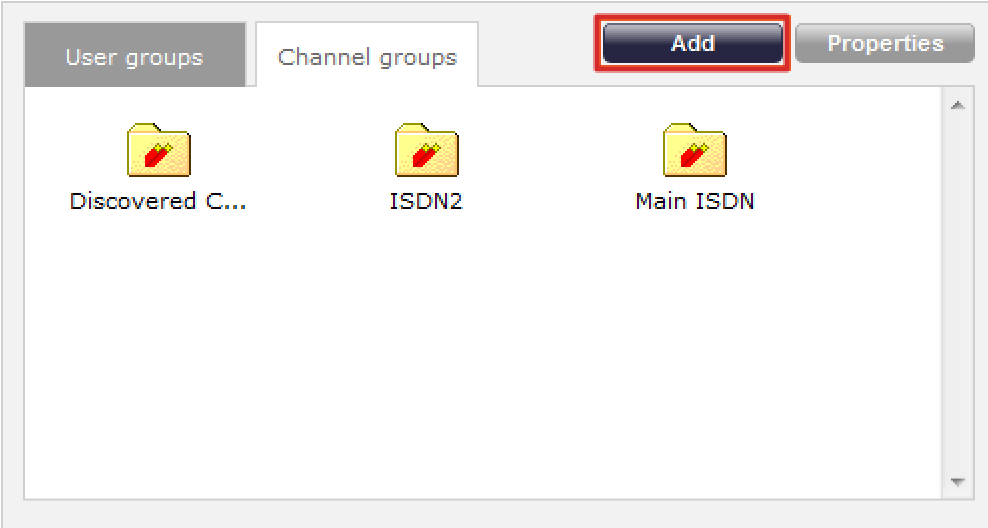



### The Discovered Channels folder

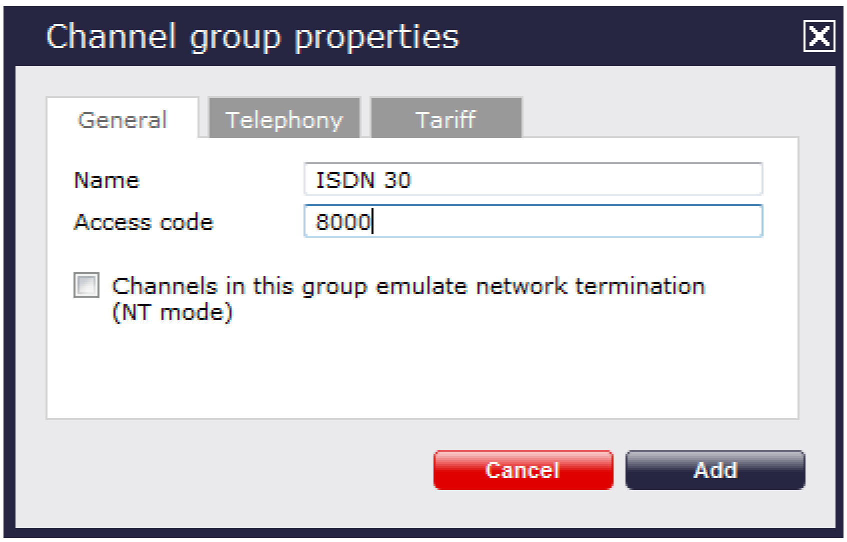
A special channel group, `Discovered Channels`, is automatically created in TIM Plus to harvest hitherto-unknown channel information from the call data received from your telephone system. Over time, when all possible channels have been collected by the Discovered Channels folder, you can create your own channel groups based on the structure of your organisation, and move channels into these new groups.

## Adding a channel group

To add a new channel group to the Directory, select the Channel groups tab from the Groups panel and click on the Add button.




A new window will appear, allowing you to enter the group's name and its associated trunk access code (TAC), if applicable.

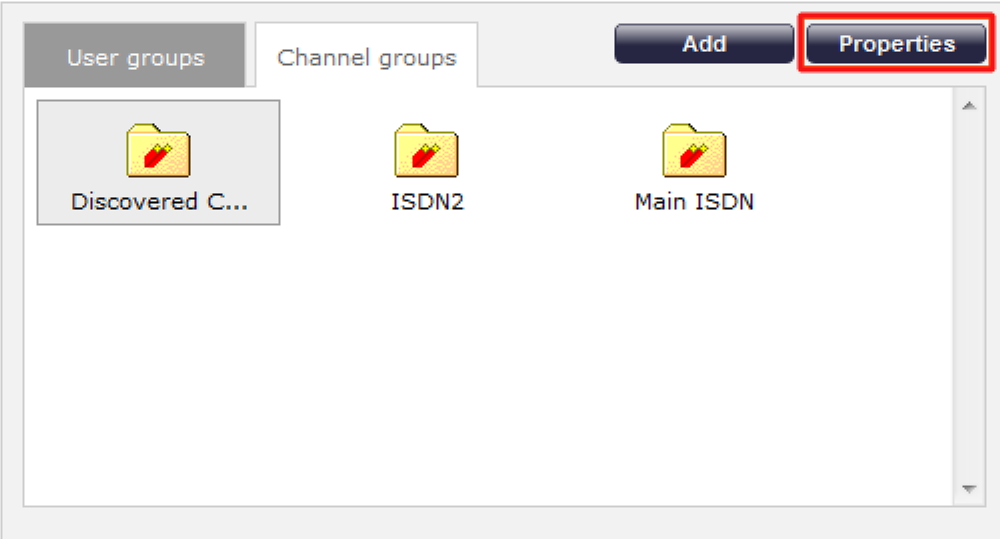



Click on the Add button to add the new group to the Directory.

If you use synchronisation, such as Cisco AXL, you need not manually configure channel groups, since TIM Plus automatically imports channels from your telephone system, placing them in their respective groups.

## Configuring a channel group

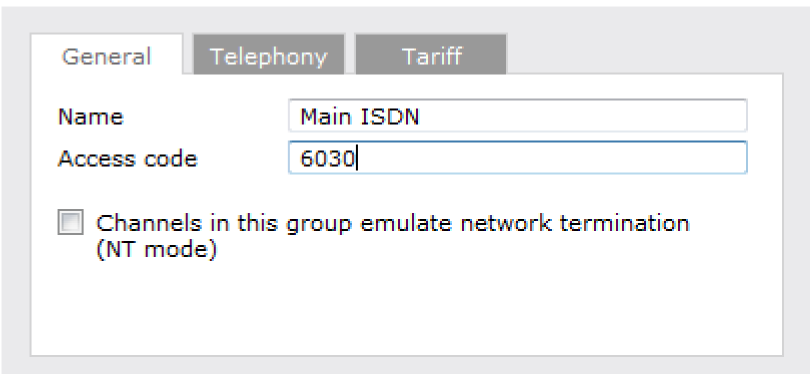
To configure the properties of a channel group, highlight the group you want to configure and click on the Properties button at the top-right corner of the panel:




A new window will open, where you can configure the properties of your channel group. Each tab in the `Group properties` window is described below:

### General

In the General tab you can edit the name of the channel group and its associated access code, if applicable.

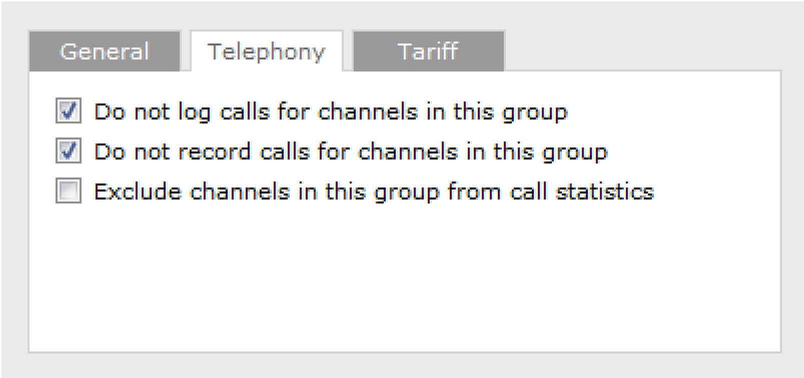



#### Channels in this group emulate network termination

This option only applies if you have enabled integrated call recording on your system. Its purpose is to indicate that the far end of the channel's physical connection is emulating PSTN network termination (NT), such as in a private circuit scenario.

## Telephony

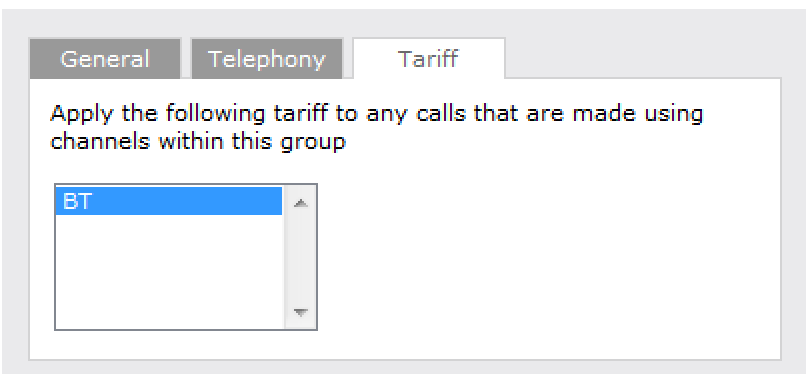
The Telephony tab gives you the option to exclude the currently-selected group from being logged by TIM Plus. If call recording integration is enabled, you can also exclude calls from being recorded.




| Option | Description |
|---|---|
| Do not log | Calls for this channel group will not be logged by TIM Plus. In addition, if integrated call recording is in use, no audio recordings will be available |
| Do not record calls | Calls for this channel group will not be recorded, if integrated call recording is in use |
| Exclude channels from call statistics | Collection of statistics will not be performed for this channel group |

### Tariff

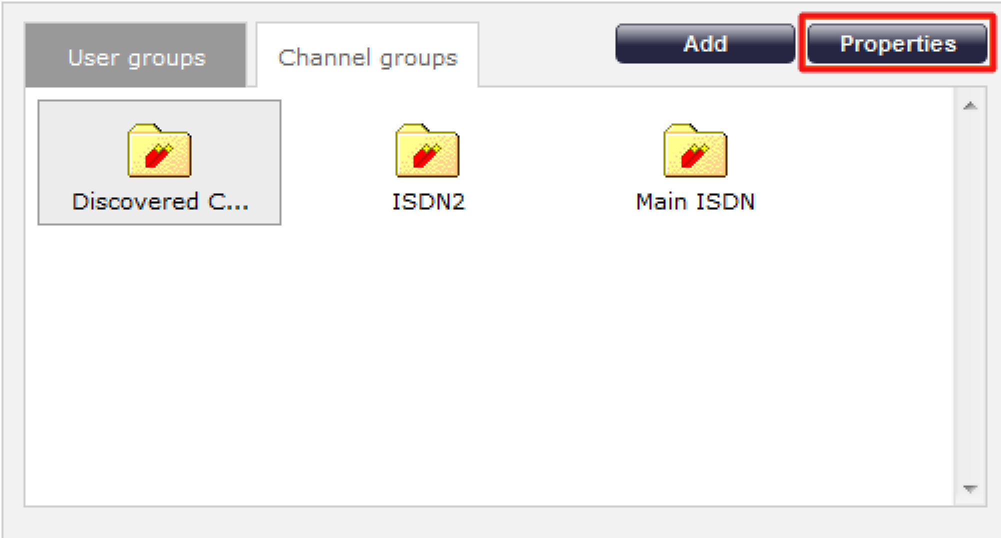
The Tariff tab gives you the ability to select a default tariff table to use, when costing calls for this channel group.



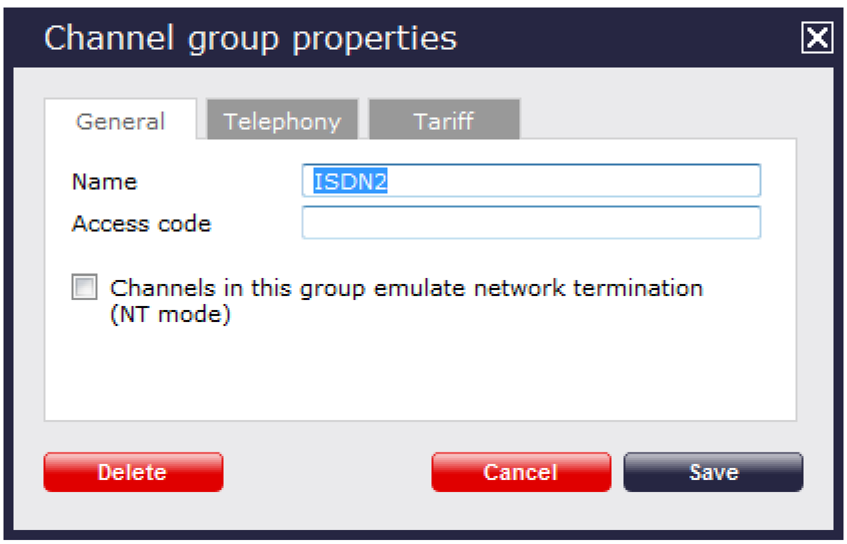

By default, TIM Plus is supplied with a standard BT tariff which will automatically pick up national, international and mobile dial codes. Bespoke tariffs can also be provided on request.

## Renaming a channel group

To rename a channel group, locate it in the Directory and click on the Properties tab.



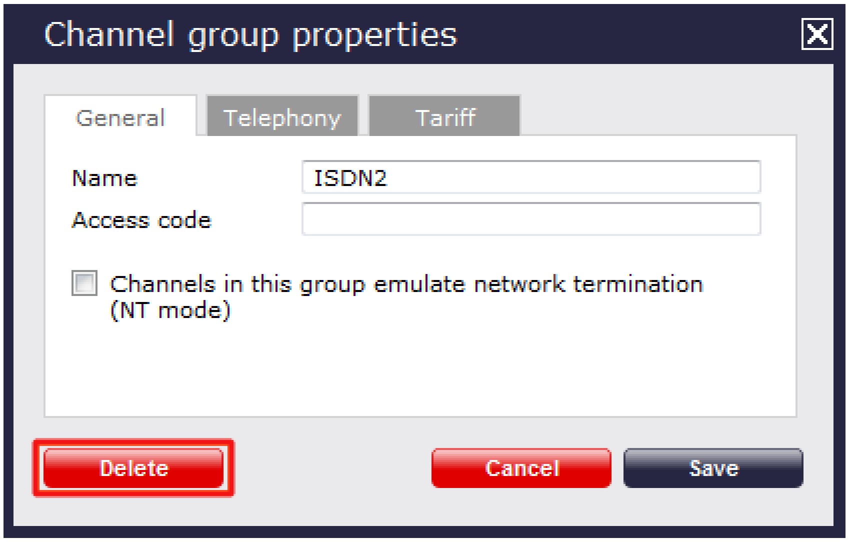

A new window will open, where you can specify a new name for the group. Click Save to apply the changes.




## Deleting a channel group

When you delete a channel group, you are deleting all the information contained within that group, including all channels and the calls associated with those channels!

To remove a channel group from the Directory, select the group you want to remove and click on the Properties button. In the `Channel properties` window that will open, click on the Delete button to remove the channel from the Directory; a confirmation will be required, to prevent users being deleted accidentally.

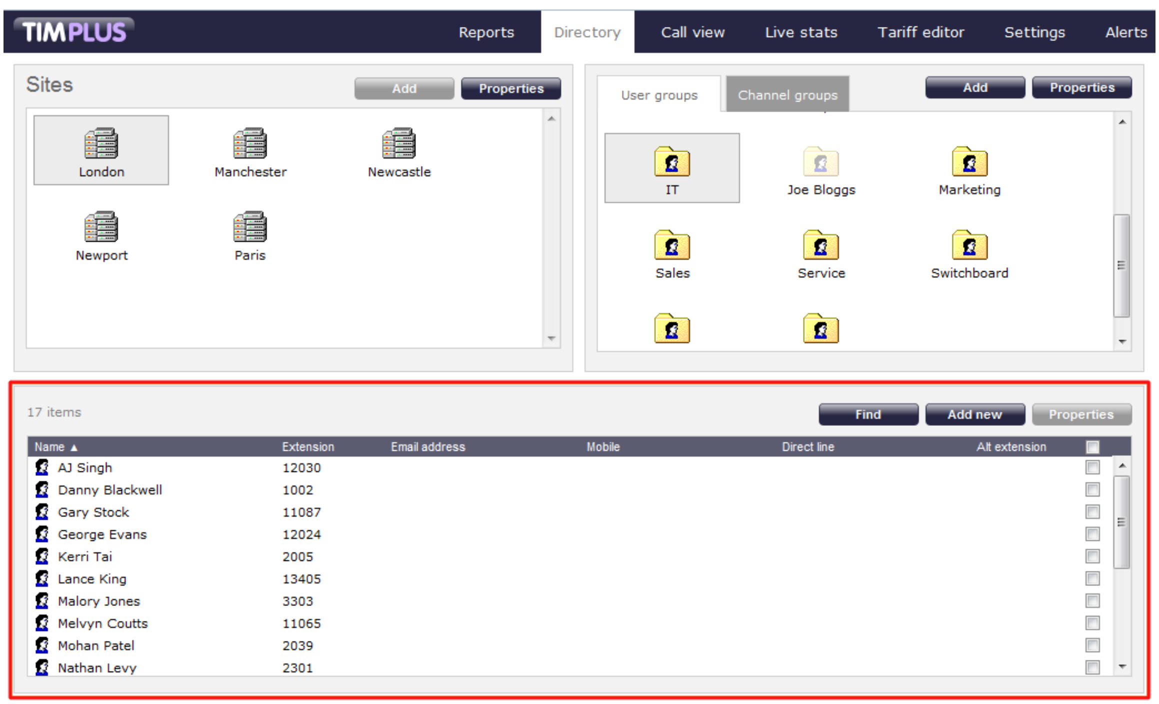



# Contents

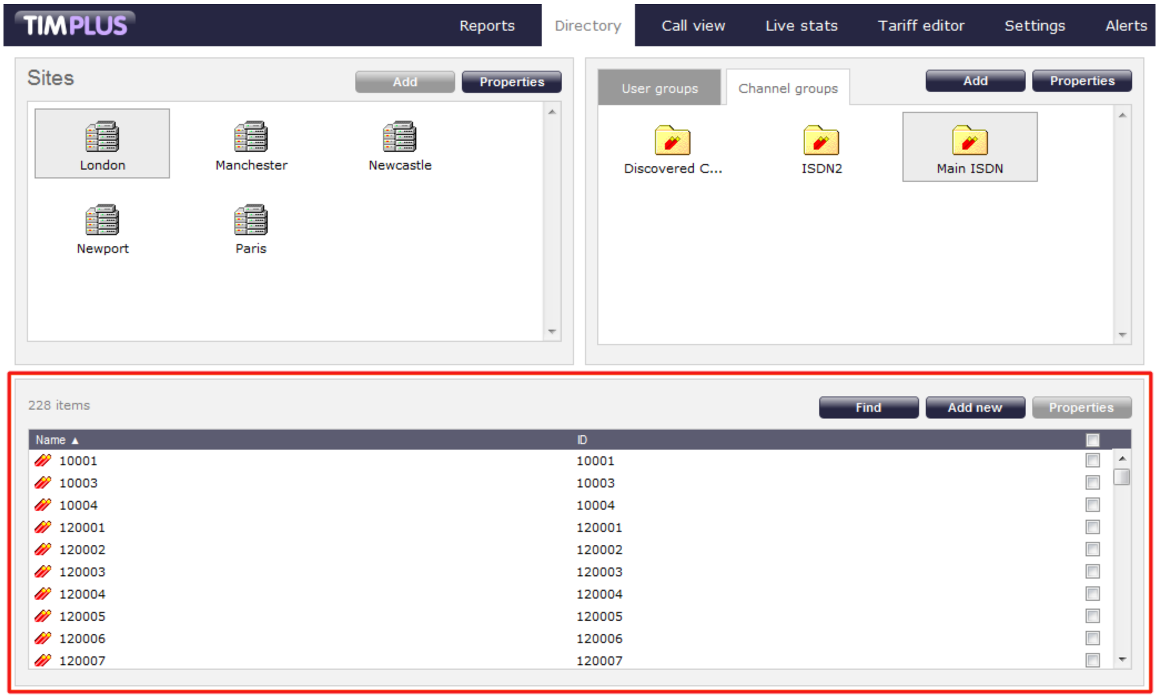
## What are Contents?

The **Contents** panel is located at the bottom-half of the Directory screen. This contains the individual objects belonging to the previously-selected user or channel group.

If a user group is currently selected, the **Contents** panel will display a list of users contained in that group, as shown below:




If a channel group is currently selected, the **Contents** panel will display a list of channels contained in that group, as shown below:




## Users

**Users**

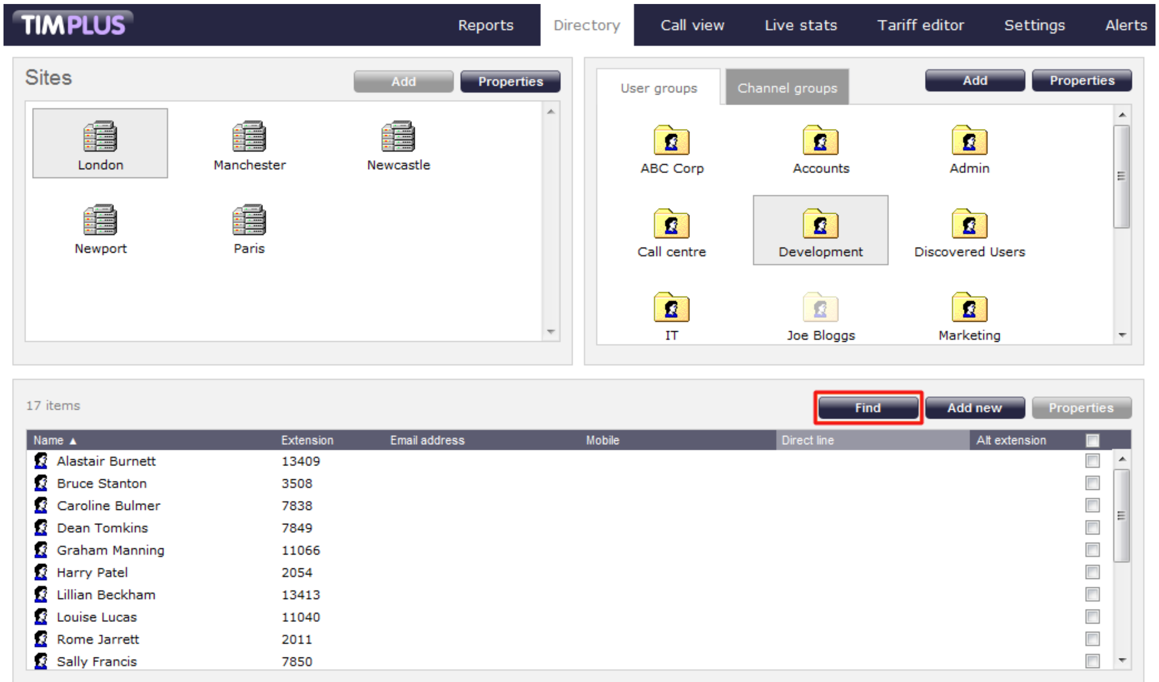


### Overview

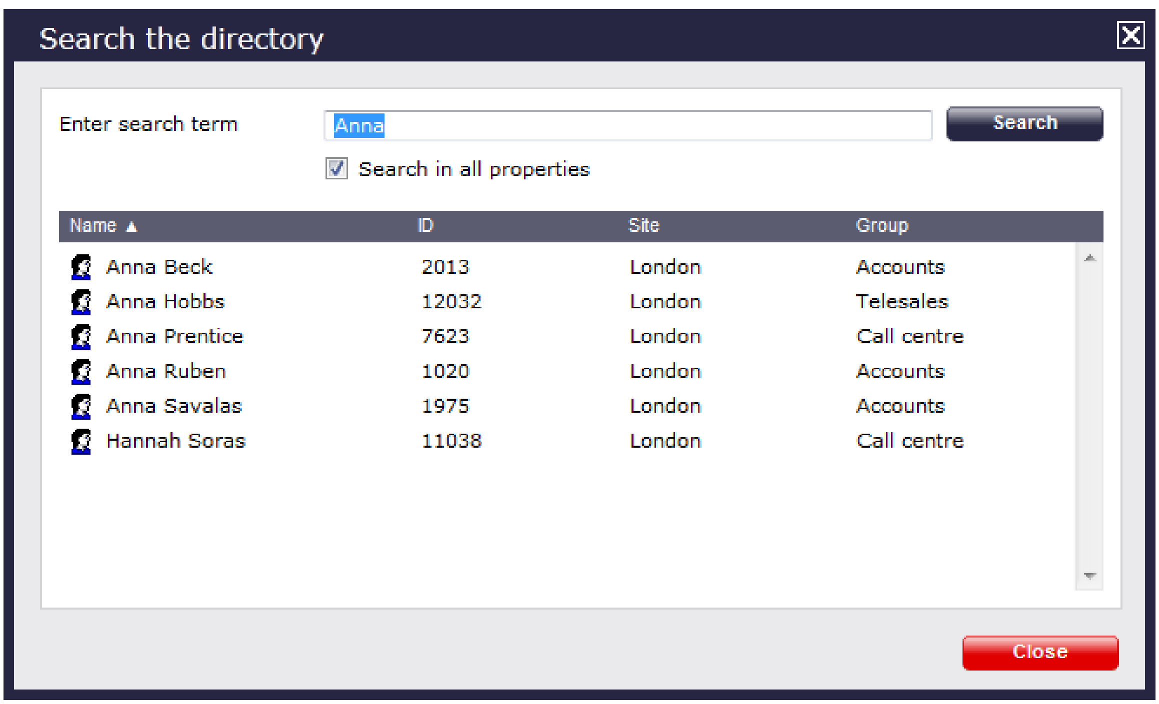
Users represent the people in your organisation who make use of devices such as telephone extensions, fax machines, etc. When you first configure TIM Plus, your users are automatically harvested from the data received from the phone system into a folder named **`Discovered Users`**. The properties of each user can be edited afterwards, and users can also be subsequently organised into new user groups, if preferred.

### Finding a user

To locate a user in the Directory, select the Directory tab and click on the Find button at the top-right corner of the Contents panel, as shown below:



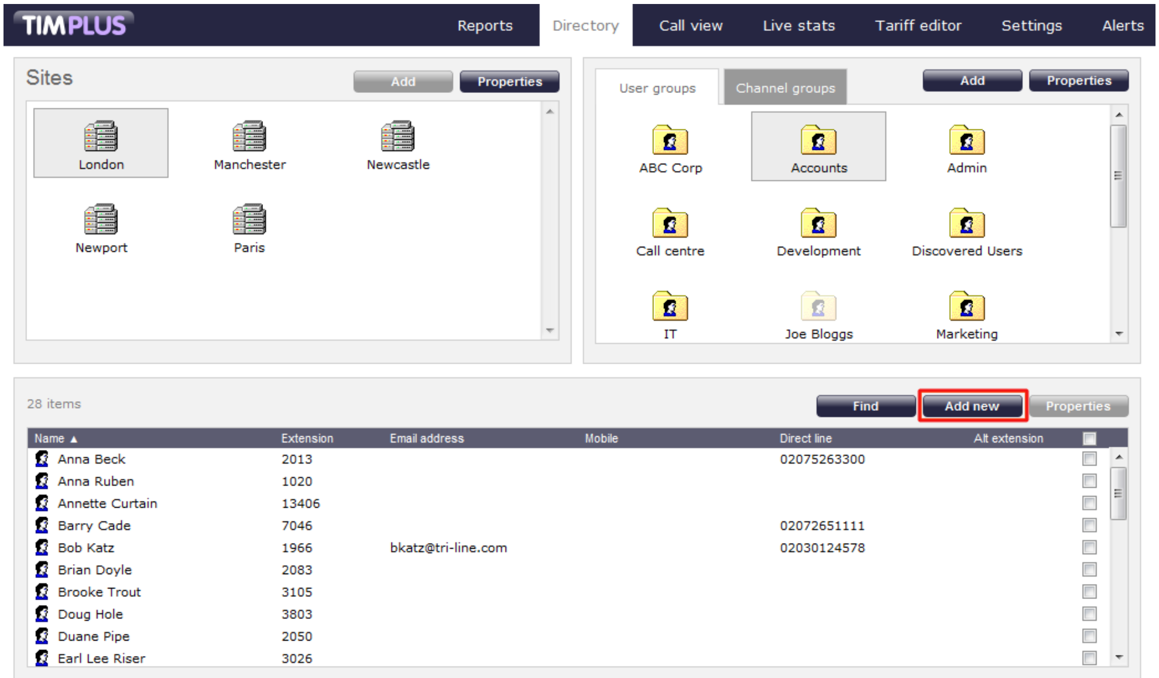

In the new window that opens, enter the name or extension number of the user you are looking for, then click on the Search button. The results will appear in the same window, as shown below:



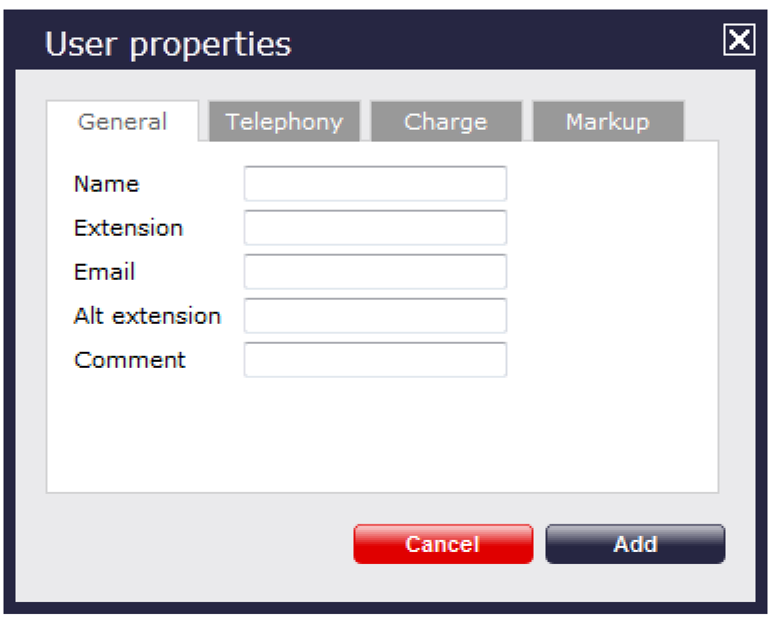

## Adding a user

Before adding a new user to the system, check that it doesn't already exist, by searching for it in the Directory.

To manually add a user to the system, click on the Directory tab, select the group where you want the new user to be added, then click on the Add new button at the top-right corner of the Contents panel.




A new window will open, allowing you to configure the properties of the new user:

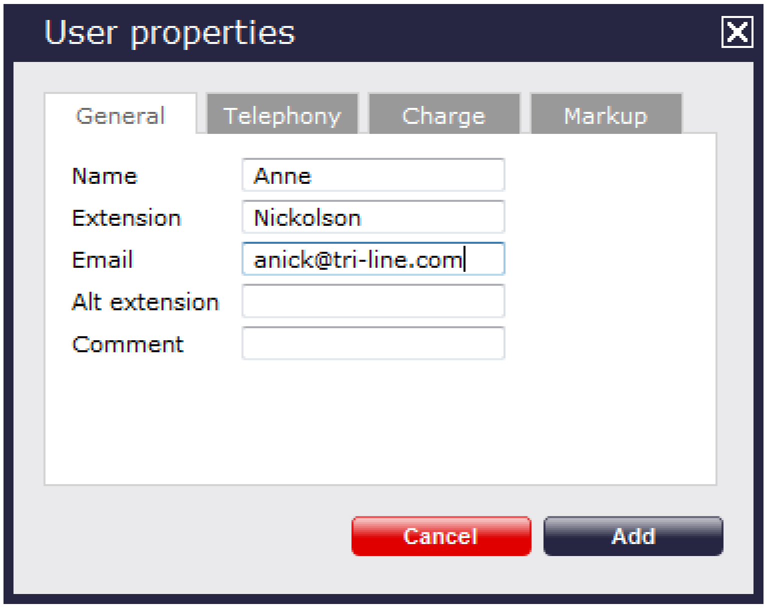



Each field in the `User properties` window is described below:

| Field | Description |
|---|---|
| **Name** | The name of the user. If no name is entered, the extension number will show instead |
| **Extension** | The extension number of the user |
| **E-mail** | The e-mail address of the user |

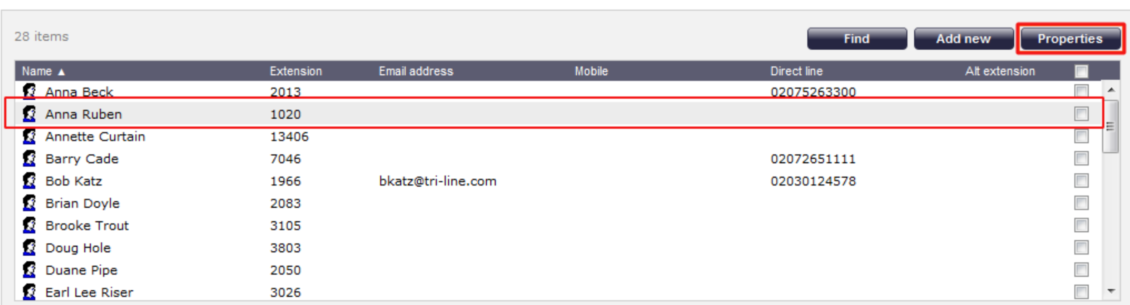
| | |
|---|---|
| **Alt extension** | The alternative extension number(s) or the DDI digits of the user's extension, if applicable |
| **Comment** | Any comments you want to add for this user |

Once you have configured the properties of the user, click on the Add button, as shown below:



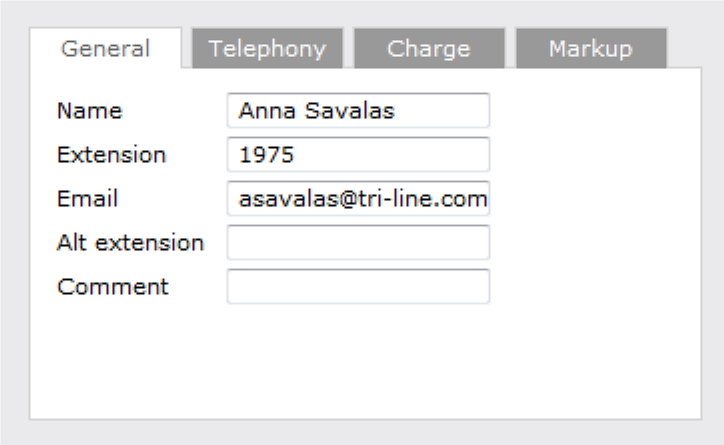

## Editing a user's properties

To edit the properties of a user, select it and click on the Properties button at the top-right corner of the Contents panel:



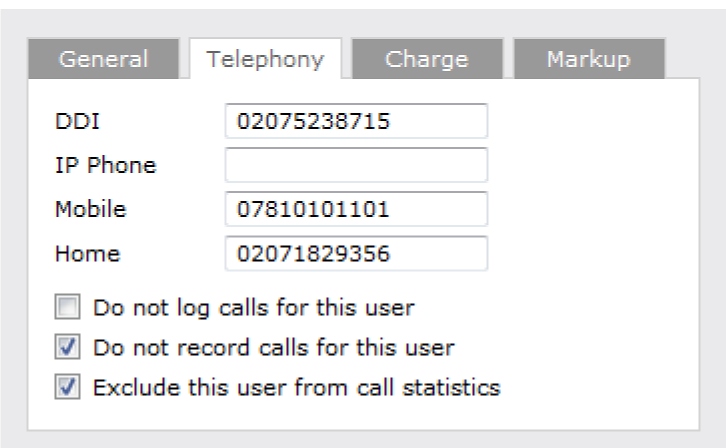

The `User properties` window will open, displaying each property of the user, arranged over the following tabs:

### General




| Field | Description |
|---|---|
| **Name** | The name of the user. If no name is entered, the extension number will show instead |
| **Extension** | The extension number of the user |
| **Email** | The e-mail address of the user |
| **Alt extension** | The alternative extension number(s) or the DDI digits of the user, if applicable |
| **Comment** | Any comments you want to add for this user |

### Telephony

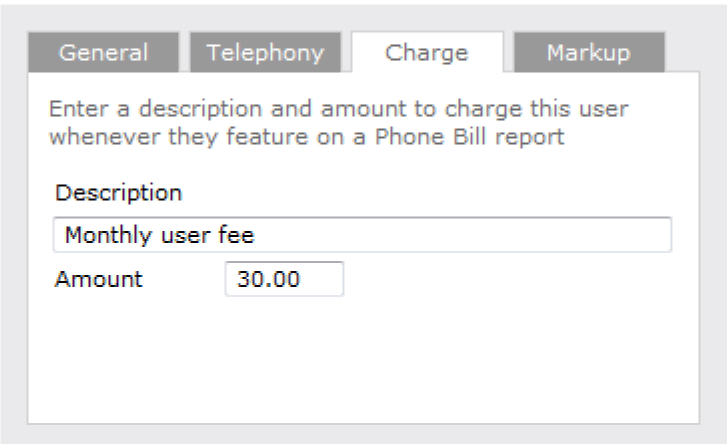



| Field | Description |
|---|---|
| **DDI** | The DDI number of the user |
| **IP Phone** | The IP phone number of the user |
| **Mobile** | The mobile number of the user |
| **Home** | The home telephone number of the user |

| | |
|---|---|
| **Do not log calls for this user** | When selected, calls for this user will not be logged |
| **Do not record calls for this user** | When selected, calls for this user will not be recorded |
| **Exclude this user from call statistics** | When selected, collection of statistics will not be performed for calls to and from this user |

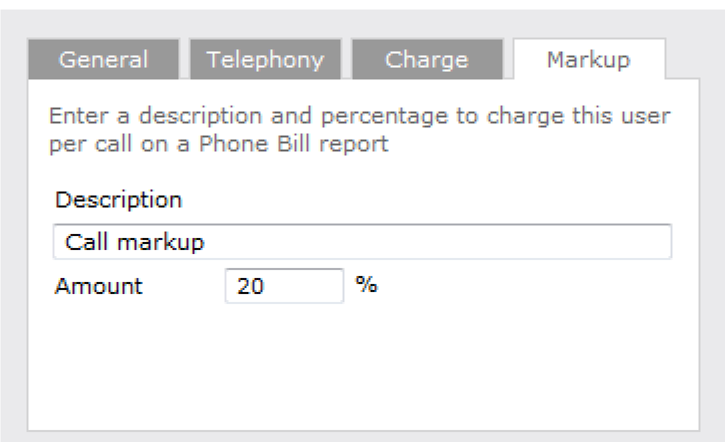
### Charge

The Charge tab allows you add or edit a fixed charge for the user, such as room rental, internet services or additional sundry items.




### Markup

The Markup tab allows you to add or edit a markup charge to calls made by the user.




After editing the properties of the user, click on the Save button to save your changes.

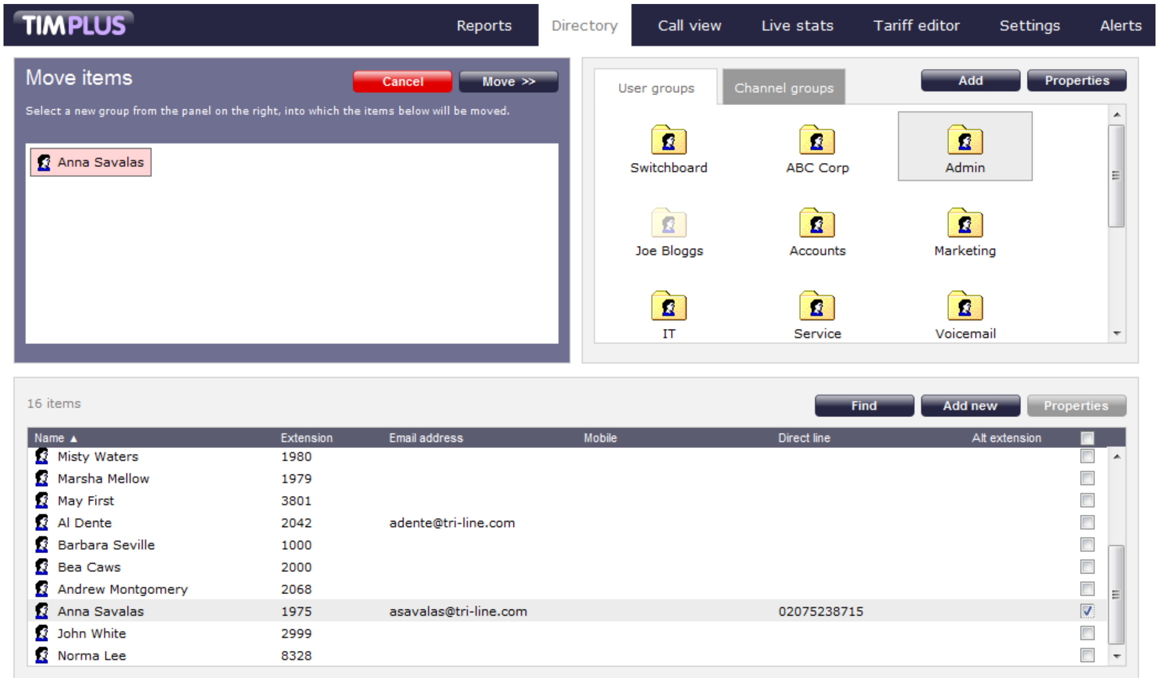
## Moving a user between two groups

Follow the steps below to move a user from one group to another:

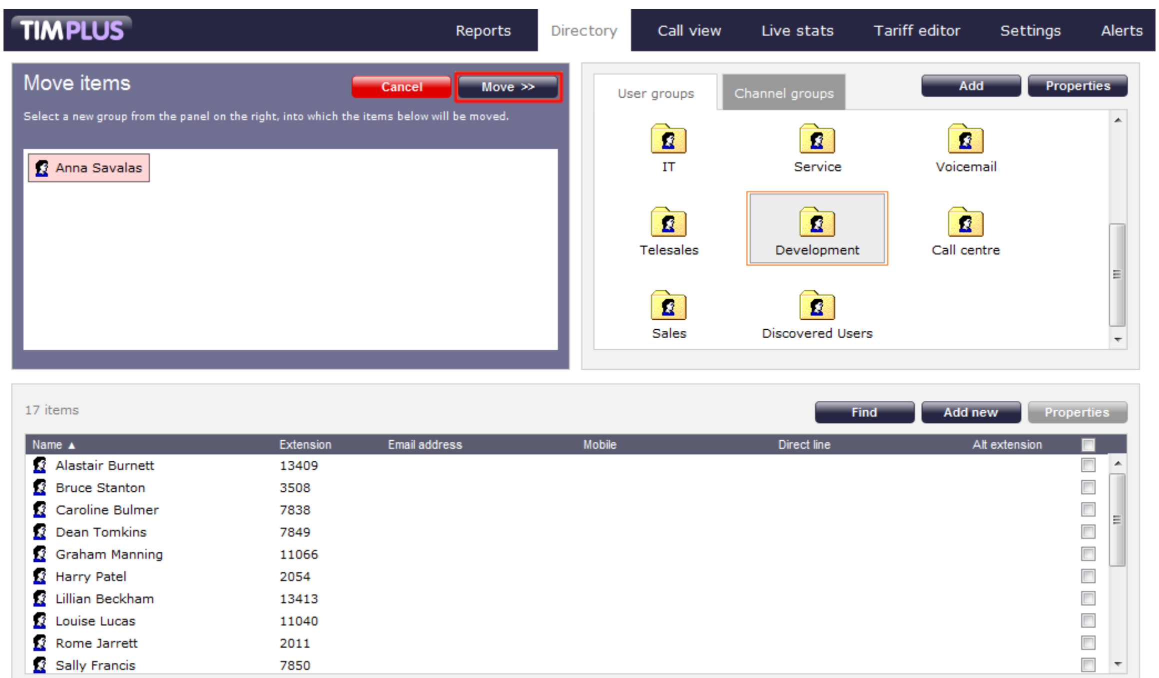
1. Click on the Directory tab and open the contents of the group which contains the user you want to move.

2. Select the user by ticking the box alongside it. The top-left panel of the screen will temporarily change to a `Move items` p

anel containing the selected user.



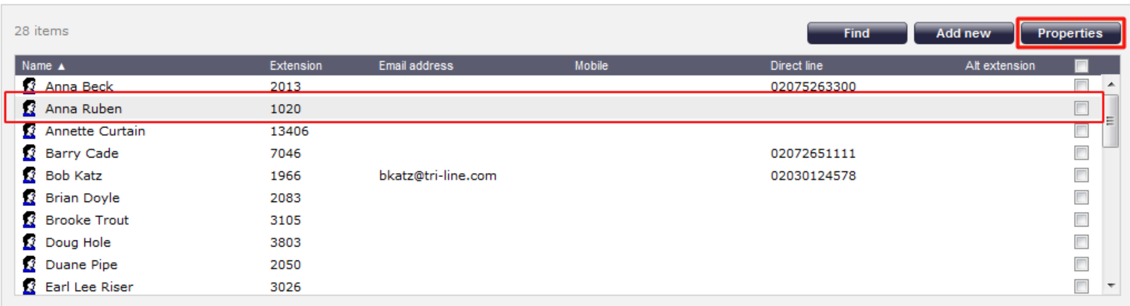

3. Next, select the destination group that you want the user to be moved into, and click on the **Move** button, as shown below:



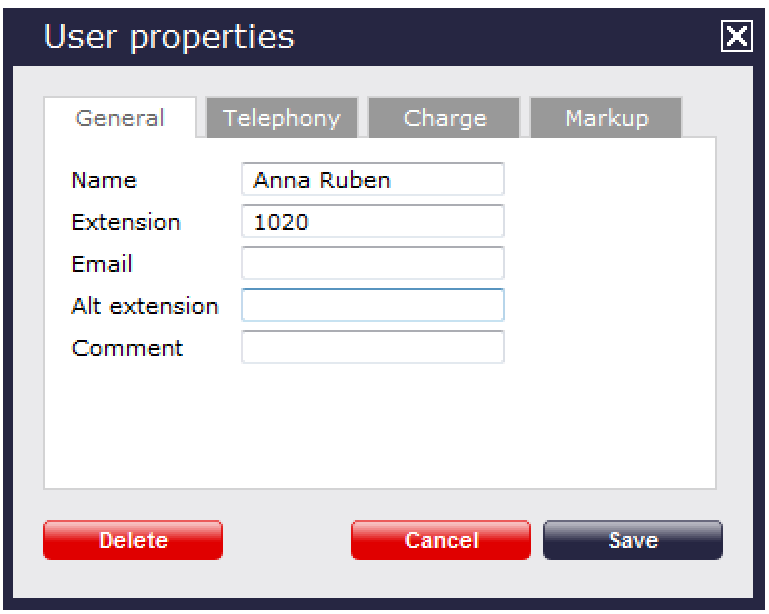

## Deleting a user

When you delete a user, you are also deleting the calls associated with that user!

To delete a user from the system, select it and click on the Properties button at the top-right corner of the Contents panel:




In the **`User properties`** window that will open, click on the Delete button to remove the user from the Directory; a confirmation will be required, to prevent users being deleted accidentally.




## Channels

**Channels**

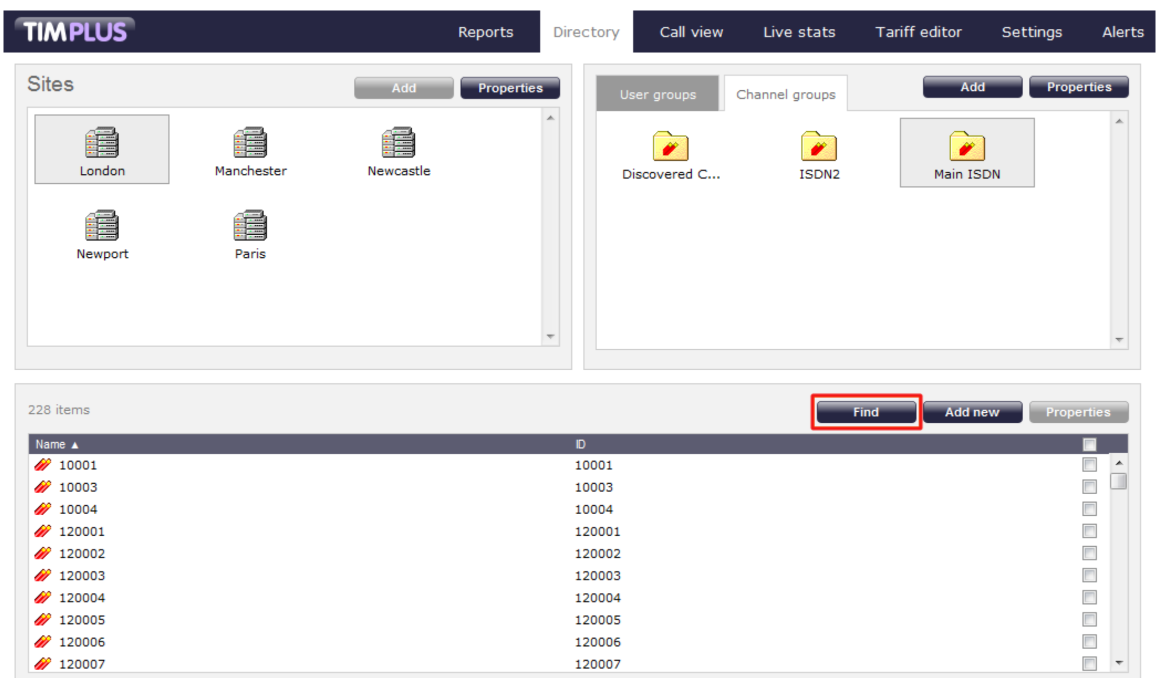


## Overview

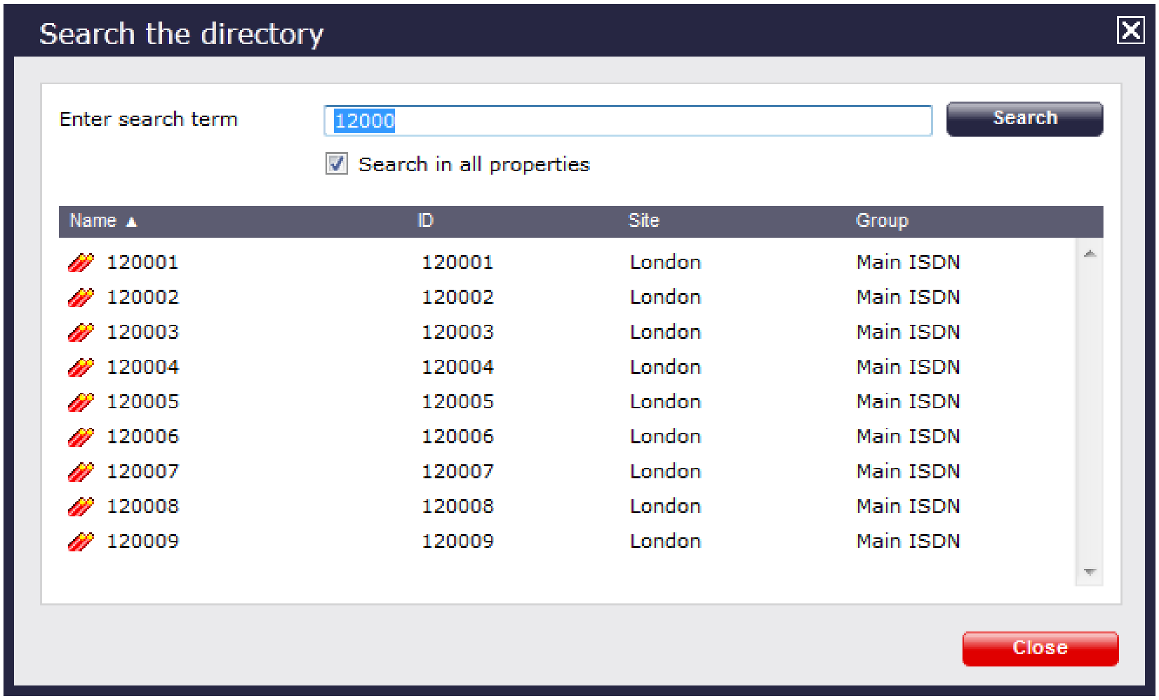
Channels are system objects representing your telephone lines. When you first configure TIM Plus, your channels are automatically harvested from the data received from the phone system, into a folder named `Discovered Channels`. The properties of each channel can be edited afterwards, and channels can also be organised subsequently into new channel groups, if preferred.

## Finding a channel

To locate a channel in the Directory, select the **Directory** tab and click on the **Find** button at the top-right corner of the Contents panel, as shown below:



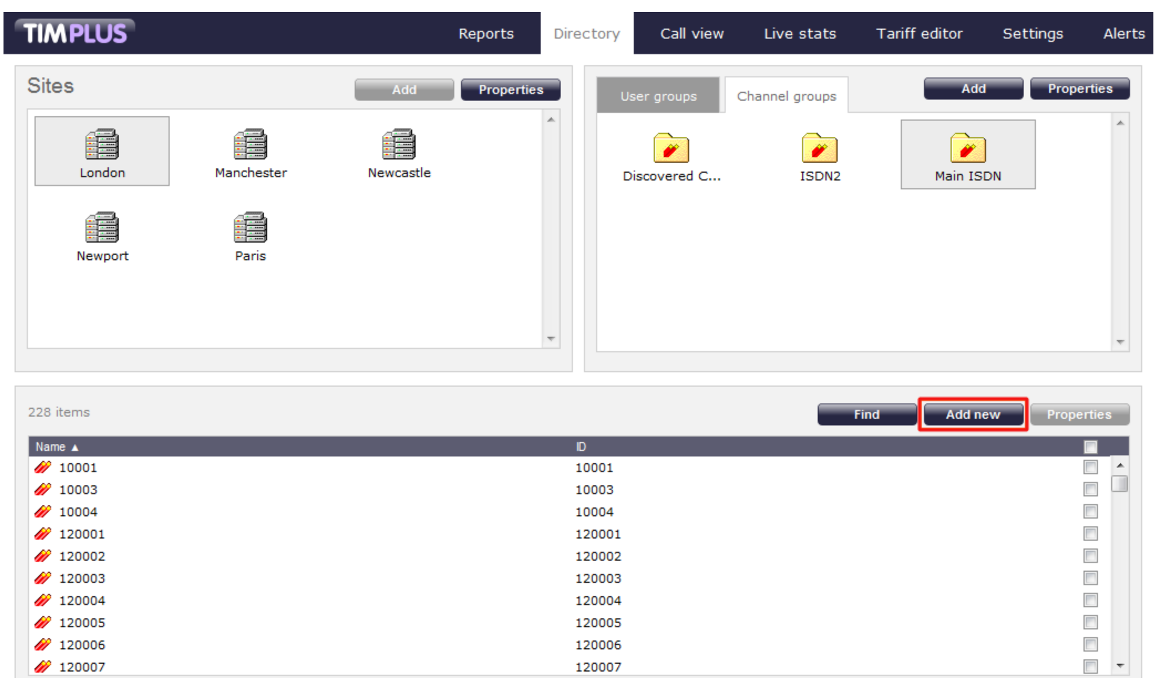

In the new window that opens, enter the name or ID of the channel you are looking for, then click on the **Search** button. The results will appear in the same window, as shown below:



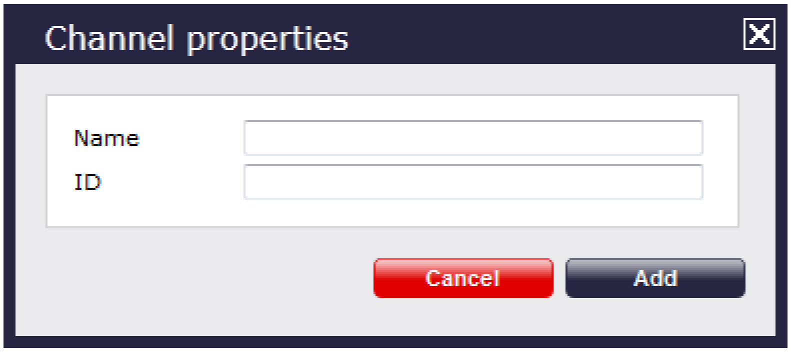

## Adding a channel

Before adding a new channel to the system, check that it doesn't already exist, by searching for it in the Directory.

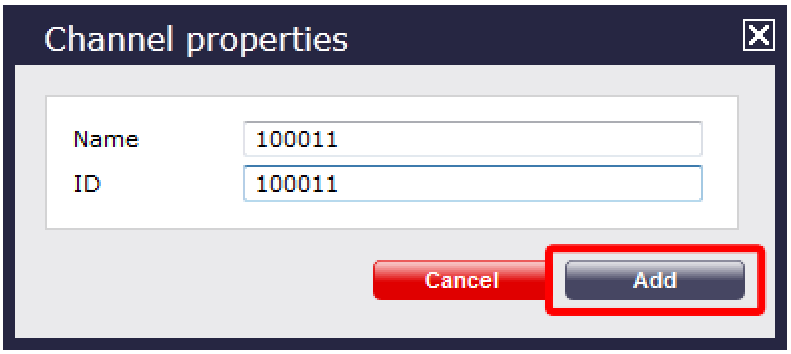
To manually add a channel to the system, click on the Directory tab and select the group where you want the new channel to be added, then click on the Add new button at the top-right corner of the Contents panel:



A new window will open, allowing you to configure the properties of the channel:

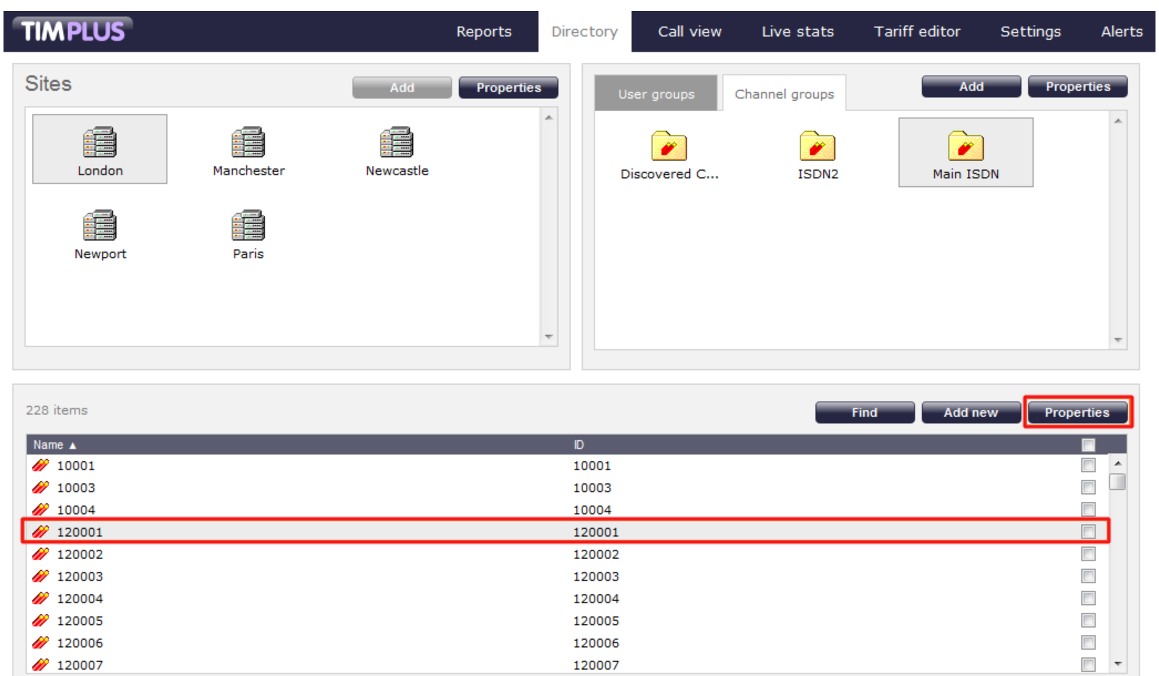



Once you have configured the properties of the channel, click on the Add button, as shown below:

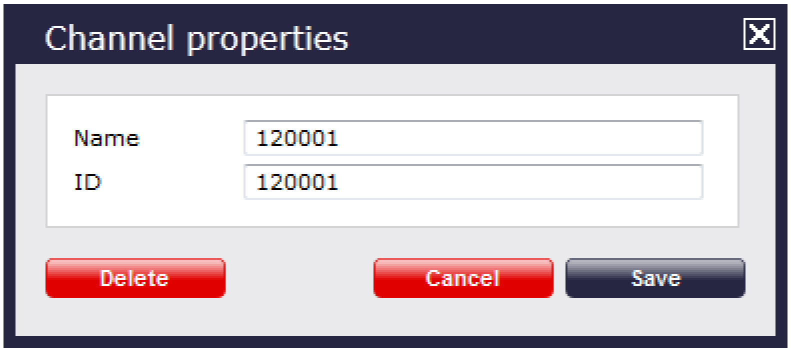



## Editing a channel's properties

To edit the properties of a channel, select it and click on the Properties button at the top-right corner of the Contents panel:




A new window will open, allowing you to edit the properties of the channel. Click Save to apply the changes.

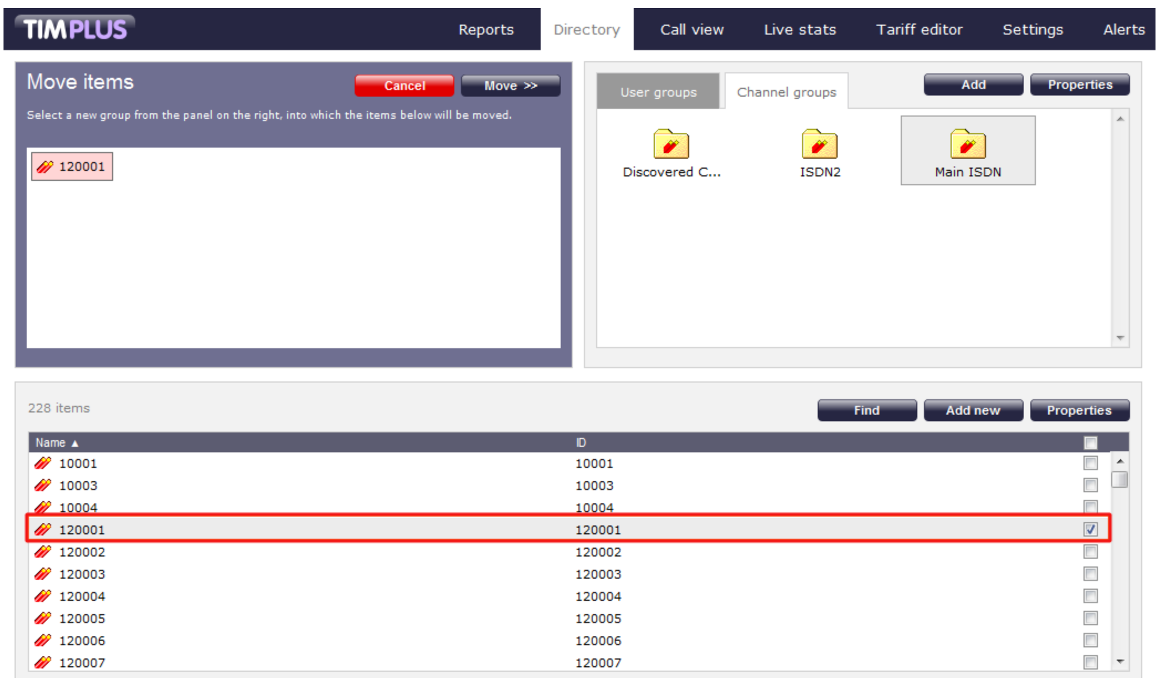



## Moving a channel between two groups

Follow the steps below to move a channel from one group to another.

1. Click on the Directory tab and select the group which contains the channel you want to move.

2. Select the channel, by ticking the box alongside it. The top-left panel of the screen will temporarily change to a `Move items` panel containing the selected channel.

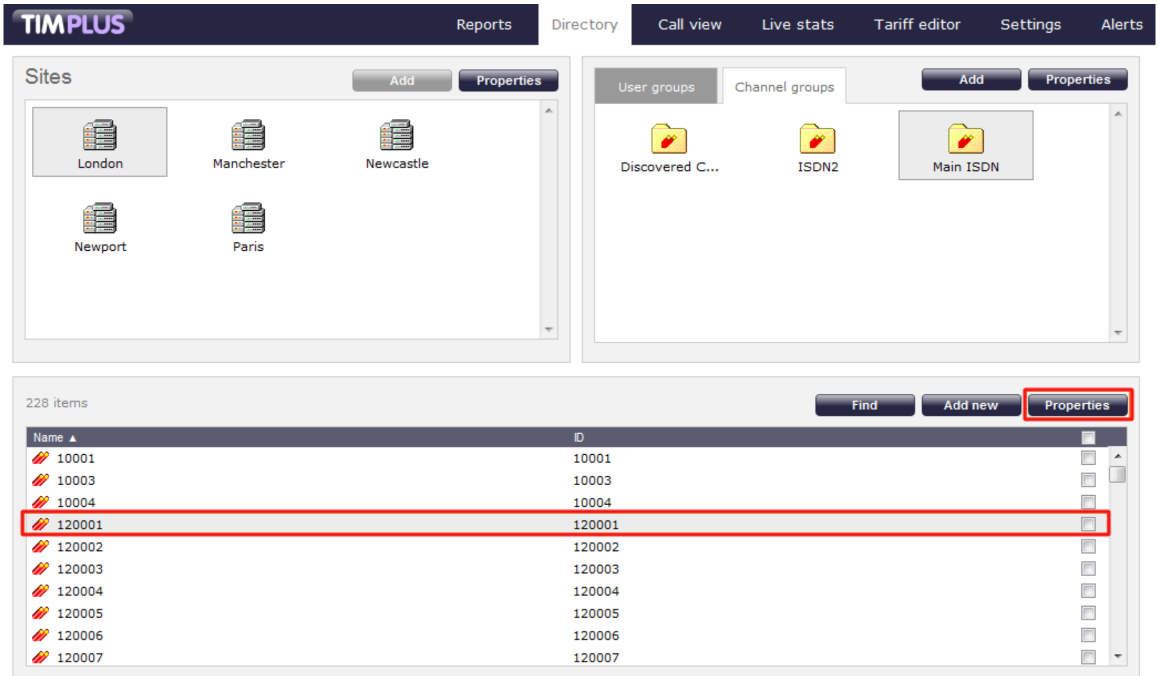



3. Next, select the destination group that you want the channel to be moved into, and click on the Move button.

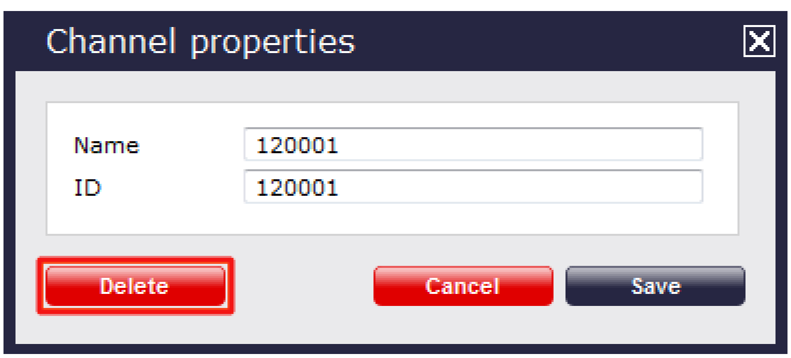
## Deleting a channel

When you delete a channel, you are also deleting the calls associated with that channel!

To delete a channel from the system, select it and click on the Properties button at the top-right corner of the Contents panel:




In the `Channel properties` window that will open, click on the Delete button to remove the channel from the Directory; a confirmation will be required, to prevent channels being deleted accidentally.




## Call view

The `Call view` screen displays a live list of calls, showing each call the moment it is received from your telephone system(s) and successfully processed by TIM Plus. The call list is arranged so that the most recent calls are at the top of the list.

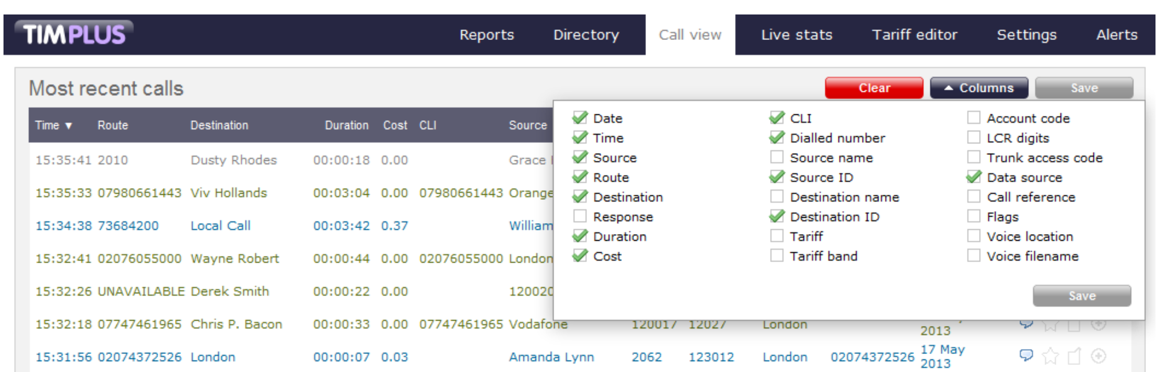

Each call type is colour-coded using a system-wide colour scheme, as follows:

- **Green**: Incoming calls
- **Light green**: Answered transferred calls
- **Blue**: Outgoing calls
- **Light blue**: Outgoing non-connected calls
- **Grey**: Internal calls
- **Mauve**: Internal non-connected calls
- **Red**: Abandoned DDI (Direct Dialled In) calls
- **Pink**: Tandem calls

> The calls you see in the `Call view` screen pertain only to the area to which the logged-in user has been granted access; administrators see calls from all sites.

## Column headers

The `Call View` screen can be customised by each web user to show only the columns they are interested in. To add or remove columns, click on the Columns tab, which will display the following panel:




Include a column header in the list by ticking the box alongside each one. Click the Save button to apply your changes.

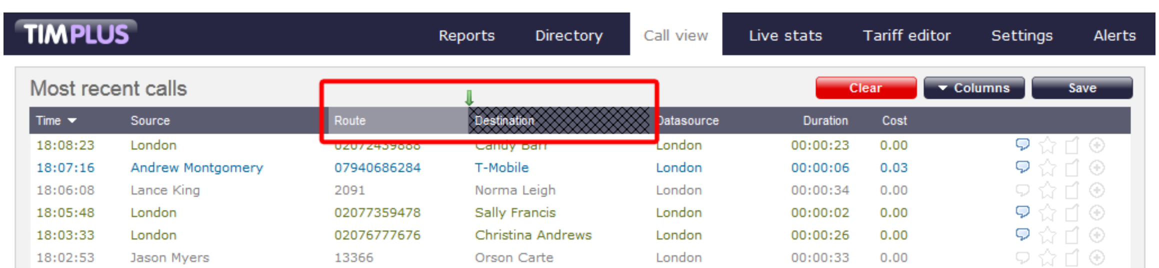
Each column header displayed in the `Call view` list is described in the table below:

| Field name | Description |
|---|---|
| **Date** | The date the call started |
| **Time** | The time the call started |
| **Source** | The place from where the call originated |
| **Route** | The information displayed in this field is determined by the type of call:<br>▪ for incoming calls, this shows the CLI of the caller;<br>▪ for incoming internal calls, this shows either the caller's username or extension number;<br>▪ for outgoing calls, this shows the dialled number. |
| **Destination** | The information displayed in this field is determined by the type of call:<br>▪ for incoming calls, this shows the name of the user whose extension answered the call, or the extension number if not available;<br>▪ for outgoing calls, this shows the geographical location that was dialled, or an alias if defined in your contacts list;<br>▪ for internal calls, this shows the extension that was dialled, enclosed in square brackets [ ]. |
| **Response** | The time it took for the call to be answered (in seconds) |
| **Duration** | The duration of the call (in hours, minutes and seconds) |
| **Cost** | The cost of the call |
| **CLI** | The telephone number of the remote caller for inbound calls |
| **Dialled number** | The number that was dialled in order to reach a particular destination |
| **Source name** | The name of the person who made the call |
| **Source ID** | The ID of the person who made the call |
| **Destination name** | The name of the destination called, e.g. Manchester, Tri-Line, London |
| **Destination ID** | The ID of the destination called |
| **Tariff** | The name of the tariff table that was used to cost the call, e.g. BT |
| **Tariff band** | The specific tariff band that was used to cost the call, e.g. International, National, Mobile etc. |

| | |
|---|---|
| **Account code** | The account code associated with the call |
| **LCR Digits** | The Least Cost Routing (LCR) digits used to route the call |
| **Trunk access code** | The trunk access code used to access a group of channels |
| **Data source** | The location where the call originated |
| **Call reference** | Any call reference number associated with the call |
| **Flags** | Any flags associated with a call, as described below:<br>▪ The call has no associated voice recording<br>▪ The call has an associated voice recording; click on the icon to listen to the call<br>▪ The call has not been scored; click on the icon to score the call<br>▪ The call has been scored; click on the icon to review scoring information for the call<br>▪ The call has not been annotated; click on the icon to add a note to the call<br>▪ The call has one or more associated notes; click on the icon to review the note(s)<br>▪ The call has no related transfer legs<br>▪ The call has related transfer legs; click on the icon to view all transfers associated with the call |
| **Voice location** | The unique ID of the call recording device that captured audio for the call |
| **Voice filename** | The unique call reference identifying any voice recording associated with the call |

### Reordering column headers

Each column header can be reordered by clicking and dragging it to the new location, as shown below:




Columns can be sorted by clicking the relevant column header, with each click toggling between ascending and descending order. A small triangle is displayed alongside the column header to indicate the current sorting order.

> Any layout changes you make to the `Live calls` panel are saved only for the current web user and do not affect other web users.

# Live stats

## Display boards

### What is a display board?

A display board is a user-definable screen that can comprise any live, up-to-the-minute information, such as call statistics, leaderboards or RSS feeds. It can also pull content from third-party systems, such as sales management, accounting or CRM software.

Starting from either a blank canvas or from a pre-defined template, a display board can be customised by adding any combination of the following types of panel, using an on-screen designer:

 **Label panel**

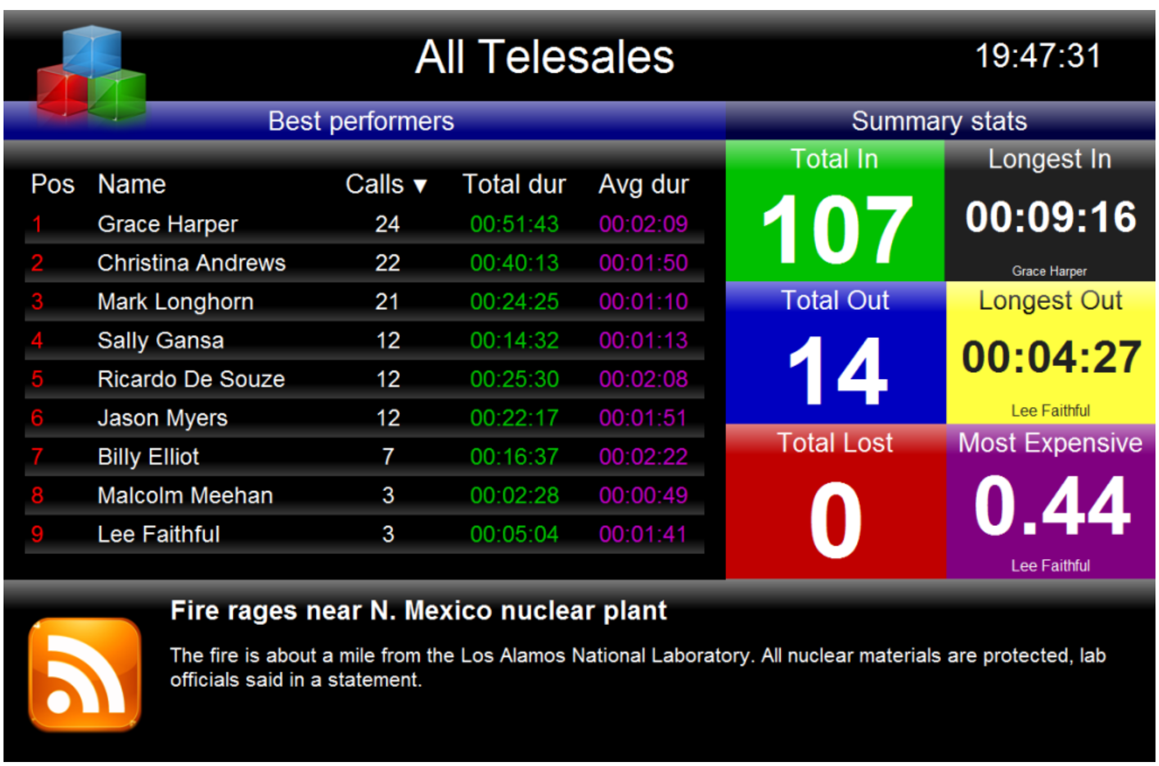
 **Leaderboard panel**

 **Summary panel**

 **RSS panel**

 **Web panel**

The example below shows a display board containing a label panel at the top of screen, a leaderboard panel on the left-hand side, and a series of 6 summary panels on the right-hand side. An RSS panel is displayed at the bottom of the screen. At the top-left corner of the display board, an additional transparent label panel was added to represent a company logo.



The following pages contain details of how to create and customise display boards.

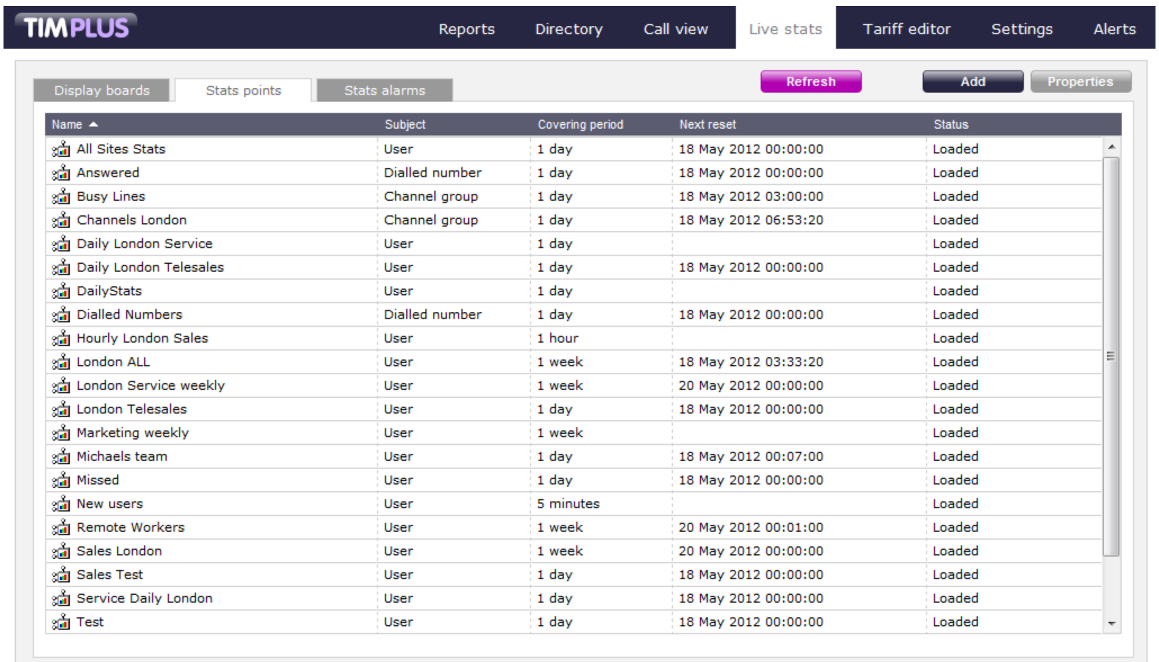
**Display boards overview video**

## How are display boards populated?

Whilst display boards can be populated by various external data feeds, their principal use is to display up-to-the-minute information about your organisation's phone calls, for which objects known as "stats points" are employed. These statistics collection points are mathematical "counters" whose scope is determined by their placement in your directory hierarchy. For example, placing a stats point inside a specific user group ensures that call information is collected only for users that inhabit the selected group. Similarly, placing a stats point inside a site will collect only call information for the chosen site.

Additionally, when configuring a stats point, a subject must be specified, which determines the property of each call whose value will be used when grouping its collated information into distinct sets. For example, specifying a subject of "user" will group its collated call information into sets of data for each distinct user.

Stats points are defined in the Stats points tab on the Live stats screen, as shown below:




For more information about stats points and how to create them, refer to the Stats points section.

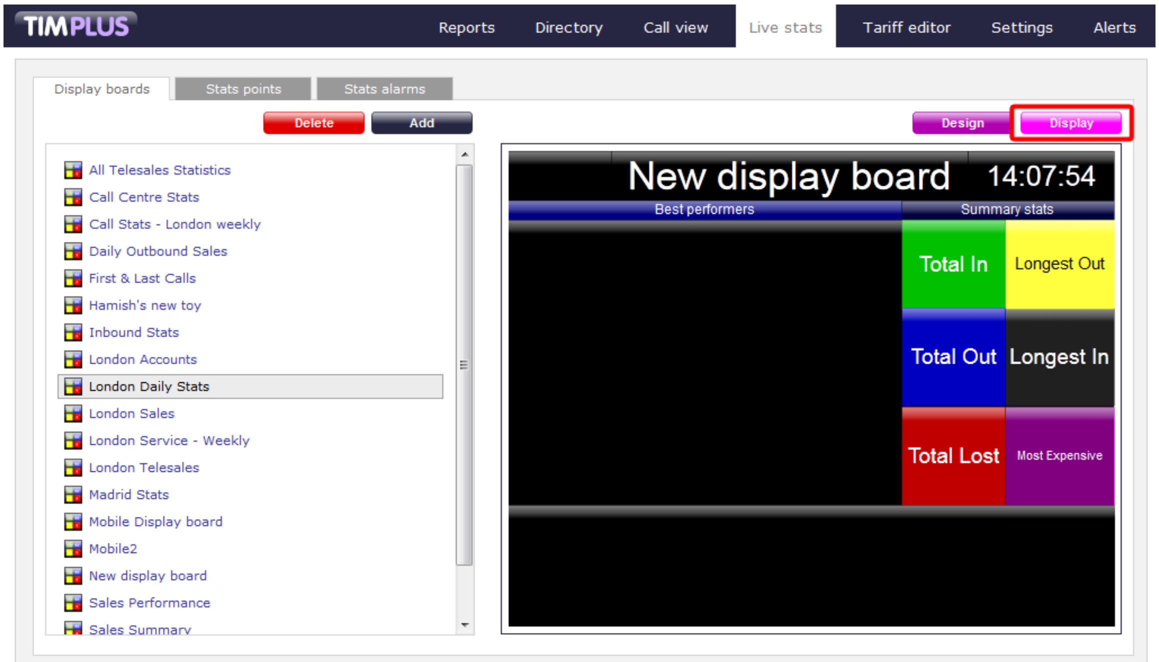
> In order to create a display board containing call information, at least one stats point must be defined first.

## Accessing the display boards

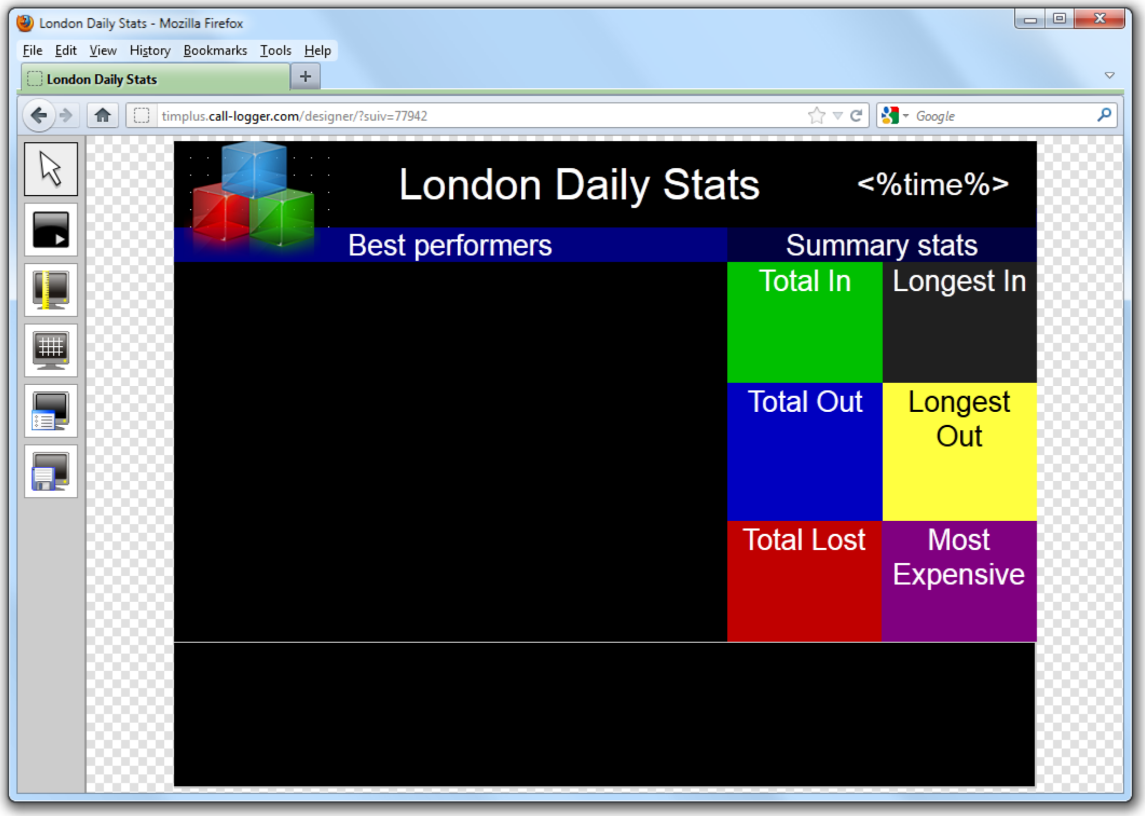
To access your display boards, click on the Live stats tab and a list of display boards will appear on the left-hand panel.

The list of display boards you are allowed to see depends on the place of your login account in the Directory. To be able to see additional display boards, contact your system administrator.

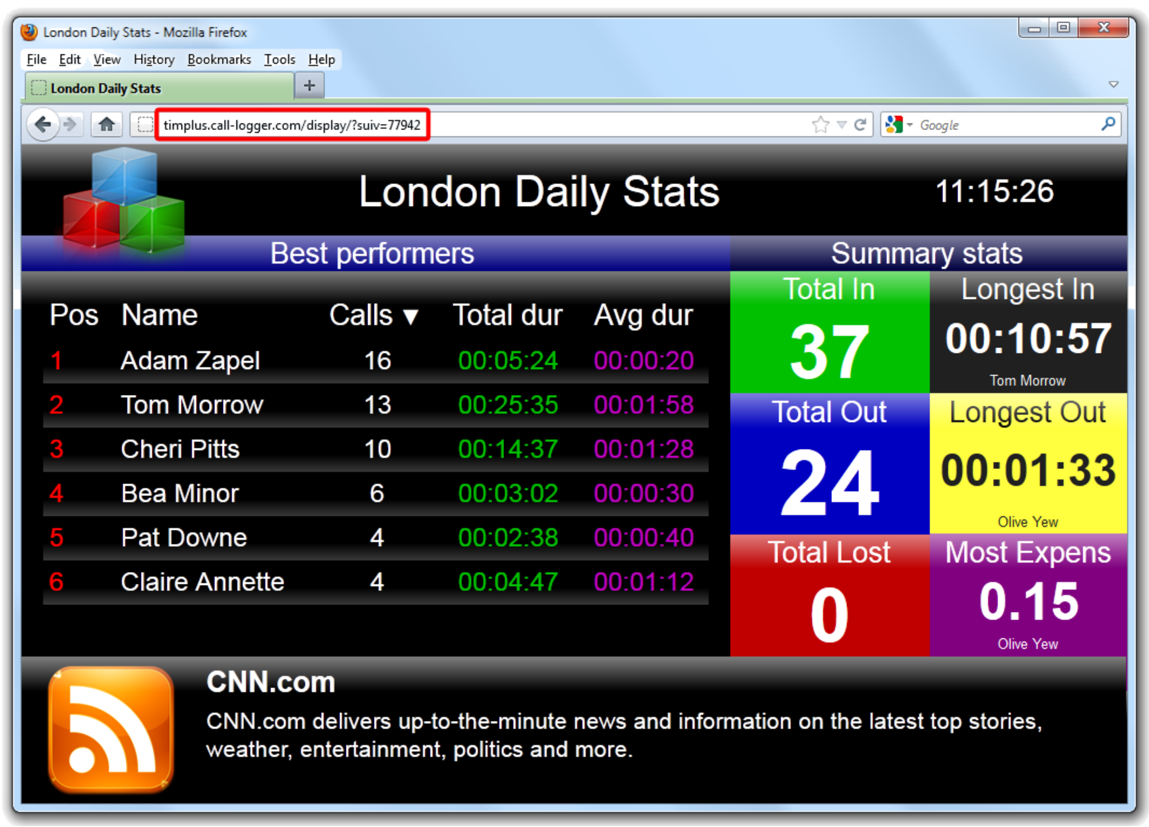
To view a display board, click on the Display button, as shown below:




To design or edit a display board, click on the Design tab. The design mode of your display board will display as follows:




To access a display board directly, type its URL in the address bar of your web browser, as shown below:




The URL of the display board can be saved in your Favorites, to your desktop or mobile device - if you need to view this screen frequently. Alternatively, you may want to display this permanently on a large screen in your office so that everyone in your team can monitor the statistics.

# Adding a display board

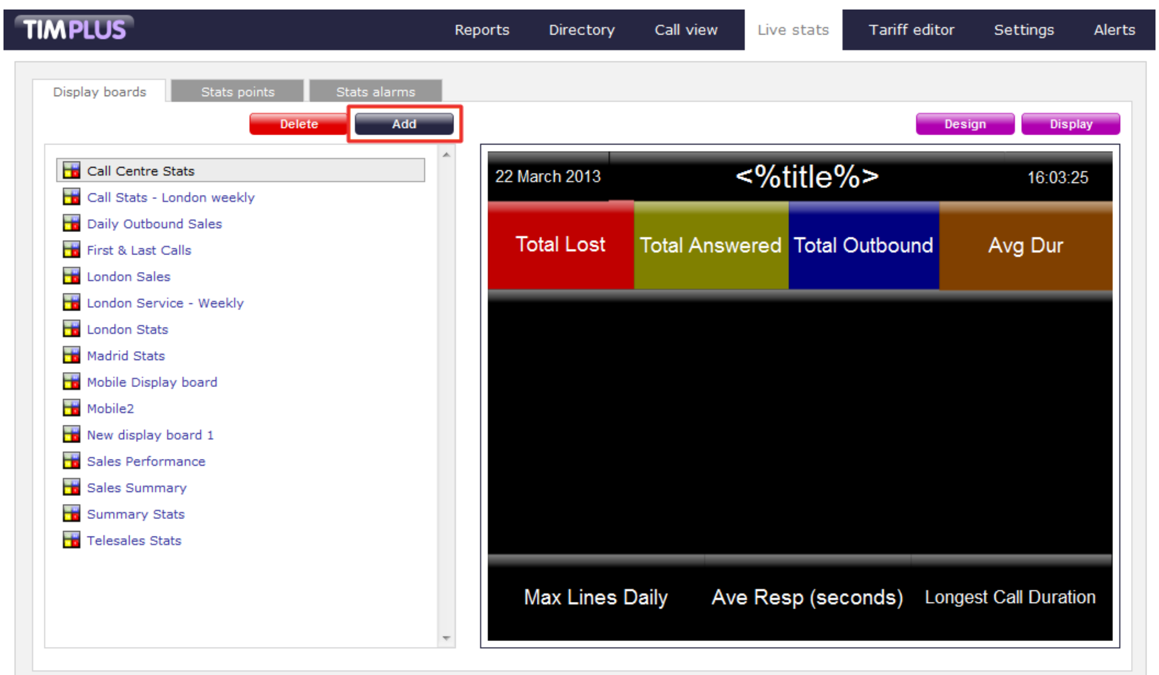
**Adding a display board**



## How to create a display board

> Before creating a display board, you must create a stats point object to populate it.

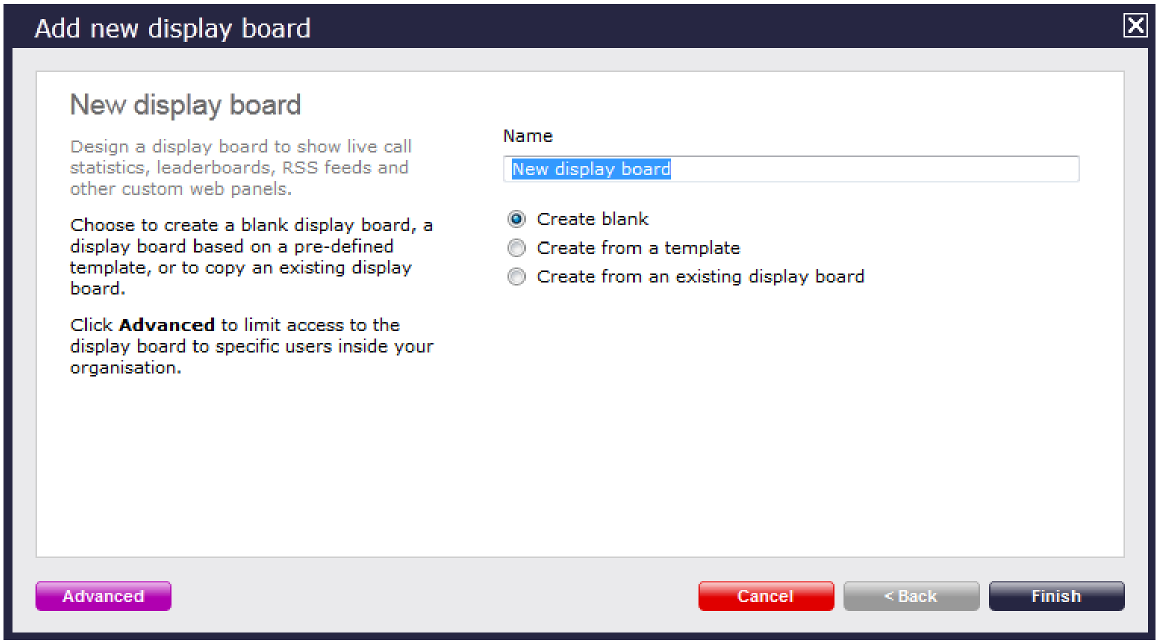
To add a new display board, select the Live stats tab and click on the Add button at the top-right corner of the `Display boards` list, as shown below:




A new window will open, allowing you to select one of the following three options:

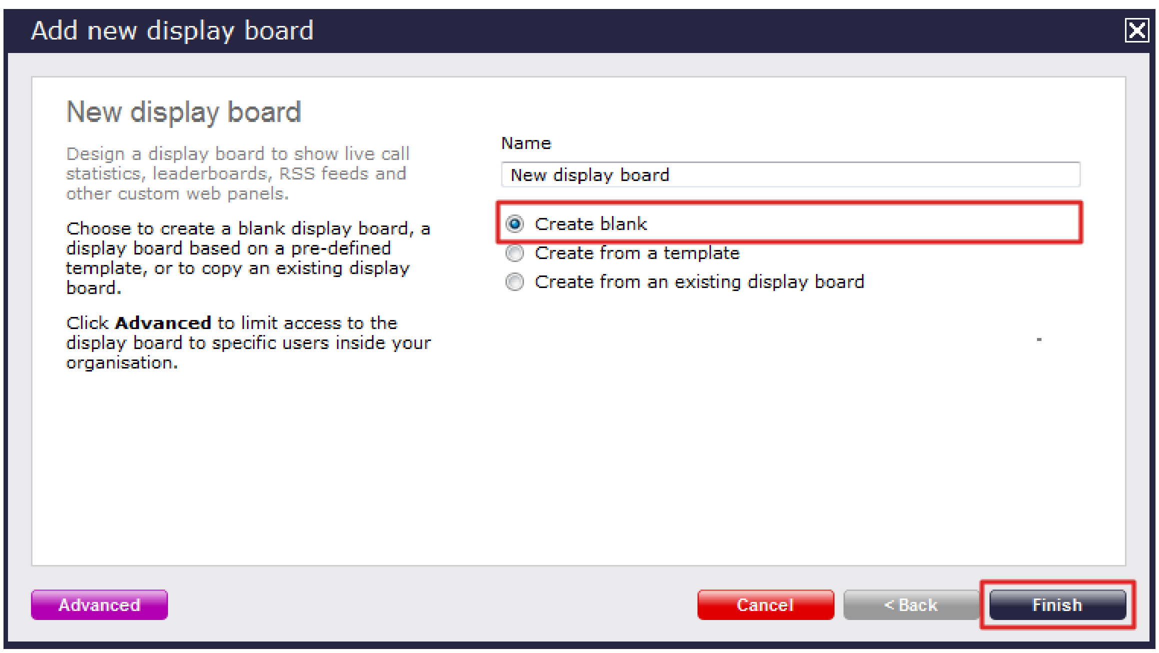
- **Create blank:** This option allows you to design your own display board from scratch
- **Create from a template:** This option allows you to choose a predefined display board template

- **Create from an existing display board:** This option allows you to create a new display board based on an existing template

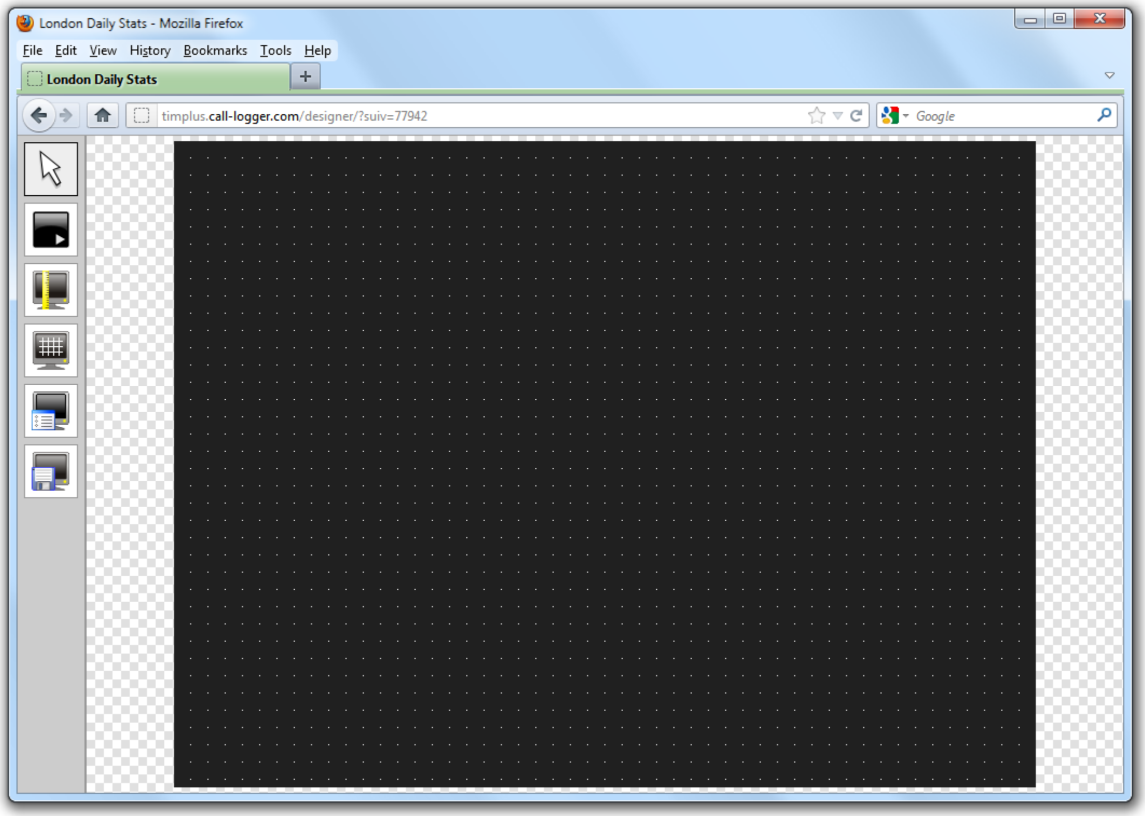



## Create blank

To design your own display board from scratch, select the `Create blank` option and click on the Finish button, as shown below:



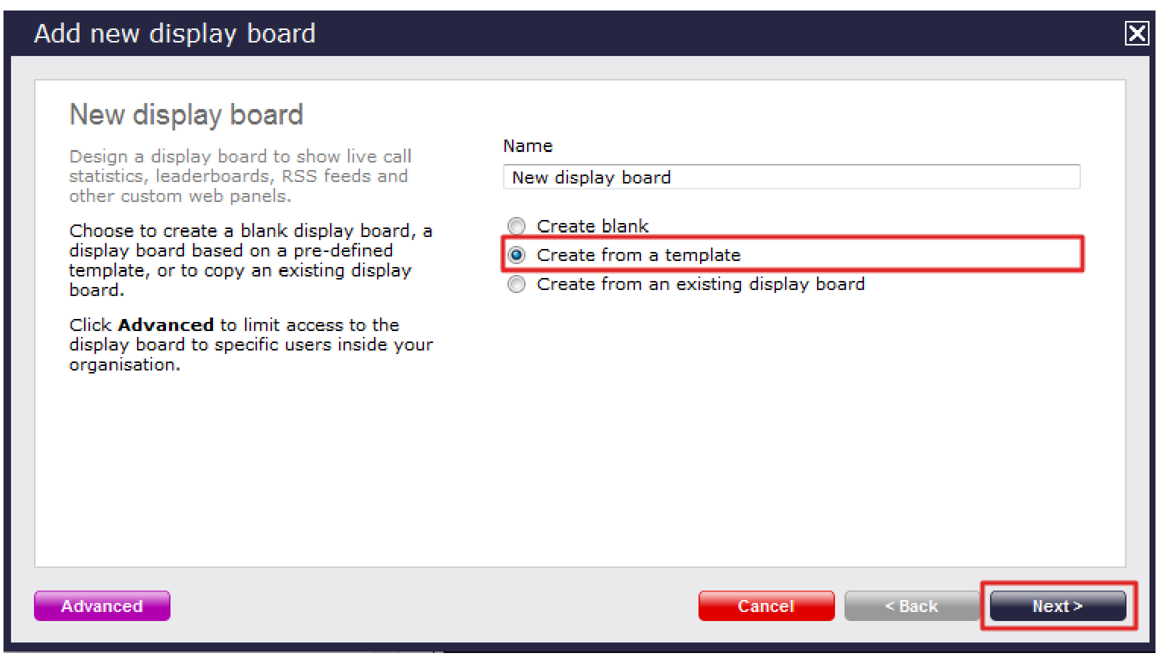

A new window will open, showing the design mode of your display board, as shown below:



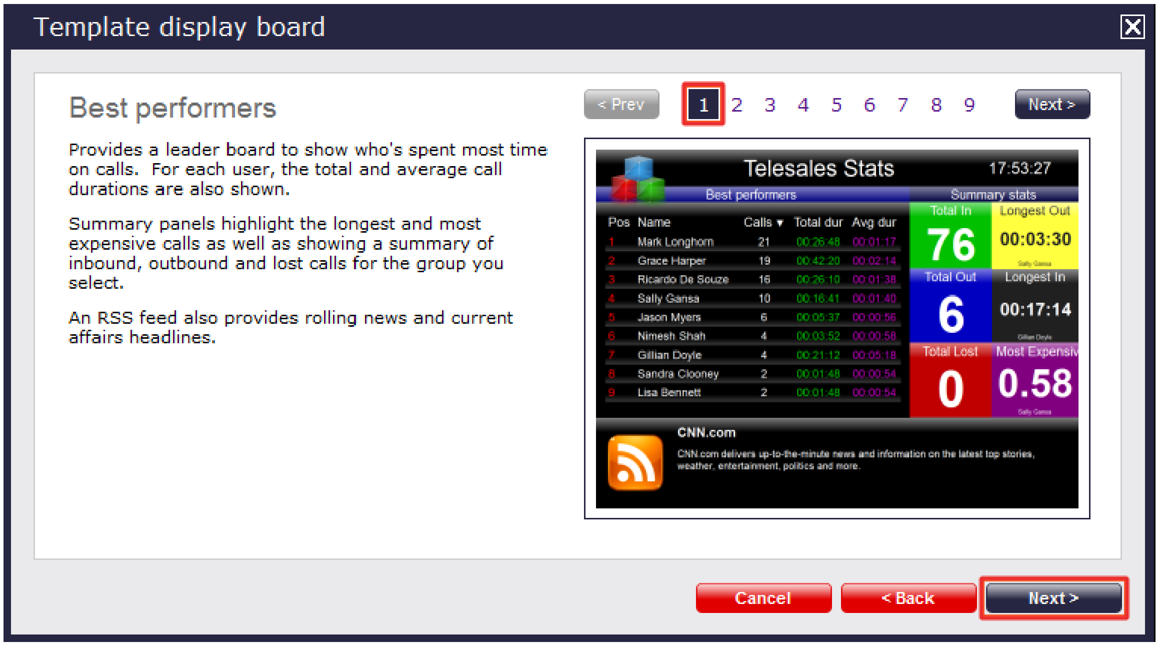

For information on how to design your own display board, refer to the Designing a display board section.

## Create from a template

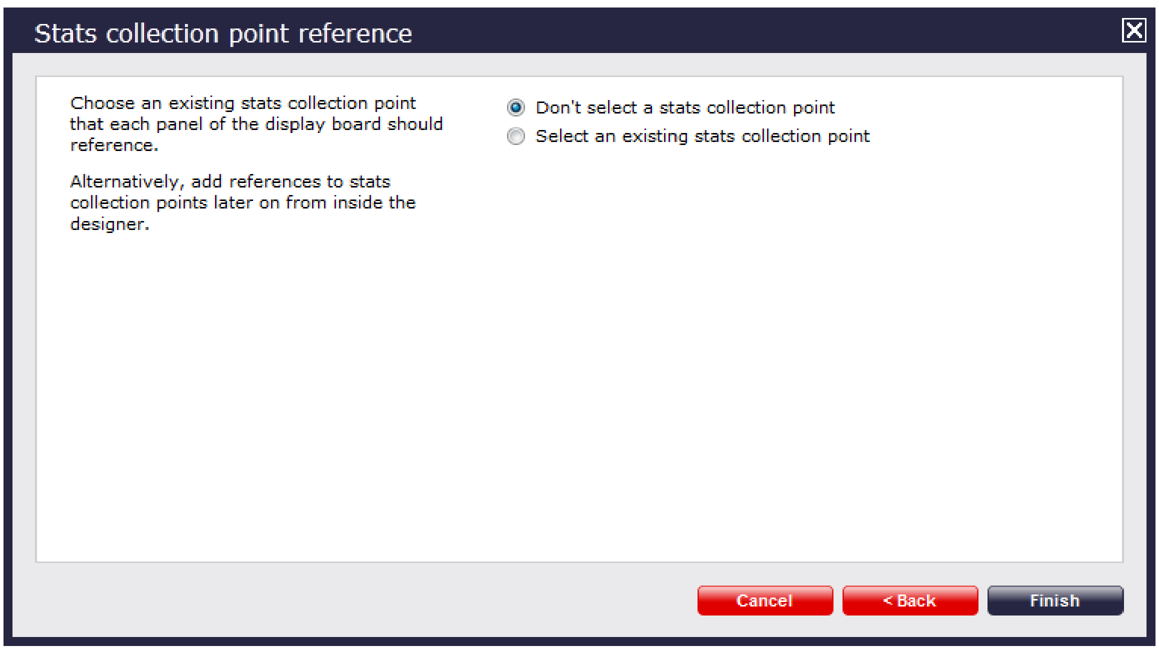
To create a display board from a predefined template, select the **`Create from template`** option, then click on the Next button, as shown below:




You can now select from a series of predefined templates, by clicking on its associated number, then click on the Next button.

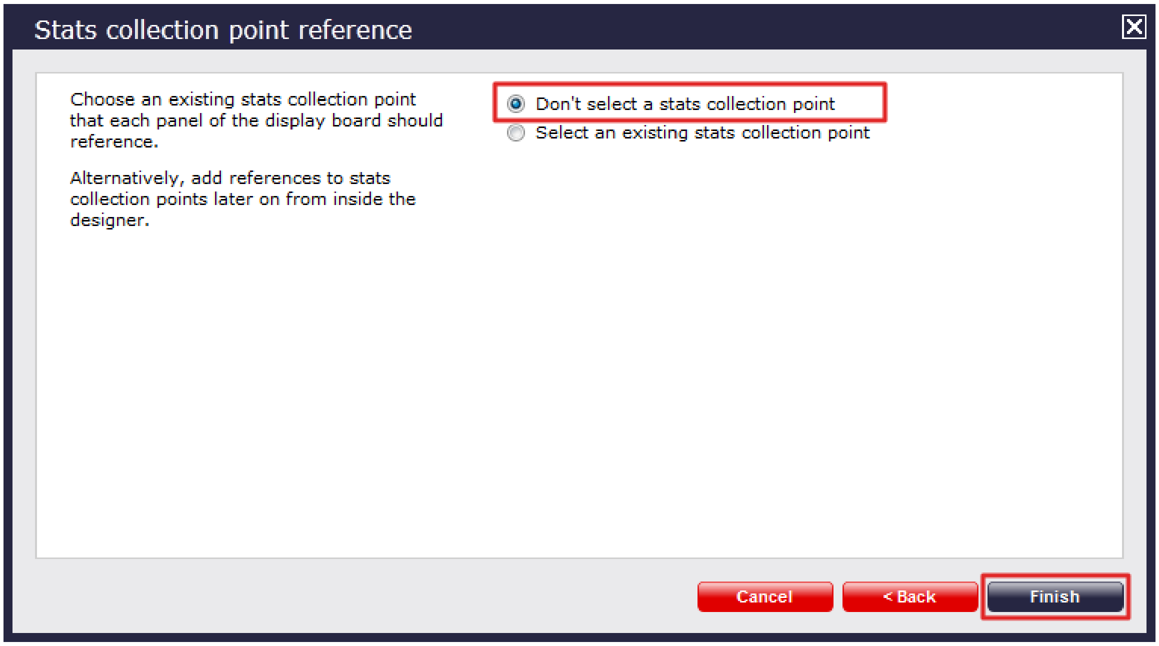



At this stage, you are asked to select a stats collection point or skip to the next section.




### Don't select a stats collection point

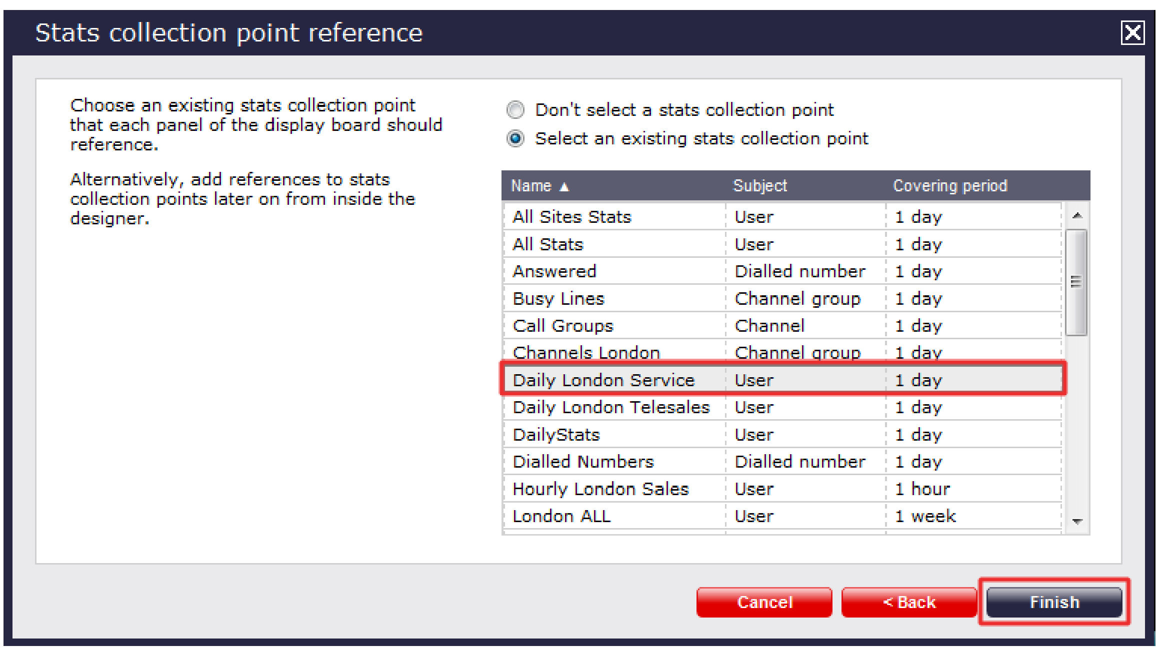
If you don't want to select a stats point at this time, click Finish and your display board will be added to the **Display boards** list. A stats point can be added at a later stage, by accessing the **Design** mode of your display board. For information on how to configure a stats collection point, refer to the Adding a stats point section.




The display board will be blank until a stats point is selected.

**Select an existing stats collection point**

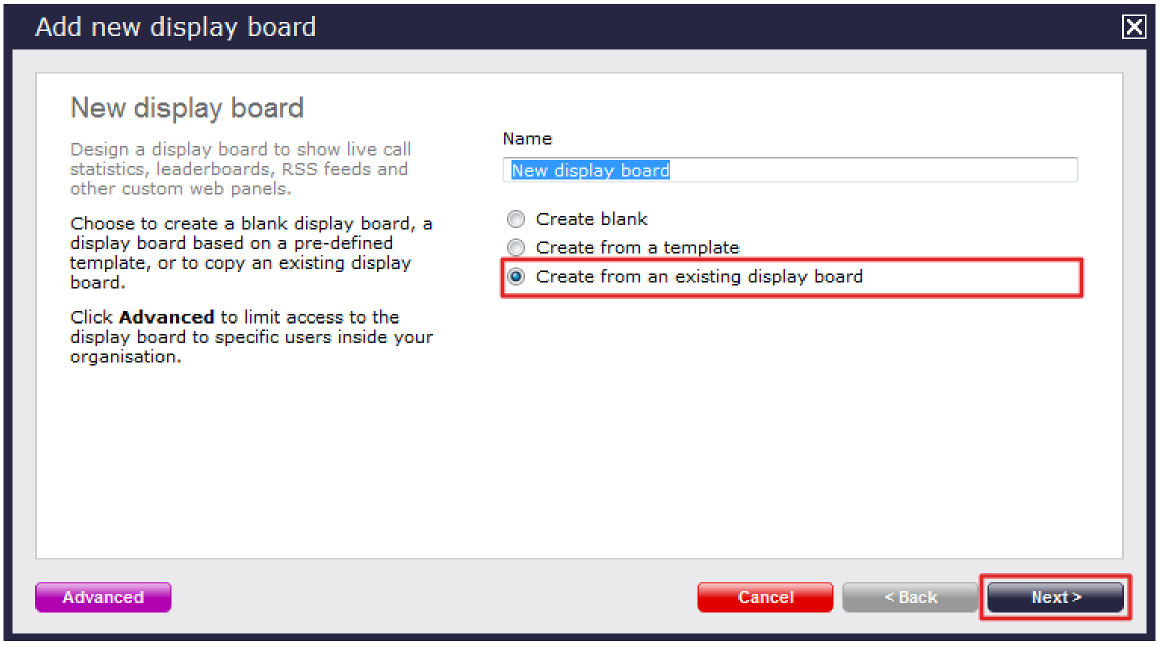
If you select this option, a list with the existing stats points objects will be displayed, as shown below:



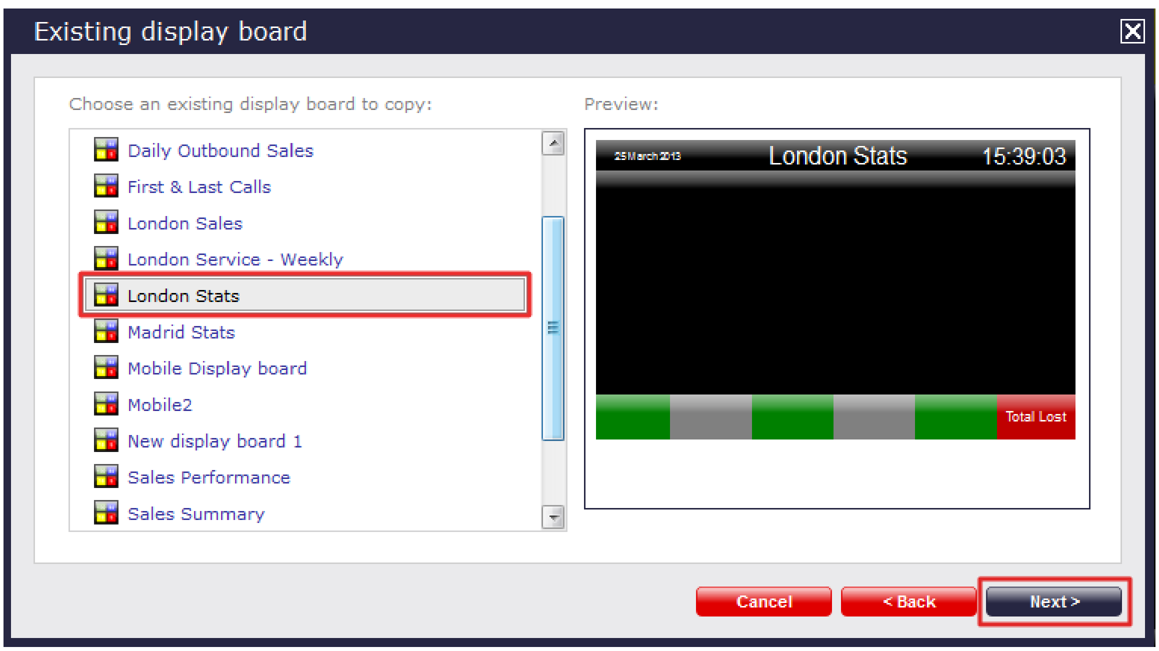

Select the relevant stats point from the list and click on the Finish button to add the new display board to the **Display boards** list.

## Create from an existing display board

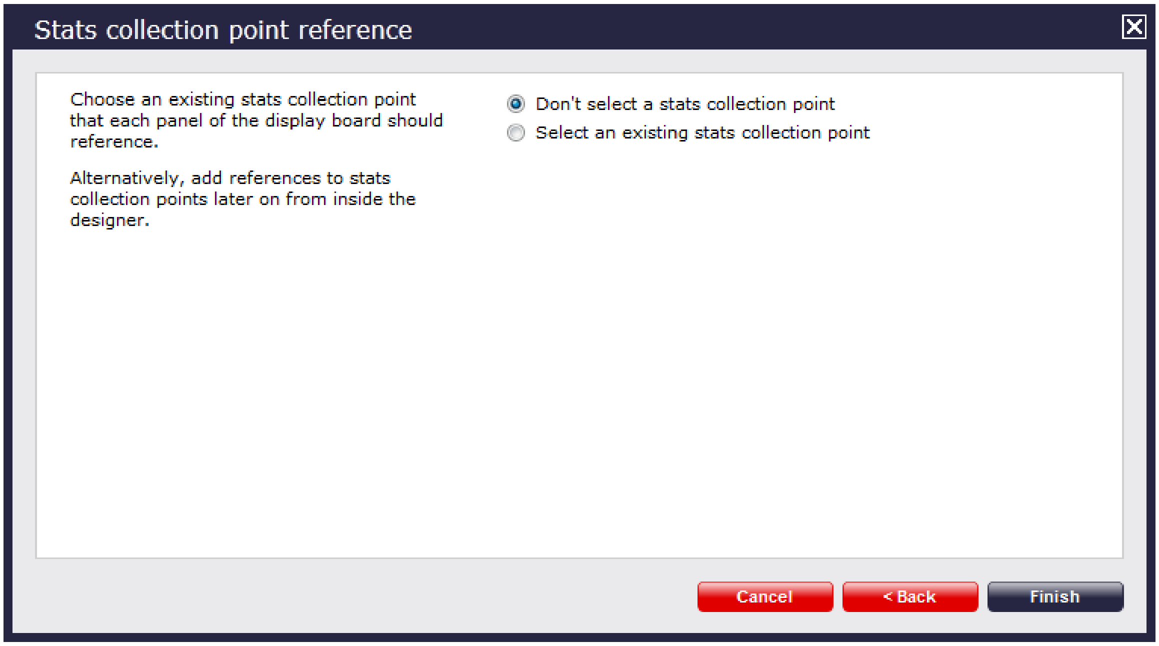
To create a display board from an existing template, select the **Create from an existing display board** option and click the Next button.




A list with the currently-available display boards will be shown. Select the one you want to copy, then click on the Next button.

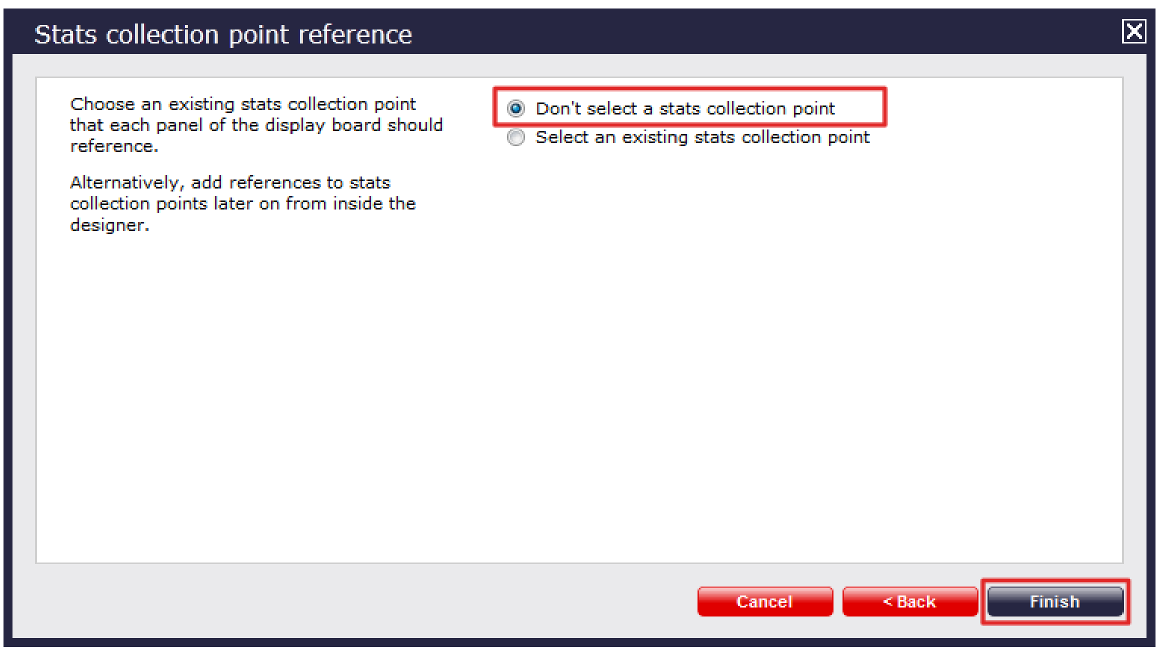



You are now given the option to add a stats collection point or skip this stage.




**Don't select a stats collection point**

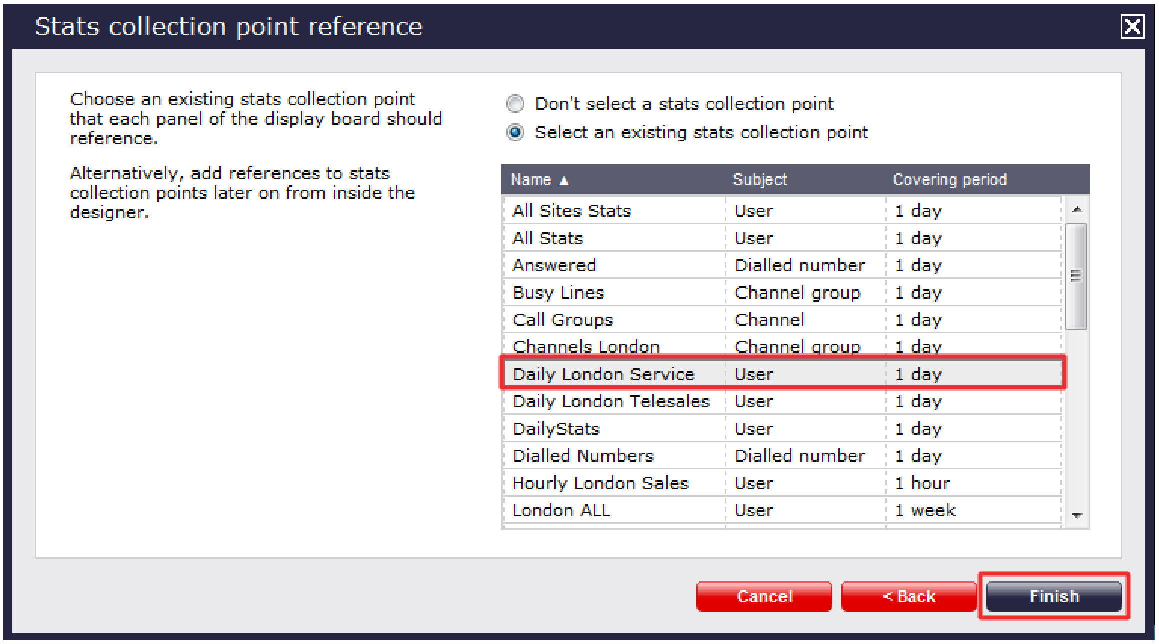
If you don't want to select a stats collection point at this time, click Finish and your display board will be added to the **`Display boards`** list. A stats point can be added at a later stage, by accessing the **`Design`** mode of your display board. For information about how to configure a stats collection point, refer to the Adding a stats point section.




The display board will be blank until a stats point is selected.

**Select an existing stats collection point**

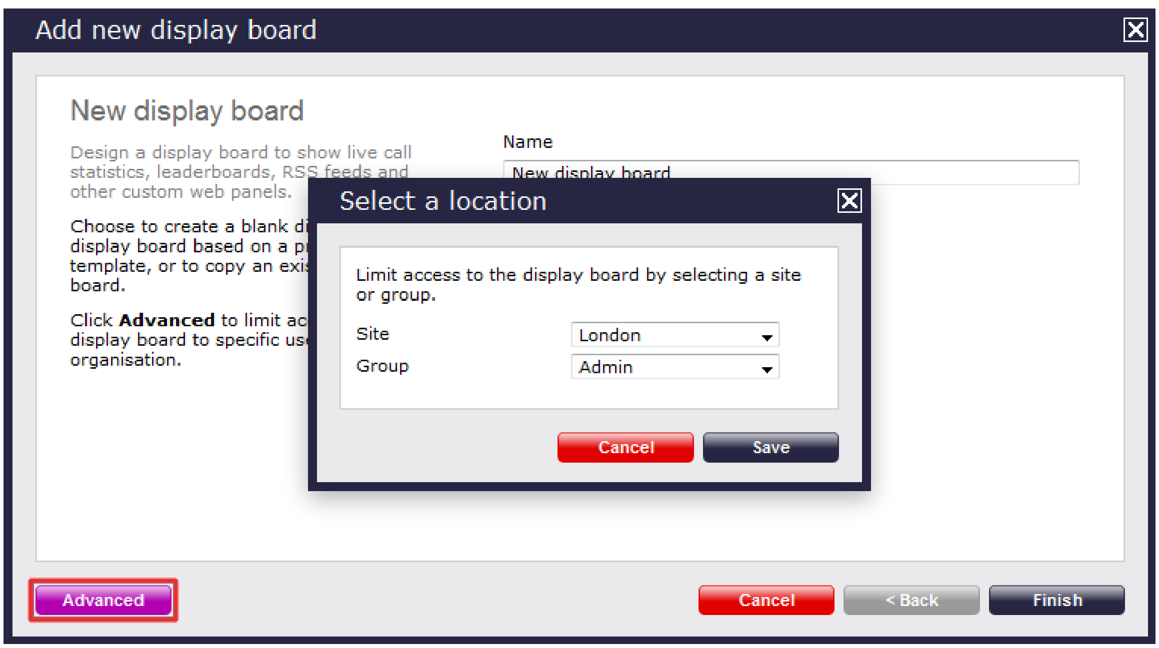
If you select this option, a list with the existing stats points objects will be displayed, as shown below:




Select the relevant stats point from the list and click on the Finish button to add the new display board in the **Display boards** list.

## Restrict access to display boards

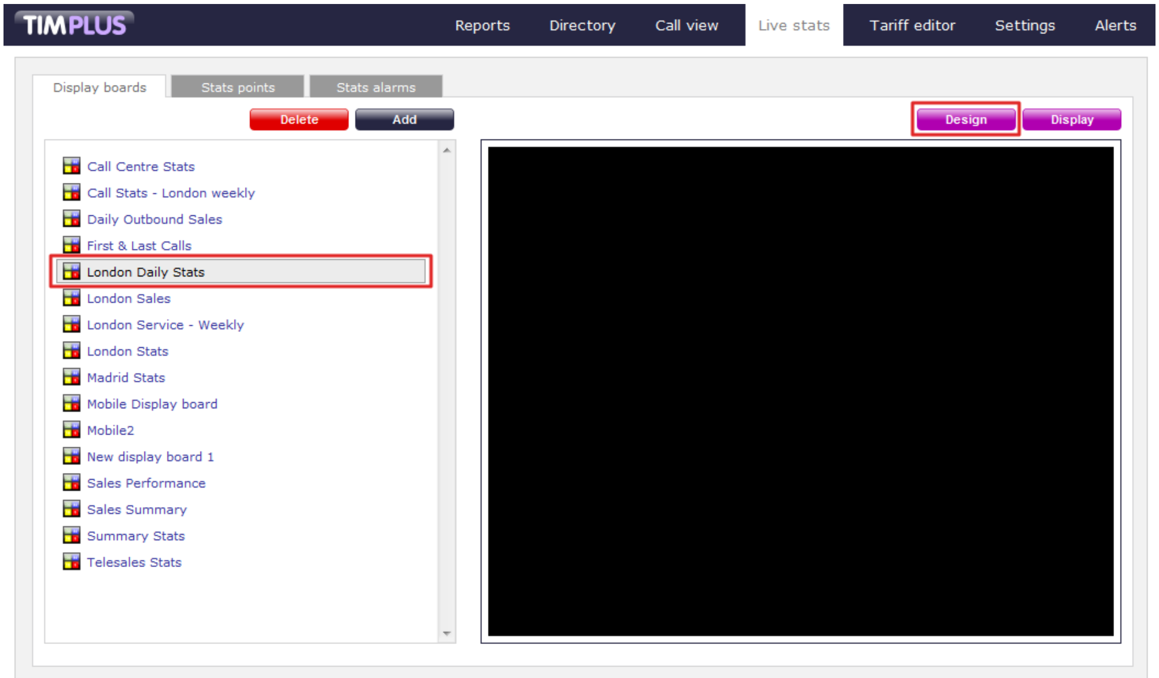
If you want to restrict specific web users from accessing a display board, click on the Advanced button at the bottom-left corner of the **Add new display board** window, and select the site and group to which you want to limit access to the display board:



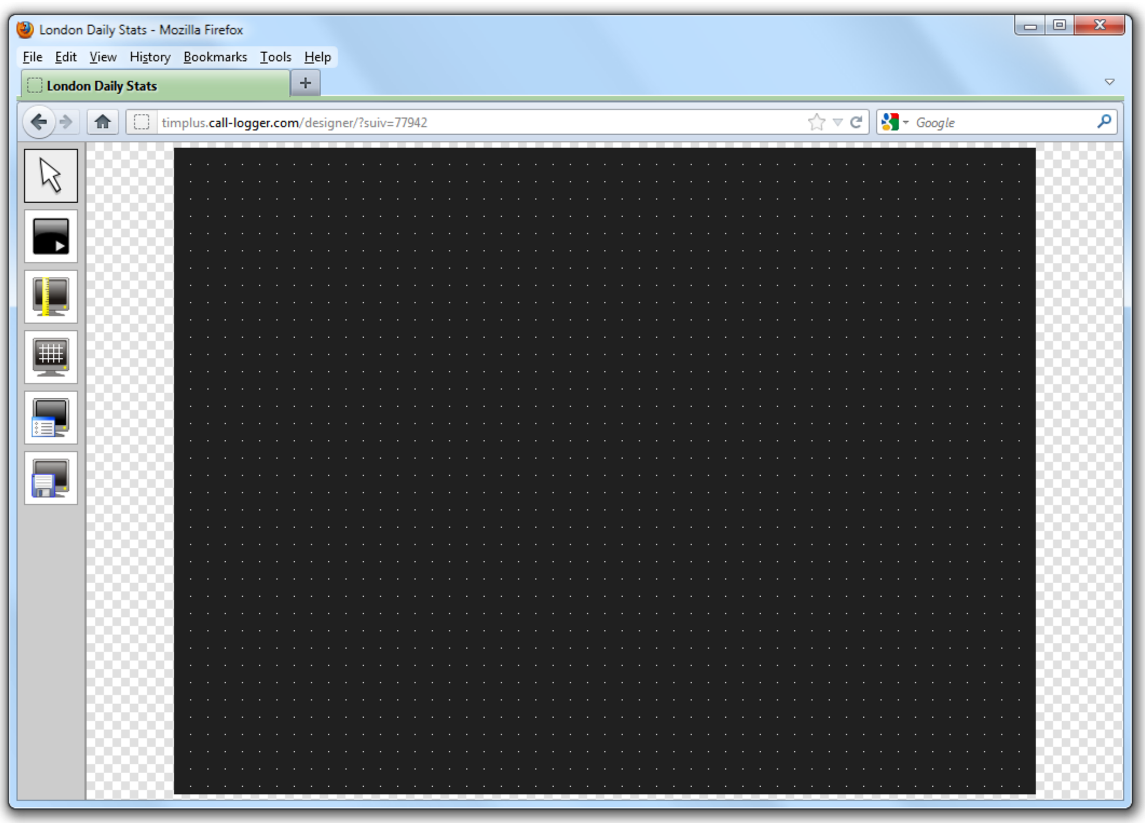

In the example above, your display board will be accessible to web users that have permissions to the **London-Admin** group. If a web user has access only to **London-Accounts** group, they will not be able to see this display board.

## Designing a display board

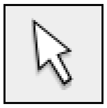
To design a display board, select it from the **`Display boards`** list and click on the Design button at the top-right corner of the panel, as shown below:




If you opted to design your display board from scratch, the following screen will appear:

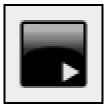



To add or edit panels in your display board, use the toolbar on the left-hand side of the panel. Each toolbar button is described below:



### The pointer button

The pointer (selector) button allows you to select an object and alter its properties.



### The panel type button

This button allows you to select the type of panel you want to add to the canvas. The available panel types are presented below:

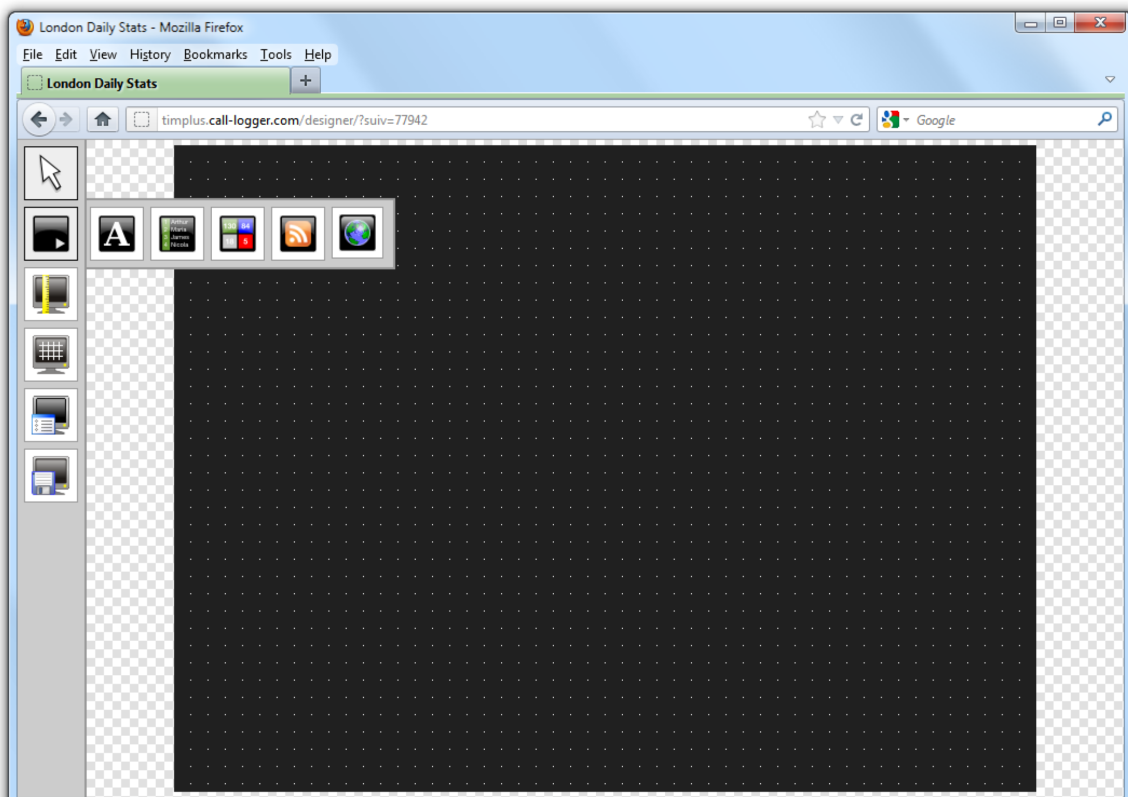
 **Label panel**

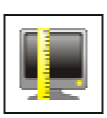
 **Leaderboard panel**

 **Summary panel**

 **RSS panel**

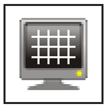
 **Web panel**



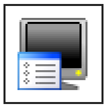
### The aspect ratio button

This button allows you to change the ratio of the screen. The defaults available are 16:10 and 4:3, but the board can be stretched to any value you set.



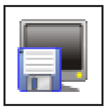
#### The grid button

The grid button is a simple toggle switch that shows or hides the grid.



#### The canvas settings button

This button allows you to change the background properties of the canvas.



#### The save button

This button allows you to save any changes made to the canvas.

## Display board panels

### Common features

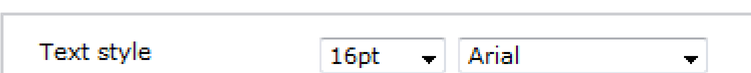
This section offers information about how to style the panels of your display boards.

Common features

- Selecting a font
- Colour picker
- Formatting buttons
- Text position

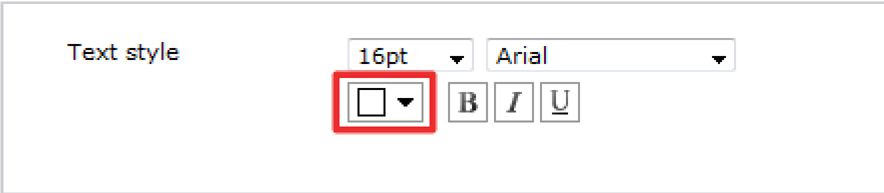
#### Selecting a font

To select a font style or a font size, expand the drop-down list and choose from the available options, as shown below:



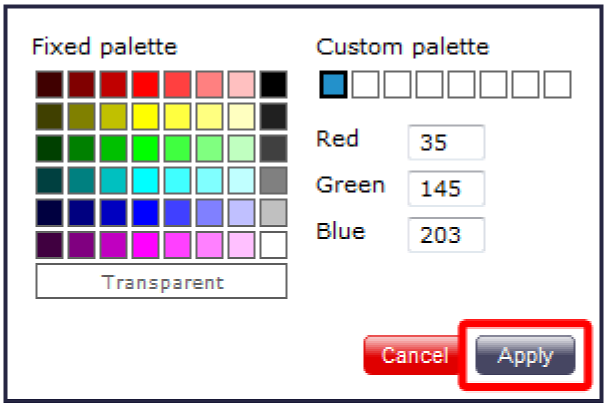

#### Colour picker

To select the colour of an object, click on the drop-down arrow to expand the colour palette.



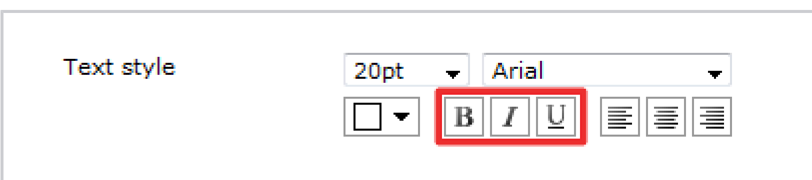

To select a standard colour, choose from the `Fixed palette` section. If you are adding an image, select the background to be transparent, so it doesn't interfere with the appearance of the image.

To select a custom colour, click on one of the blank colour squares and type the RGB colour codes to add it to your custom palette. Click on the Apply button to set the chosen colour:



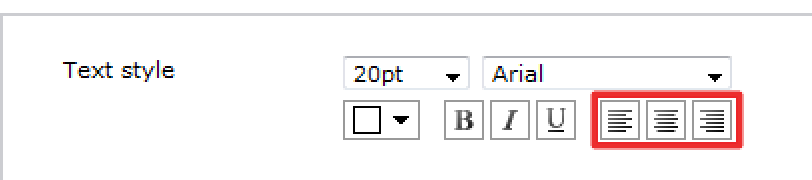

### Formatting buttons

If you would like the text in your display board to appear as bold, italic or underlined, click on the relevant  button, as shown below:




### Text position

To determine the position of your text, click on the relevant  button, as shown below:



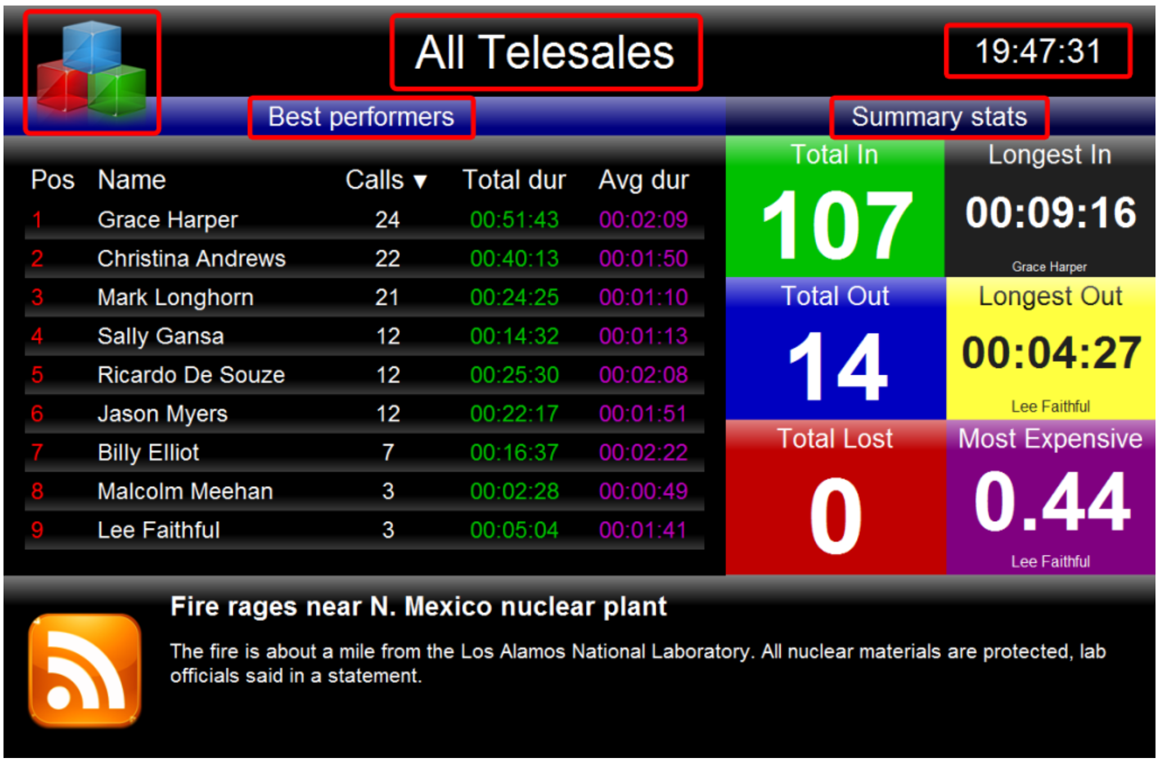
## Label panel



### What is a label panel?

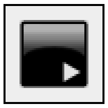
The label panel allows you to add textual labels anywhere on your display board. These labels can consist of static text, dynamic text (such as the current date and time), and images (such as your company logo) by specifying no text but choosing a background image.

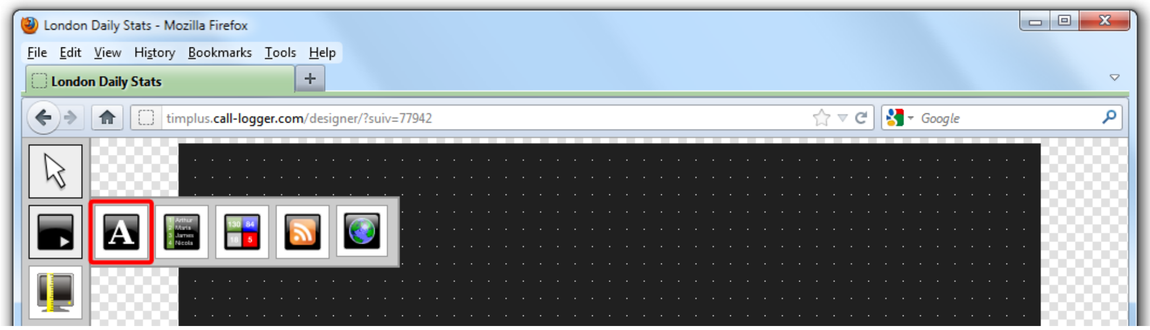
The example below shows how label panels - highlighted in red - appear on a display board; a large label panel, **`All Telesales`**, is shown at the top of the screen, followed by two smaller label panels, **`Best Performers`** and **`Summary Stats`**, describing the sections below them. Two further label panels were used to add a company logo (at the top-left of the page) and the current date and time (at the top-right of the page).



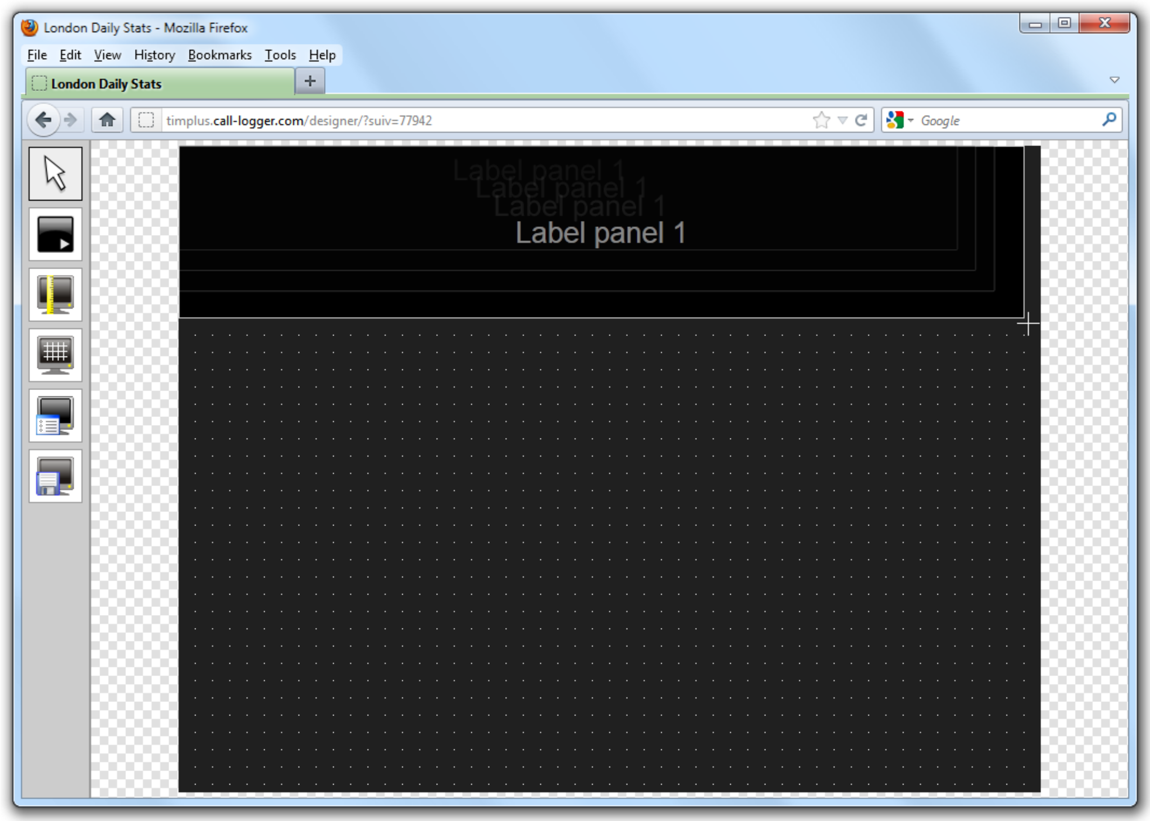

There is no limit to the number of label panels you can use on a display board.

### Adding a label panel

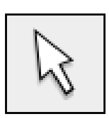
To add a label panel, click on the  toolbar button to expand the list of panel types and choose the  button, as shown below:



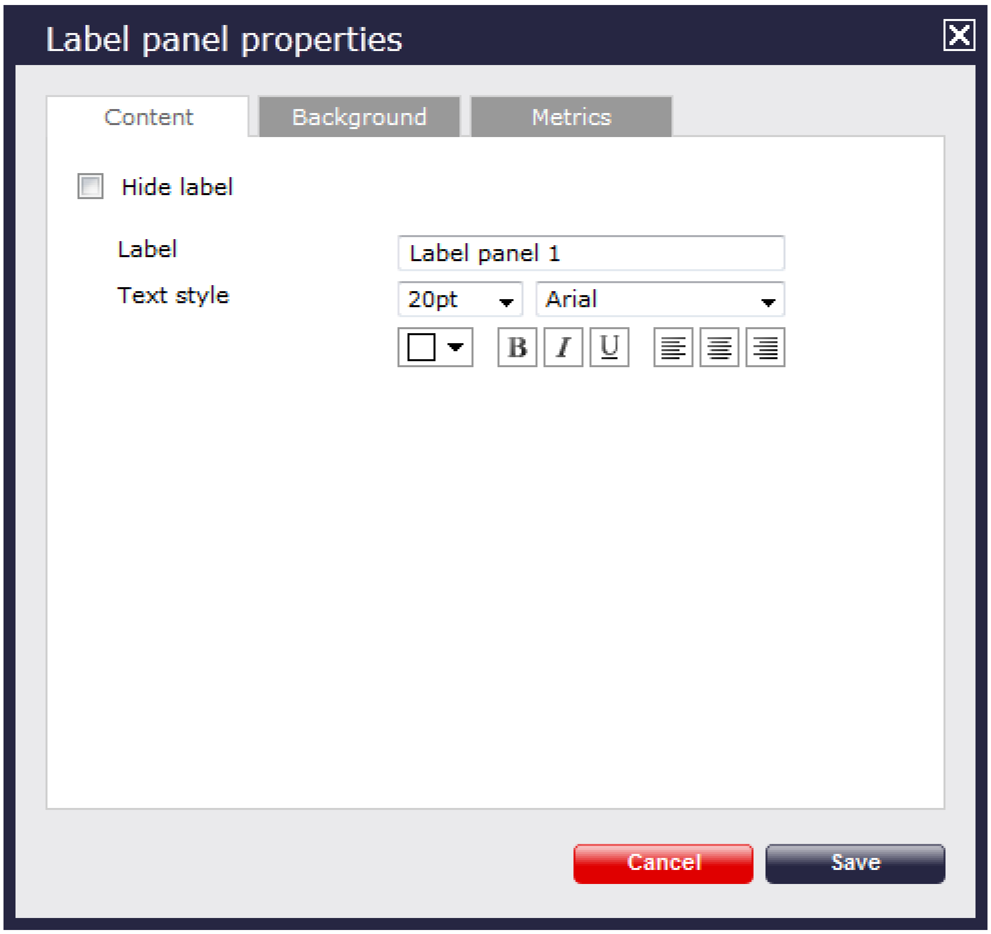

After selecting the label panel button, the mouse pointer changes into a white crosshair pointer, indicating that the designer is ready to draw your panel. Click and hold your left mouse button, starting at the point defining the upper-left corner of your new panel.  Whilst still holding down the left mouse button, drag the marquee that will appear to the point that will define the lower-right corner of your panel, as shown below:




## Customising a label panel

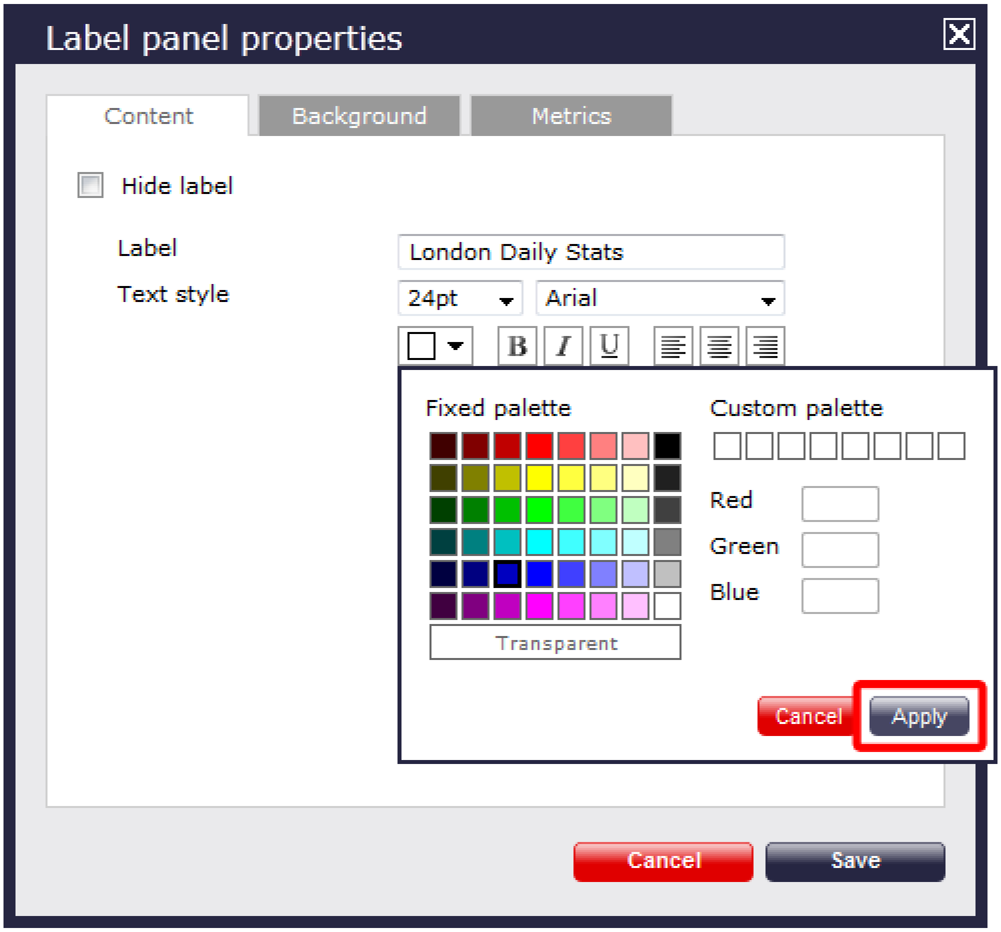
To customise a label panel, click on the  toolbar button to switch to panel selection mode. Hover your mouse pointer over the label panel you want to customise and click on the  icon, when it appears towards the top-right corner of the panel, as shown below:


The **`Label panel properties`** window will open, containing the following tabs:




### Content

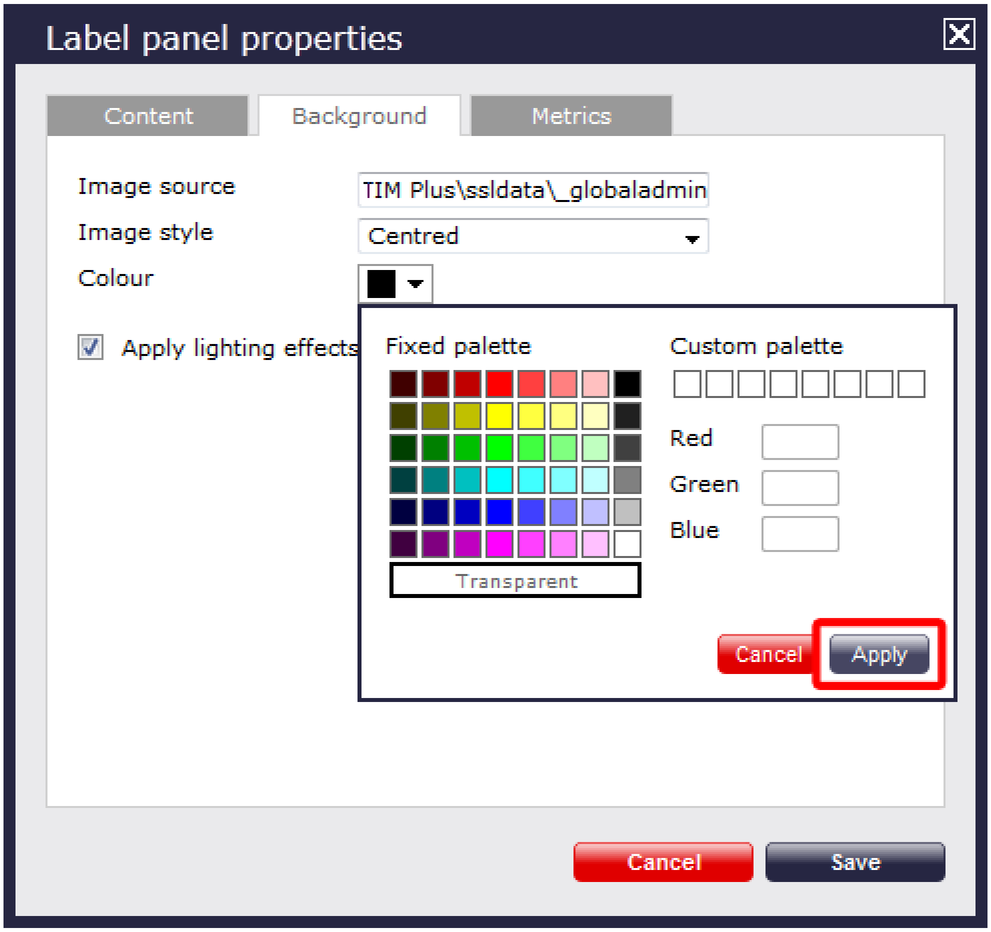
The Content tab allows you to enter the name you want to appear on the label panel and apply any styling properties, such as font size, font style, text colour, etc.




| Field | Description |
| --- | --- |
| **Hide label** | Tick this option if you don't want your panel to display the textual element, such as when you are adding a stand-alone image in the panel's background property |
| **Label** | Enter the text you want to appear on the label panel |
| **Text style** | Select any styling properties, such as font size, font style, text colour, etc. |

### Background

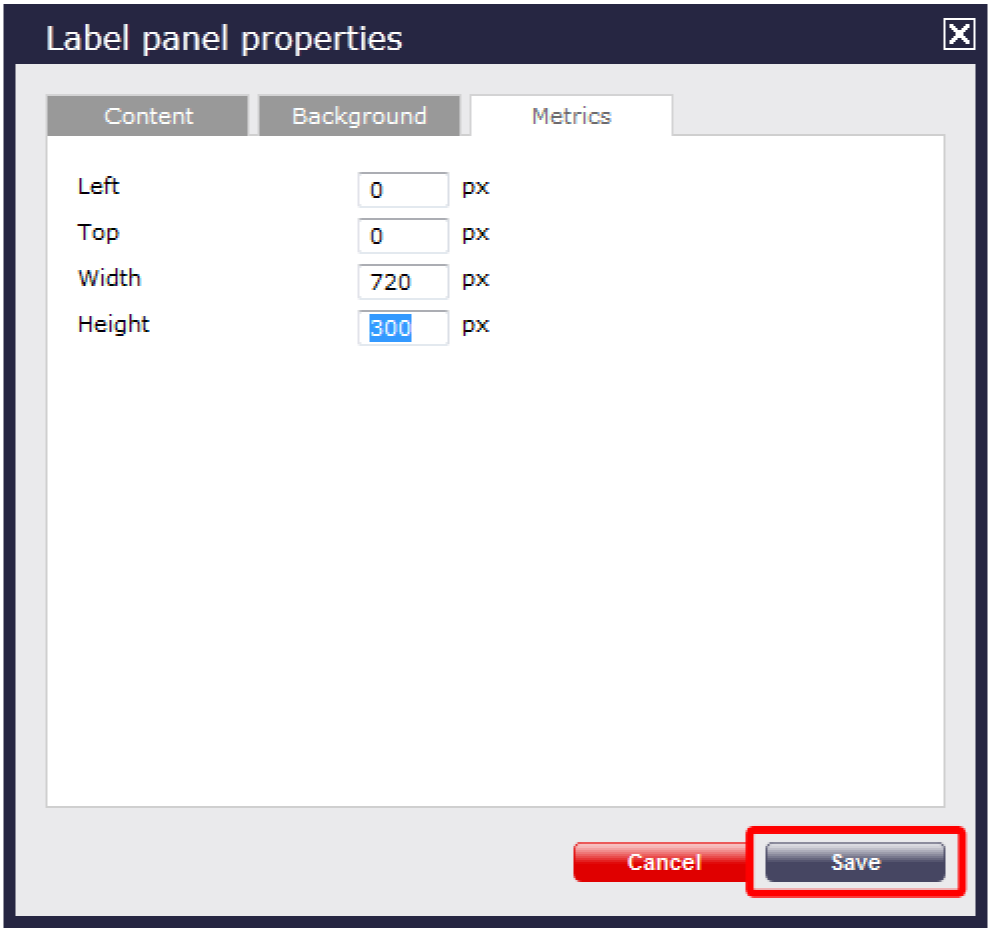
The Background tab allows you to configure the background properties of your label panel.




| Field | Description |
|---|---|
| **Image source** | If you want your panel to display an image, type its source here, e.g. `C:\Program Files (x86)\Tri-Line\TIM Plus\ssldata\_globaladmin`. Remember, the path is relative to the folder on disk from which the web content is served, and is different for each class of web user |
| **Image style** | Choose how the image should be displayed |
| **Colour** | Choose the background colour of the panel; if you are adding an image, you may want to select `Transparent` so that this does not interfere with your image |
| **Apply lighting effects to this panel** | Tick this option to apply a shine effect to the entire panel; if you are using the panel to display an image, this may adversely affect how it appears |

### Metrics

The Metrics tab allows you to define the shape of the panel, by entering values for its position and size.




Once you have configured the properties of your Label panel, click on the Save button to apply any changes.

### Label panel - overview video

For a live demonstration of how to design and customise a label panel, watch the video below:

## Leaderboard panel

Leaderboard panel

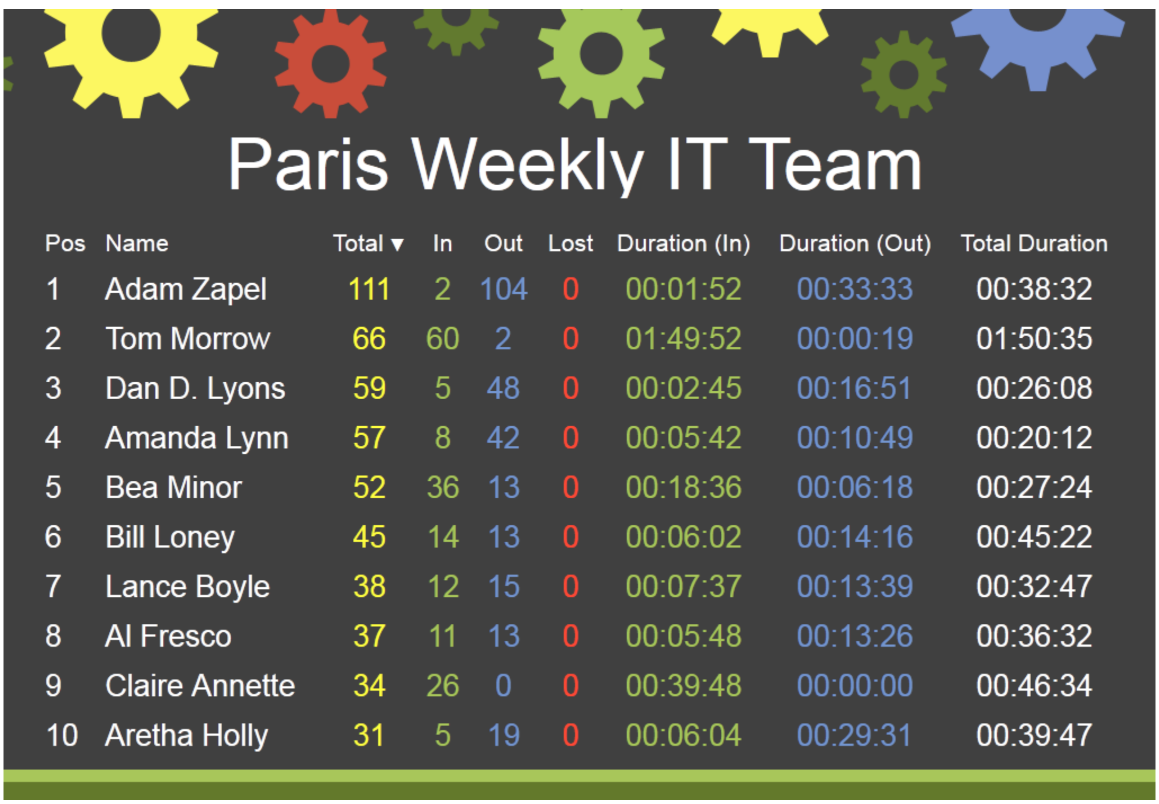


### What is a leaderboard panel?

The leaderboard panel allows you to display your live call logging data organised in columns placed next to each other, in order to provide a visual summary of any call information you wish to monitor. The content of each column is determined solely by your selection and the leaderboard can show any combination of column types. The fonts and background of the panel are also customisable.

> The information shown in the leaderboard is updated every time a call finishes and has been logged by the system.

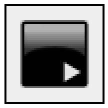
The example below shows a leaderboard panel containing the following columns: the total number of calls, inbound, outbound, lost calls, duration of inbound, duration of outbound, total duration of calls and is ordered by total number of calls per user:

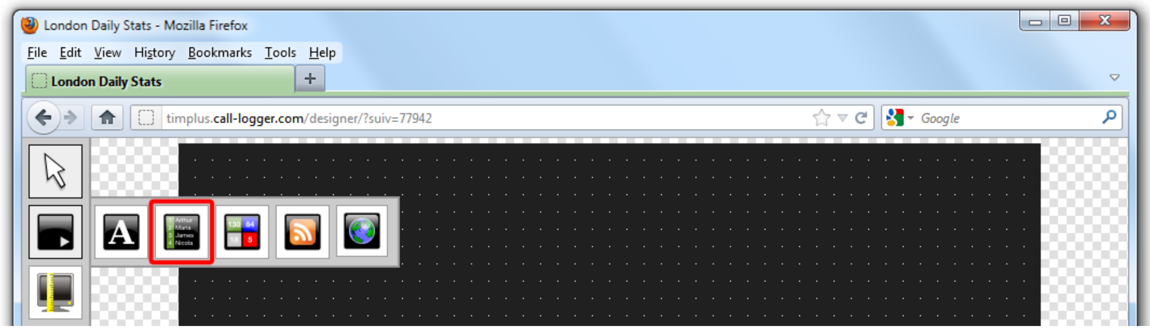


Paris Weekly IT Team

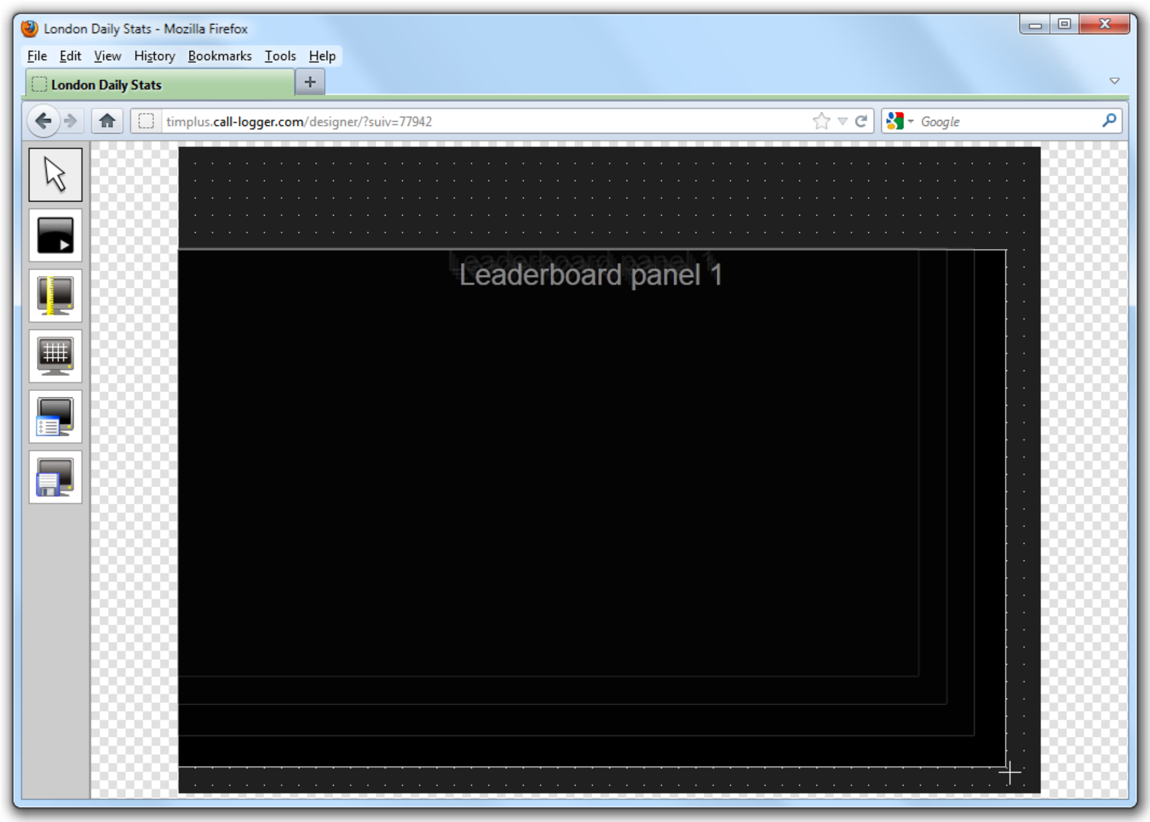
| Pos | Name | Total ▾ | In | Out | Lost | Duration (In) | Duration (Out) | Total Duration |
|---|---|---|---|---|---|---|---|---|
| 1 | Adam Zapel | 111 | 2 | 104 | 0 | 00:01:52 | 00:33:33 | 00:38:32 |
| 2 | Tom Morrow | 66 | 60 | 2 | 0 | 01:49:52 | 00:00:19 | 01:50:35 |
| 3 | Dan D. Lyons | 59 | 5 | 48 | 0 | 00:02:45 | 00:16:51 | 00:26:08 |
| 4 | Amanda Lynn | 57 | 8 | 42 | 0 | 00:05:42 | 00:10:49 | 00:20:12 |
| 5 | Bea Minor | 52 | 36 | 13 | 0 | 00:18:36 | 00:06:18 | 00:27:24 |
| 6 | Bill Loney | 45 | 14 | 13 | 0 | 00:06:02 | 00:14:16 | 00:45:22 |
| 7 | Lance Boyle | 38 | 12 | 15 | 0 | 00:07:37 | 00:13:39 | 00:32:47 |
| 8 | Al Fresco | 37 | 11 | 13 | 0 | 00:05:48 | 00:13:26 | 00:36:32 |
| 9 | Claire Annette | 34 | 26 | 0 | 0 | 00:39:48 | 00:00:00 | 00:46:34 |
| 10 | Aretha Holly | 31 | 5 | 19 | 0 | 00:06:04 | 00:29:31 | 00:39:47 |

### Adding a leaderboard panel

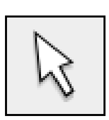
To add a leaderboard panel, click on the  toolbar button to expand the list of panel types and choose the  button, as shown below:

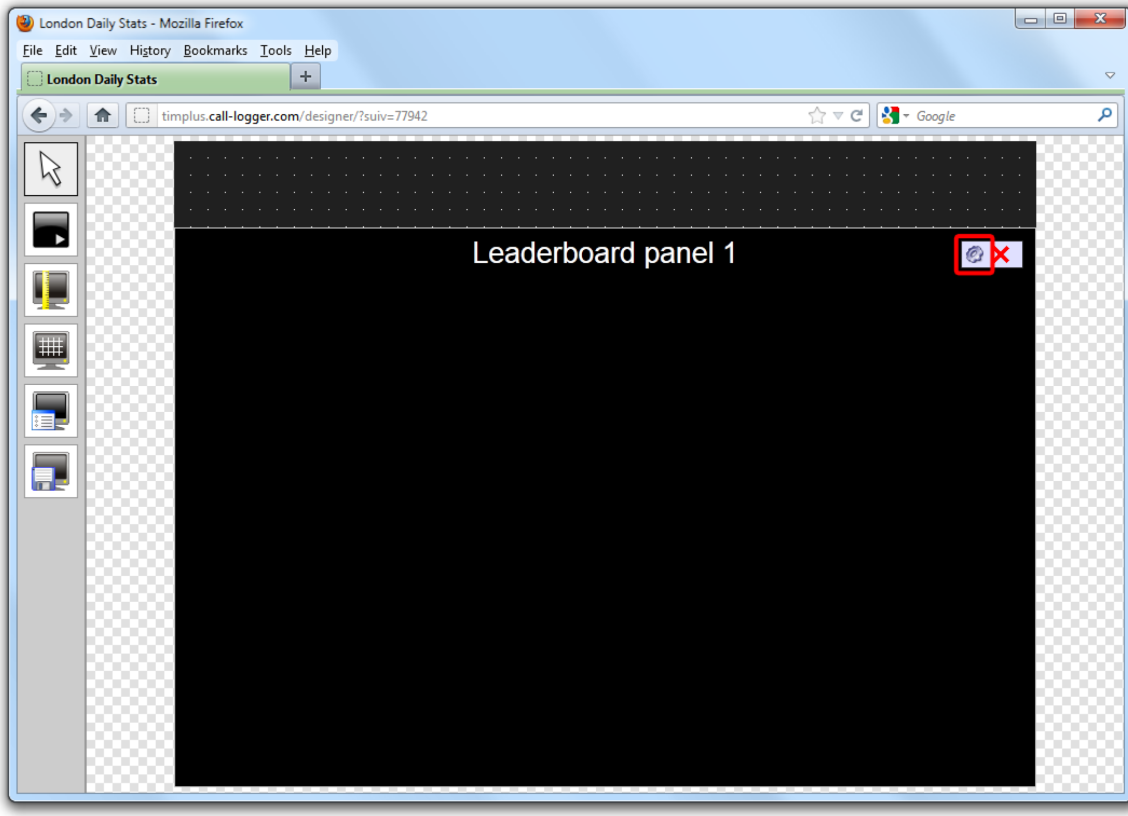



After selecting the leaderboard panel button, the mouse pointer changes into a white crosshair pointer, indicating that the designer is ready to draw your panel. Click and hold your left mouse button, starting at the point defining the upper-left corner of your new panel. Whilst still holding down the left mouse button, drag the marquee that will appear to the point that will define the lower-right corner of your panel, as shown below:

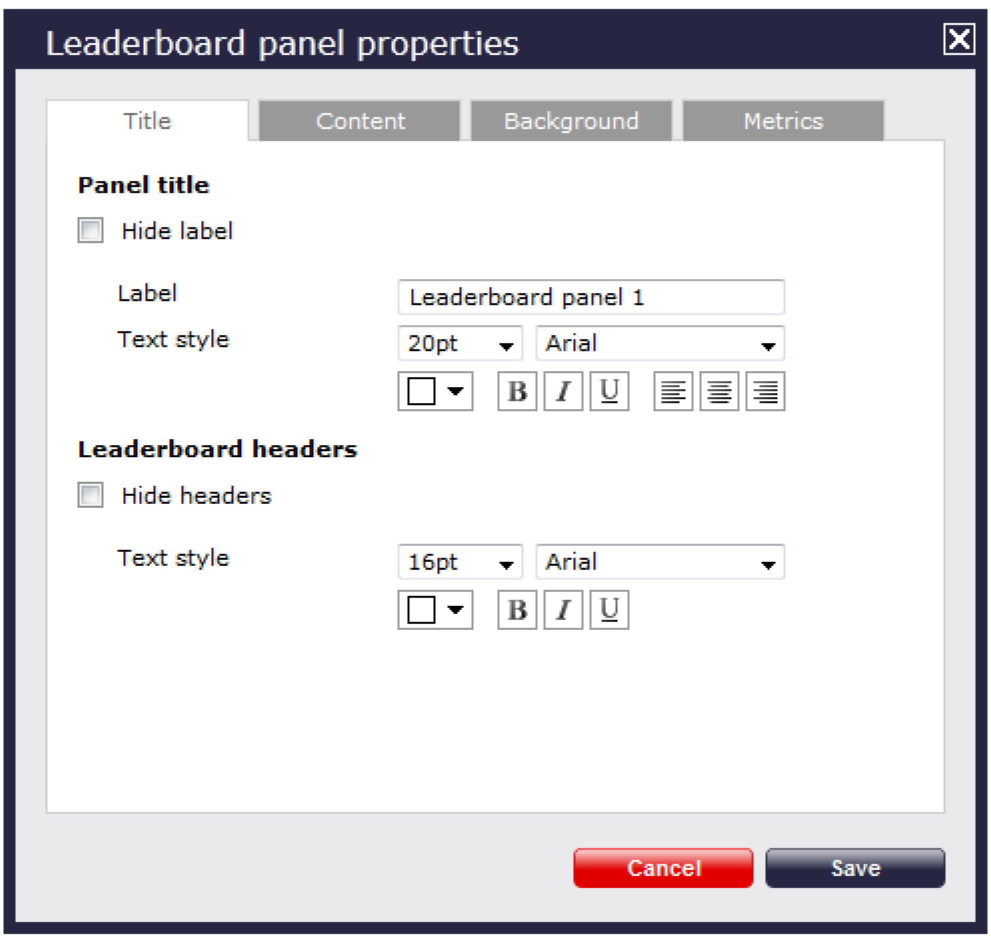



## Customising a leaderboard panel

To customize a leaderboard panel, click on the  toolbar button to switch to panel selection mode. Hover your mouse pointer over the leaderboard panel you want to customise and click on the  icon, when it appears towards the top-right corner of the panel, as shown below:

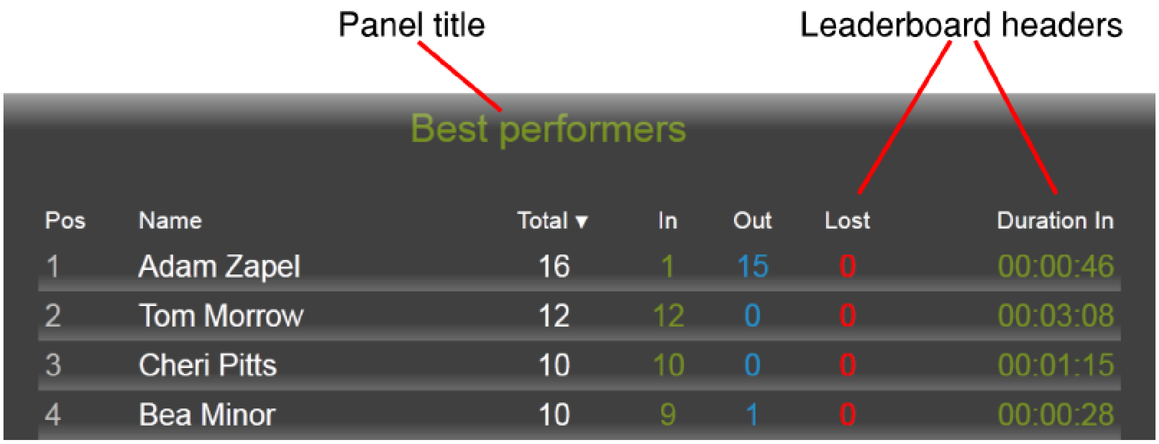



The **`Leaderboard panel properties`** window will open, containing the following tabs:

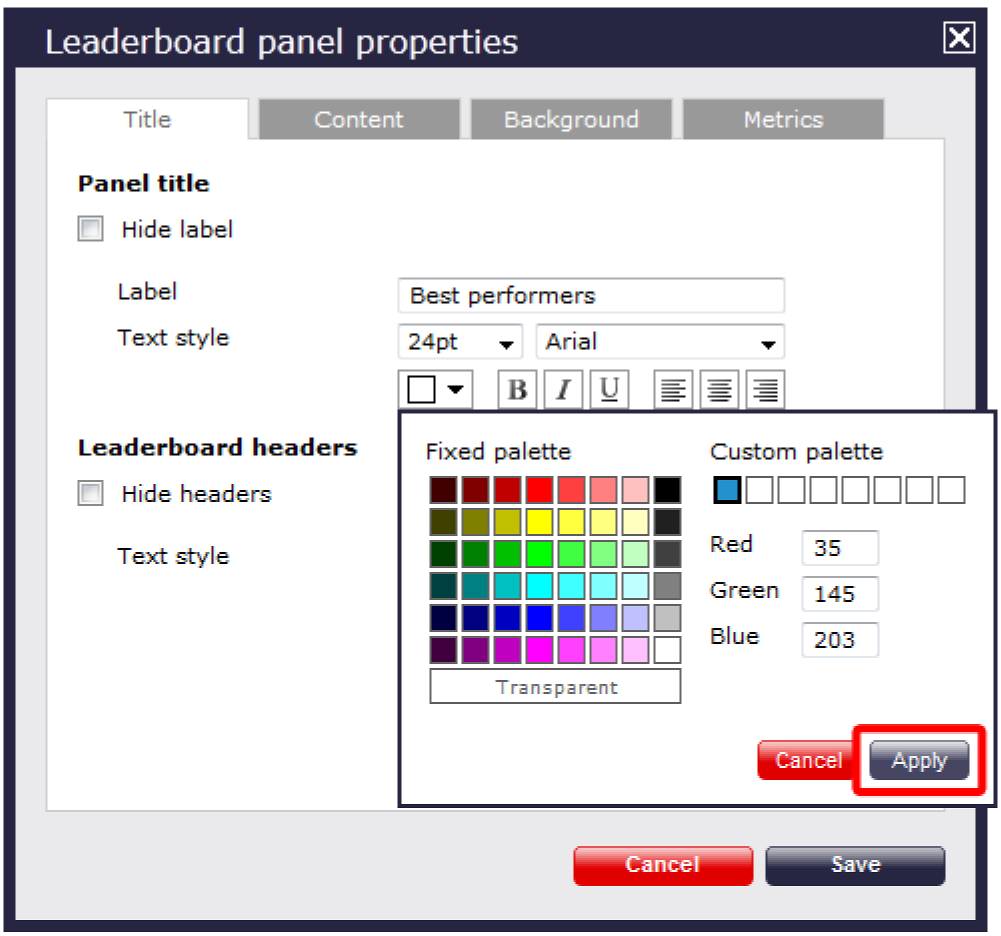


### Title

The Title tab allows you to configure the properties of the panel title and of the leaderboard headers:



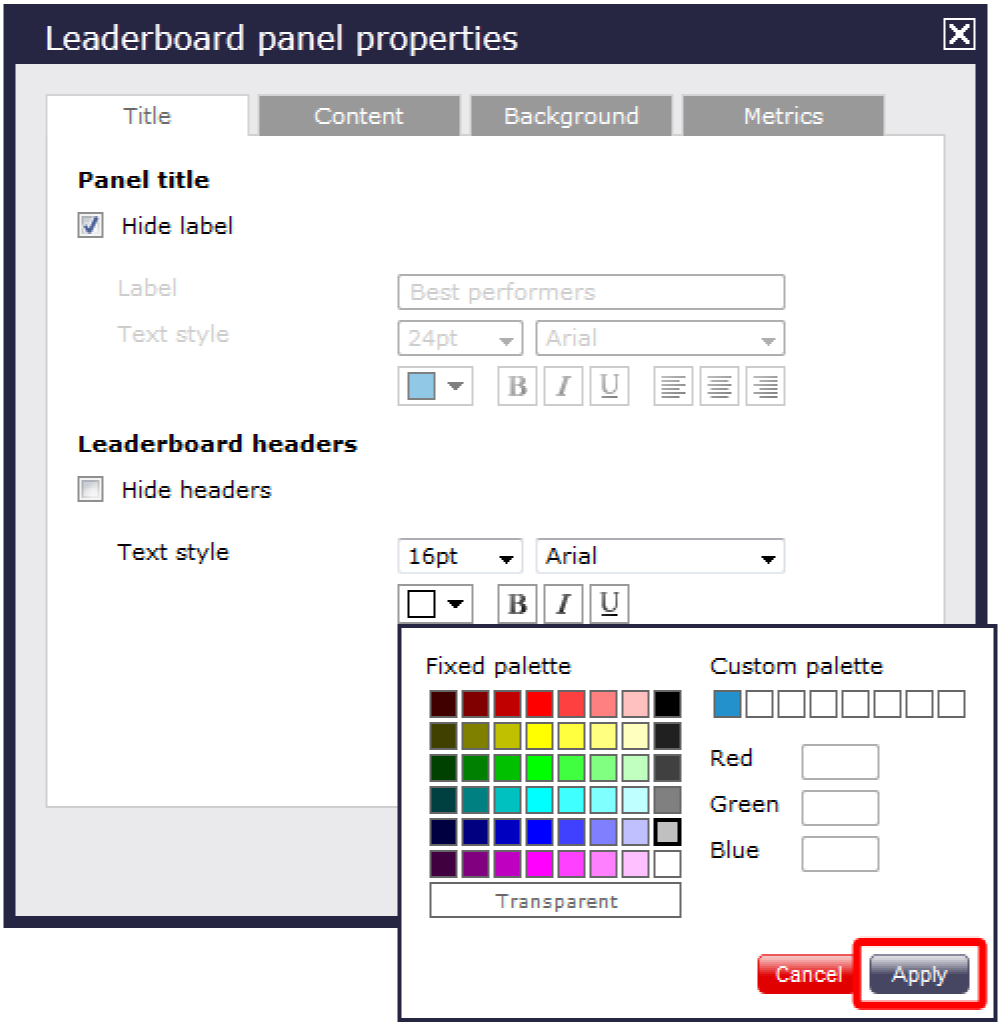

Panel title




| Field | Description |
|---|---|
| **Hide label** | Tick this option if you don't want your panel to have a title |
| **Label** | Enter the name of your leaderboard |

| | |
|---|---|
| **Text style** | Select any styling properties for your panel title, e.g font size, font style or text colour etc. |

Leaderboard headers




| Field | Description |
|---|---|
| **Hide label** | Tick this option if you don't want to add any column headers |
| **Text style** | Select any styling properties for your column headers, e.g font size, font style or text colour etc. |

## Content

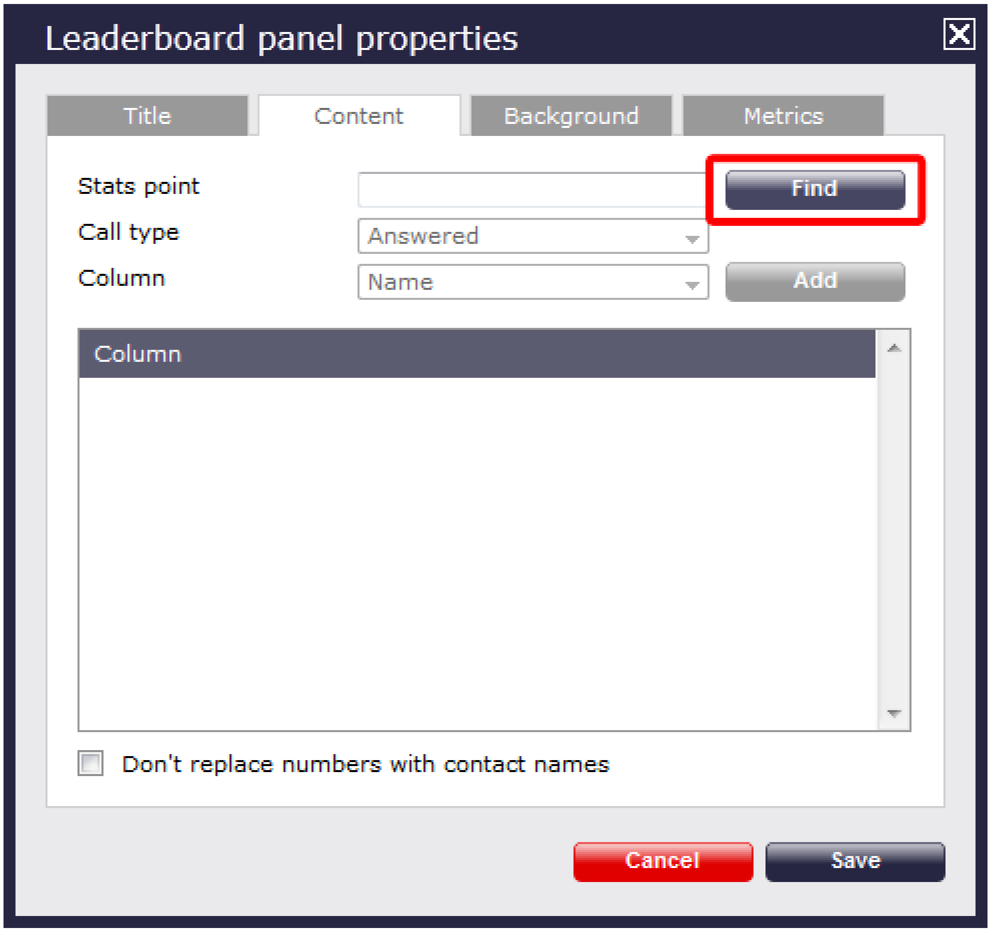
The Content tab allows you to select the type of information you want to display in your leaderboard. Each column can comprise different call information (duration, response time, etc.), for different call types (inbound, outbound, etc.) and for different entities (sites, groups, users). For example, one column can show statistics for the total number of inbound calls on a daily basis, while in a different column you can display the same information, but for a different user group and on a weekly basis.

Perform the following steps to add a column to your leaderboard panel:

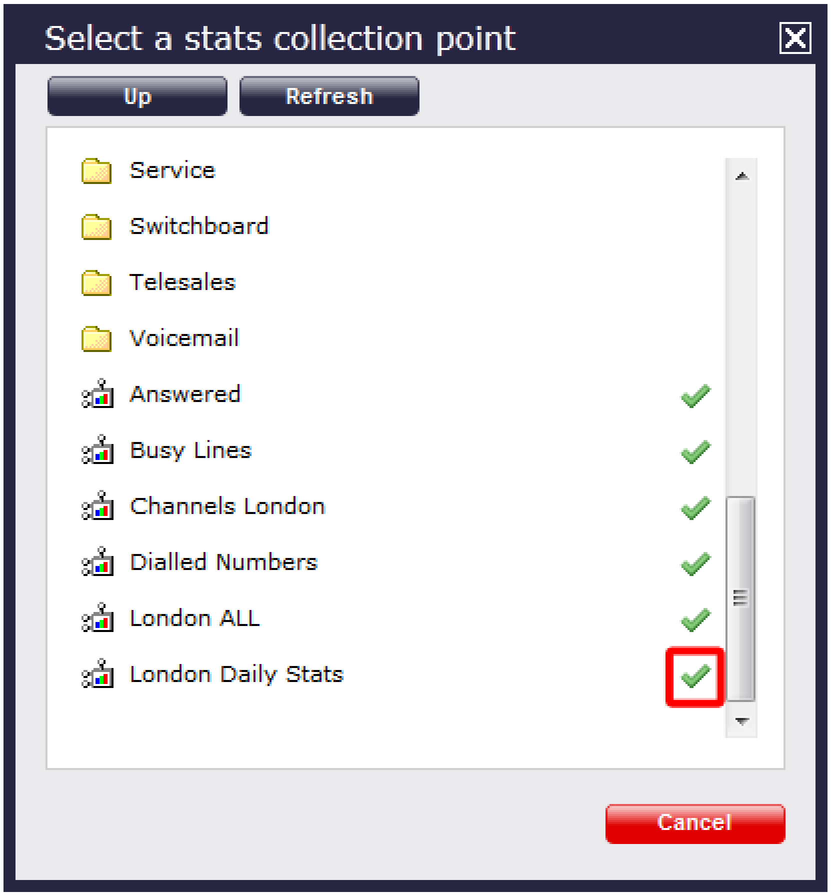
Select a stats point

> To populate a leaderboard with call logging information, you first need to add a stats point object in the Directory to collect data for the site, group or user you want the leaderboard to display.

To select the relevant stats point for your leaderboard, click on the Find button, as shown below:



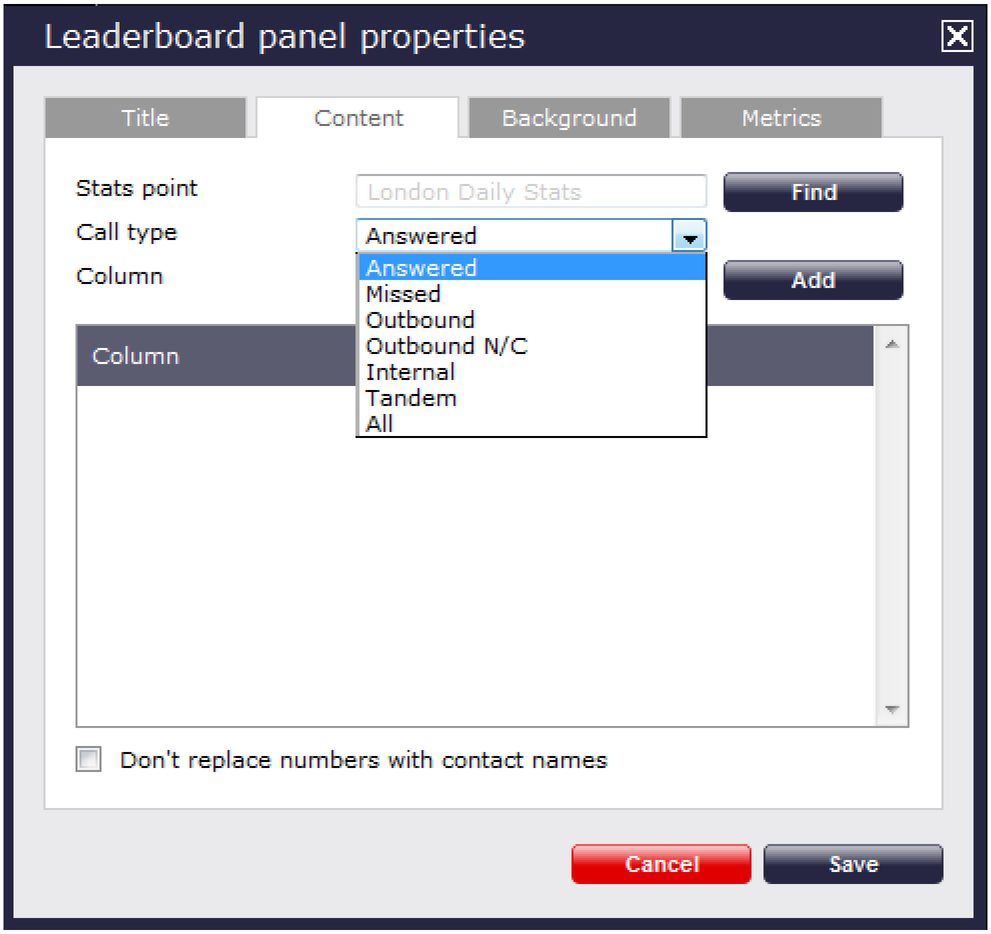

A new window will open, allowing you to drill-down to the site or group level in the Directory, where the stats point object you want to add resides. To select the stats point, click on the ✔ icon alongside it.




The selected stats point will automatically feed all columns in the leaderboard, but each individual column can be set afterwards to use a different stats point.

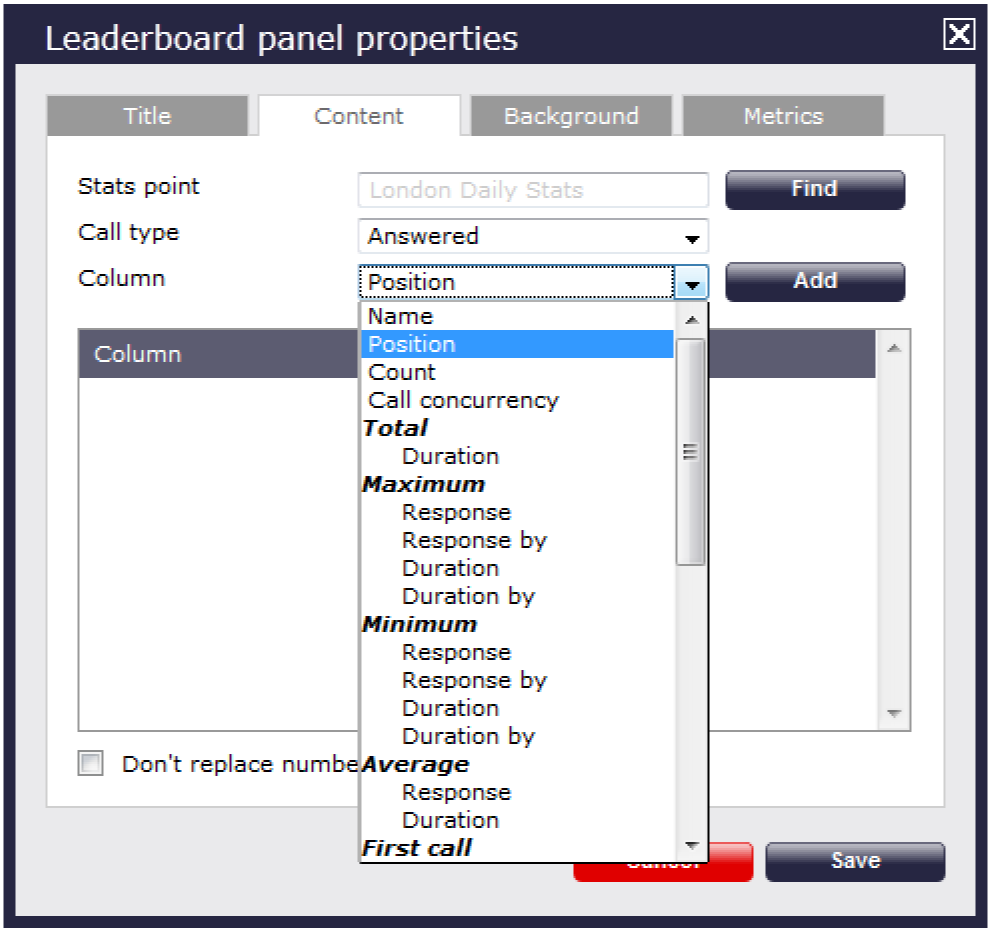
### Select a call type

To select the type of call you want to display in this column, click on the `Call type` drop-down list and choose from the available options, as shown below:

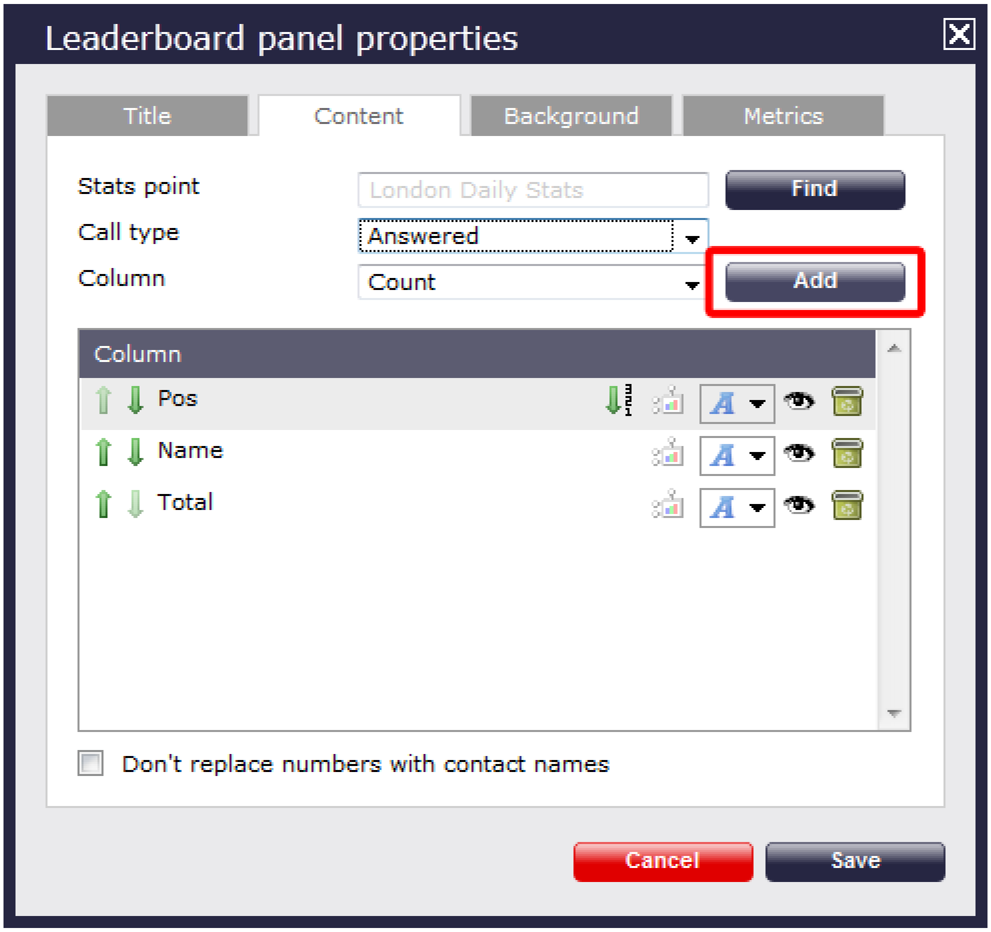



Select column information

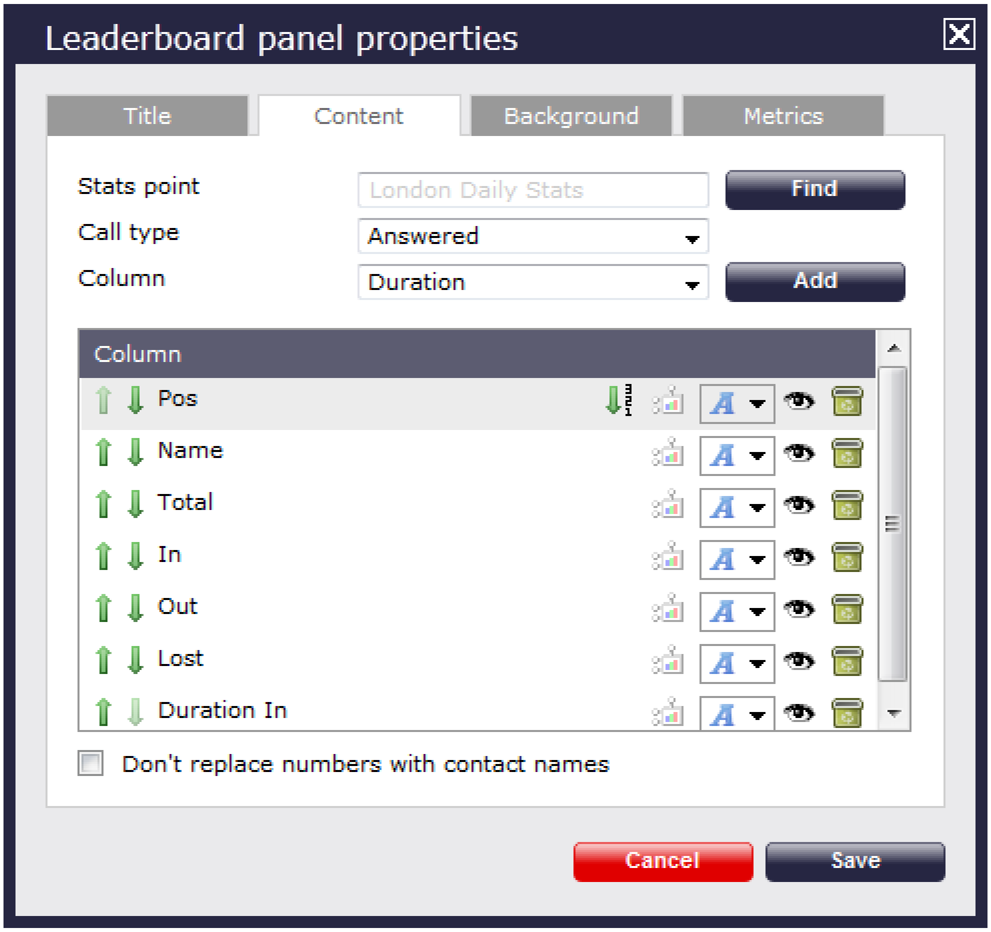
To select the type of call information you want to display in this column, such as total duration, response time, etc., click on the **`Column`** drop-down list and choose from the available options, as shown below:




Click on the **Add** button to add the column to the list and repeat the process if you need to add another column.



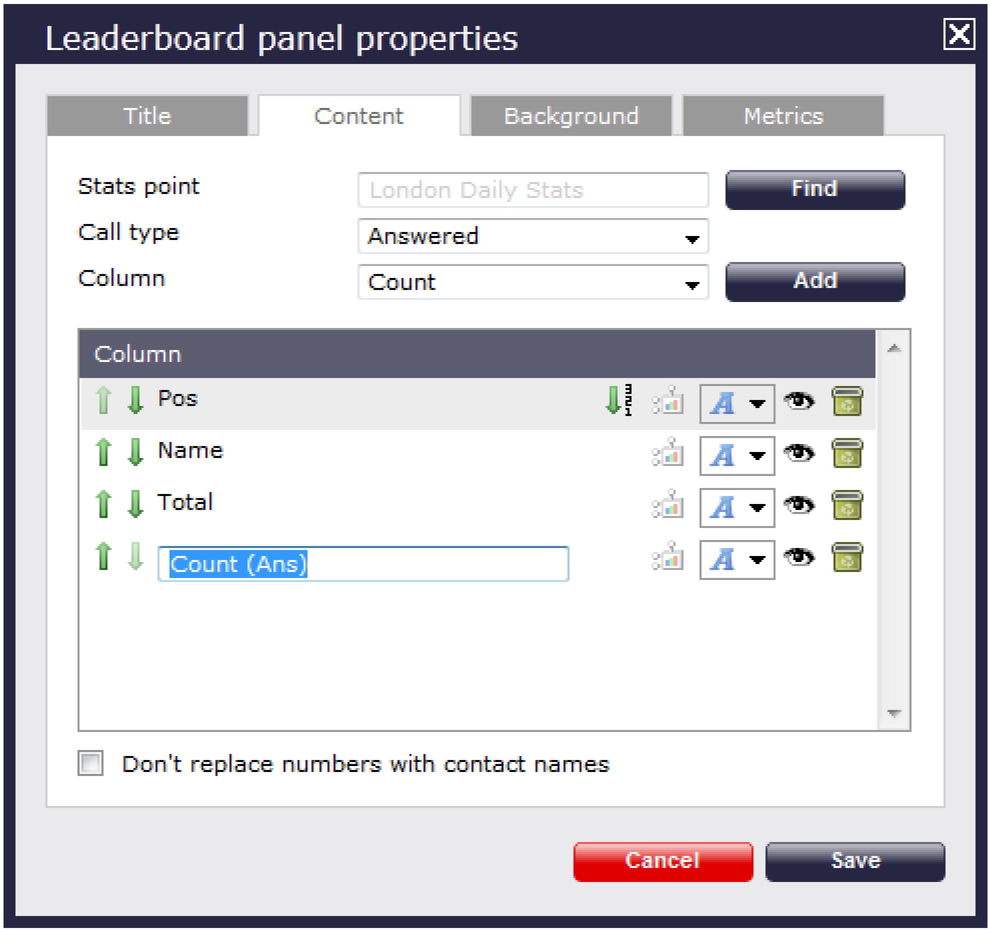

In the example below, the following settings for the `Call type` and `Column` fields have been selected in order to form the columns that appear in the list:




| Name | Call type | Column |
|---|---|---|
| `Pos` | `All` | `Position` |
| `Name` | `All` | `Name` |
| `Total` | `All` | `Count` |
| `In` | `Answered` | `Count` |
| `Out` | `Outbound` | `Count` |
| `Lost` | `Missed` | `Count` |
| `Duration In` | `Answered` | `Average duration` |

Changing column name

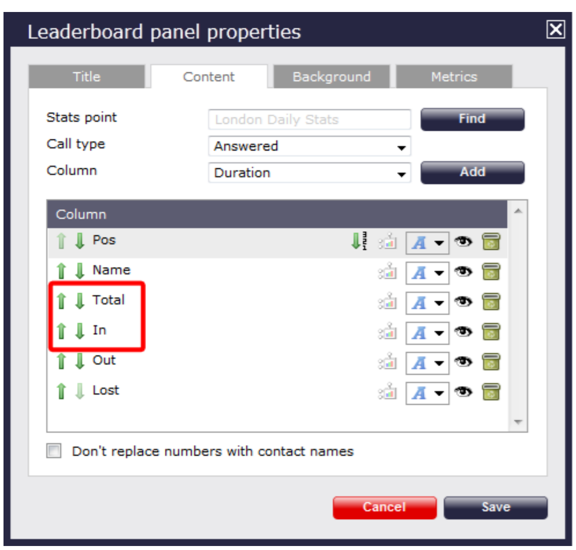
To change the name of a column, click on it to highlight the text and enter the new name. Press the `Enter` key to save the changes.

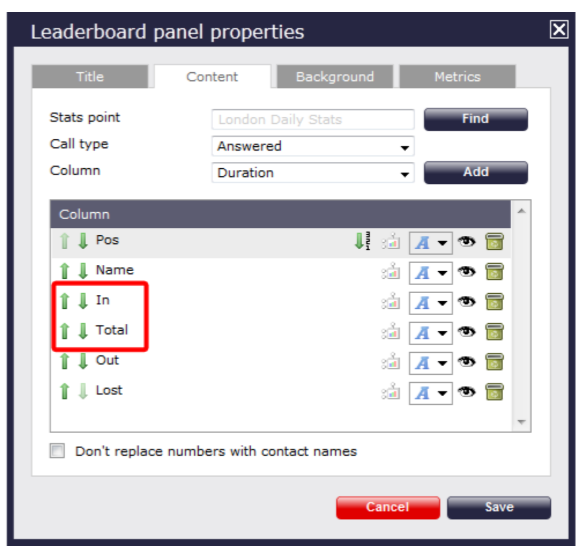



Rearranging columns

To rearrange the columns in a different order, click on the icon alongside each column. By clicking on the icon, the column will move one level up in the design mode, and one column to the left on the live display board.

In the example below, we rearrange the **In** and **Total** columns. By clicking on the icon next to the **Total** column, we move it one level up.

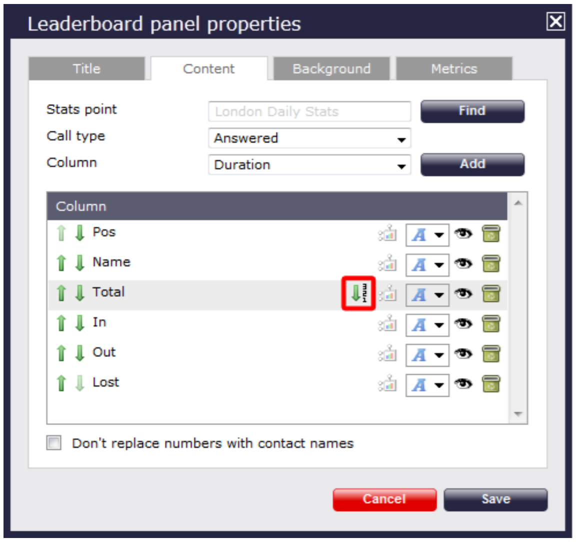


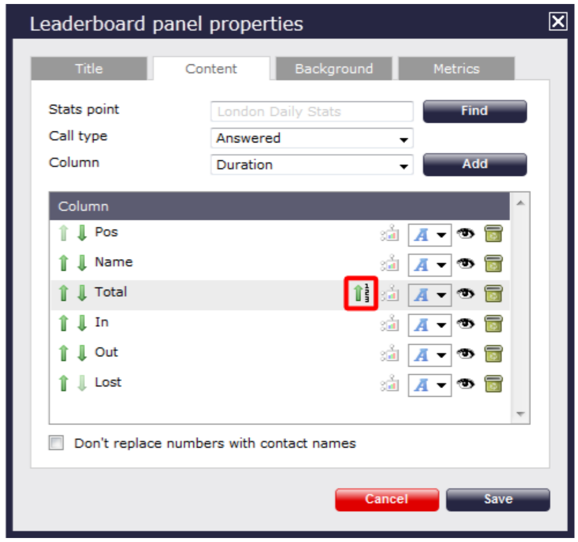




Changing a column's sorting

To sort the columns to appear in a specific order, click on the icon.

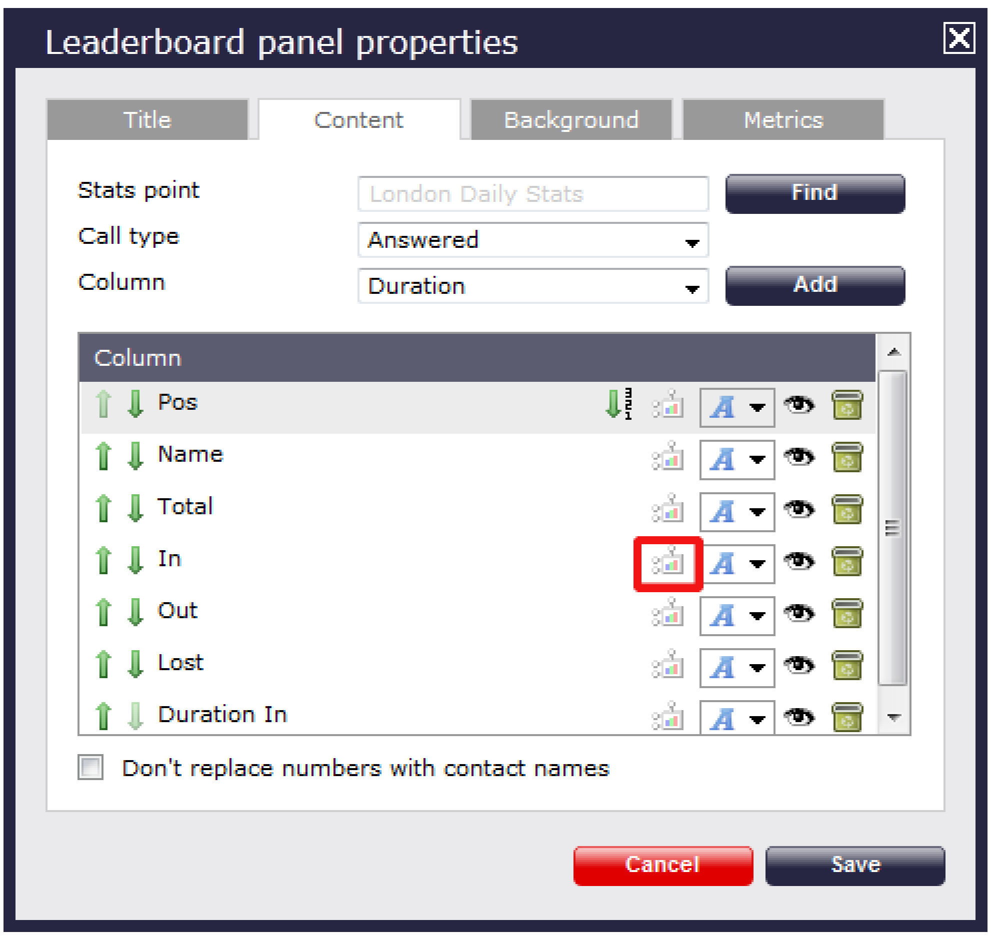
In the example below, we change the sorting of the `Total` column from descending to ascending. By clicking on the icon alongside the `Total` column, we turn the sorting of this column to descending.



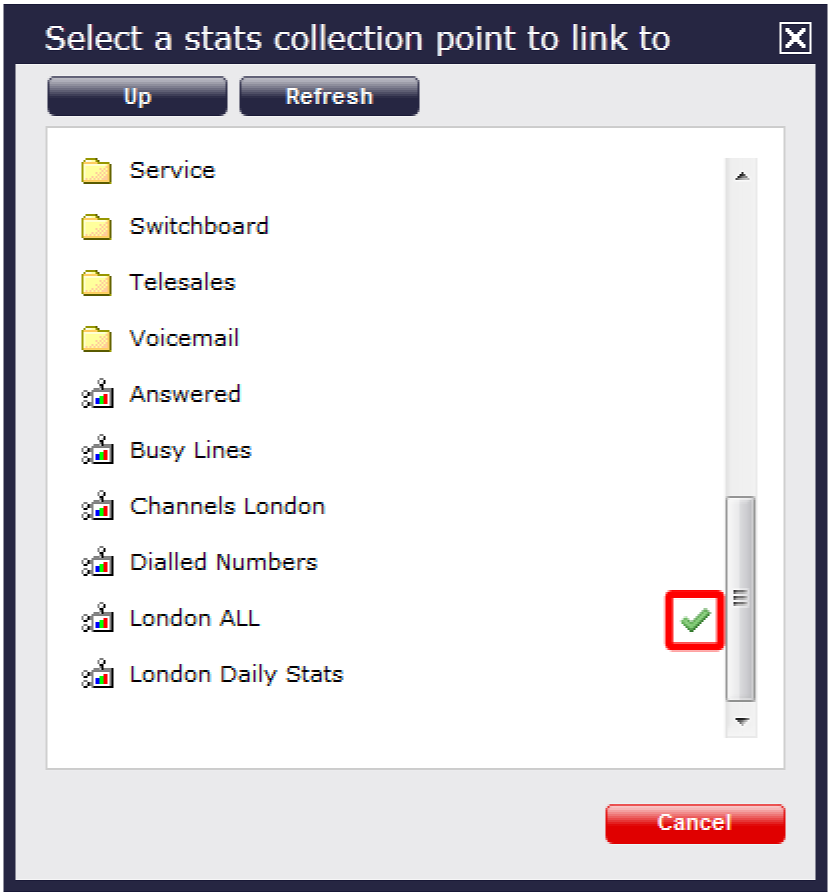




### Changing the stats collection point

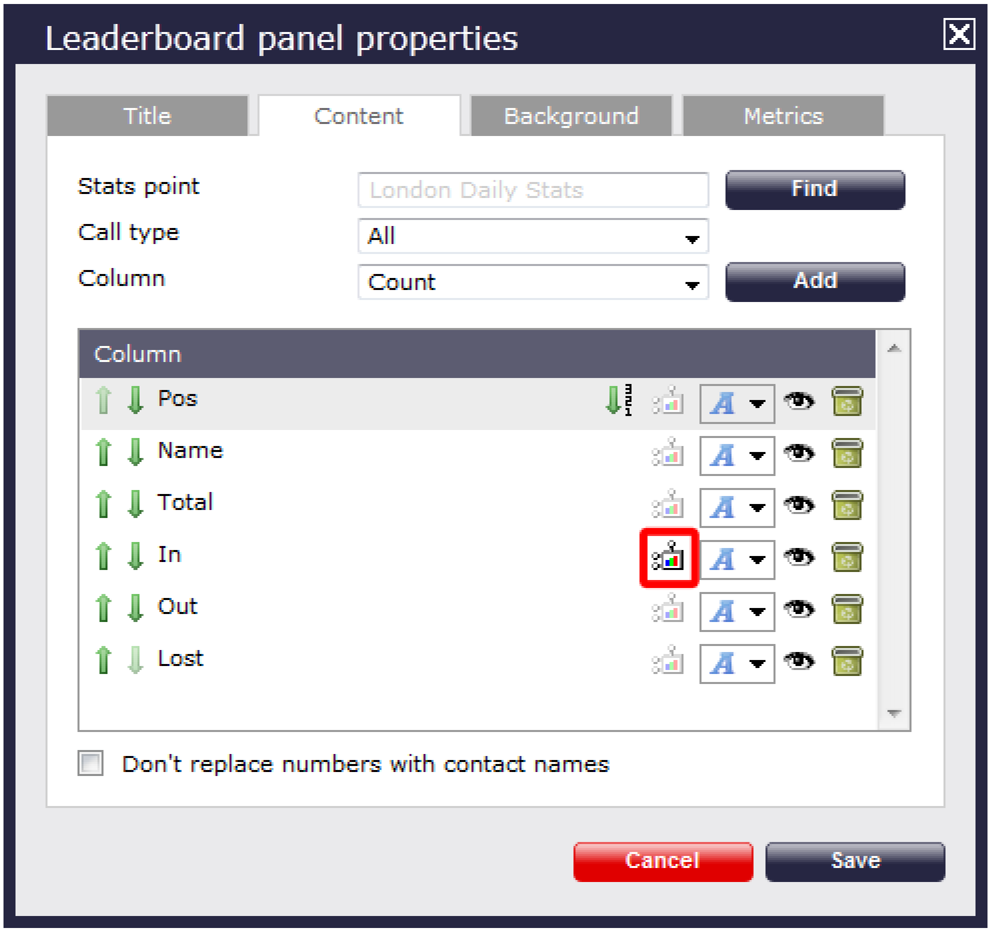
To change the stats collection point of a column, click on the icon alongside it, as shown below:




A new window will open, allowing you to drill-down to the site or group level in the Directory, where the stats point object you want to add resides. To select the stats point, click on the icon alongside it.

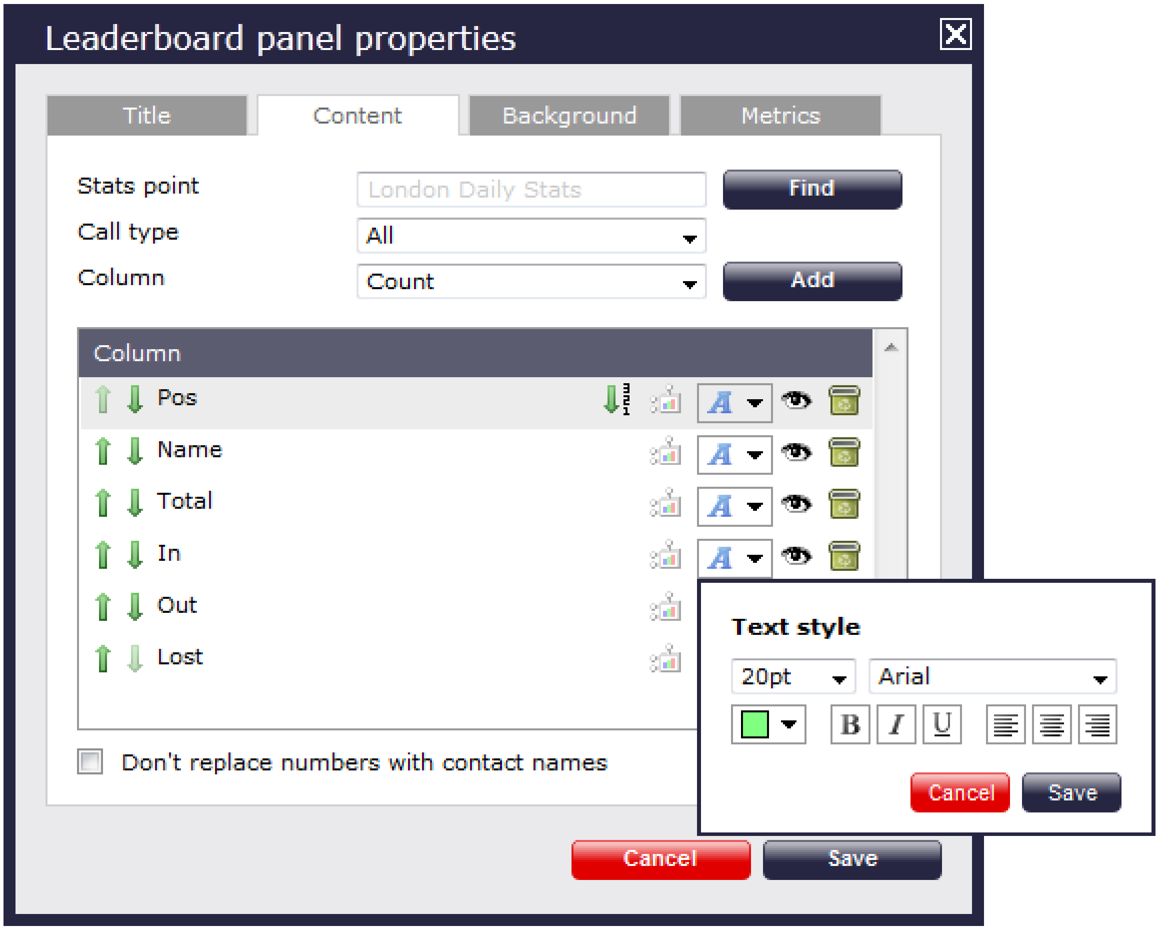



After selecting the new stats point, the icon will automatically turn into , to highlight that the current column is using a different stats collection point.



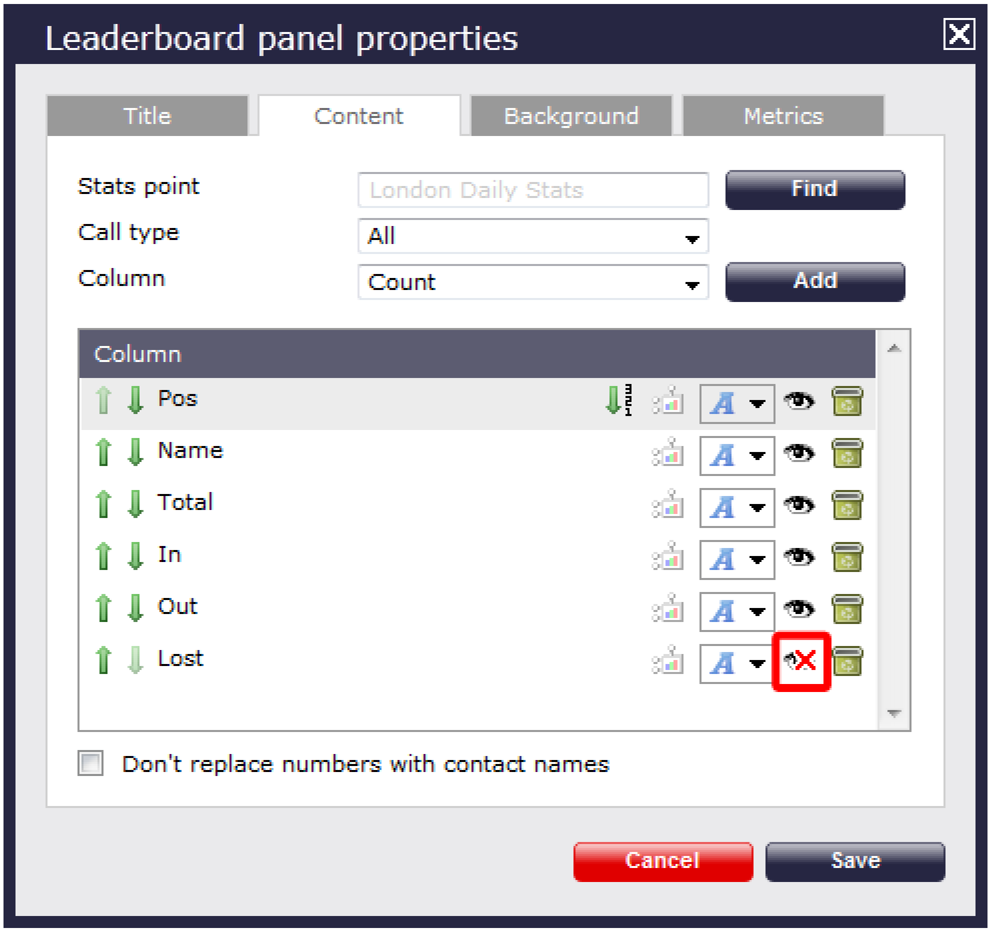

Changing the font properties

Click on the  icon to change any styling properties for the selected column, e.g font size, font style or text colour etc.




## Hiding a column

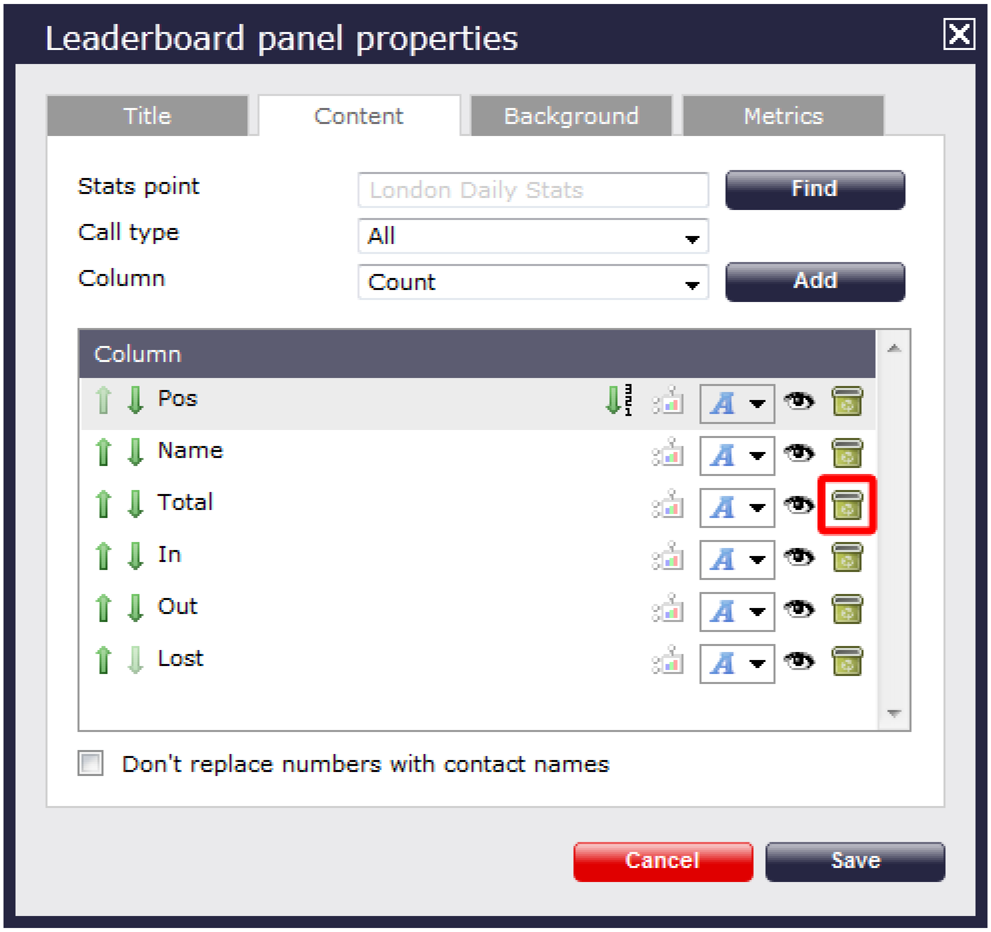
To temporarily hide a column from your leaderboard panel, click on the icon, which will turn automatically into highlighting the column is hidden.




To display the column again, click on the icon, which will turn back into .

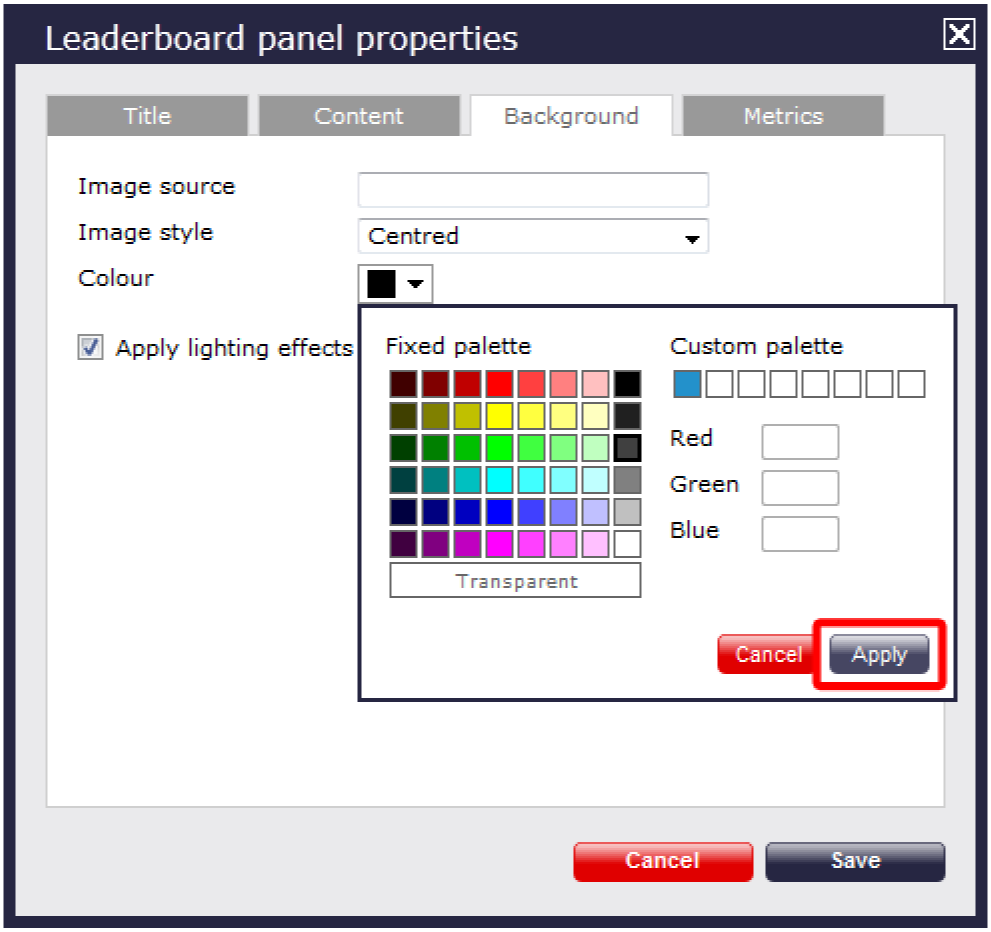
### Deleting a column

If you would like to permanently delete a column from your leaderboard panel, click on the icon, as shown below:




**Background**

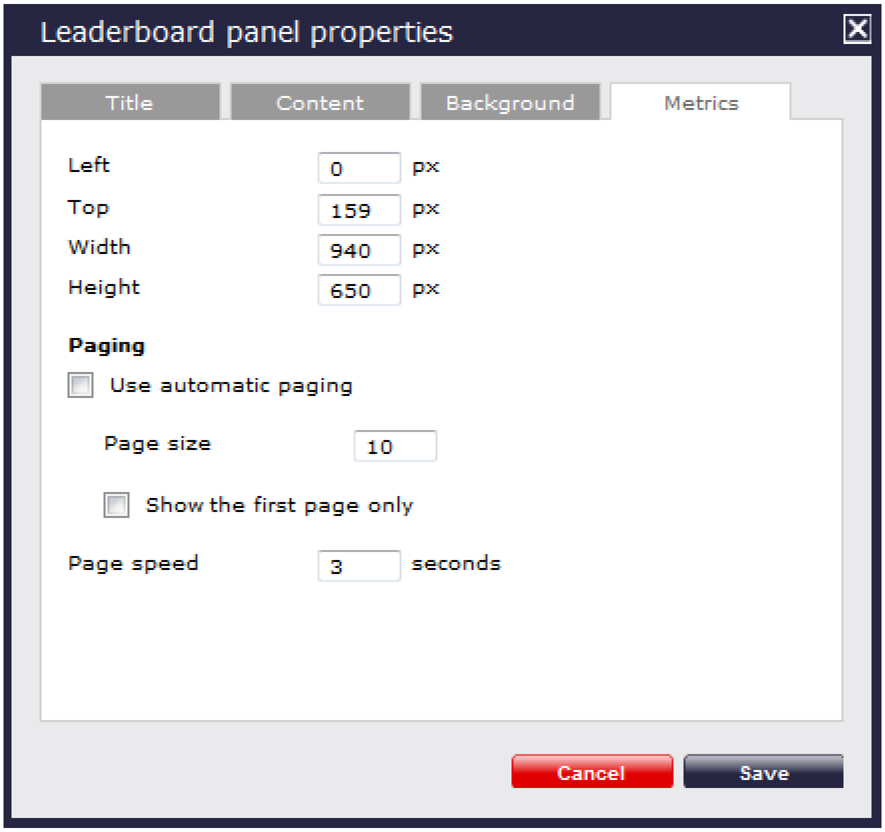
The Background tab allows you to configure the background properties of your leaderboard panel.




| Field | Description |
|---|---|
| **Image source** | If you want your panel to display an image, type its source here. Remember, the path is relative to the folder on disk from which the web content is served, and is different for each class of web user |
| **Image style** | Choose how the image should be displayed |
| **Colour** | Choose the background colour of the panel; if you are adding an image, you may want to select `Transparent` so that this does not interfere with your image |
| **Apply lighting effects to this panel** | Tick this option to apply a shine effect to the entire panel; if you are using the panel to display an image, this may adversely affect how it appears |

### Metrics

The Metrics tab allows you to define the size of the leaderboard panel and the parameters of the page.




Panel size

To define the shape of the panel, enter the values for its position and size.

Paging

If you want to use automatic paging, select the box provided; alternatively, enter the number of rows you want the leaderboard to show per page, or select **Show the first page only**. If the leaderboard has more than one page, you can set the rate at which you want the pages to change, by entering a value in the **Page speed** box.

Once you have configured the settings of your leaderboard panel, click on the Save button to apply any changes.

### Leaderboard panel - overview video

For a live demonstration of how to design and customise a leaderboard panel, watch the video below:

## Summary panel

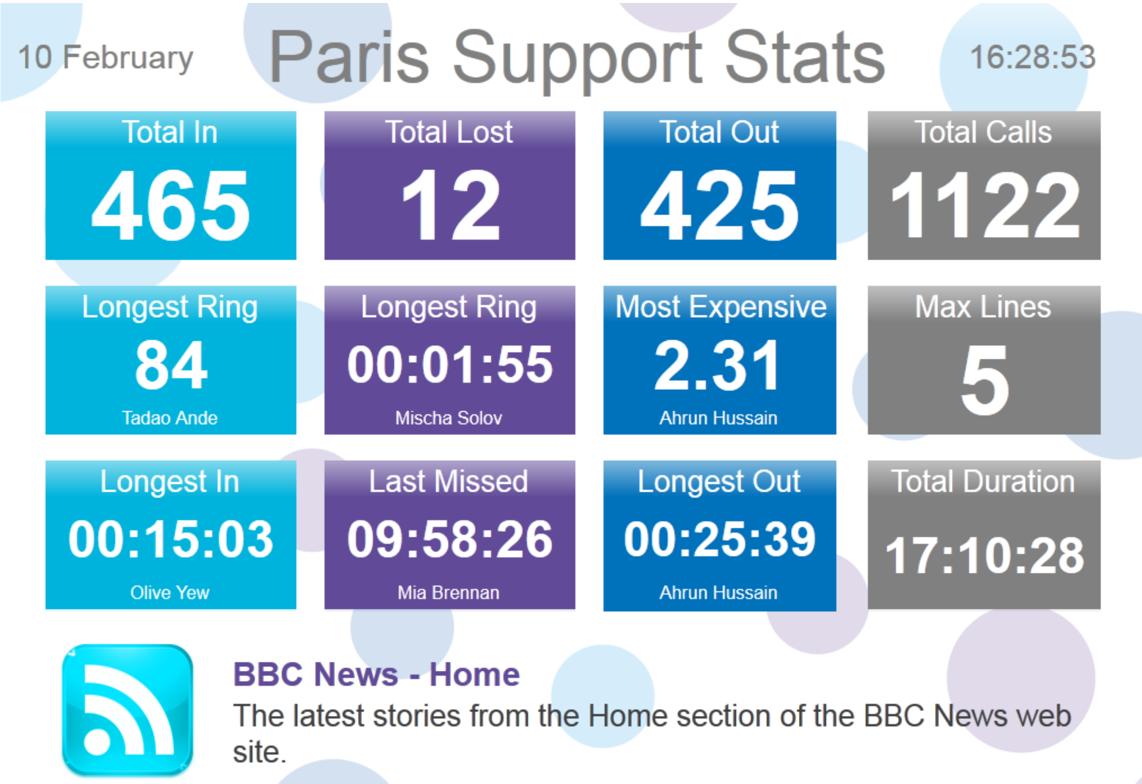
Summary panel

- What is a summary panel?
- Adding a summary panel
- Customising a summary panel
- Summary panel - overview video

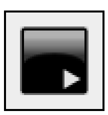
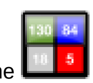
### What is a summary panel?

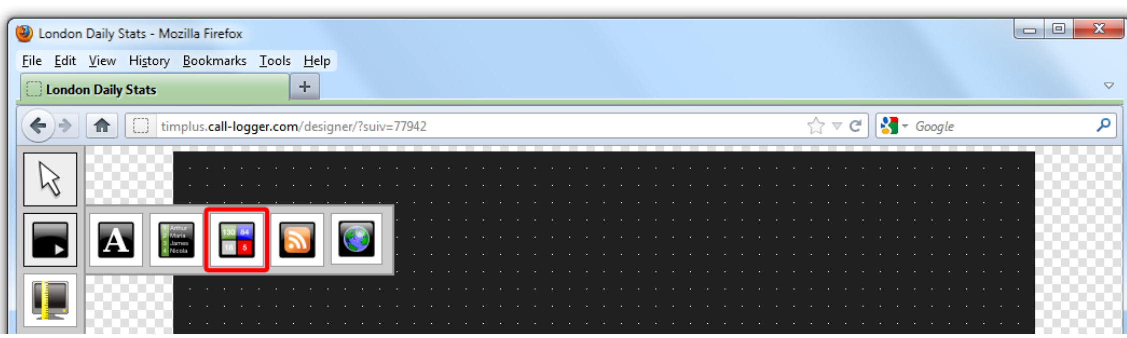
Summary panels are normally used to display call statistics based on a particular call type or call property, e.g. the longest call, the most expensive call, the total number of inbound calls etc.

The display board in the screenshot below displays several summary panels, each of them showing call information grouped by different criteria

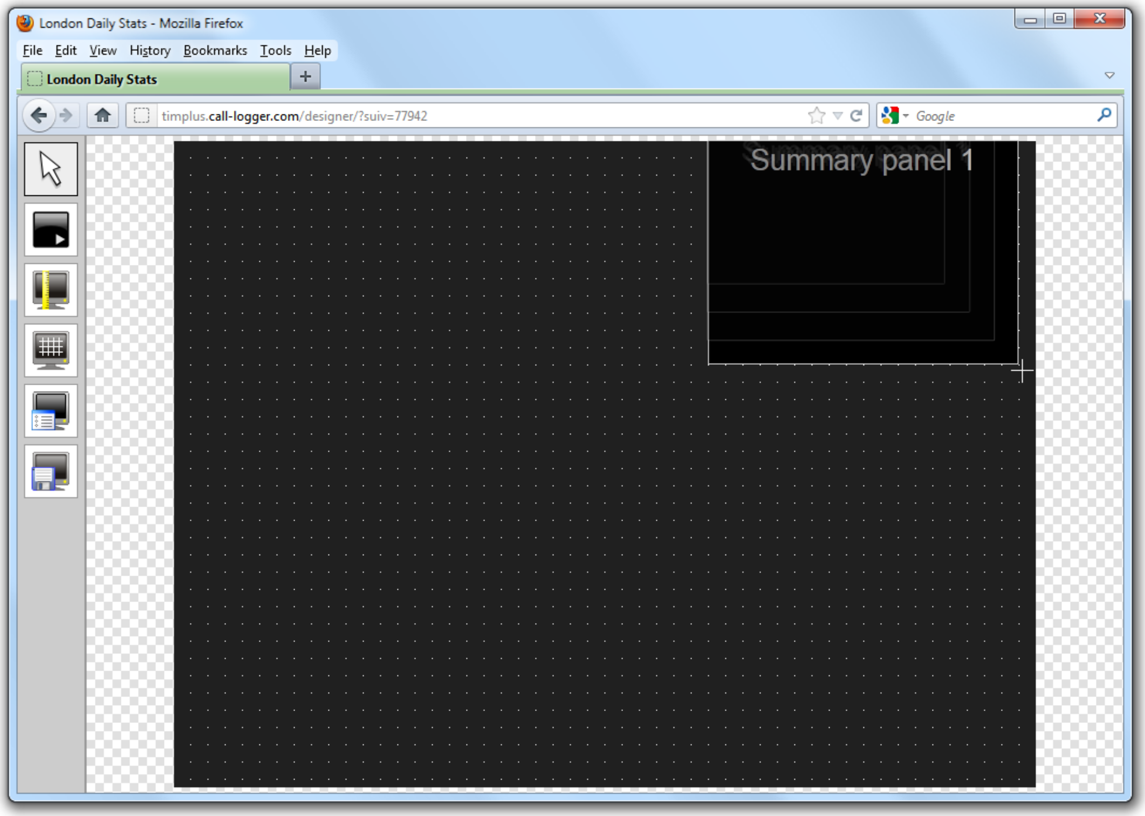



### Adding a summary panel

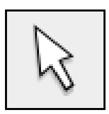
To add a summary panel, click on the  toolbar button to expand the list of panel types and choose the  button, as shown below:

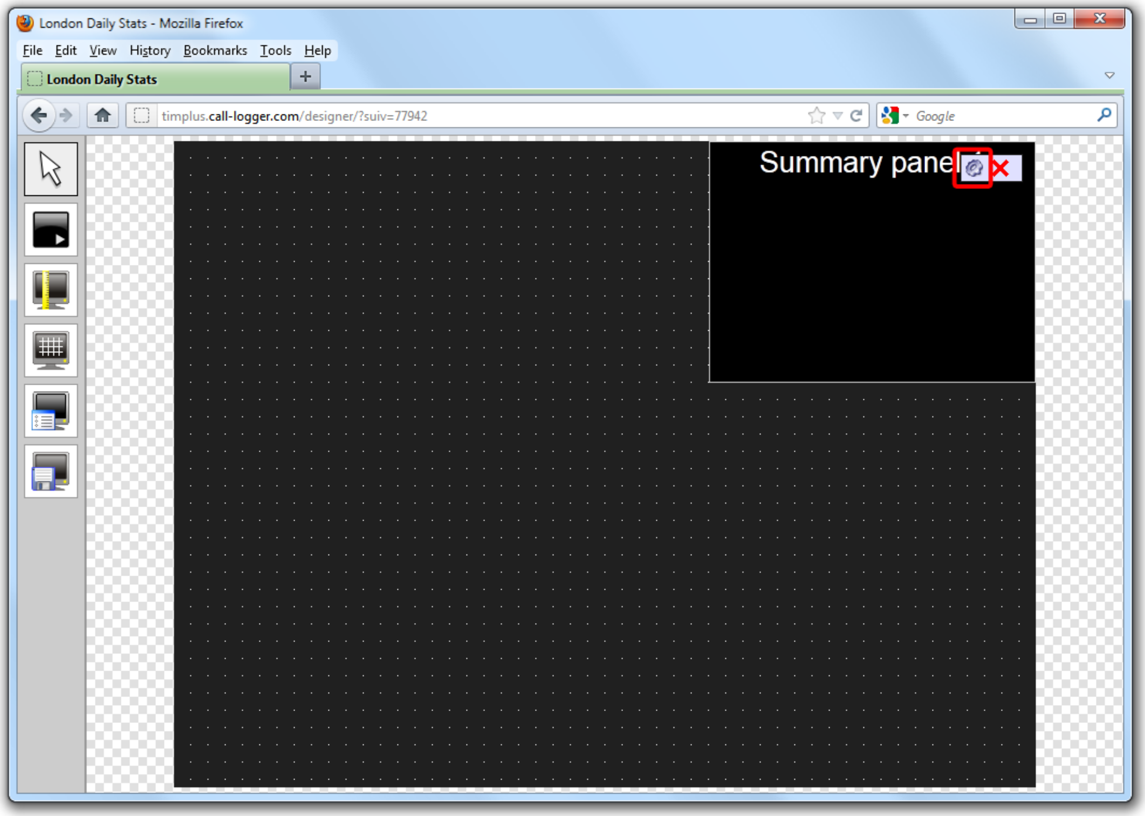



After selecting the summary panel button, the mouse pointer changes into a white crosshair pointer, indicating that the designer is ready to draw your panel. Click and hold your left mouse button, starting at the point defining the upper-left corner of your new panel. Whilst still holding down the left mouse button, drag the marquee that will appear to the point that will define the lower-right corner of your panel, as shown below:

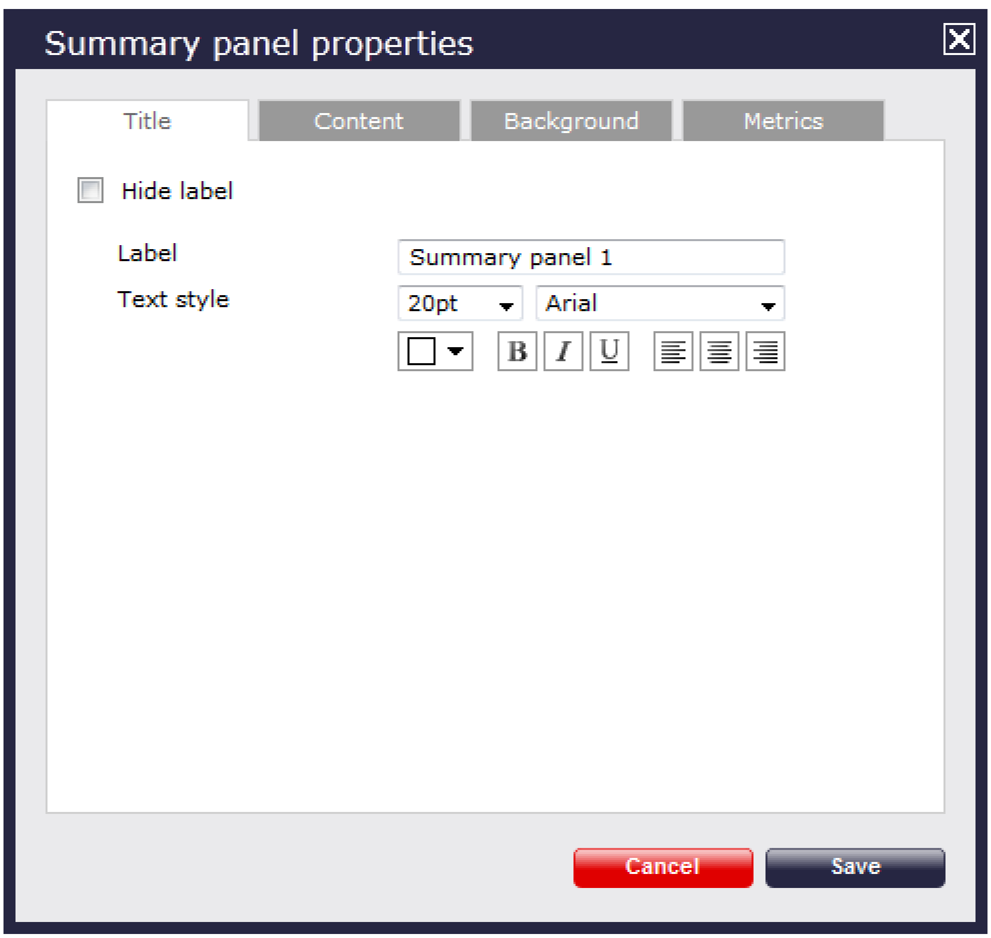



### Customising a summary panel

To customize a summary panel, click on the  toolbar button to switch to panel selection mode. Hover your mouse pointer over the label panel you want to customise and click on the  icon, when it appears towards the top-right corner of the panel, as shown below:

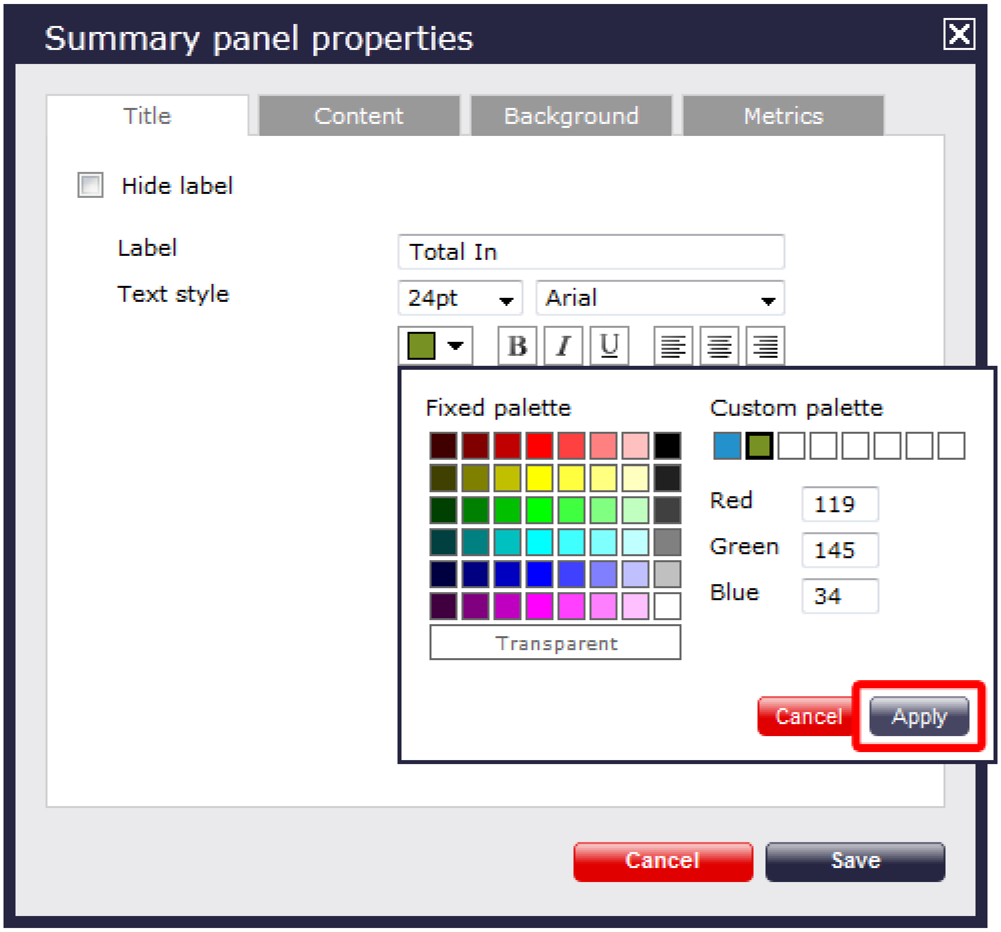



The **Summary panel properties** window will open, containing the following tabs:



### Title

The Title tab allows you to enter the name you want to appear on the summary panel and apply any styling properties, such as font size, font style, text colour, etc.




| Field | Description |
|---|---|
| **Hide label** | Tick this option if you don't want your panel to have a title |
| **Label** | Enter a title for your summary panel |
| **Text style** | Select any styling properties for your panel title, e.g font size, font style or text colour etc. |

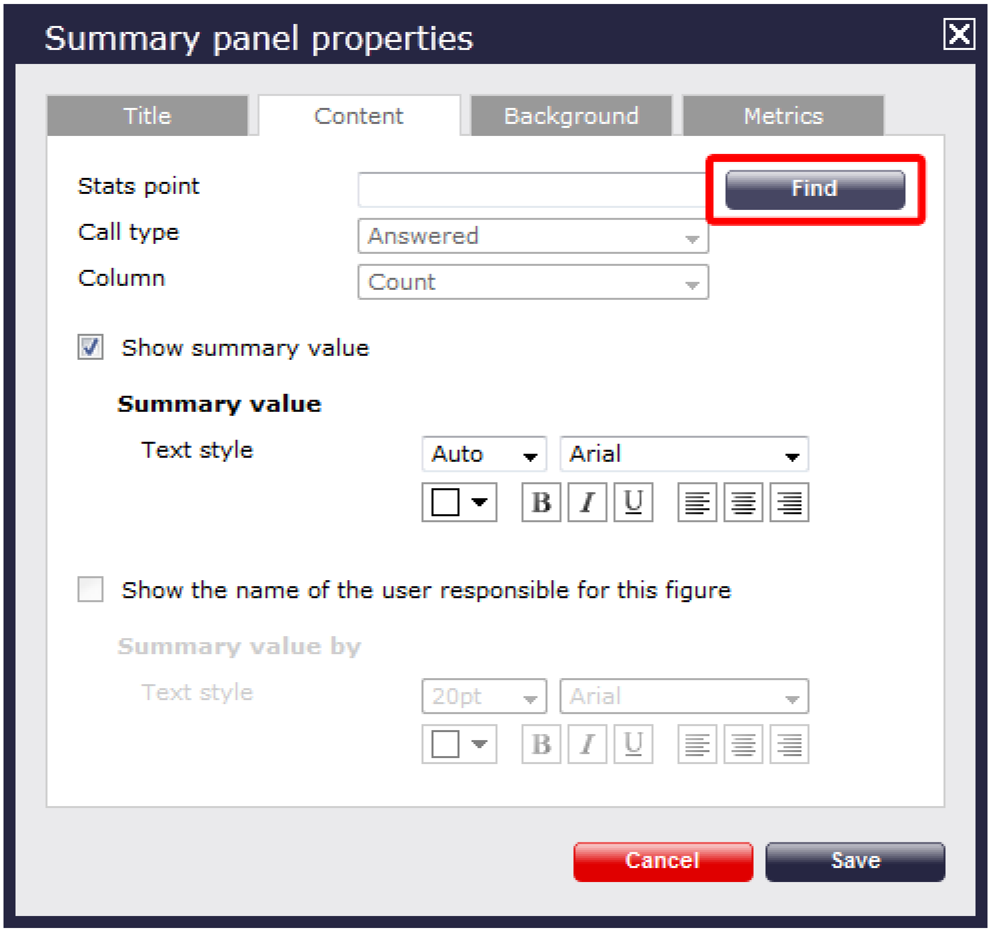
### Content

The Content tab allows you to select the type of call information you want to display in your summary panel.

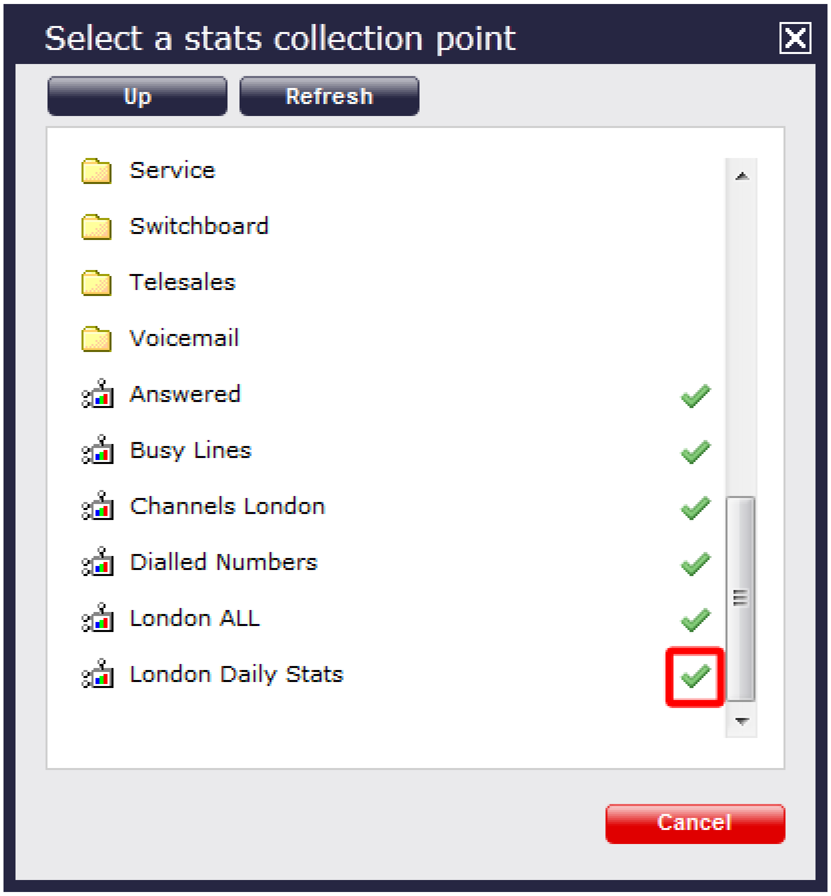
Selecting a stats point

To populate the summary panel with call logging information, you first need to create a stats point object in the Directory to collect data for the site, group or user that you want the summary panel to display.

To choose the entity whose calls you want to display in this panel, select a stats collection point, by clicking on the Find button
.



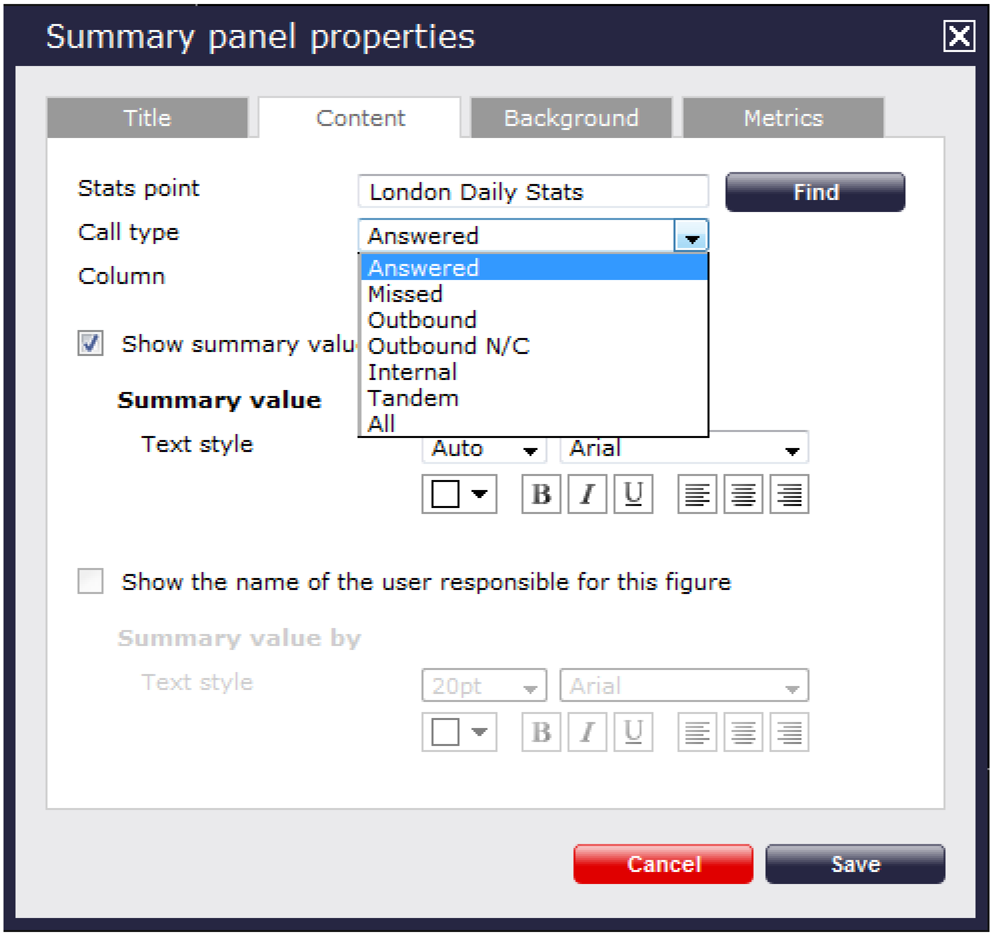

A new window will open, allowing you to drill-down to the site or group level in the Directory, where the stats point object you want to add resides. To select the stats point, click on the  icon alongside it.




This will now appear as your chosen stats point.

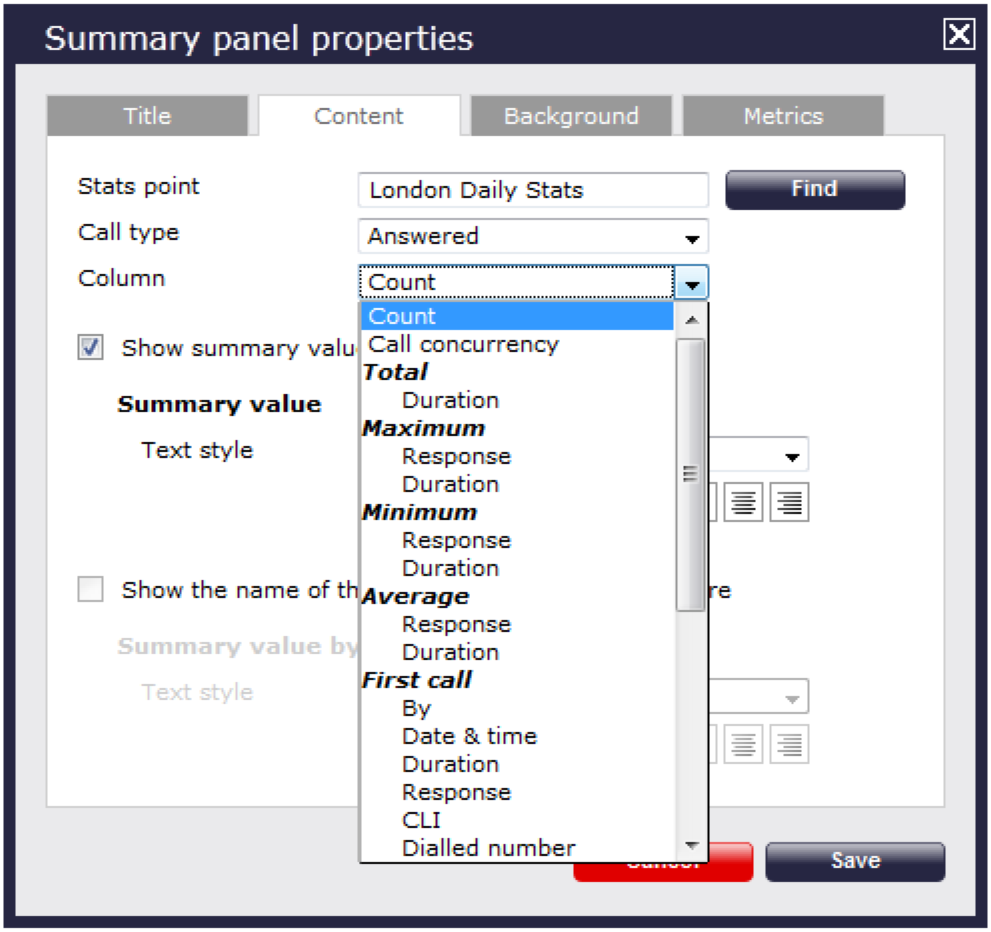
### Selecting the call type

To select the call type you want to display in this column, click on the `Call type` drop-down list and choose from the available options, as shown below:



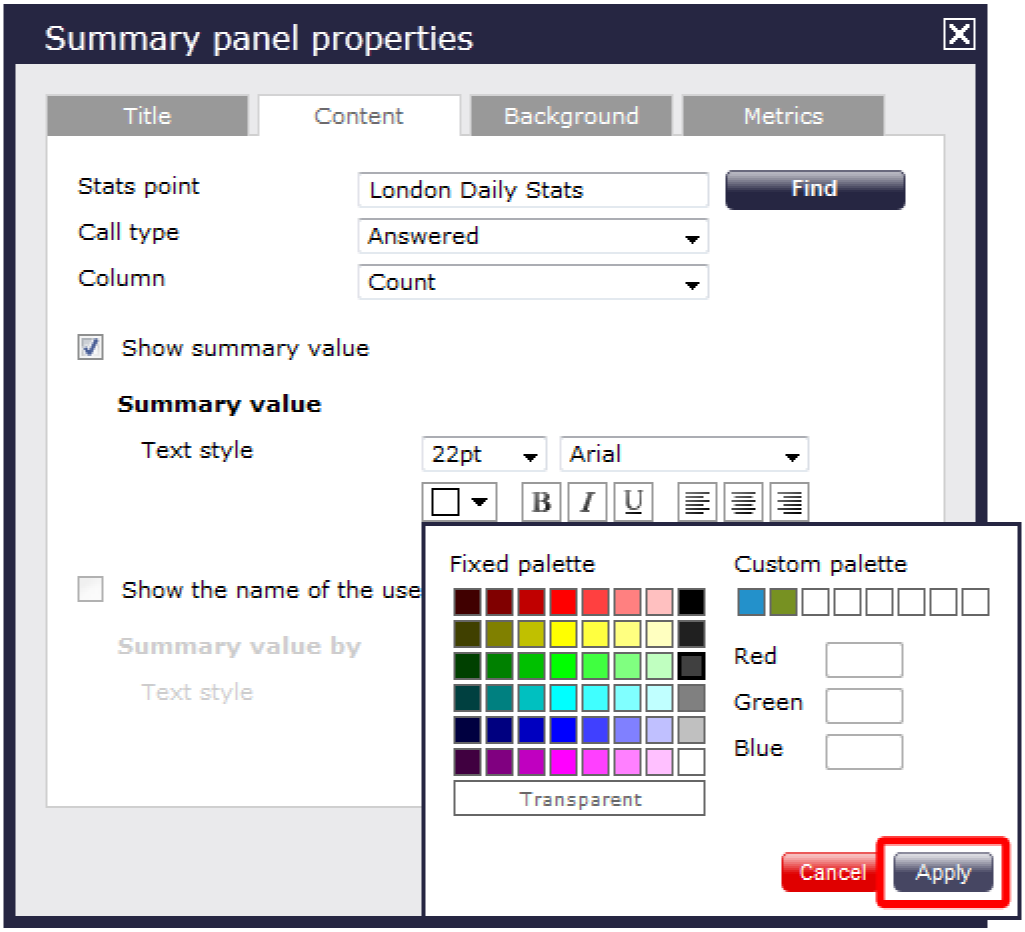

Selecting the information type

To select the type of call information you want to display in the summary panel, such as total duration, response time, etc., click on the **Column** drop-down list and choose from the available options, as shown below:




Show summary values

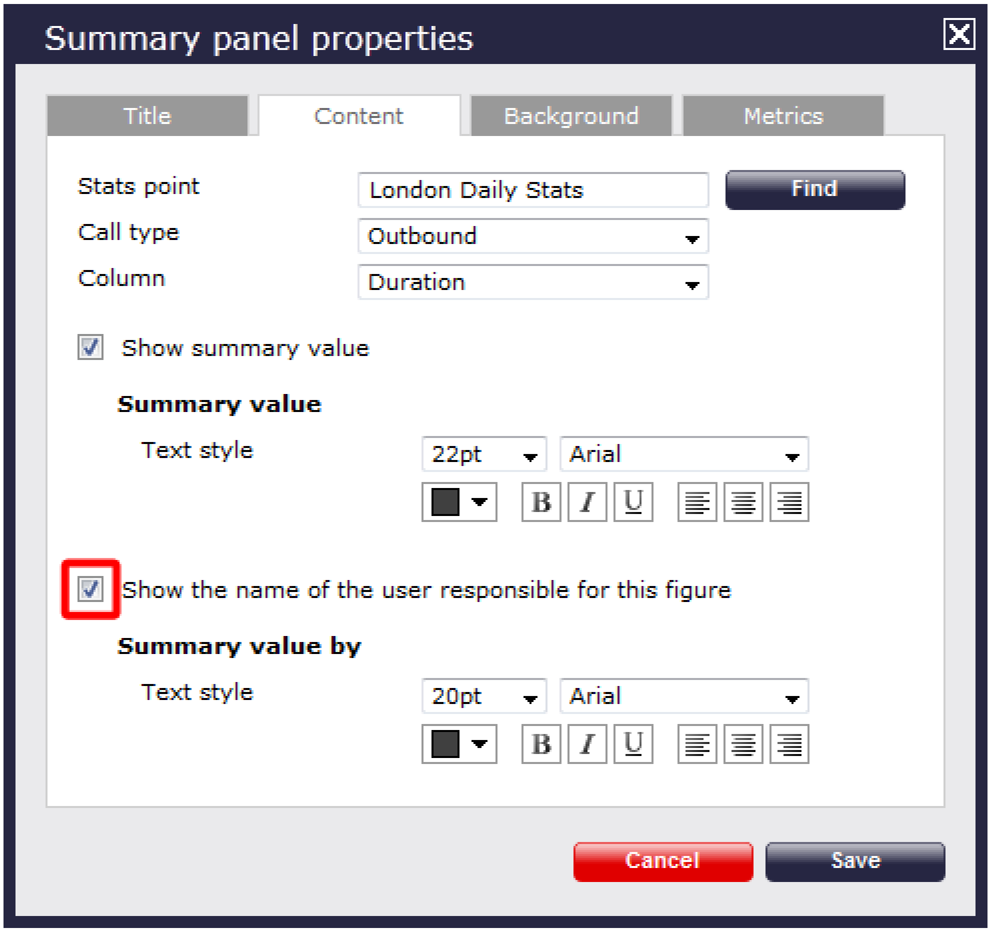
To see only the summary values for the information displayed in this panel, without the textual element, tick the available option and apply any styling properties, if preferred.




### Show the name of the user

To see the name of the user whose call information is displayed in this panel, tick the available option and apply any styling properties, if preferred.

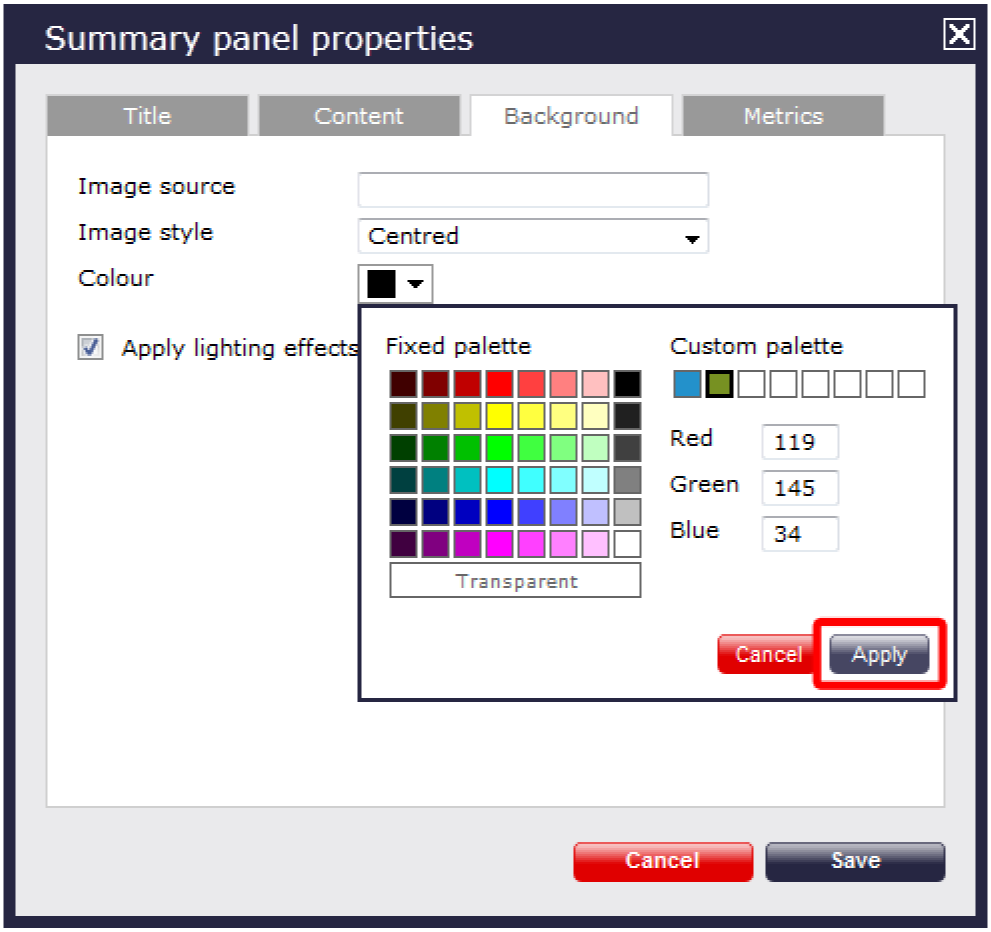
In the example below, we have selected to show the longest outbound call, so in the `Call type` field we have selected **`Outbound`**, and in the `Column` field we have selected **`Maximum Duration`**. Ticking the box to display the name of the user that meets the criteria above, the summary panel will display the outbound call with the max duration and the name of the person who achieved this.




The summary panel of this last example will display as shown below:


## Background

The Background tab allows you to configure the background properties of your summary panel.

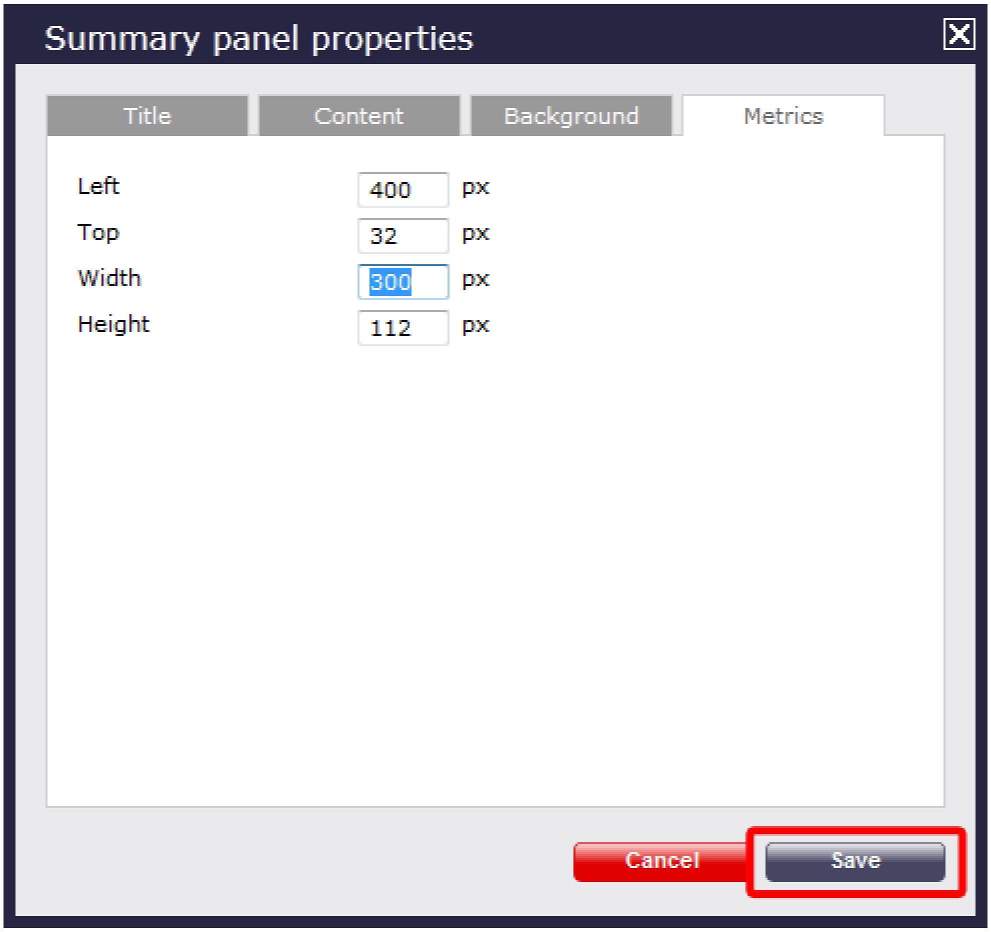



| Field | Description |
| --- | --- |
| **Image source** | If you want your panel to display an image, type its source here. Remember, the path is relative to the folder on disk from which the web content is served, and is different for each class of web user |
| **Image style** | Choose how the image should be displayed |
| **Colour** | Choose the background colour of the panel; if you are adding an image, you may want to select `Transparent` so that this does not interfere with your image |
| **Apply lighting effects to this panel** | Tick this option to apply a shine effect to the entire panel; if you are using the panel to display an image, this may adversely affect how it appears |

The two examples below show the difference between panels with and without lighting effects.


### Metrics

The Metrics tab allows you to define the shape of the panel, by entering values for its position and size.




### Summary panel - overview video

For a live demonstration of how to design and customise a summary panel, watch the video below:

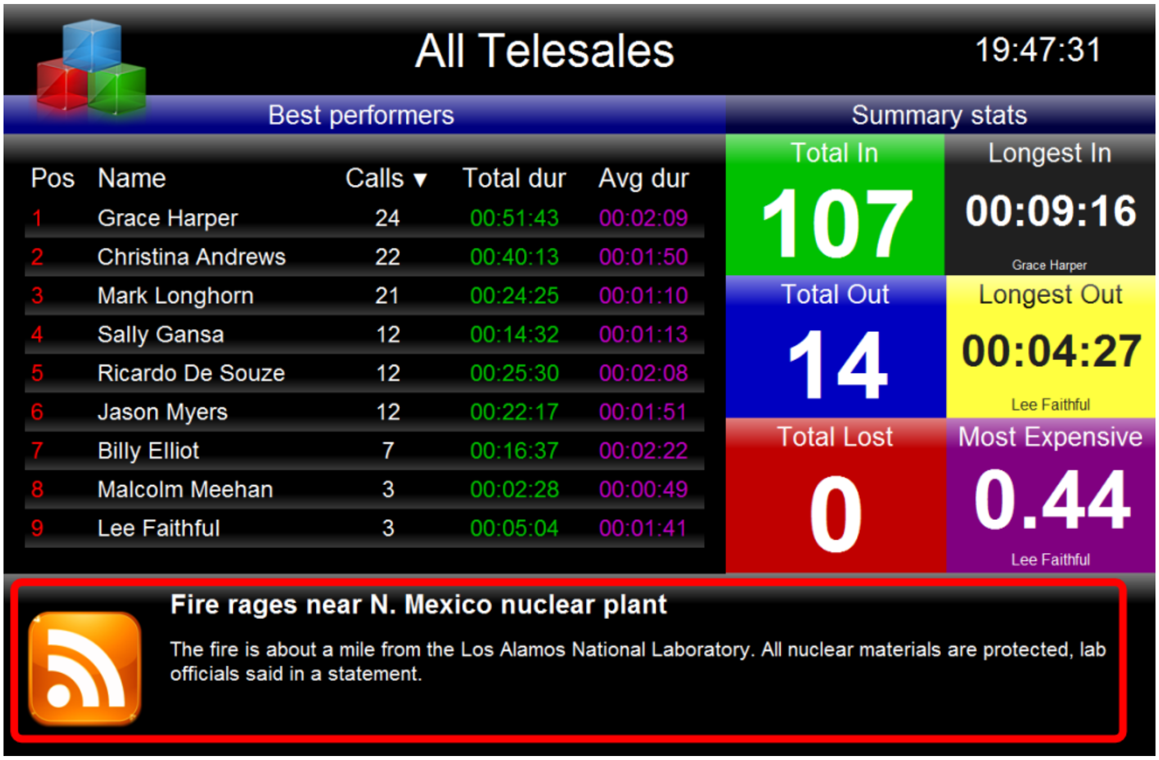
## RSS panel

RSS panel

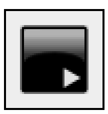


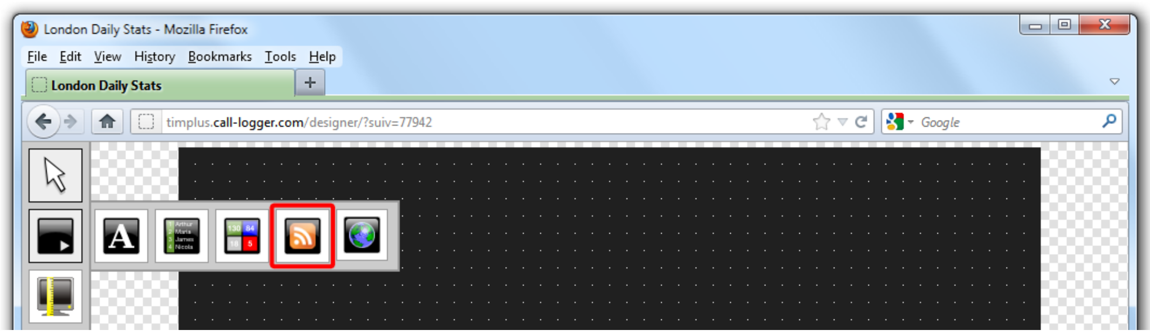
### What is an RSS panel?

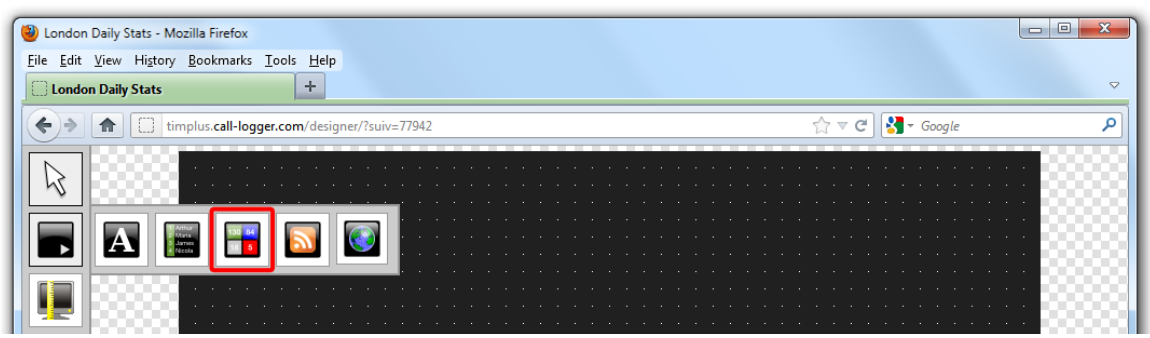
An RSS panel allows you to send a live RSS feed to your display board. The example below shows an RSS panel displayed at the bottom of the board.



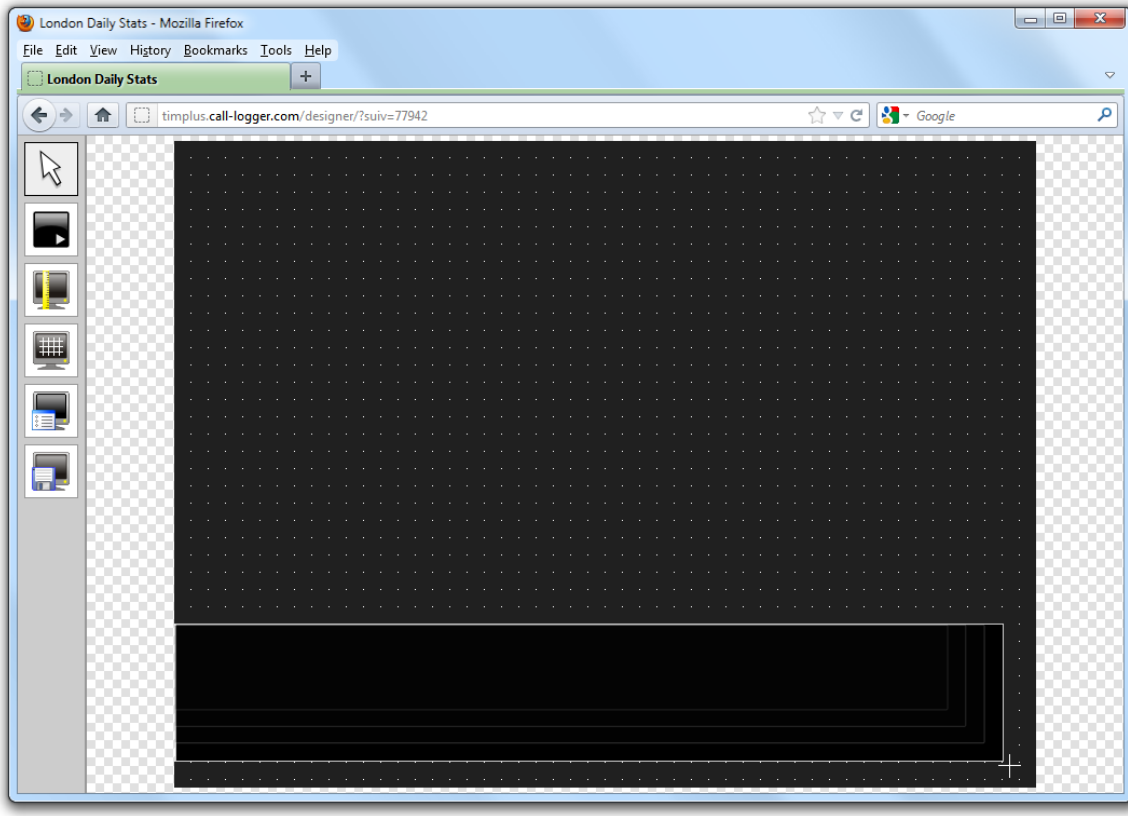

## Adding an RSS panel

To add an RSS panel, click on the  toolbar button to expand the list of panel types and choose the  button, as shown below:

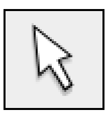


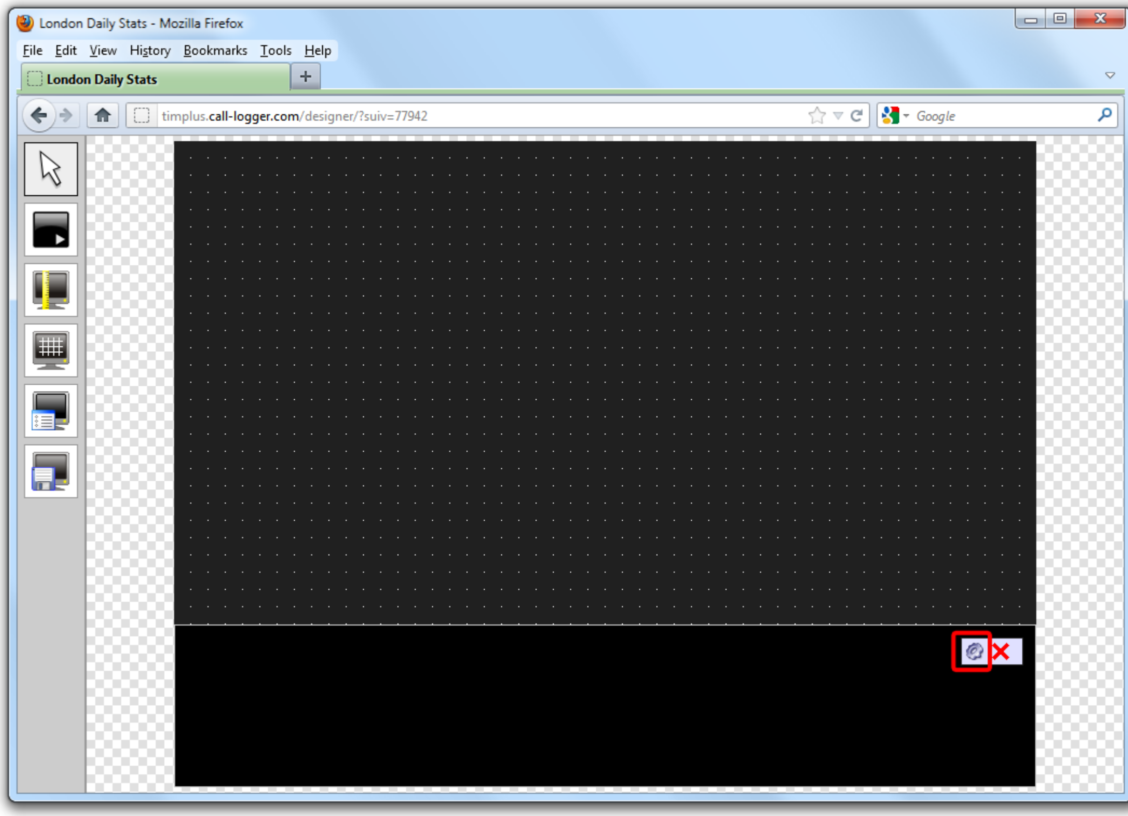




After selecting the RSS panel button, the mouse pointer changes into a white crosshair pointer, indicating that the designer is ready to draw your panel. Click and hold your left mouse button, starting at the point defining the upper-left corner of your new panel. Whilst still holding down the left mouse button, drag the marquee that will appear to the point that will define the lower-right corner of your panel, as shown below:

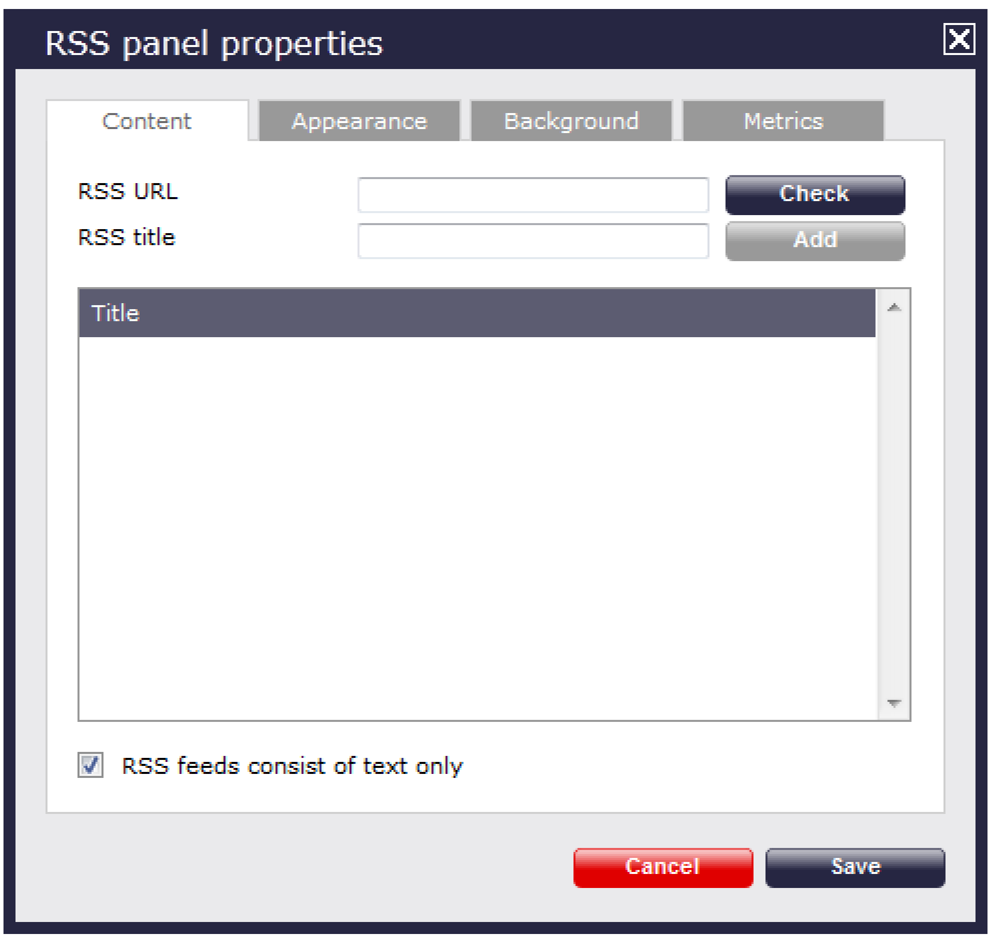



### Customising an RSS panel

To customize an RSS panel, click on the  toolbar button to switch to panel selection mode. Hover your mouse pointer over the label panel you want to customise and click on the  icon, when it appears towards the top-right corner of the panel, as shown below:

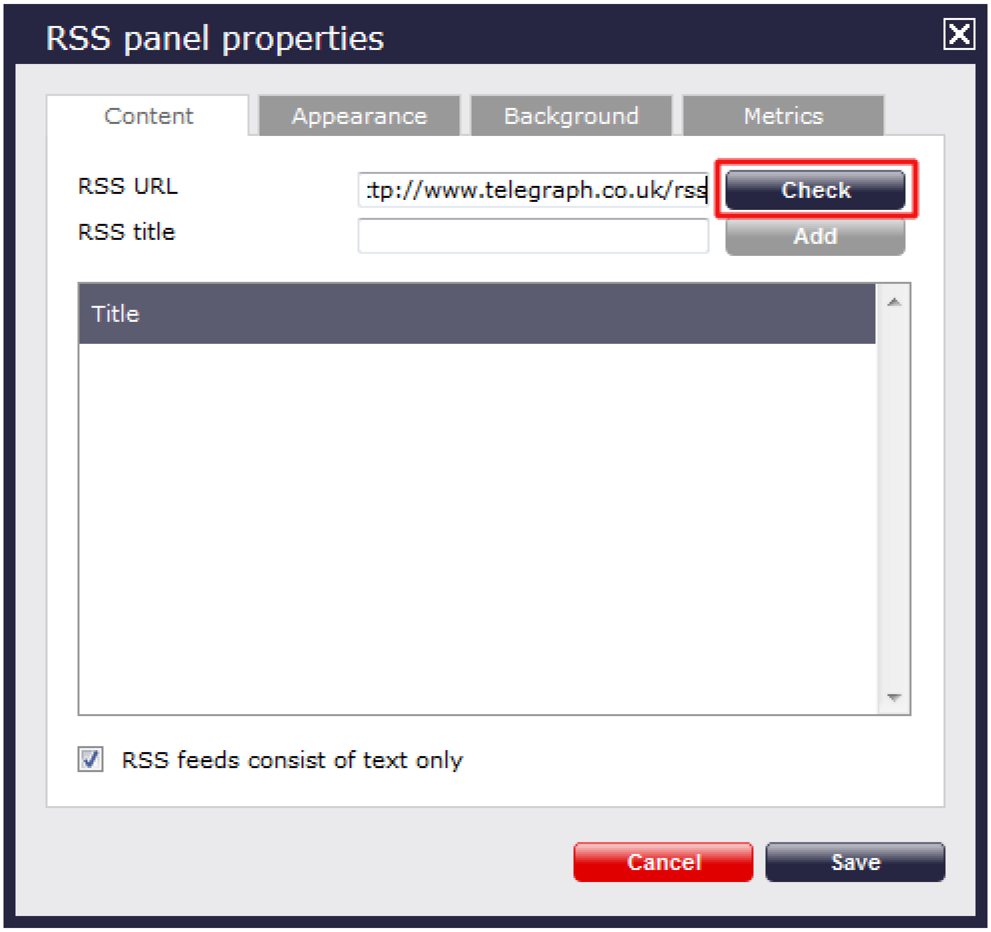



The **`RSS panel properties`** window will open, containing the following tabs:

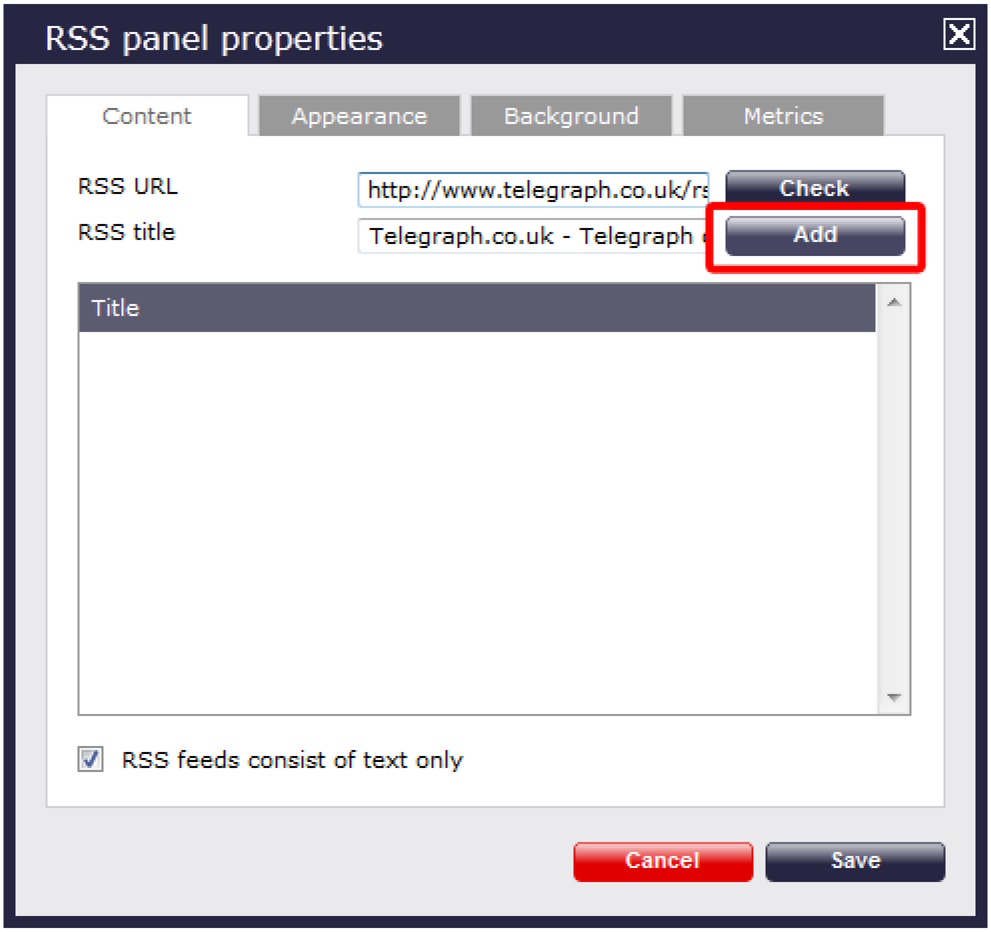


### Content

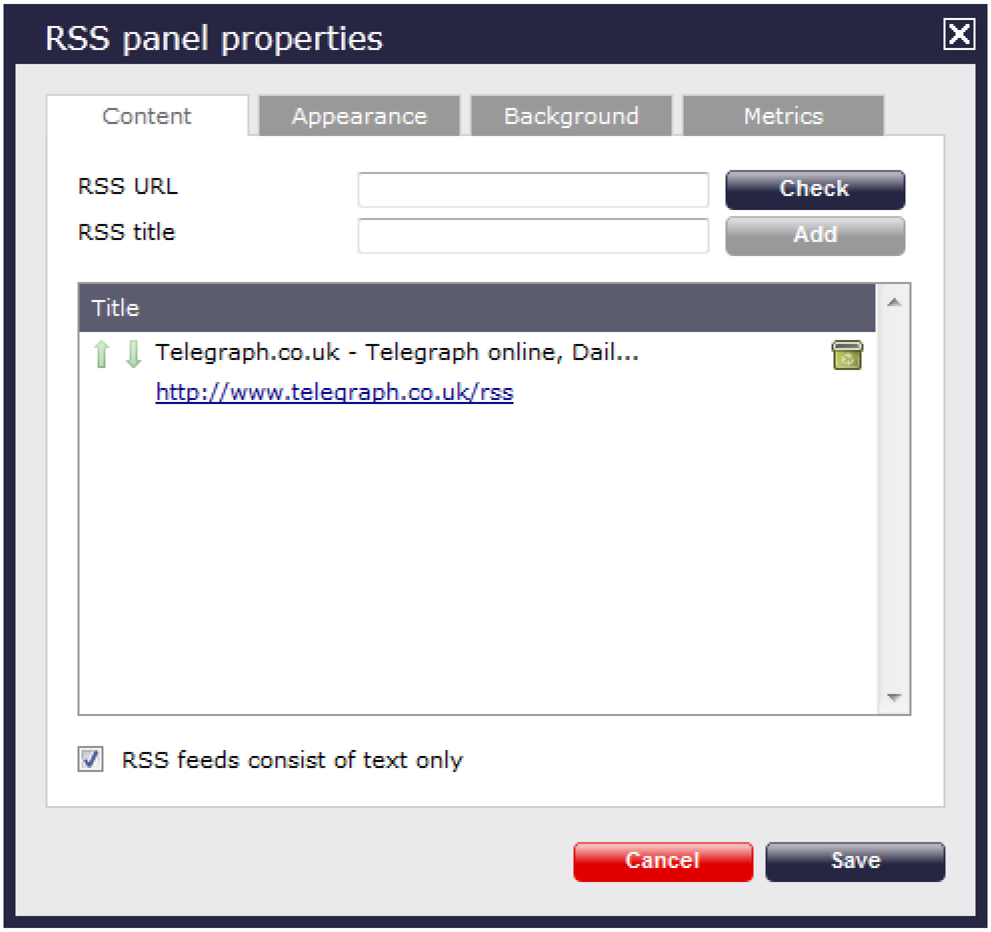
The Content tab allows you to add the URL of your RSS feed, e.g. http://www.telegraph.co.uk/rss. To verify that the feed is valid, click on the Check button.




If the entry is valid, the title of the RSS feed will appear in the **RSS title** field. Click on the Add button to add this feed to your RSS panel, as shown below:



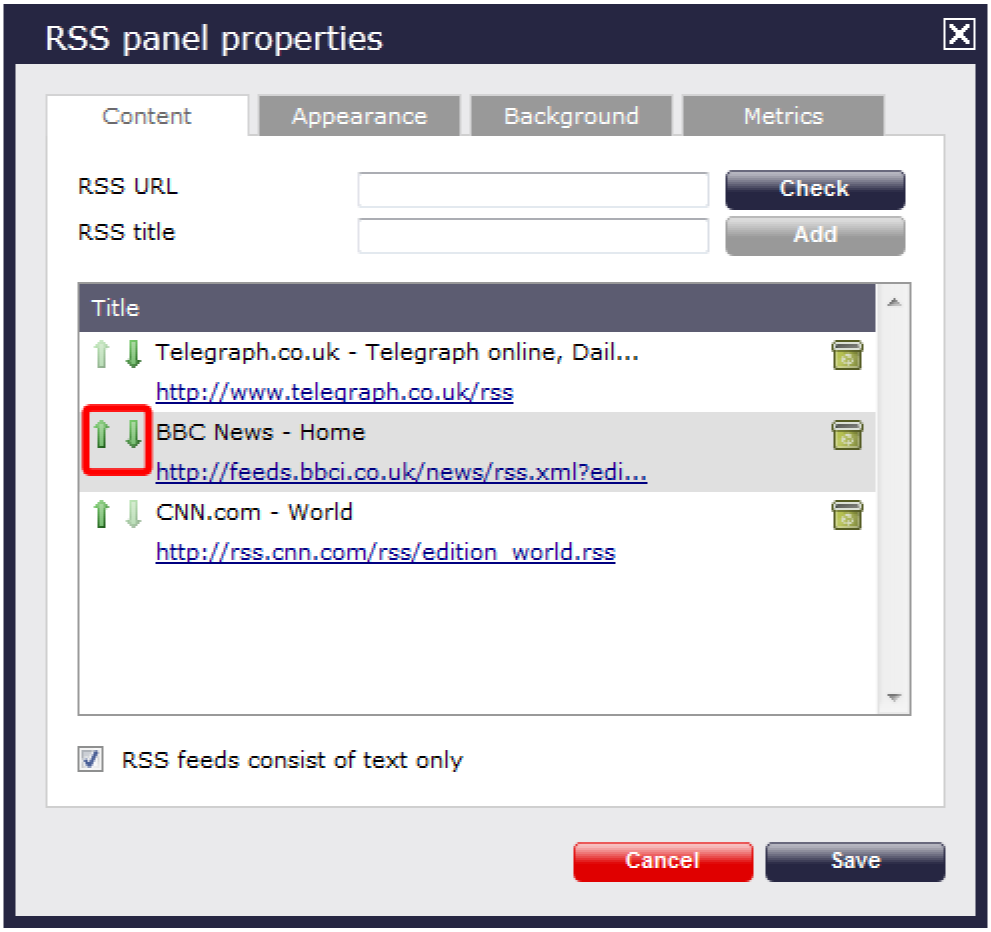

By default, this will appear in your RSS panel as follows:




To add another RSS feed to your panel, follow the same procedure as described above.

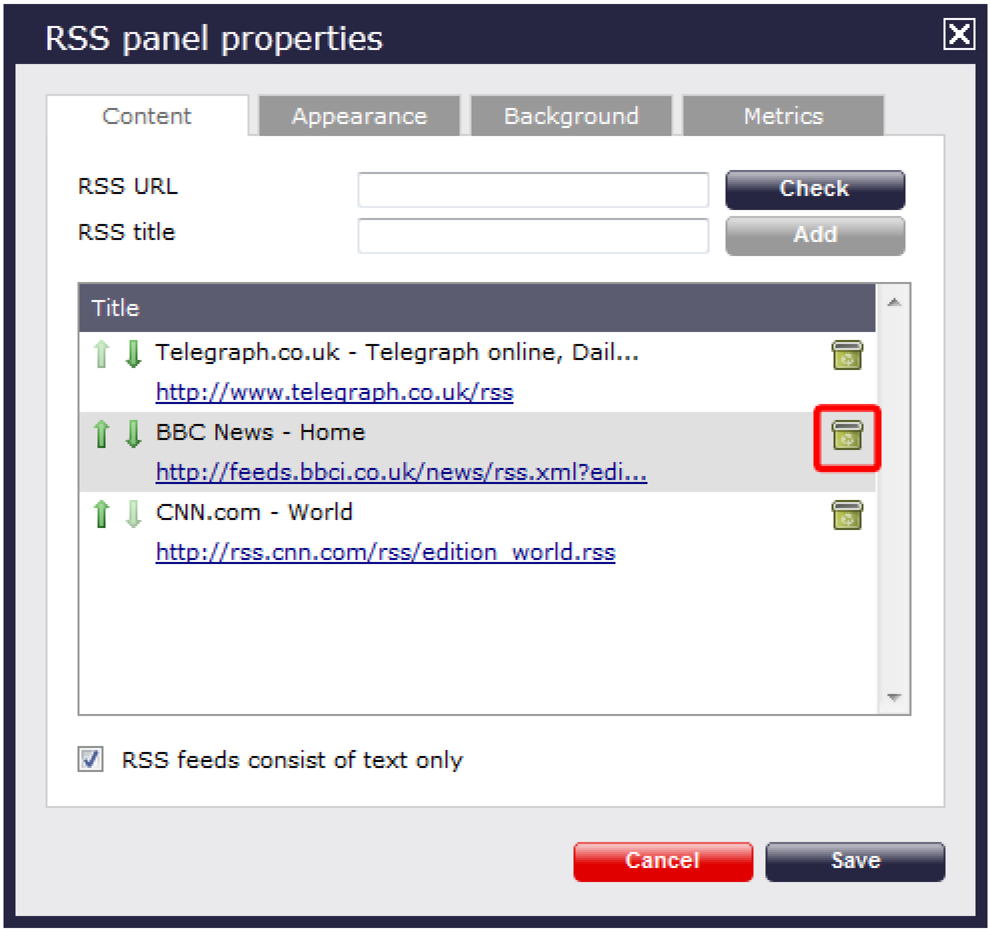
### Reordering RSS feeds

If your RSS panel contains more than one RSS feed, you can change the order they will appear on your display board, by clicking on the ⇧ ⇩ icons alongside each feed, as shown below:



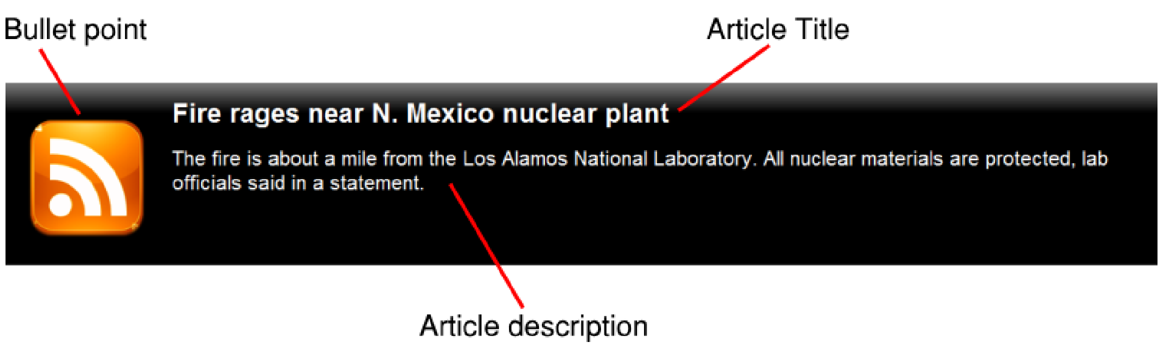

### Deleting an RSS feed

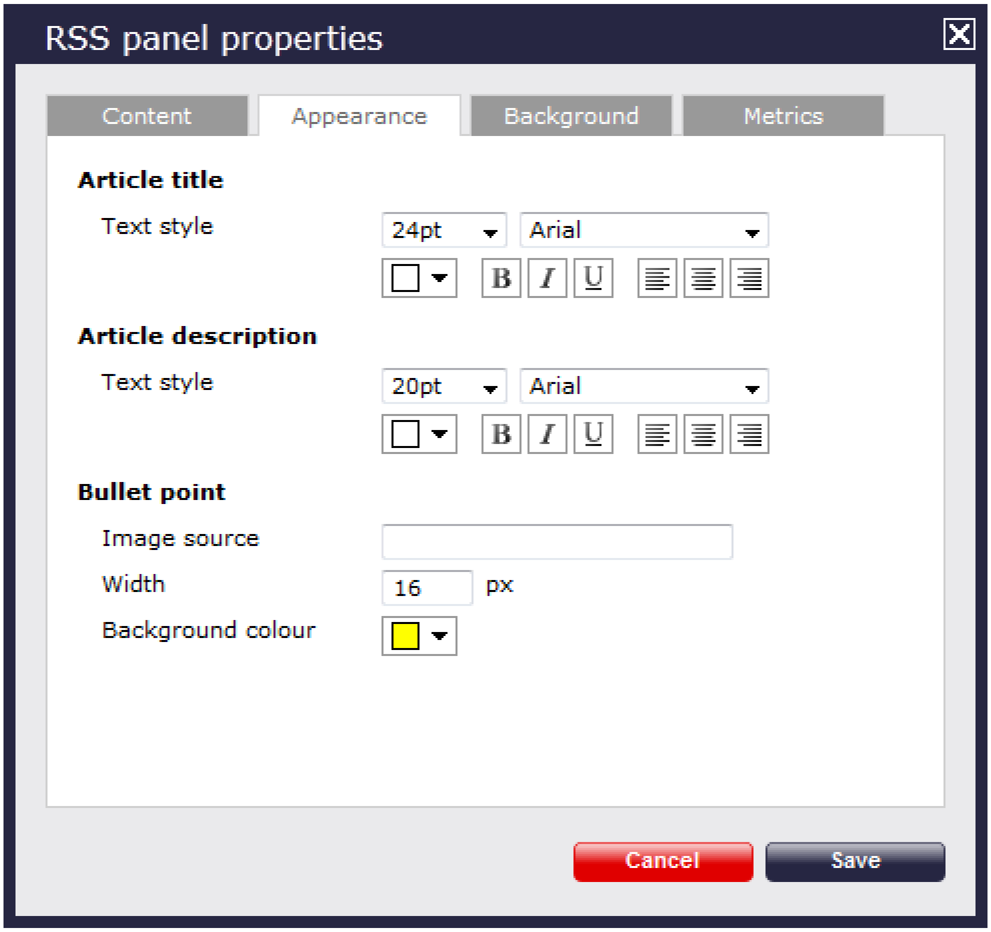
To delete an RSS feed from the panel, click on the  icon as shown below:




### Appearance

The Appearance tab allows you change the look of your RSS feed, by amending one or more of the following properties: the article title, the article description and the bullet point, as shown below:





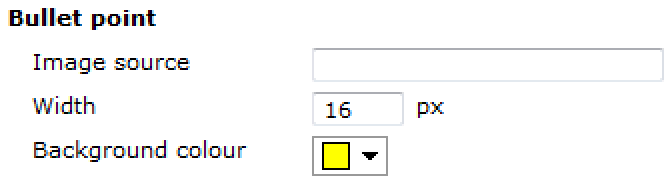

### Article title

Apply any styling properties, such as font size, font style or text colour, if you want to change the appearance of your article title.


### Article description

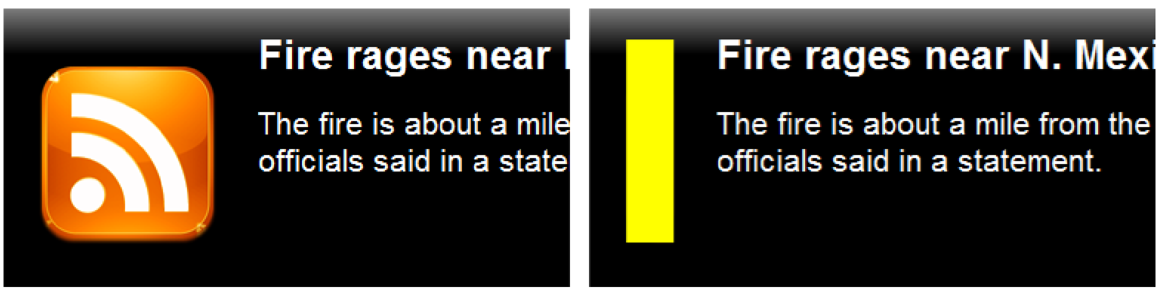
Apply any styling properties, such as font size, font style or text colour, if you want to change the appearance of your article description.


### Bullet point



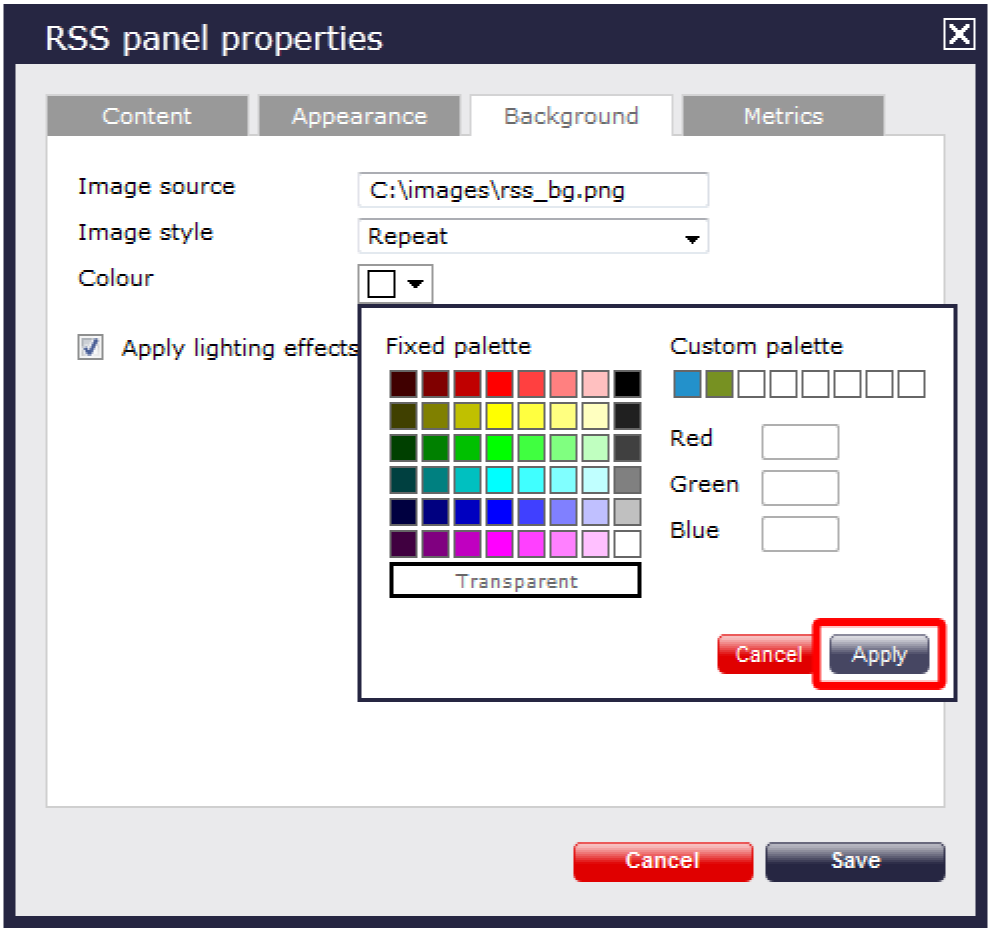

| Field | Description |
|---|---|
| **Image source** | To use an image rather than a plain colour as your bullet point, enter its source here; the path is relative to the folder on disk from which the web content is served, and is different for each class of web user; the background colour should be set as `Transparent`, so it does not interfere with your image |
| **Width** | Define the width of the image, in pixels |
| **Background colour** | If you don't want to use an image as your bullet point, you can select a background colour |

The example below shows two different bullet point implementations of the same RSS feed. On the left, you can see an image as a bullet point, whereas on the right the bullet point is a coloured rectangle of specific width.




### Background

The Background tab allows you to configure the background properties of your RSS panel.



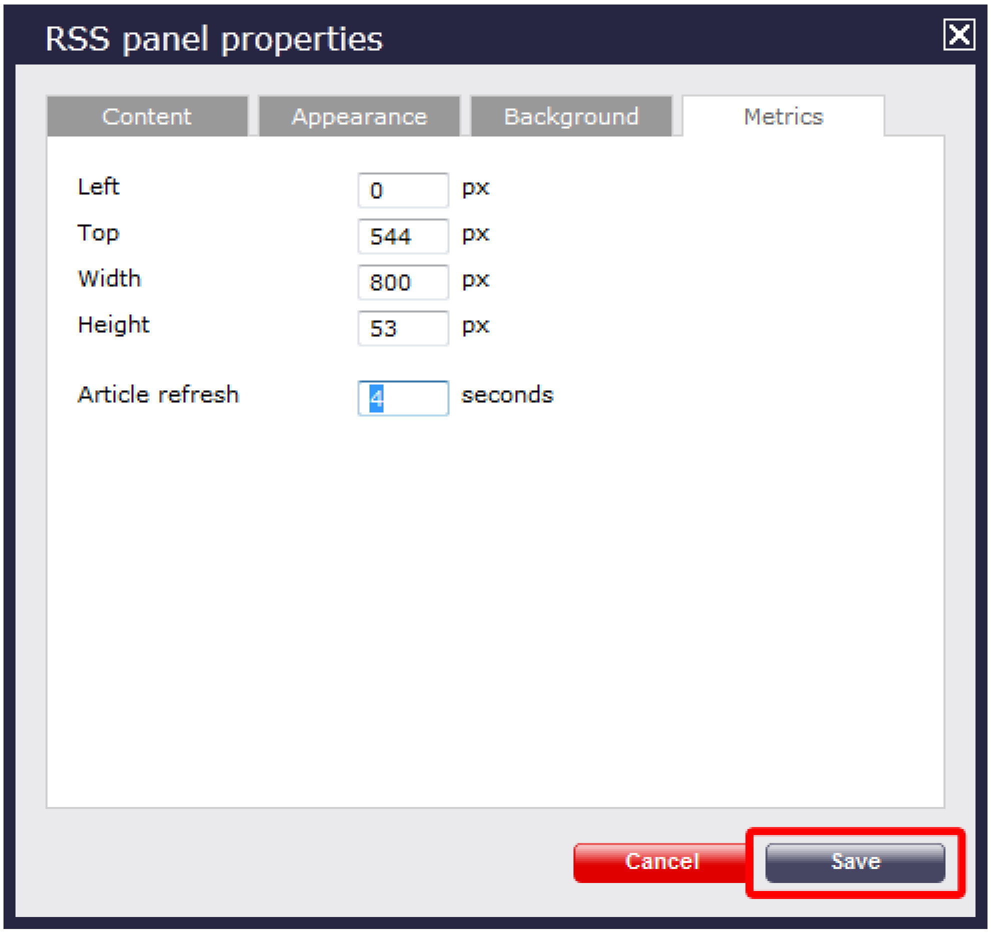

| Field | Description |
|---|---|
| **Image source** | If you want your panel to display an image, type its source here. Remember, the path is relative to the folder on disk from which the web content is served, and is different for each class of web user |
| **Image style** | Choose how the image should be displayed |
| **Colour** | Choose the background colour of the panel; if you are adding an image, you may want to select **`Transparent`** so that this does not interfere with your image |
| **Apply lighting effects to this panel** | Tick this option to apply a shine effect to the entire panel; if you are using the panel to display an image, this may adversely affect how it appears |

The two examples below show the difference between panels with and without lighting effects.


It is recommended that you check with the RSS feed provider that they are happy for you to use their feed.

#### Metrics

The Metrics tab allows you to define the shape of the panel, by entering values for its position and size. You are also given the option to determine the refresh frequency of the page, by entering a value in the `Article refresh` box.




When you have finished configuring the properties of your RSS panel, click on the Save button to apply the changes.

### RSS panel - overview video

For a live demonstration of how to design and customise an RSS panel, watch the video below:

## Web panel

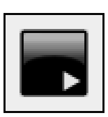
Web panel

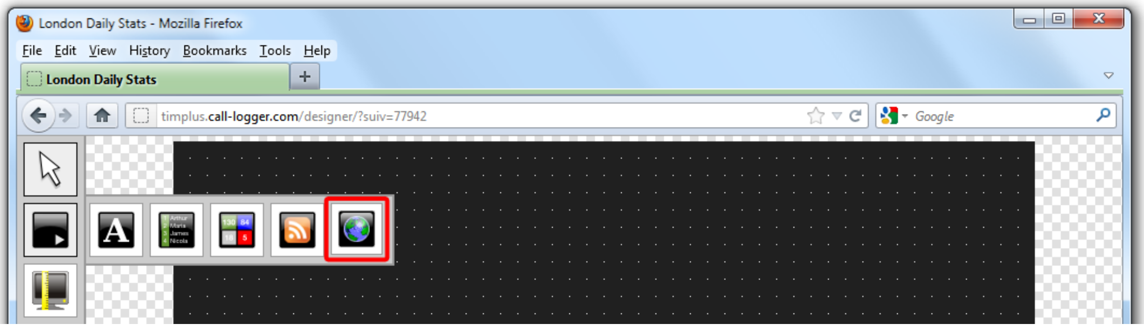


### What is a web panel?

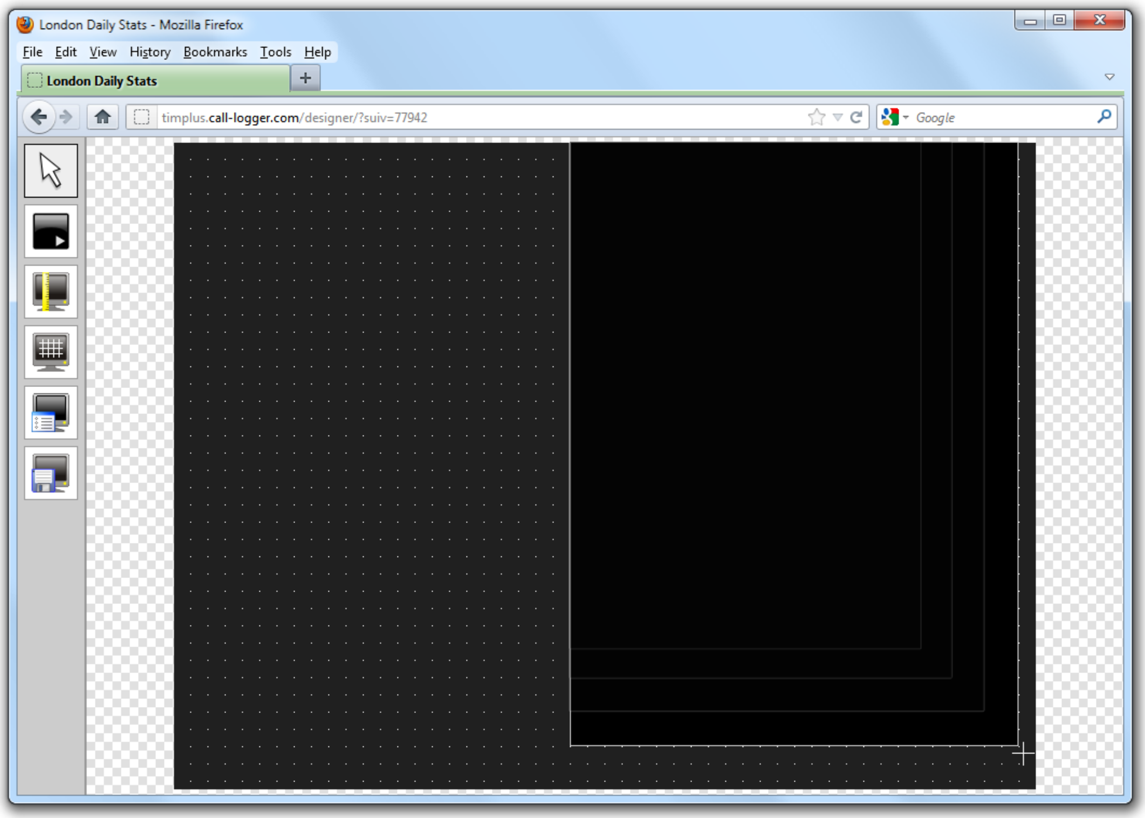
A web panel allows you to display a web page in any section of your display board. In the example below, the BBC News page is displayed on the right-hand side of the board, alongside a leaderboard panel.


### Adding a web panel

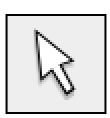
To add a web panel, click on the  toolbar button to expand the list of panel types and choose the  button, as shown below:

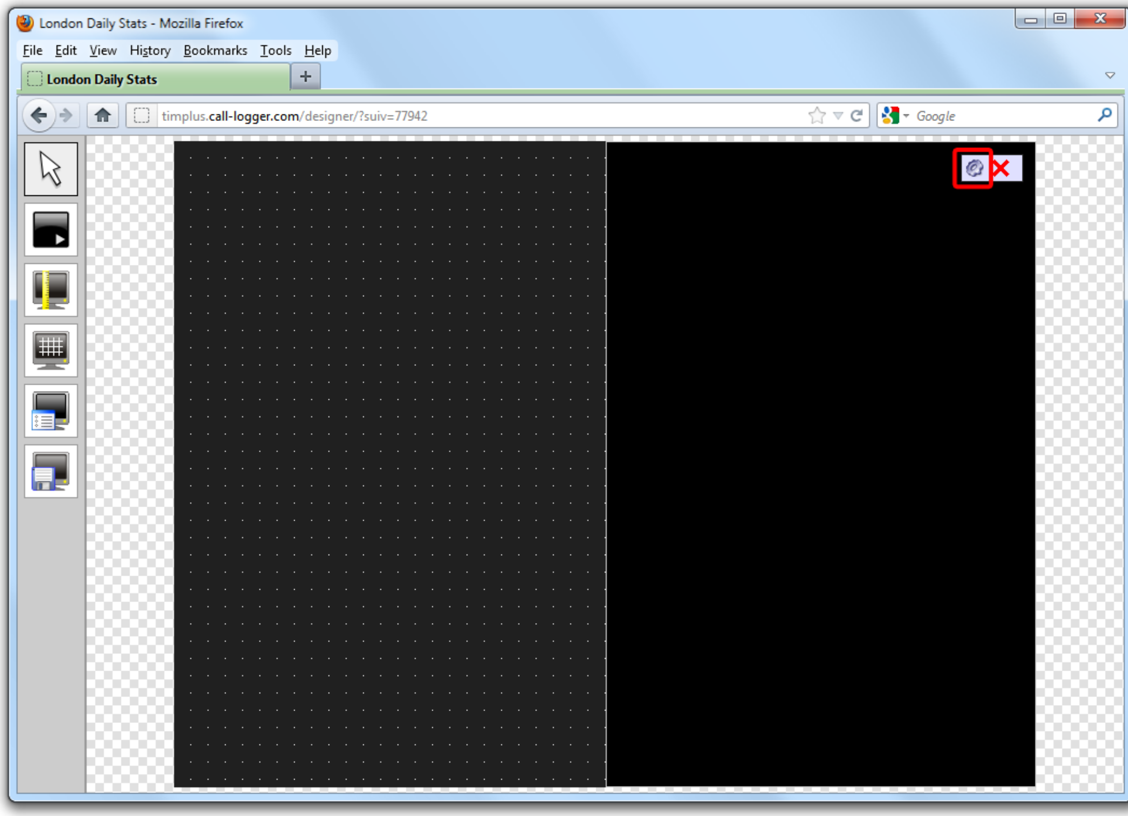



After selecting the web panel button, the mouse pointer changes into a white crosshair pointer, indicating that the designer is ready to draw your panel. Click and hold your left mouse button, starting at the point defining the upper-left corner of your new panel. Whilst still holding down the left mouse button, drag the marquee that will appear to the point that will define the lower-right corner of your panel, as shown below:

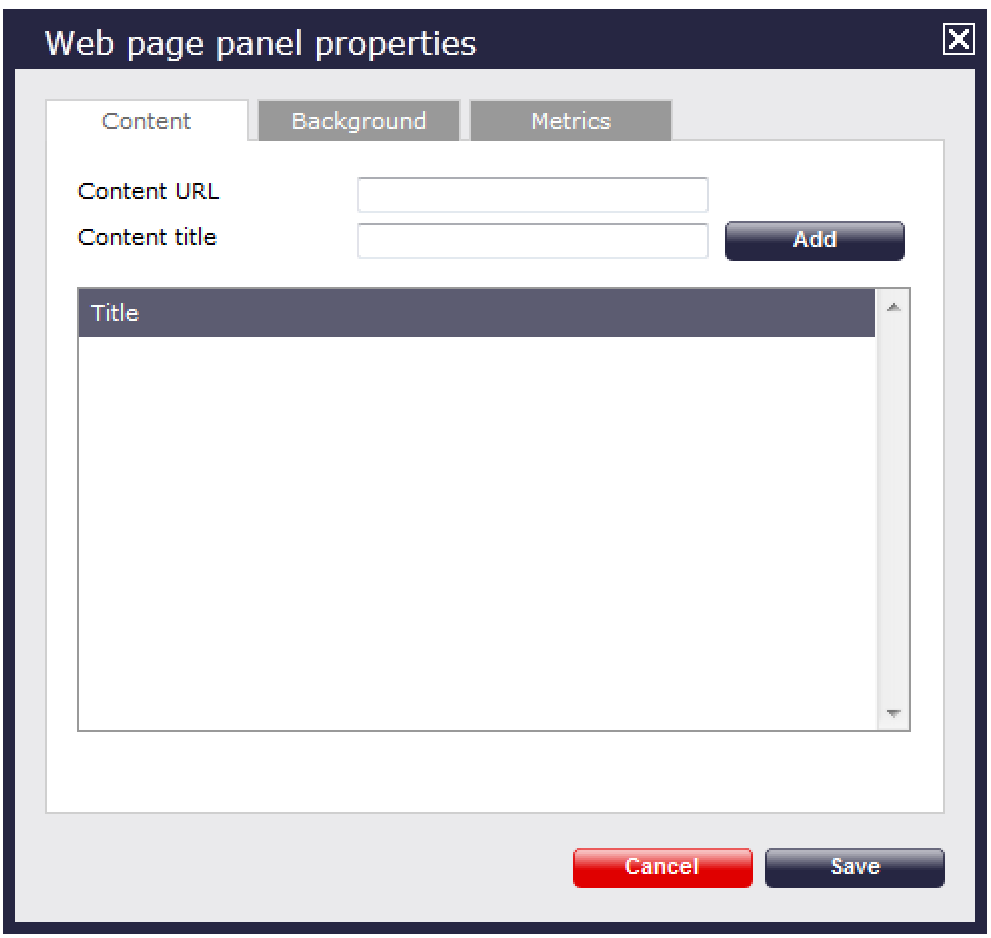



## Customising a Web panel

To customize a web panel, click on the  toolbar button to switch to panel selection mode. Hover your mouse pointer over the label panel you want to customise and click on the  icon, when it appears towards the top-right corner of the panel, as shown below:

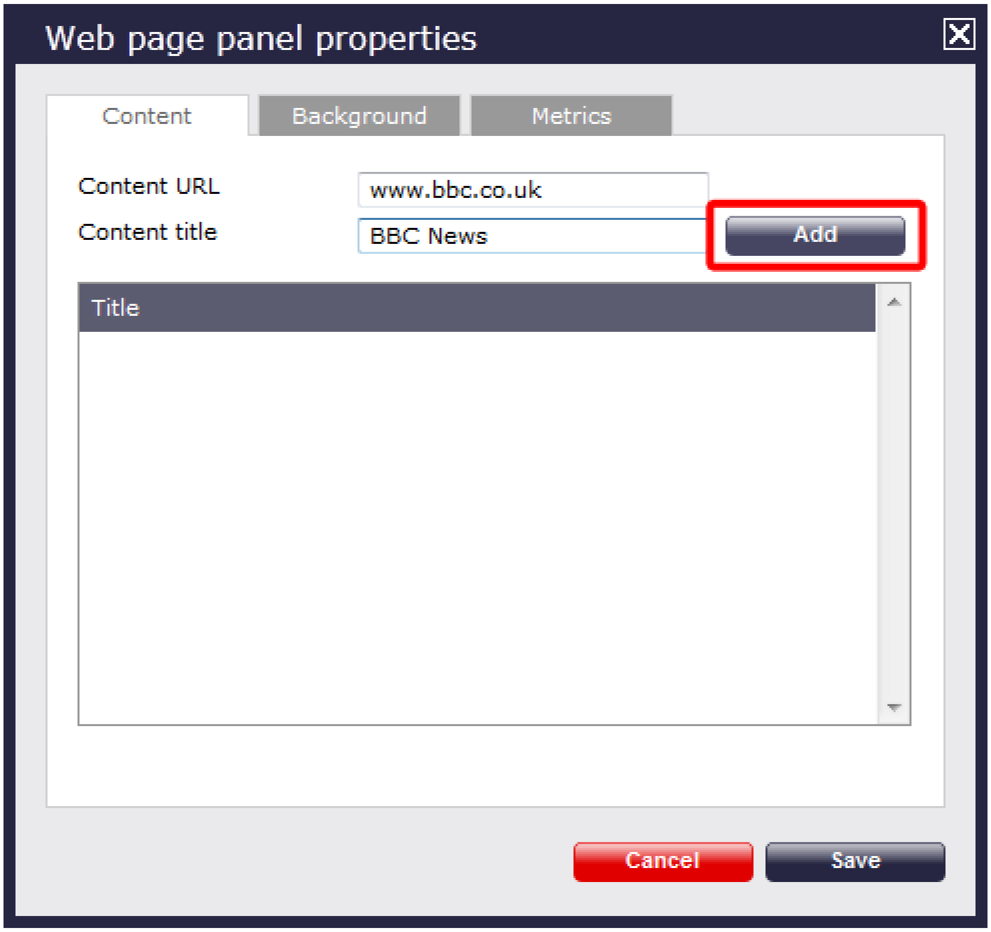



The **`Web page panel properties`** window will open, containing the following tabs:



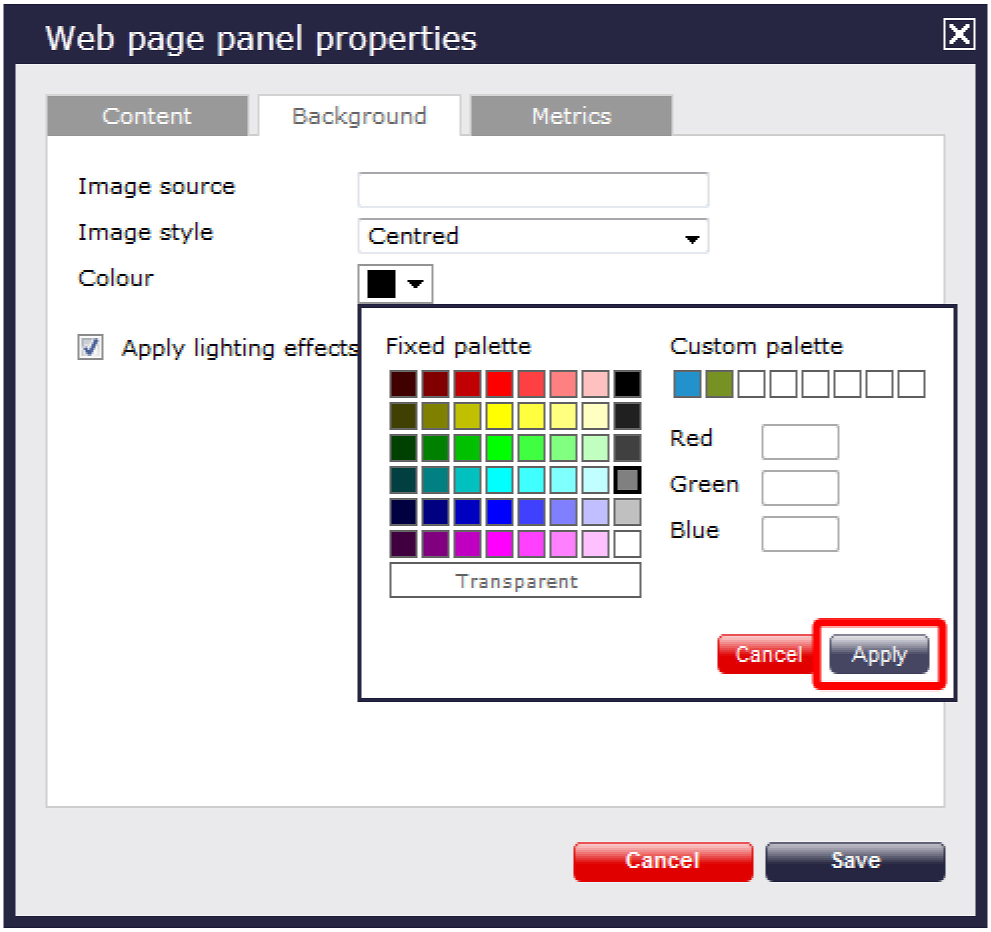
### Content

The Content tab allows you to add the URL and title of the web page you want to display. Click on the Add button to add the web page to the panel, as shown below:




### Background

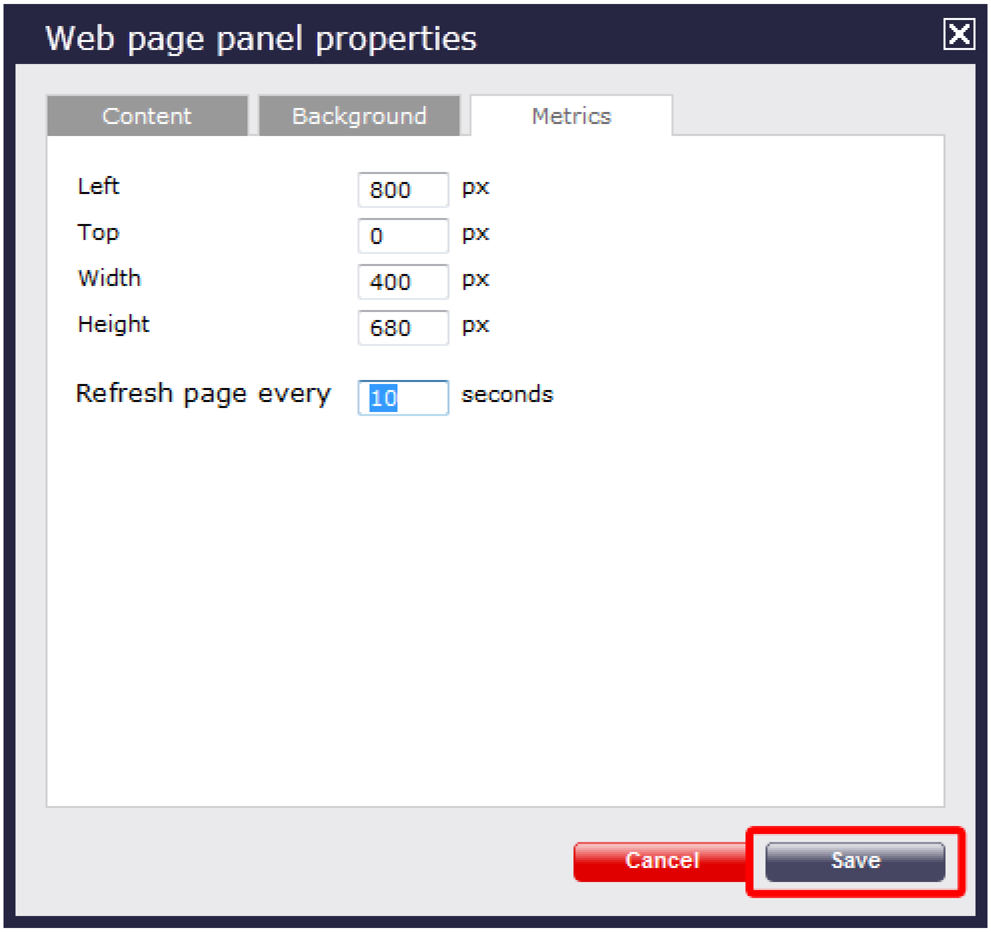
The Background tab allows you to configure the background properties of your web panel.




| Field | Description |
|---|---|
| **Image source** | If you want your panel to display an image, type its source here. Remember, the path is relative to the folder on disk from which the web content is served, and is different for each class of web user |
| **Image style** | Choose how the image should be displayed |
| **Colour** | Choose the background colour of the panel; if you are adding an image, you may want to select `Transparent` so that this does not interfere with your image |
| **Apply lighting effects to this panel** | Tick this option to apply a shine effect to the entire panel; if you are using the panel to display an image, this may adversely affect how it appears |

### Metrics

The Metrics tab allows you to define the shape of the panel, by entering values for its position and size. You are also given the option to determine the refresh frequency of the page, by entering a value in the `Refresh page` box, as shown below:



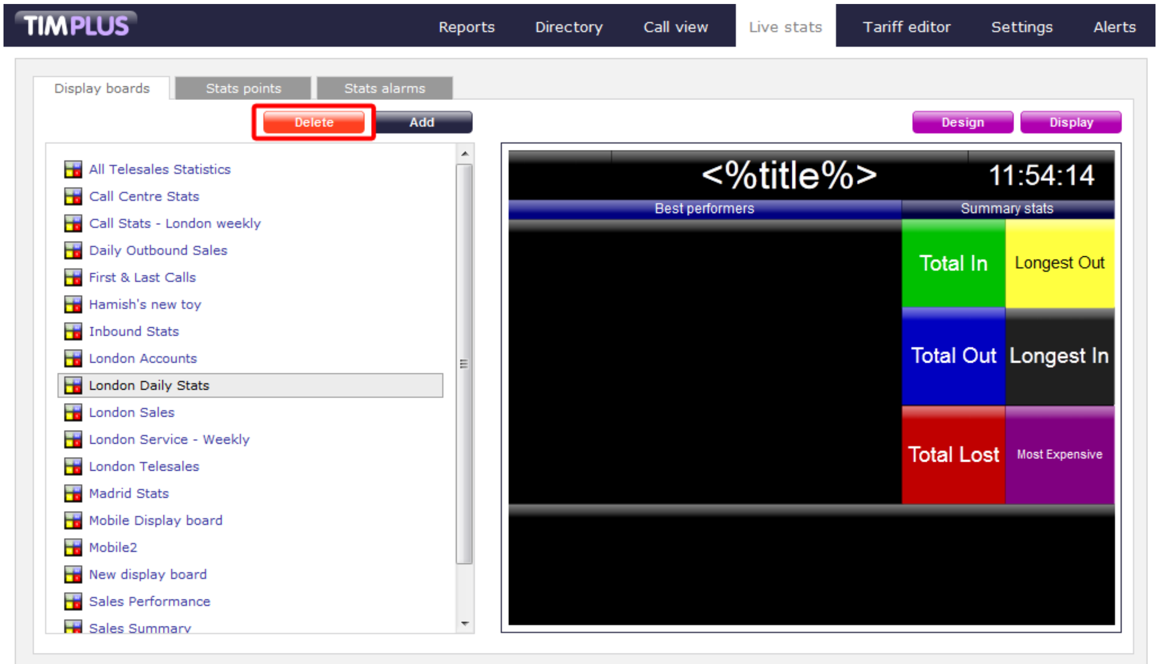

When you have finished configuring the properties of your Web panel, click on the Save button to apply the changes.

### Web panel - overview video

For a live demonstration of how to design and customise a web panel, watch the video below:

## Deleting a display board

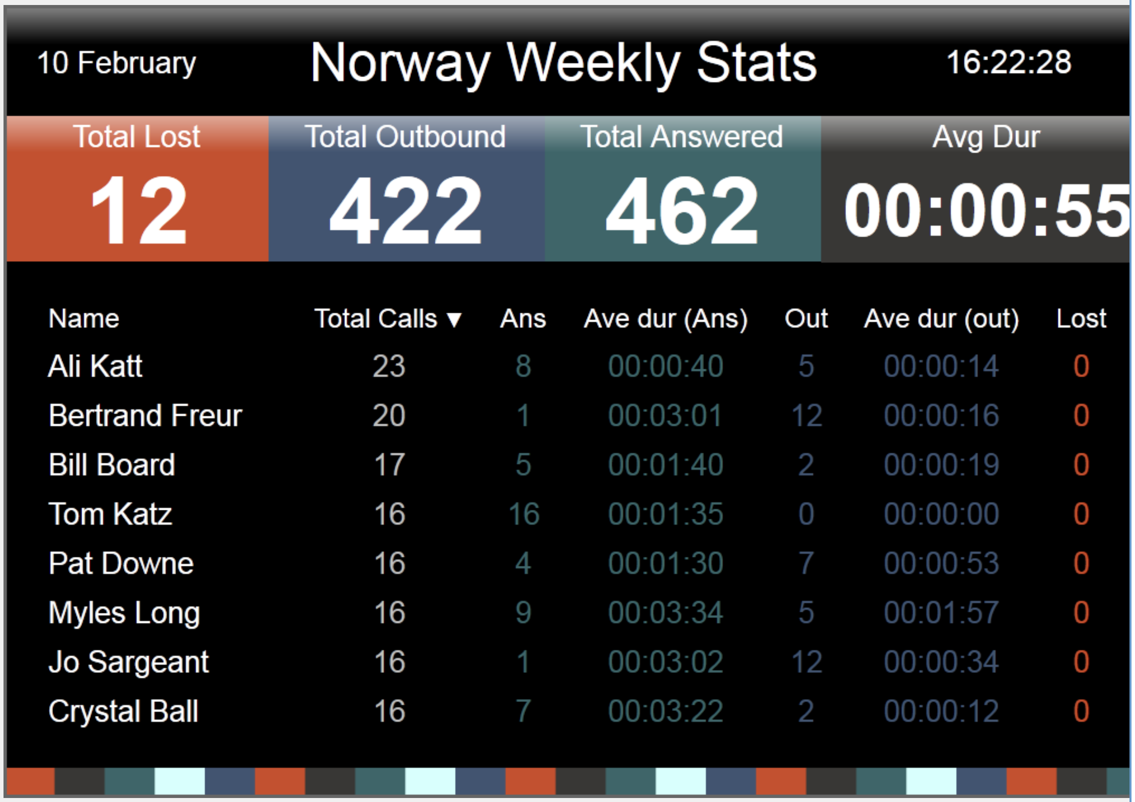
To delete a display board, select it from the **Display boards** list and click on the Delete button at the top-left corner of the screen, as shown below:

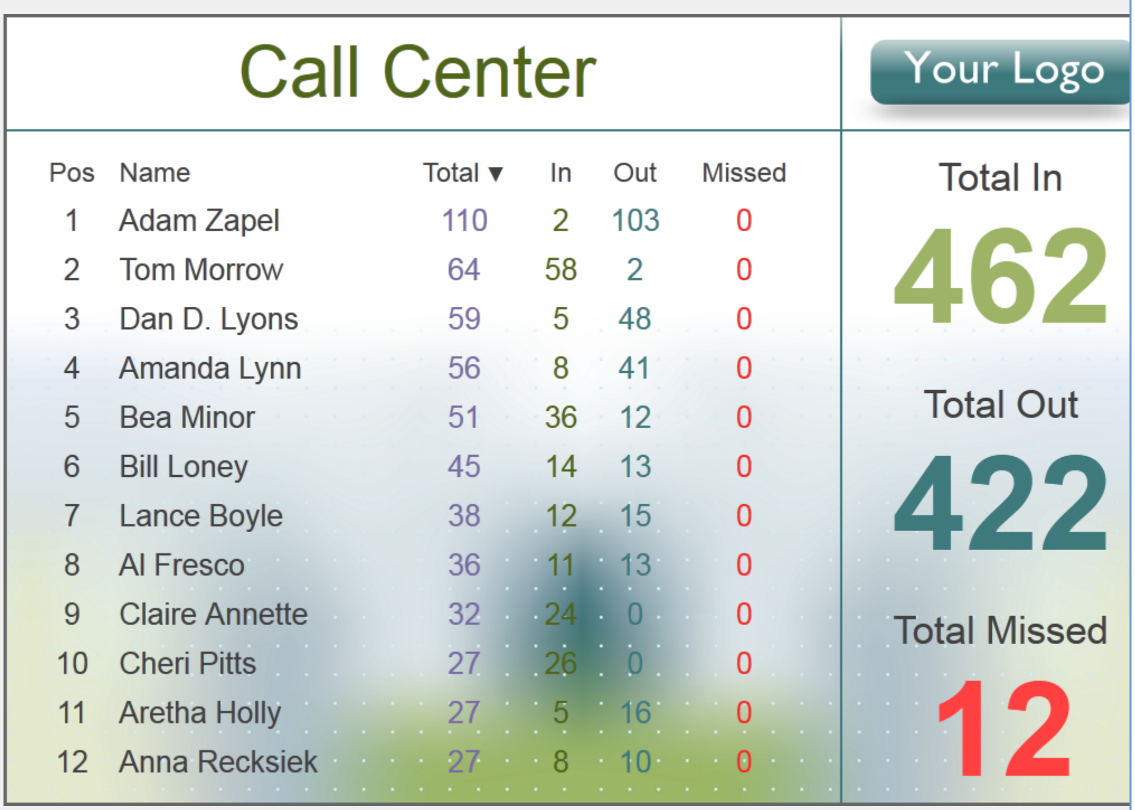


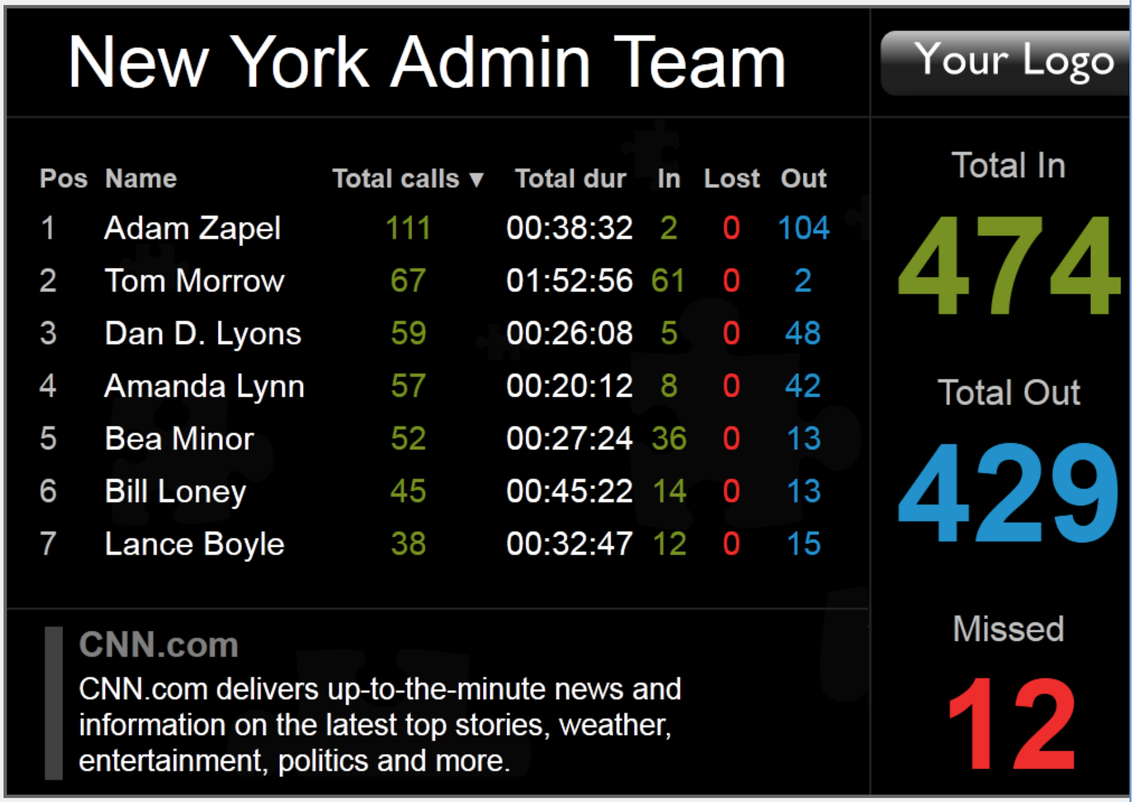

## FAQs

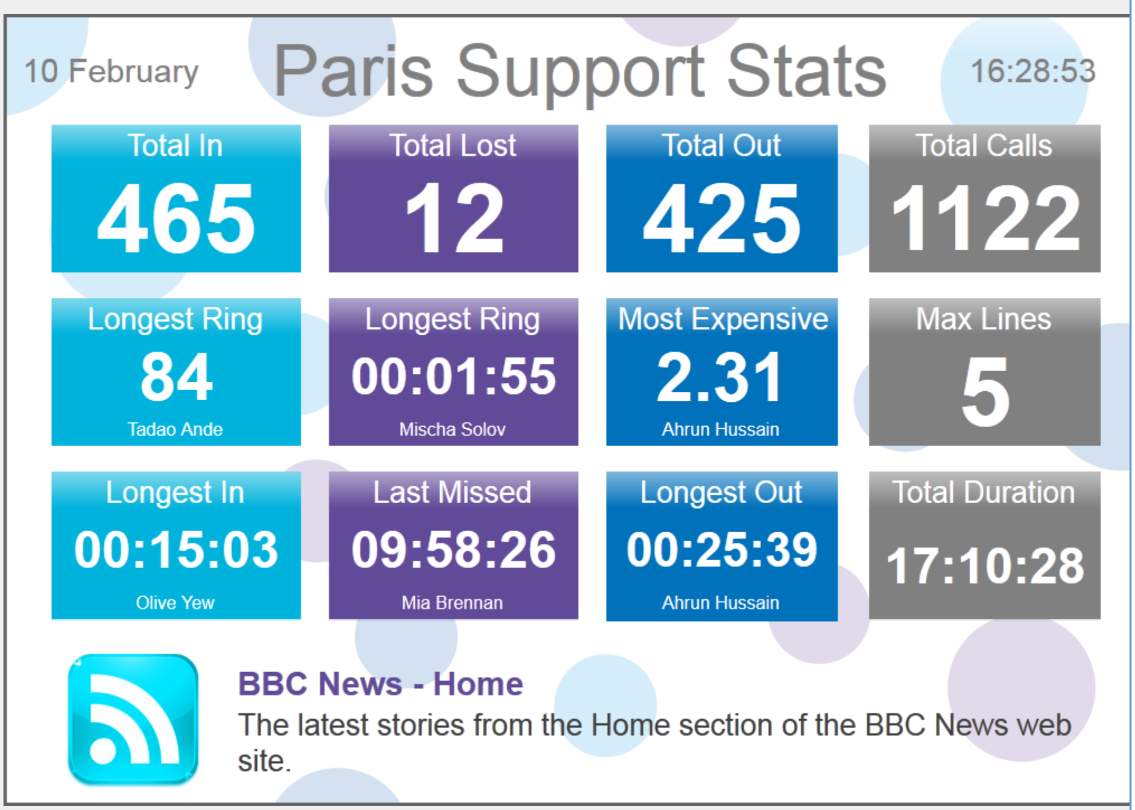
| Q. How many display boards can I have? |
| --- |
| **A.** There is no limit to the number of display boards allowed in TIM Plus. |

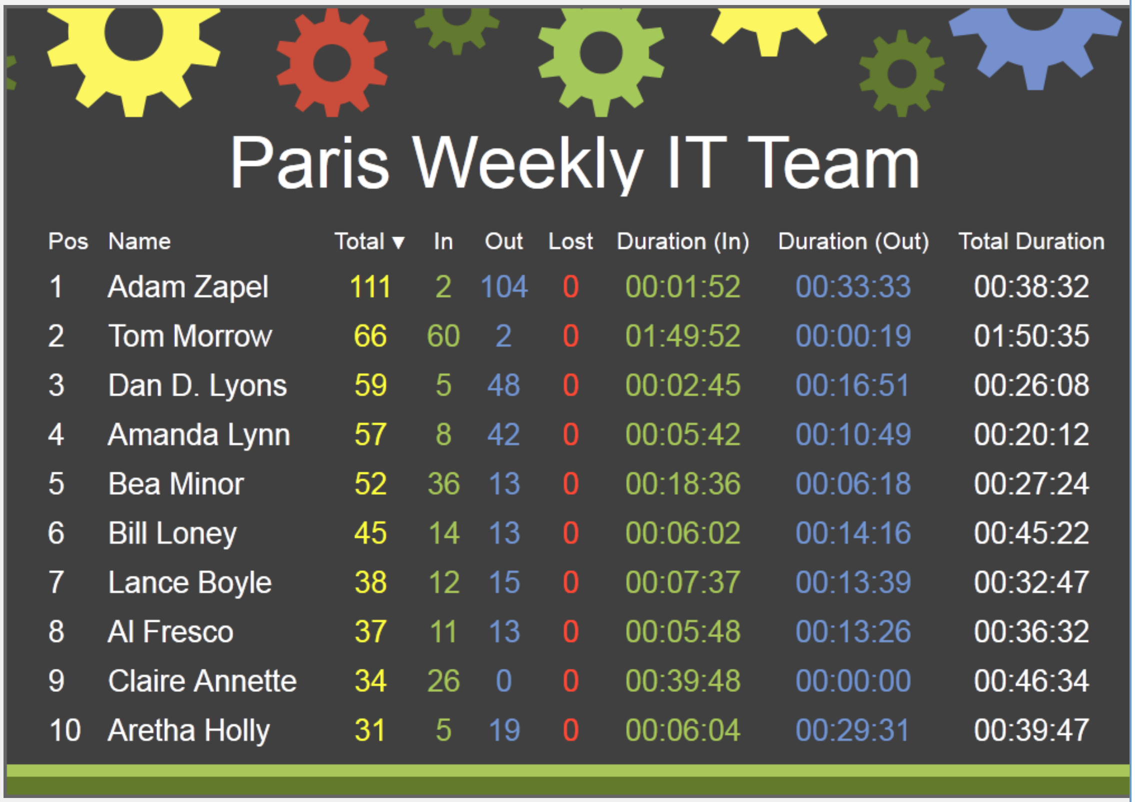
| Q. How much do display boards cost? |
| --- |
| **A.** There is no charge for adding additional display boards to TIM Plus.<br><br>Some sample display boards are shown below: |


10 February
Norway Weekly Stats
16:22:28
Total Lost
12
Total Outbound
422
Total Answered
462
Avg Dur
00:00:55
Name Total Calls ▼ Ans Ave dur (Ans) Out Ave dur (out) Lost
Ali Katt 23 8 00:00:40 5 00:00:14 0
Bertrand Freur 20 1 00:03:01 12 00:00:16 0
Bill Board 17 5 00:01:40 2 00:00:19 0
Tom Katz 16 16 00:01:35 0 00:00:00 0
Pat Downe 16 4 00:01:30 7 00:00:53 0
Myles Long 16 9 00:03:34 5 00:01:57 0
Jo Sargeant 16 1 00:03:02 12 00:00:34 0
Crystal Ball 16 7 00:03:22 2 00:00:12 0


Call Center
Your Logo
Pos Name Total ▼ In Out Missed
1 Adam Zapel 110 2 103 0
2 Tom Morrow 64 58 2 0
3 Dan D. Lyons 59 5 48 0
4 Amanda Lynn 56 8 41 0
5 Bea Minor 51 36 12 0
6 Bill Loney 45 14 13 0
7 Lance Boyle 38 12 15 0
8 Al Fresco 36 11 13 0
9 Claire Annette 32 24 0 0
10 Cheri Pitts 27 26 0 0
11 Aretha Holly 27 5 16 0
12 Anna Recksiek 27 8 10 0
Total In
462
Total Out
422
Total Missed
12

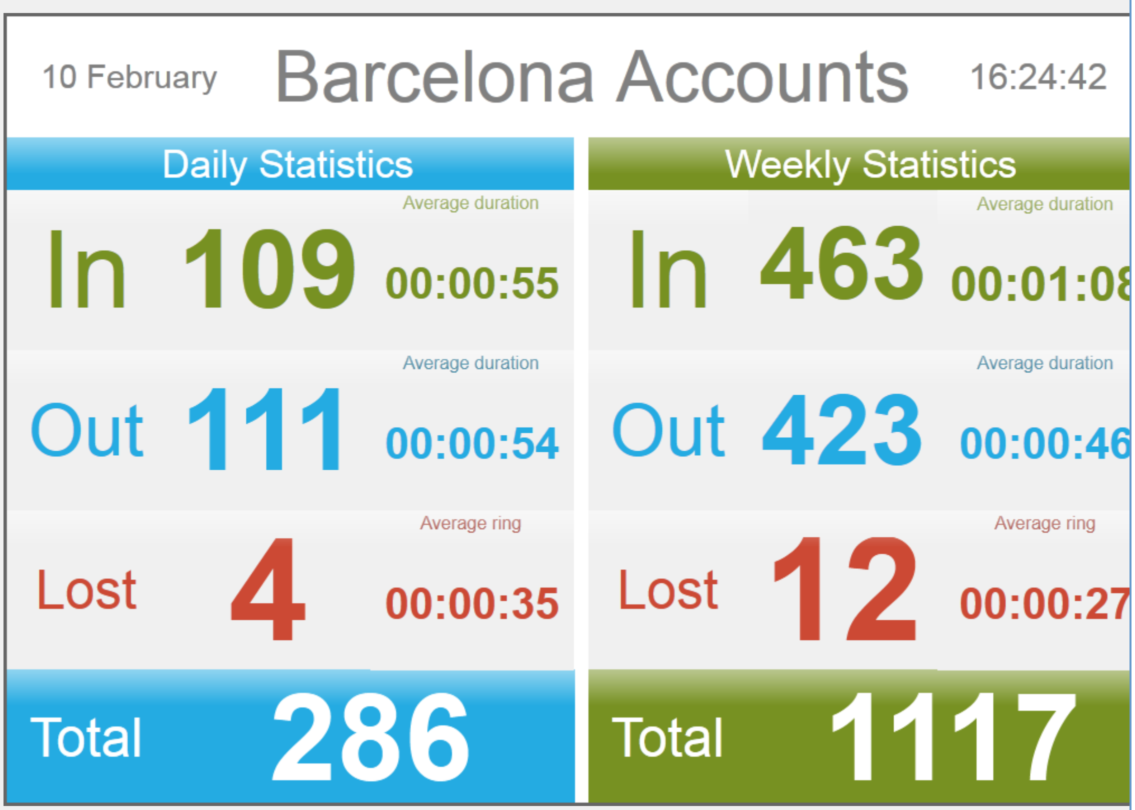

New York Admin Team
Your Logo
Pos Name Total calls ▼ Total dur In Lost Out
1 Adam Zapel 111 00:38:32 2 0 104
2 Tom Morrow 67 01:52:56 61 0 2
3 Dan D. Lyons 59 00:26:08 5 0 48
4 Amanda Lynn 57 00:20:12 8 0 42
5 Bea Minor 52 00:27:24 36 0 13
6 Bill Loney 45 00:45:22 14 0 13
7 Lance Boyle 38 00:32:47 12 0 15
CNN.com
CNN.com delivers up-to-the-minute news and information on the latest top stories, weather, entertainment, politics and more.
Total In
474
Total Out
429
Missed
12


10 February
Paris Support Stats
16:28:53
Total In
465
Total Lost
12
Total Out
425
Total Calls
1122
Longest Ring
84
Tadao Ande
Longest Ring
00:01:55
Mischa Solov
Most Expensive
2.31
Ahrun Hussain
Max Lines
5
Longest In
00:15:03
Olive Yew
Last Missed
09:58:26
Mia Brennan
Longest Out
00:25:39
Ahrun Hussain
Total Duration
17:10:28
BBC News - Home
The latest stories from the Home section of the BBC News web site.



Paris Weekly IT Team

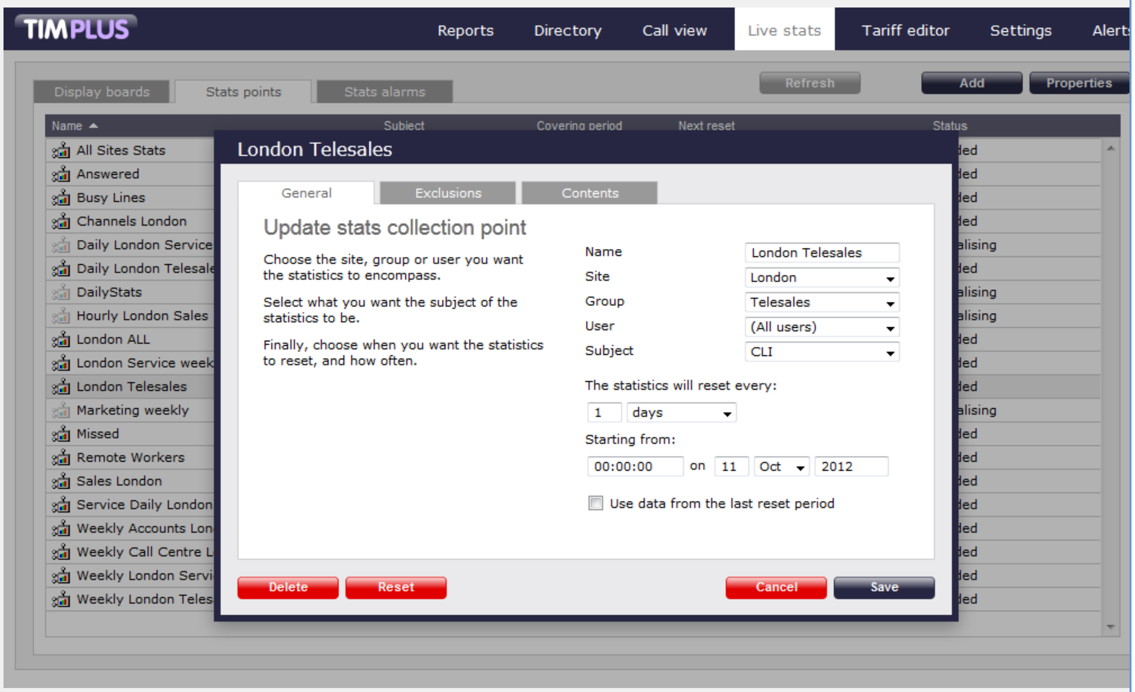
| Pos | Name | Total ▼ | In | Out | Lost | Duration (In) | Duration (Out) | Total Duration |
|---|---|---|---|---|---|---|---|---|
| 1 | Adam Zapel | 111 | 2 | 104 | 0 | 00:01:52 | 00:33:33 | 00:38:32 |
| 2 | Tom Morrow | 66 | 60 | 2 | 0 | 01:49:52 | 00:00:19 | 01:50:35 |
| 3 | Dan D. Lyons | 59 | 5 | 48 | 0 | 00:02:45 | 00:16:51 | 00:26:08 |
| 4 | Amanda Lynn | 57 | 8 | 42 | 0 | 00:05:42 | 00:10:49 | 00:20:12 |
| 5 | Bea Minor | 52 | 36 | 13 | 0 | 00:18:36 | 00:06:18 | 00:27:24 |
| 6 | Bill Loney | 45 | 14 | 13 | 0 | 00:06:02 | 00:14:16 | 00:45:22 |
| 7 | Lance Boyle | 38 | 12 | 15 | 0 | 00:07:37 | 00:13:39 | 00:32:47 |
| 8 | Al Fresco | 37 | 11 | 13 | 0 | 00:05:48 | 00:13:26 | 00:36:32 |
| 9 | Claire Annette | 34 | 26 | 0 | 0 | 00:39:48 | 00:00:00 | 00:46:34 |
| 10 | Aretha Holly | 31 | 5 | 19 | 0 | 00:06:04 | 00:29:31 | 00:39:47 |



## Q. Can I show only missed calls on a display board?

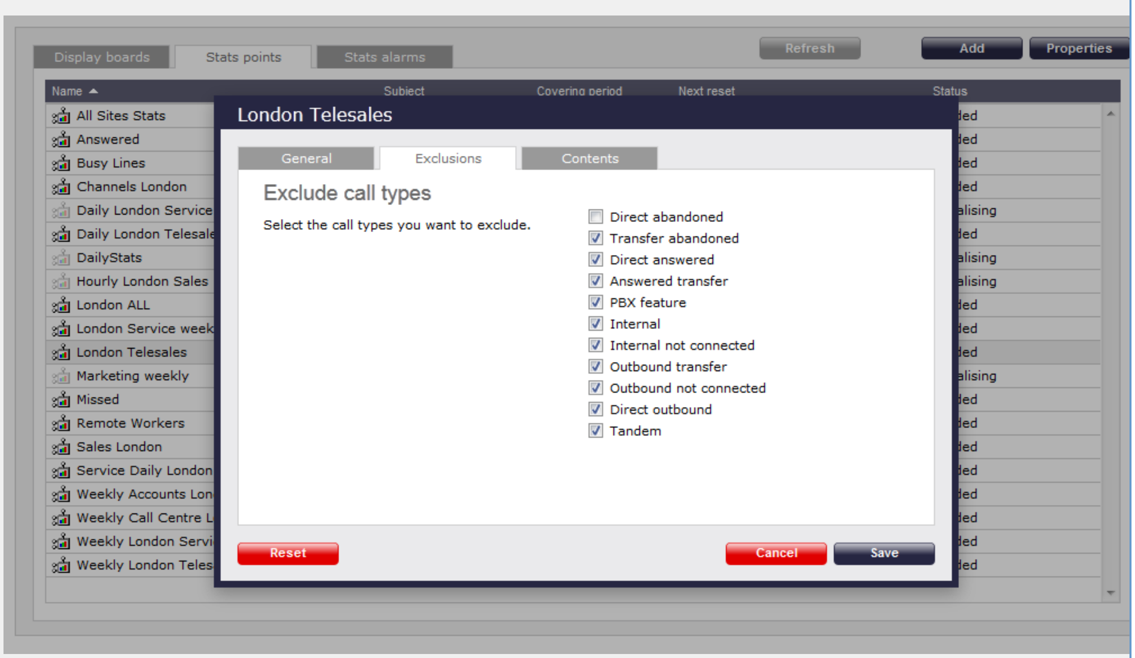
**A.** Yes. See details below:

1. When creating a stats collection point for your display board, select `CLI` from the drop-down list of the `Subject` field, as shown below:




2. Click on the Exclusions tab.

3. Tick the relevant boxes to exclude all call types except `Direct abandoned`.



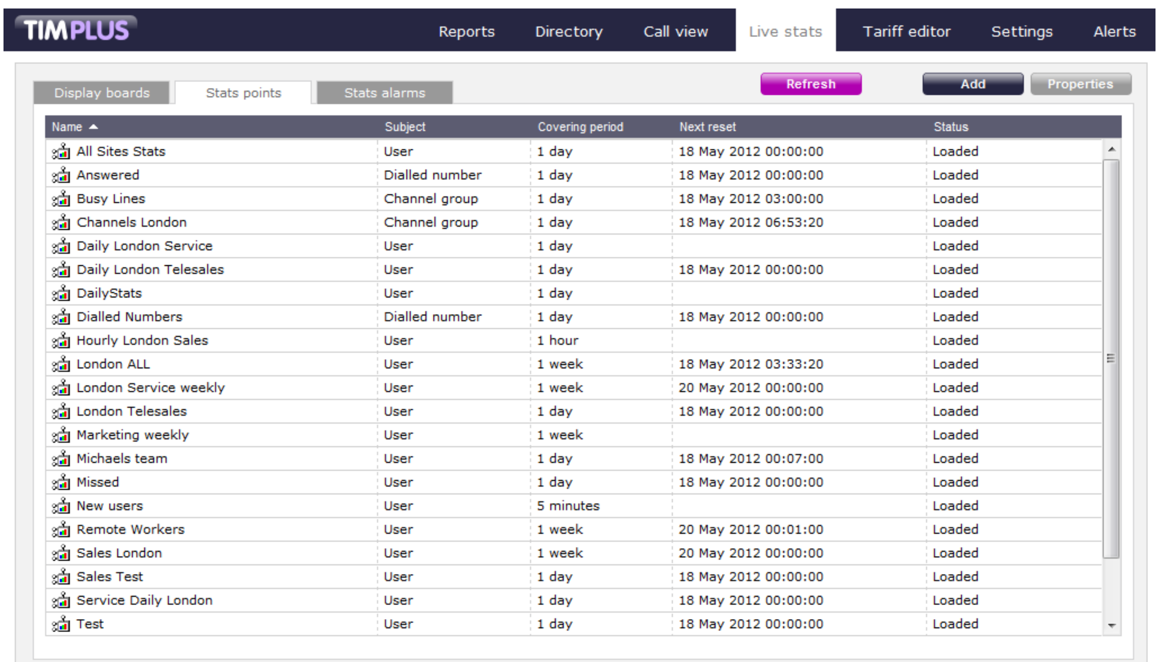
# Stats points

**Stats points**



## What is a stats point?

A statistics collection point (stats point) object is a mathematical "counter" whose scope of data collection is determined by its placement in your directory hierarchy. As calls are made and received, the properties of each one are collated for future consumption by display boards. Stats points can be configured to only collect calls of a certain type or calls whose properties match certain criteria.

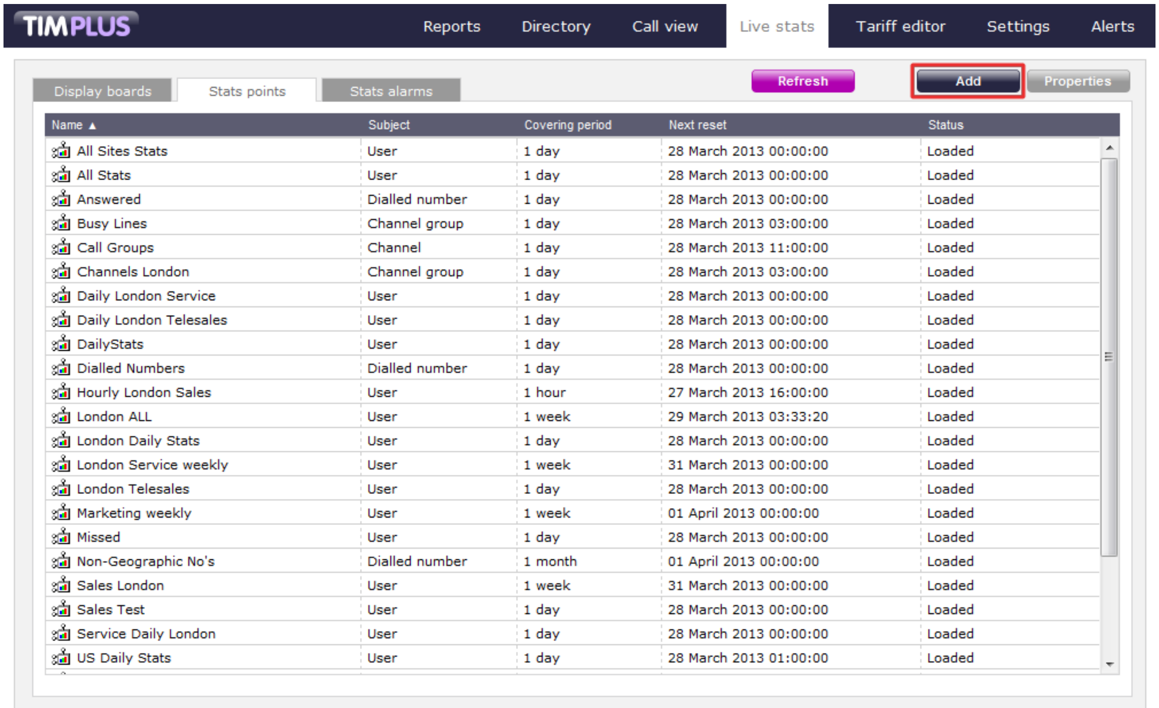



| Name | Subject | Covering period | Next reset | Status |
|---|---|---|---|---|
| All Sites Stats | User | 1 day | 18 May 2012 00:00:00 | Loaded |
| Answered | Dialled number | 1 day | 18 May 2012 00:00:00 | Loaded |
| Busy Lines | Channel group | 1 day | 18 May 2012 03:00:00 | Loaded |
| Channels London | Channel group | 1 day | 18 May 2012 06:53:20 | Loaded |
| Daily London Service | User | 1 day | | Loaded |
| Daily London Telesales | User | 1 day | 18 May 2012 00:00:00 | Loaded |
| DailyStats | User | 1 day | | Loaded |
| Dialled Numbers | Dialled number | 1 day | 18 May 2012 00:00:00 | Loaded |
| Hourly London Sales | User | 1 hour | | Loaded |
| London ALL | User | 1 week | 18 May 2012 03:33:20 | Loaded |
| London Service weekly | User | 1 week | 20 May 2012 00:00:00 | Loaded |
| London Telesales | User | 1 day | 18 May 2012 00:00:00 | Loaded |
| Marketing weekly | User | 1 week | | Loaded |
| Michaels team | User | 1 day | 18 May 2012 00:07:00 | Loaded |
| Missed | User | 1 day | 18 May 2012 00:00:00 | Loaded |
| New users | User | 5 minutes | | Loaded |
| Remote Workers | User | 1 week | 20 May 2012 00:01:00 | Loaded |
| Sales London | User | 1 week | 20 May 2012 00:00:00 | Loaded |
| Sales Test | User | 1 day | 18 May 2012 00:00:00 | Loaded |
| Service Daily London | User | 1 day | 18 May 2012 00:00:00 | Loaded |
| Test | User | 1 day | 18 May 2012 00:00:00 | Loaded |

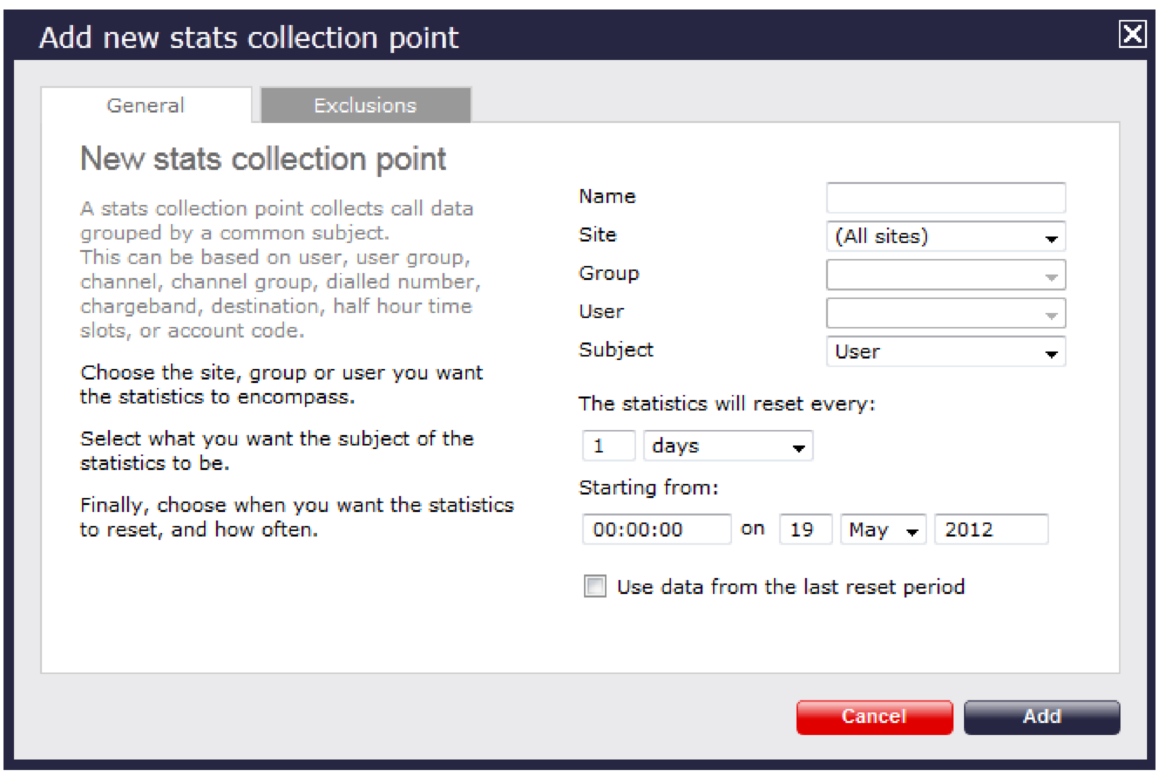
## Adding a stats point

To add a stats point, select the Live stats tab and click on the Stats points button.

There is no limit to the number of stats points allowed in TIM Plus.

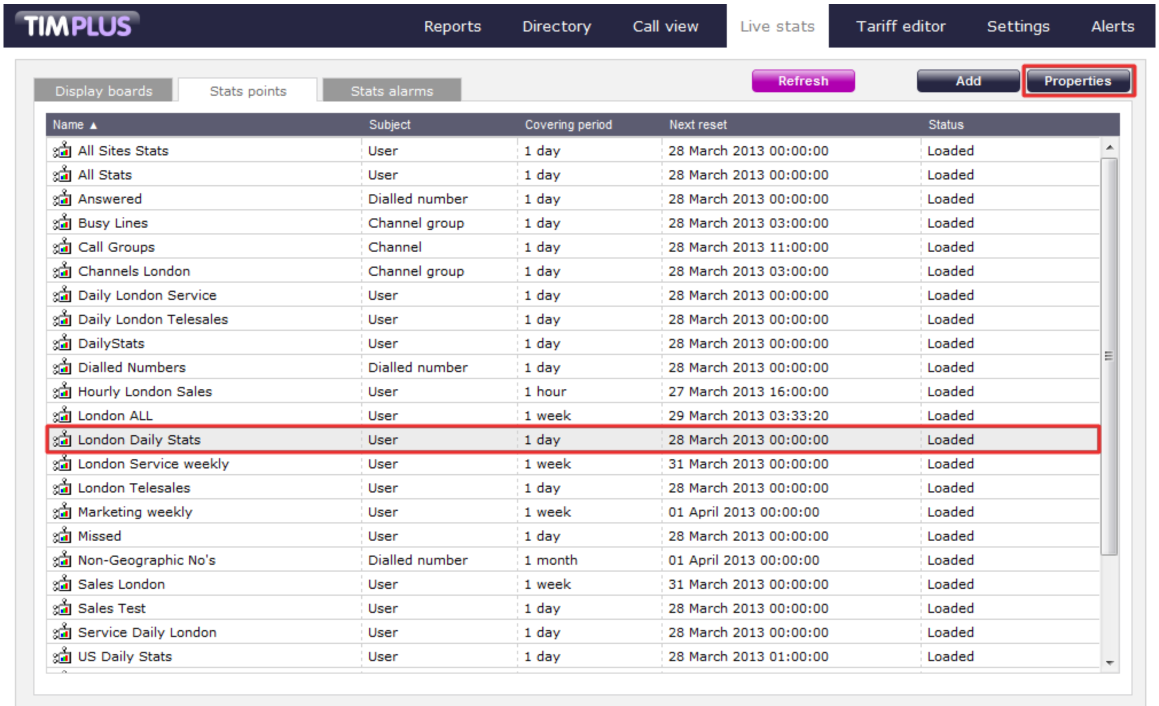



A new window will open, where you can configure the properties of your stats point. Once you have entered all the parameters, click on the  Add  button to add the new stats point to the list.




## Configuring a stats point

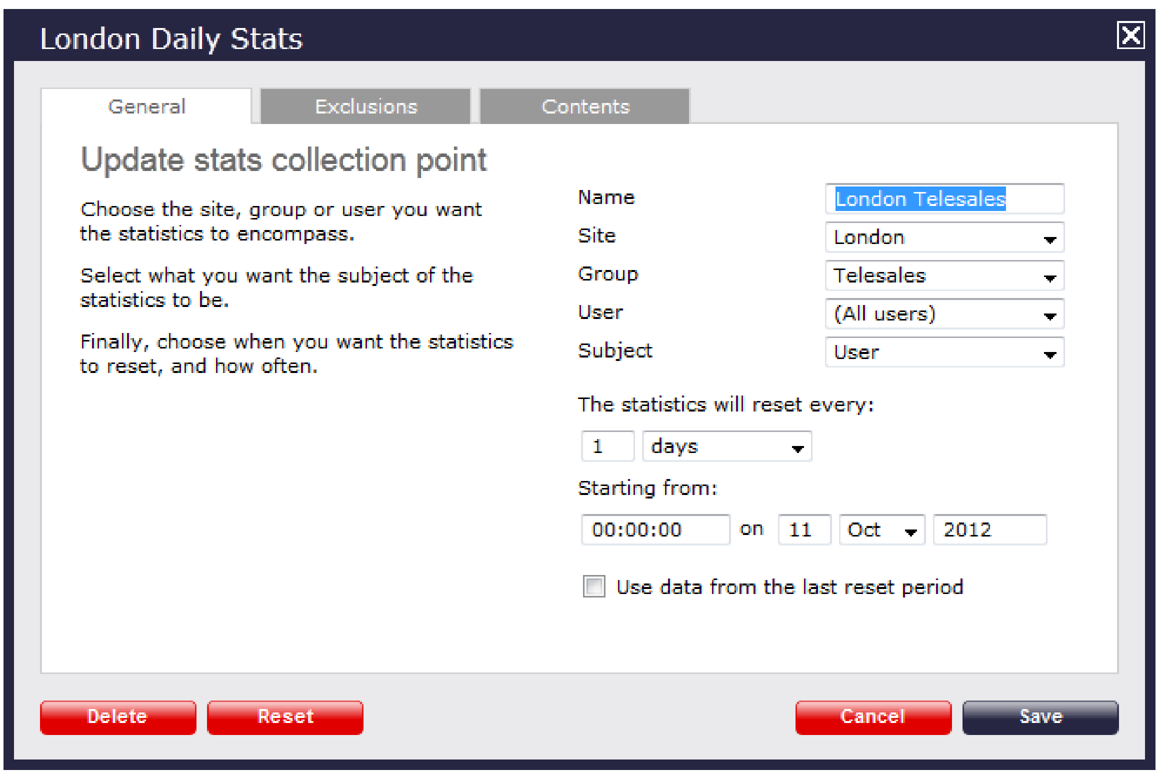
To configure or edit a stats collection point, select it from the **`Stats points`** list and click on the  Properties  button at the top-right corner of the panel, as shown below:




A new window will open, allowing you to configure the properties of your stats point object. Each tab in this window will be explained below:

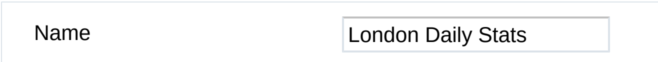
## General properties

The General tab allows to configure the general properties of your stats collection point, such as name, entity, subject or reset frequency:



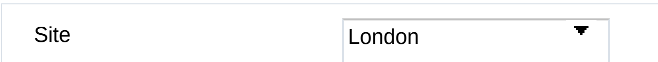

### Name

Enter or edit the name of your stats collection point.



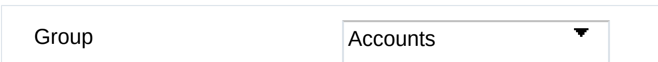

### Site

If you want your stats point to include calls from one site only, select the site from the drop-down list.



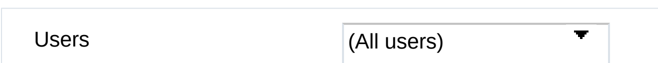

### Group

If you have selected a site and want your stats point to include only calls from one particular user group within that site, select the group from the drop-down list.



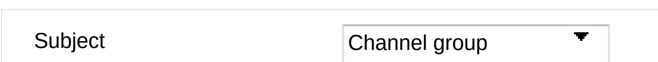

### User

If you have selected a site and a user group and want your stats point to include only calls from one individual user within that user group, select the user from the drop-down list.



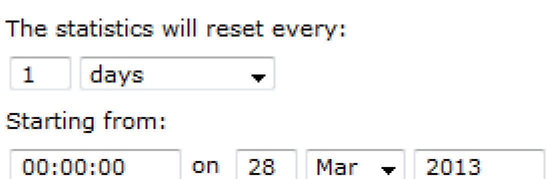

### Subject

The stats points can be configured to group the collected calls by a particular subject, such as users, channels, dialled number, half-hour time slot etc. To choose a subject, select it the drop-down list.



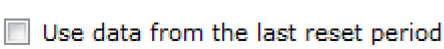

### Reset frequency

Choose when to reset your stats point, by entering the date and time in the `Starting from` section; to choose the frequency with which you want them to reset, select a predefined period from the drop-down list, as shown below:

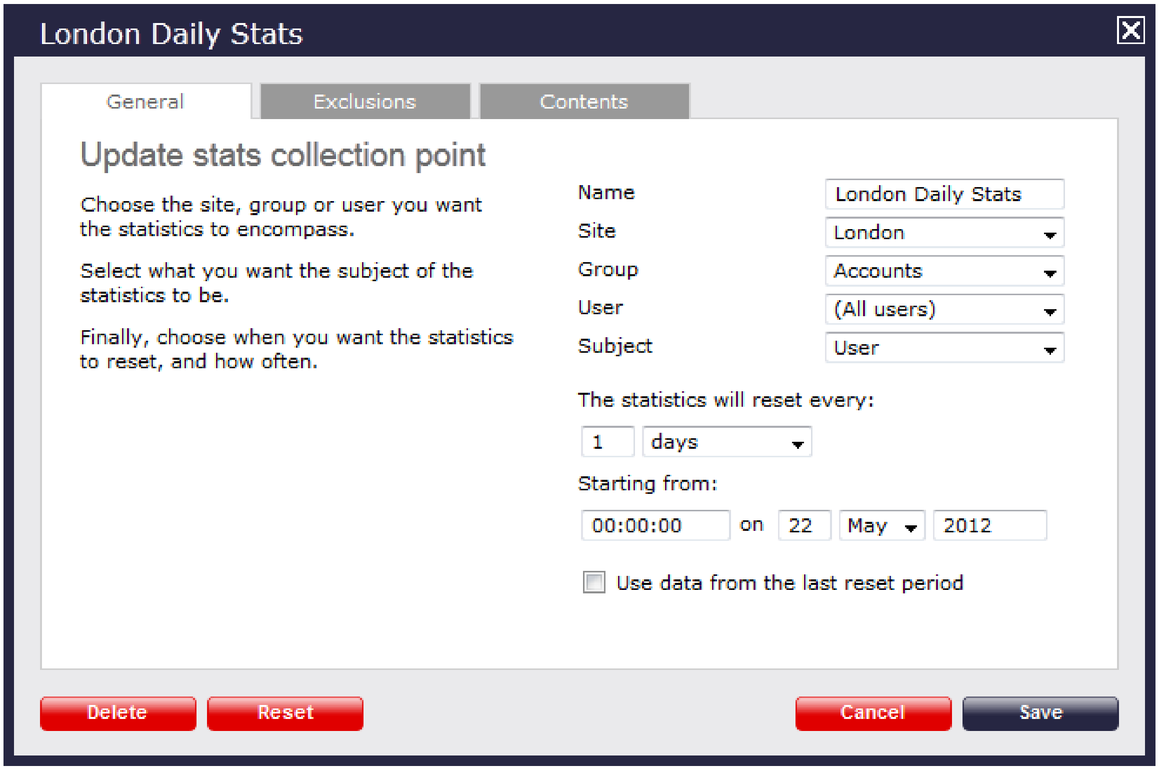



### Last reset period data

This option allows you to keep a copy of the previous stats for comparison purposes, e.g. if you want to compare today's stats with yesterday's. Select the tick-box provided to enable this feature.



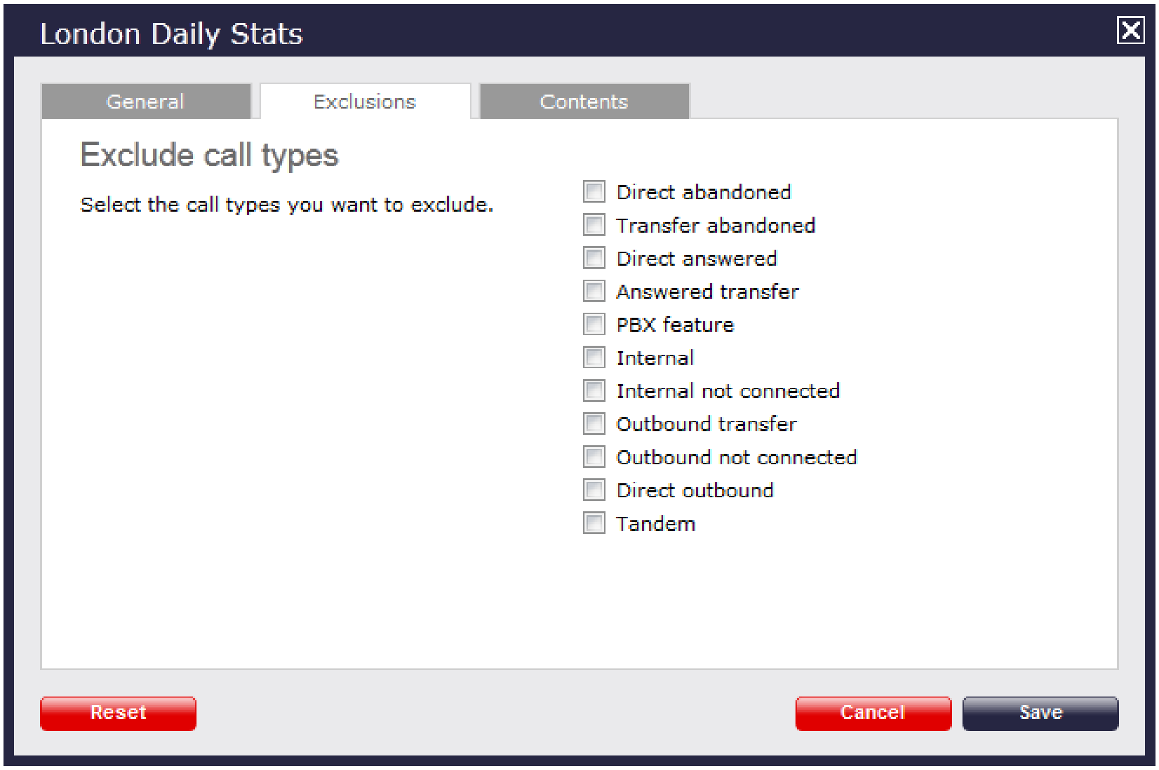

In the example below, the stats point is set for all users of the **`Accounts`** team in **`London`** site, and it resets every day.



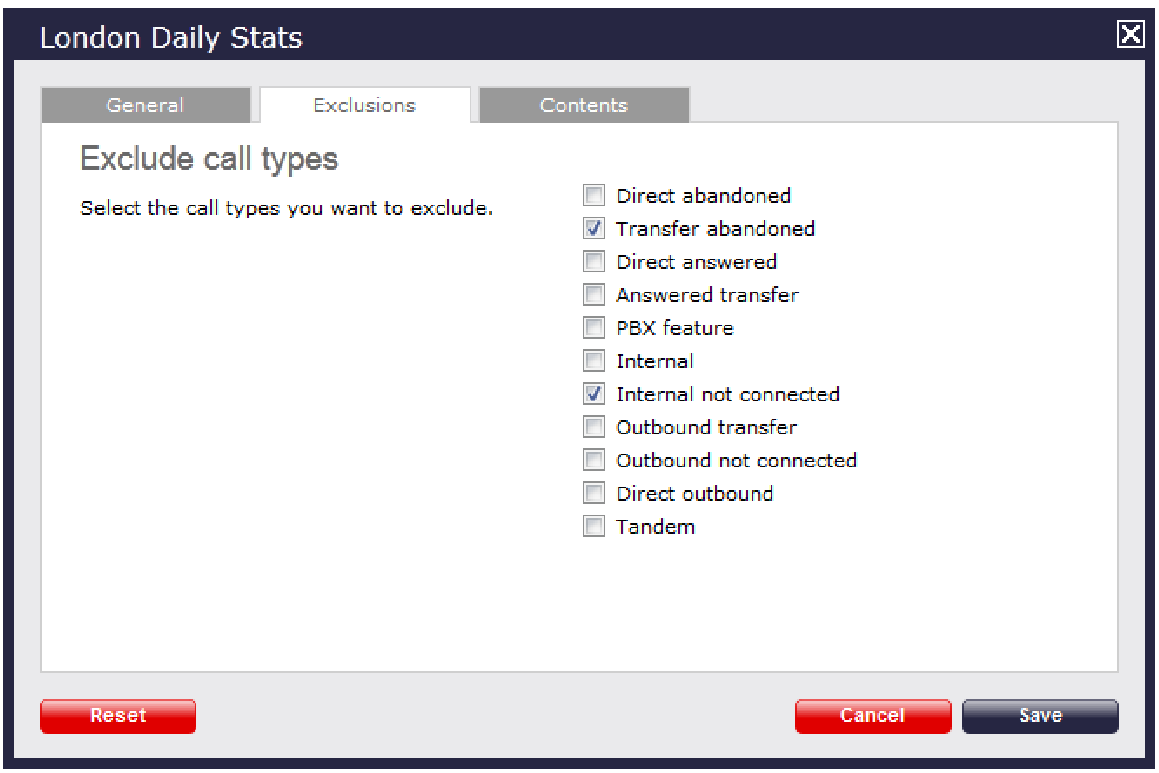

Because there is no limit on the number of stats points you are allowed to have in TIM Plus, you can add several stats points at any one place, refreshing at different times, e.g. daily, weekly and monthly.

## Exclusions

If you want to exclude certain call types from your statistics, click on the Exclusions tab and tick the box against the type of calls you don't want to include in your stats point.

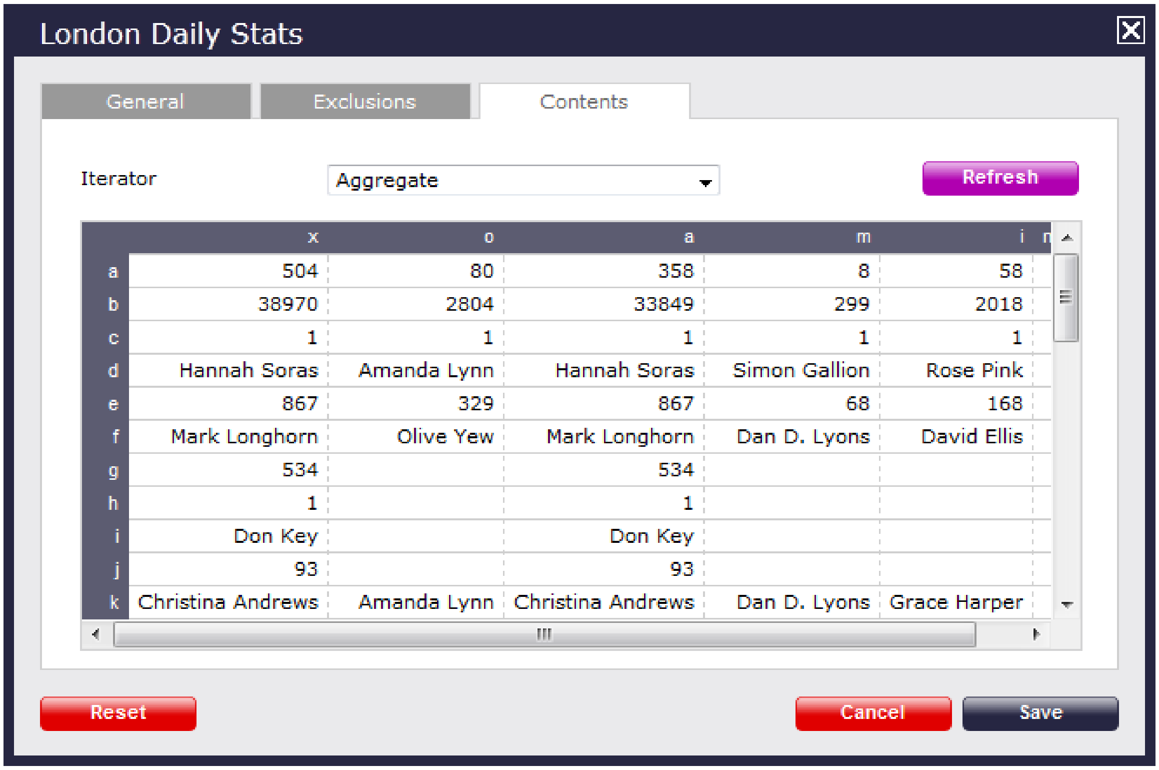



The example below shows an exclusion set for `Transfer abandoned` and `Internal not connected` calls.




## Contents

The Contents tab allows you to check whether call stats are being collected by TIM Plus, and it is generally used for troubleshooting purposes.



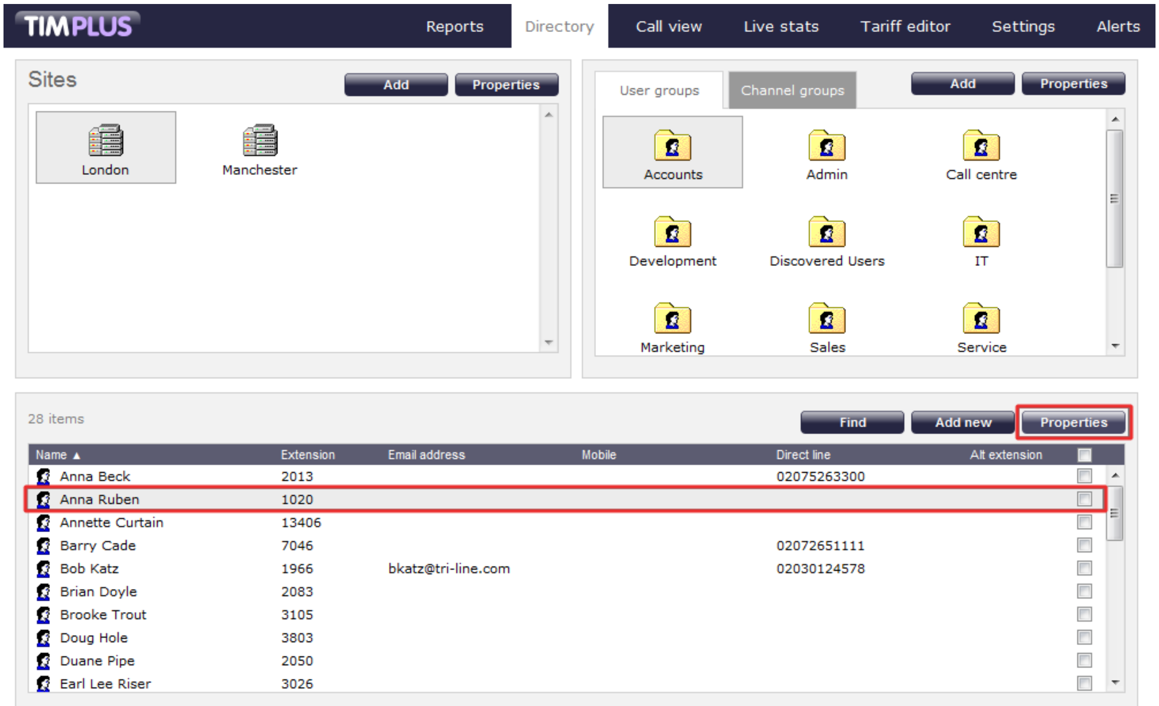

Click on the Refresh button to refresh the statistics on that page and verify that the stats point is collecting data. If you click on the Reset button, you can clear the statistics and reload them for the period that they cover, e.g. last week.

## Excluding a user from a stats point

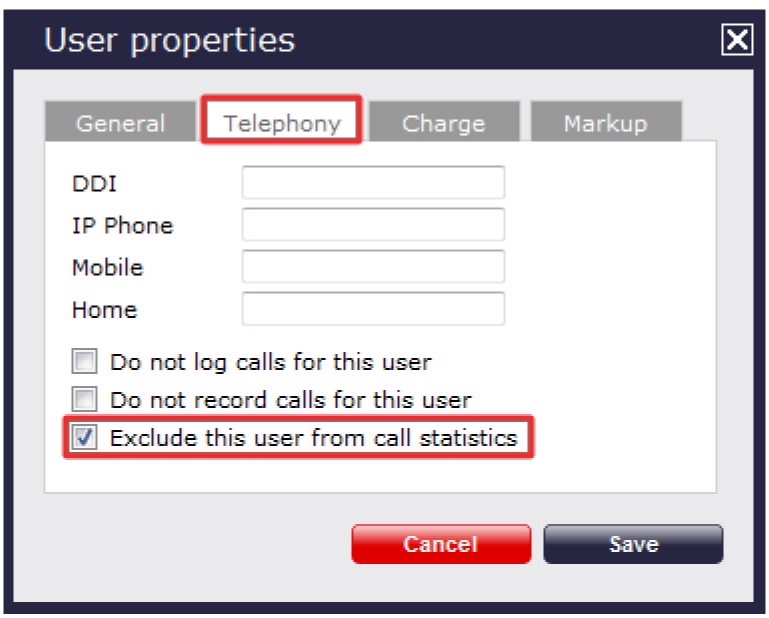
Follow the instructions below to exclude a user from a stats collection point, e.g. exclude the sales manager from the sales team stats:

1. Search the Directory to locate the user you want to exclude from your stats.

2. Select the user and click on the Properties tab.




3. A new window will appear. Click on the Telephony tab and tick the **Exclude this user from call statistics** box.

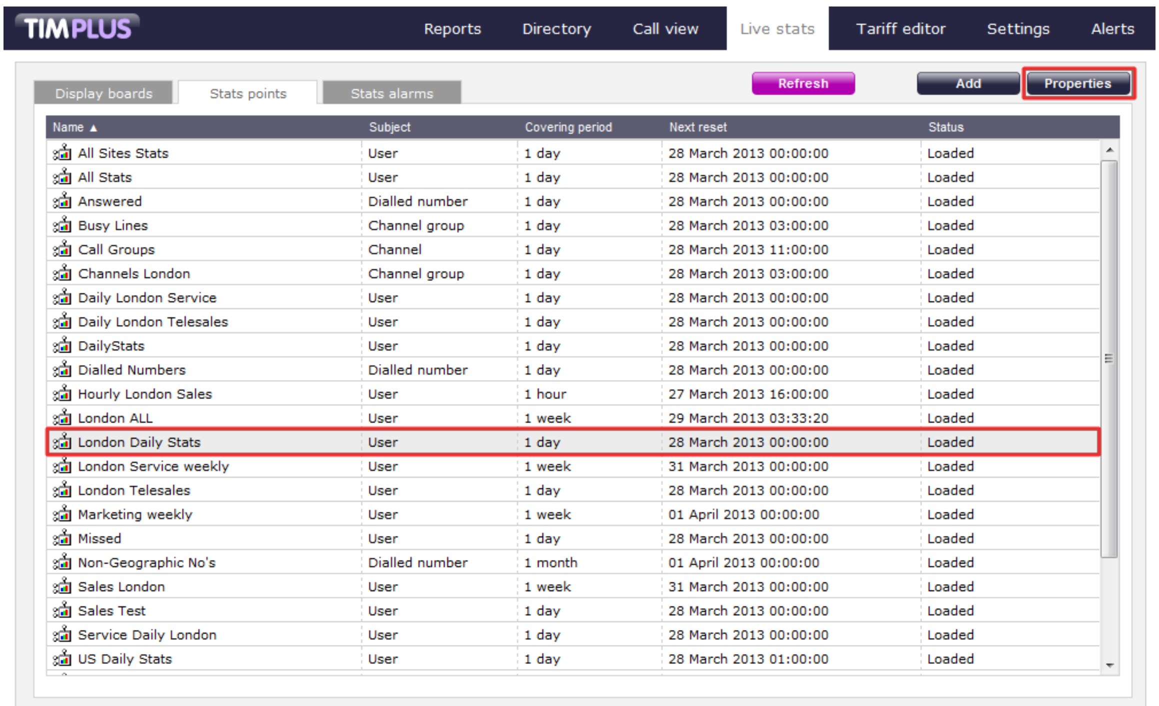



4. Click on the Save button to apply the changes.

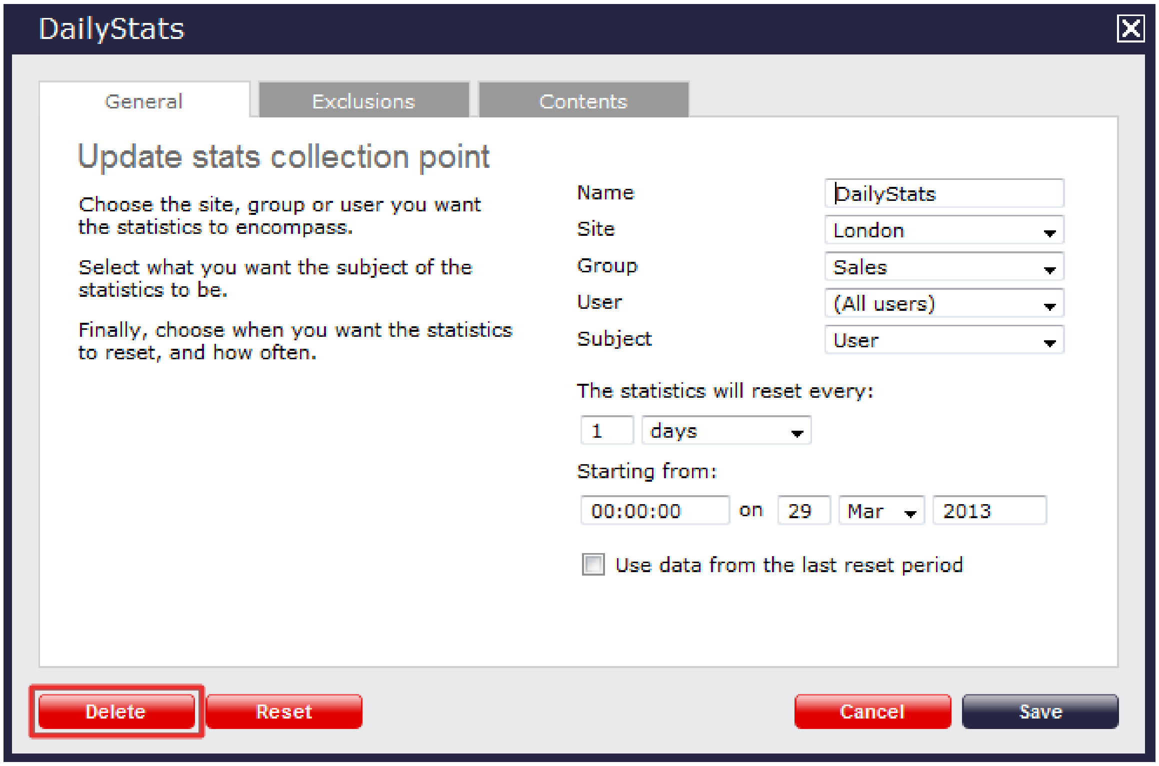
To perform the steps below you need administrative privileges to be able to access the Directory and the user properties.

## Deleting a stats point

To delete a stats point, select it from the **Stats points** list and click on the Properties button at the top-right corner of the screen, as shown below:



A new window will open. Click on the Delete button at the bottom-left corner of the window to remove the selected stats point.




## Stats point - overview video

## Stats alarms

**Stats alarms**



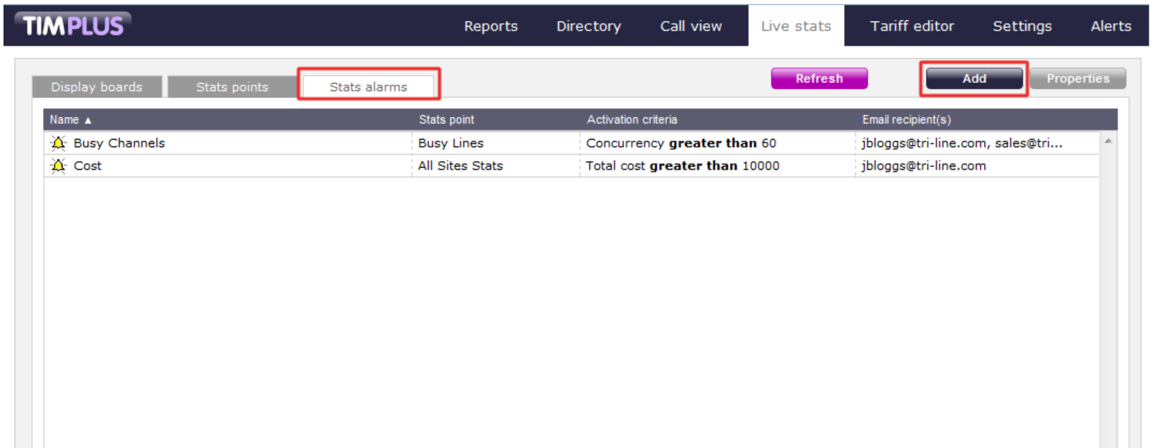
## What is a stats alarm?

Stats alarms are alarms that can be added to a selected stats collection point in order to trigger an alert when calls whose properties match certain criteria have happened, such as calls above a particular duration, calls to specific phone numbers, or when user-defined cost thresholds are exceeded. The criteria that must be met to trigger an alarm is user-defined, and email alerts can be sent to one or more recipients.

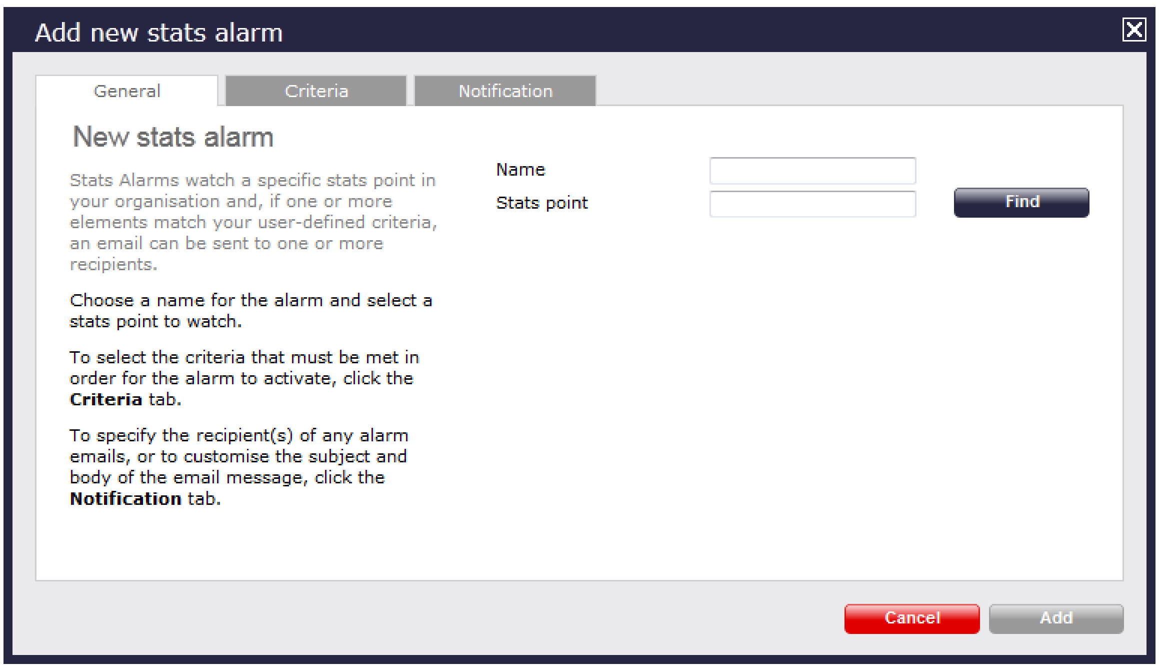
Call statistics alarms are simply a variation of the standard "alarm" directory object and provide an additional means of keeping a tab on call patterns.

## Adding a stats alarm

To add a stats alarm, go to the Live stats screen, select the Stats alarms tab and click on the Add button at the top-right corner of the screen, as shown below:




A new window will open, allowing you to configure the properties of your stats alarm. Each tab displayed in this window is described below:

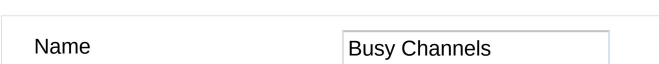



## General

The General tab allows you to name the alarm object and select the stats point you want the alarm to monitor.

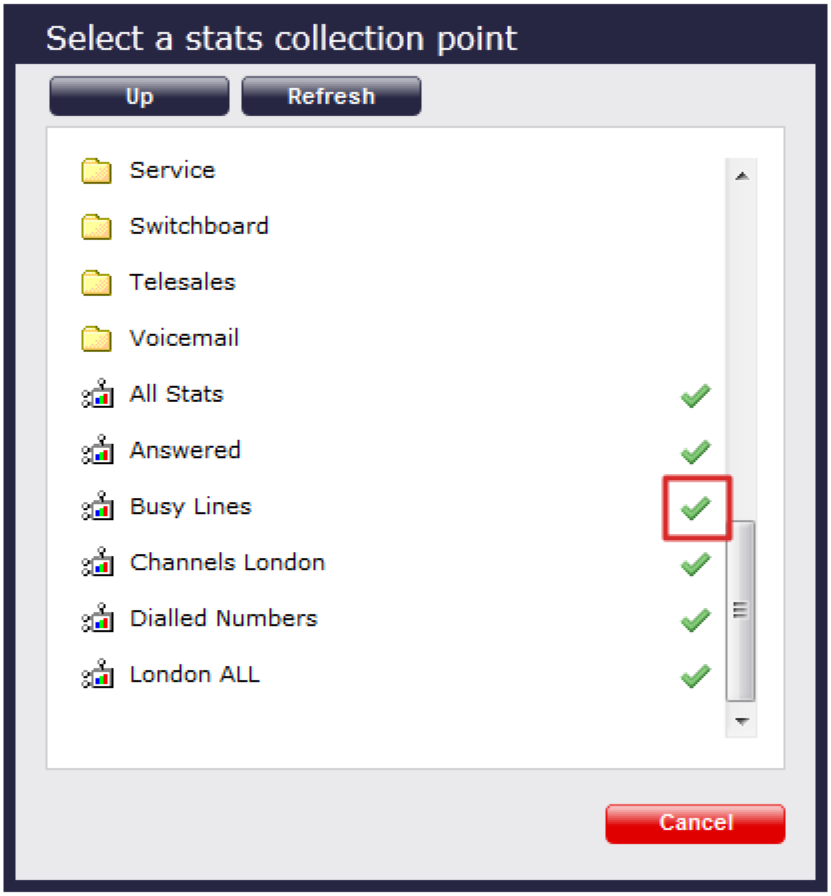
### Name

Enter a name for the alarm in the text box provided, as shown below:



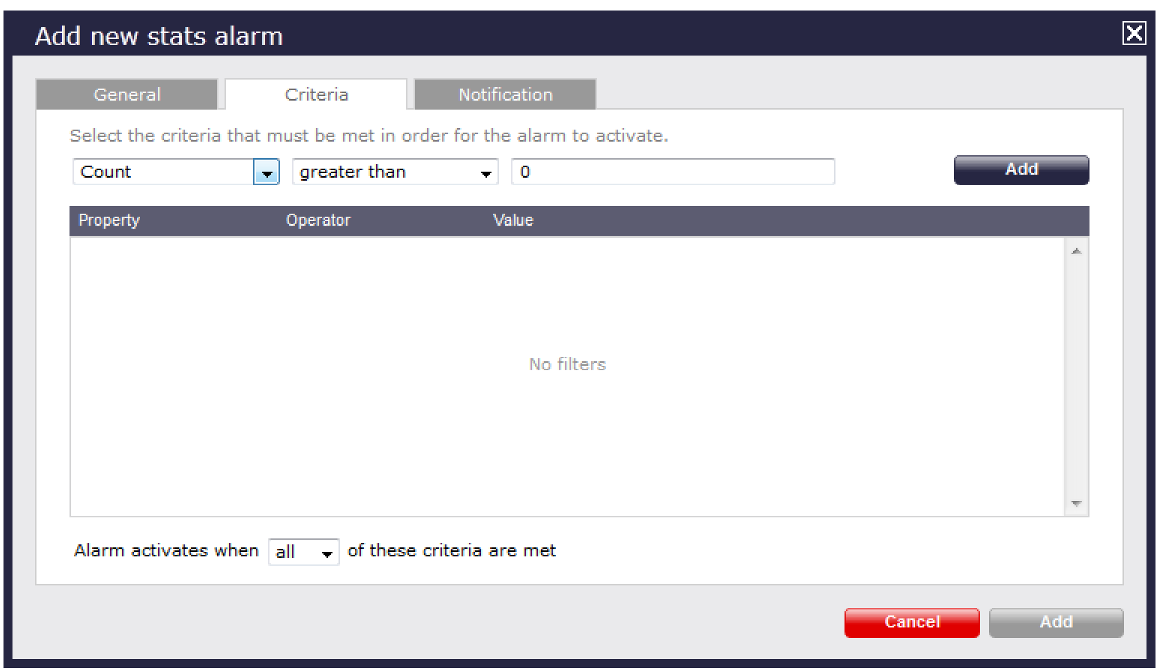

### Stats point

To select the stats point you want the alarm to monitor, click on the Find button. A new window will open, allowing you to drill-down to the site or group level in the Directory, where the stats point object you want to use resides. To select the stats point, click on the icon alongside it, as shown below:




## Criteria

This section allows you to choose the criteria that calls must match in order to activate the alarm. The criteria available for selection are described below:



### Count

The alarm will be triggered when the **call count** of the calls collected in this stats point meets, exceeds, is less than or equal to a predetermined value, e.g. when busy channels equals 10 or busy channels > 10.

| | | |
|---|---|---|
| Count | greater than | 10 |

### Total duration

The alarm will be triggered when the **total duration**, exceeds, is less than or equal to a predetermined value, e.g. when call duration is greater than 3600 seconds (1 hour).

| | | |
|---|---|---|
| Total duration | greater than | 18000 |

### Average duration

The alarm will be triggered when the **average duration** meets, exceeds, is less than or equal to a predetermined value, e.g. when average call duration is less than 1 minute.

| | | |
|---|---|---|
| Average duration | less than | 60 |

### Minimum duration

The alarm will be triggered when the **minimum duration** meets, exceeds, is less than or equal to a predetermined value, e.g. when minimum duration equals 20 seconds.

| | | |
|---|---|---|
| Minimum duration | equals | 20 |

### Maximum duration

The alarm will be triggered when the **maximum duration** meets, exceeds, is less than or equal to a predetermined value, e.g. when maximum call duration is greater than 1 hour.

| | | |
|---|---|---|
| Maximum duration | greater than | 3600 |

### Total response

The alarm will be triggered when the **total response** time exceeds, equals, is less than or is or equal to a predetermined value, e.g. total response time exceeds 30 seconds.

| | | |
|---|---|---|
| Total response | greater than | 30 |

### Average response

The alarm will be triggered when the **average response** time exceeds, equals, is less than or is equal to a predetermined value, e.g. average response time exceeds 20 seconds.

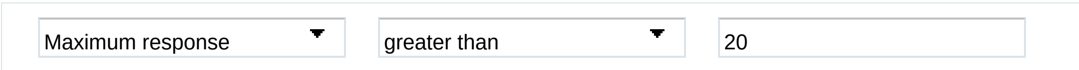
| | | |
|---|---|---|
| Average response | greater than | 20 |

### Minimum response

The alarm will be triggered when the **minimum response** time exceeds, equals, is less than or is equal to a predetermined value, e.g. minimum response time equals 2 seconds.

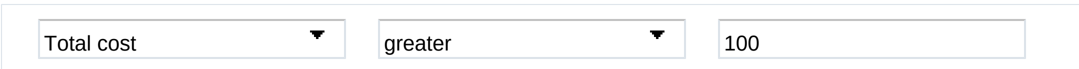

### Maximum response

The alarm will be triggered when the **maximum response** time exceeds, equals, is less than or is equal to a pre-determined value, e.g. maximum response time exceeds 20 seconds.




### Total cost

The alarm will be triggered when the **total cost** exceeds, equals, is less than or is equal to a predetermined value, e.g. total cost exceeds £100.




### Average cost

The alarm will be triggered when the **average cost** exceeds, equals, is less than or is equal to a predetermined value, e.g. average cost exceeds £2.00.


### Minimum cost

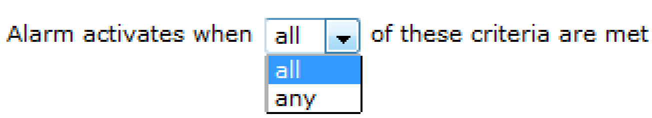
The alarm will be triggered when the **minimum cost** exceeds, equals, is less than or is equal to a predetermined value, e.g. minimum cost equals £1.00.


### Maximum cost

The alarm will be triggered when **maximum cost** exceeds, equals, is less than or is equal to a predetermined value, e.g. maximum cost exceeds £10.00.


### Concurrency

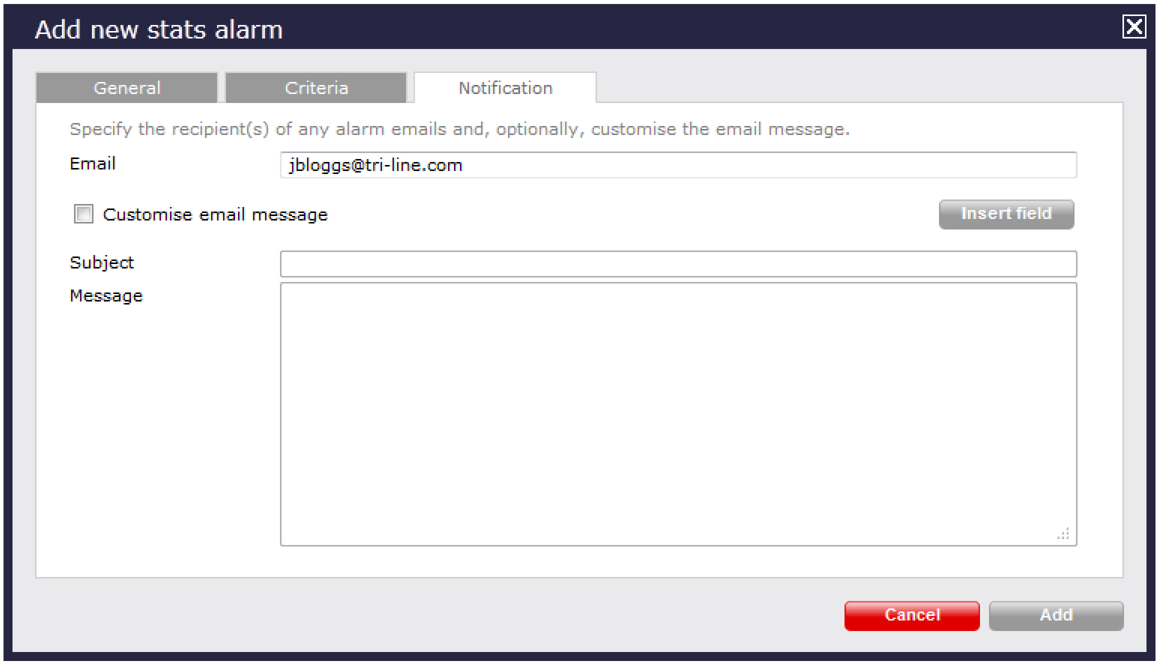
The alarm will be triggered when the **call concurrency** exceeds, equals, is less than or is equal to a predetermined value, e.g. total number of simultaneous calls exceeds 20.

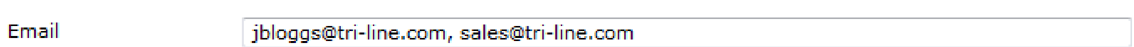
When adding multiple selection criteria, you are given the option to trigger an alarm when ALL or ANY of the criteria are met.

## Notification

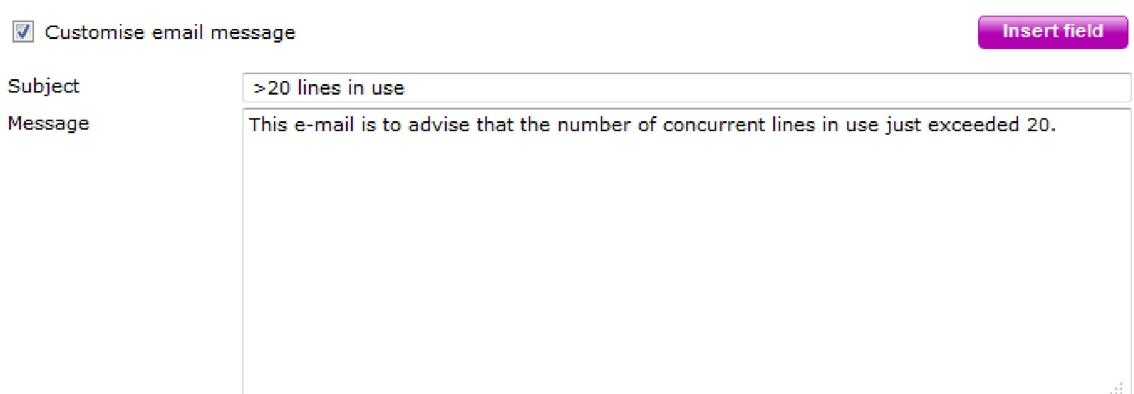
The Notification tab allows you to set up an email alert when any of the above-mentioned alarms are triggered.



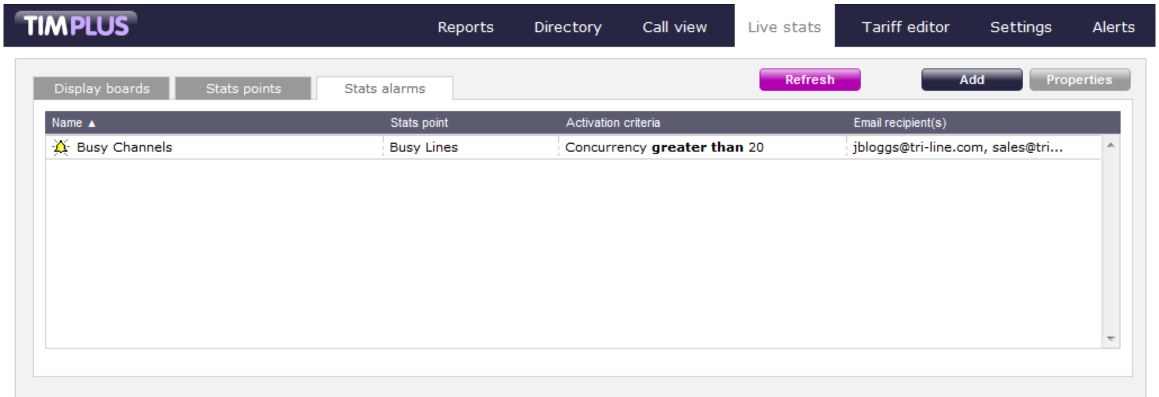

To send the notification to multiple email addresses, separate each entry with a semicolon.




You can also customise the email notification by adding a subject and/or a message in the boxes provided, as shown below:

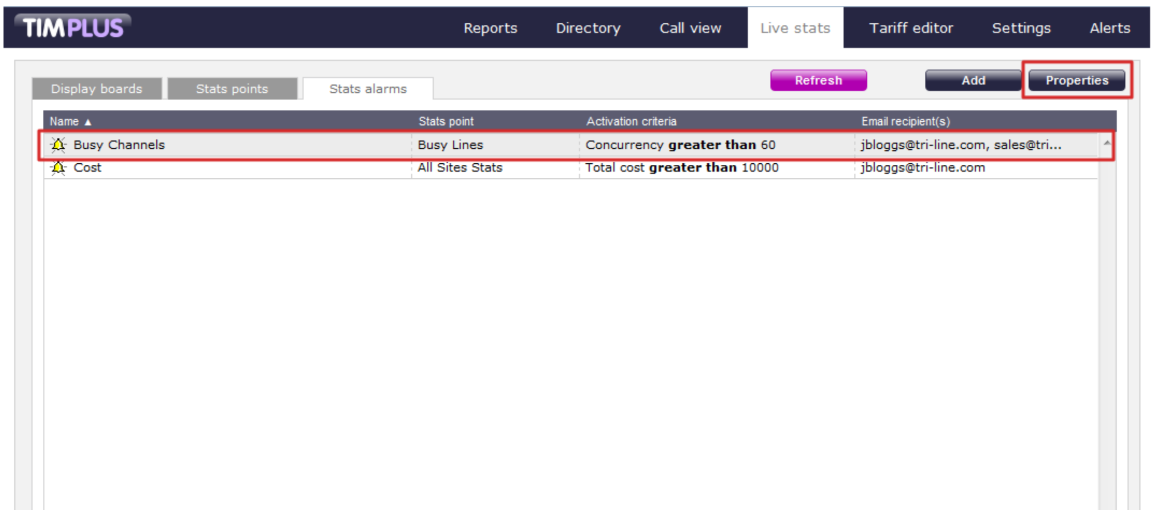



Once you have configured all the settings, click on the Add button to add your alarm to the **Stats alarm** list, as shown below:

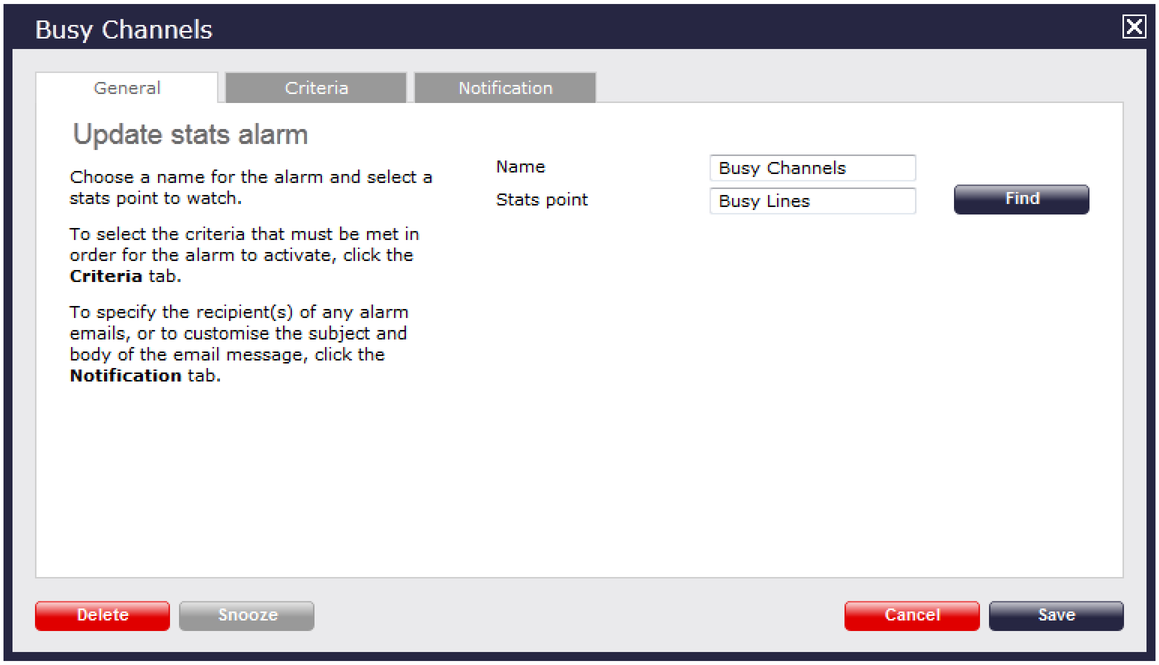



## Configuring a stats alarm

To configure a stats alarm, select it from the existing list and click on the Properties button at the top-right corner of the screen, as shown below:

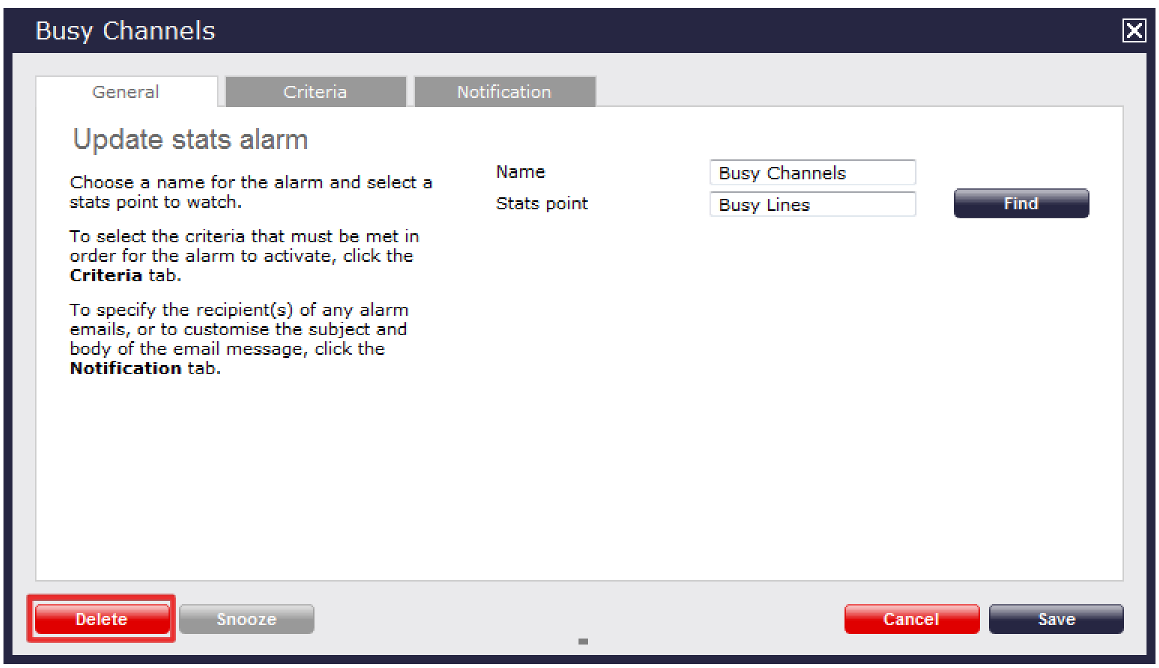



A new window will open, where you can edit the properties of the stats alarm.




## Deleting a stats alarm

To delete a stats alarm, select it from the list and click on the Properties button at the top-right corner of the screen. In the new window that opens, click on the Delete button to remove the alarm from the system.




# Tariff editor

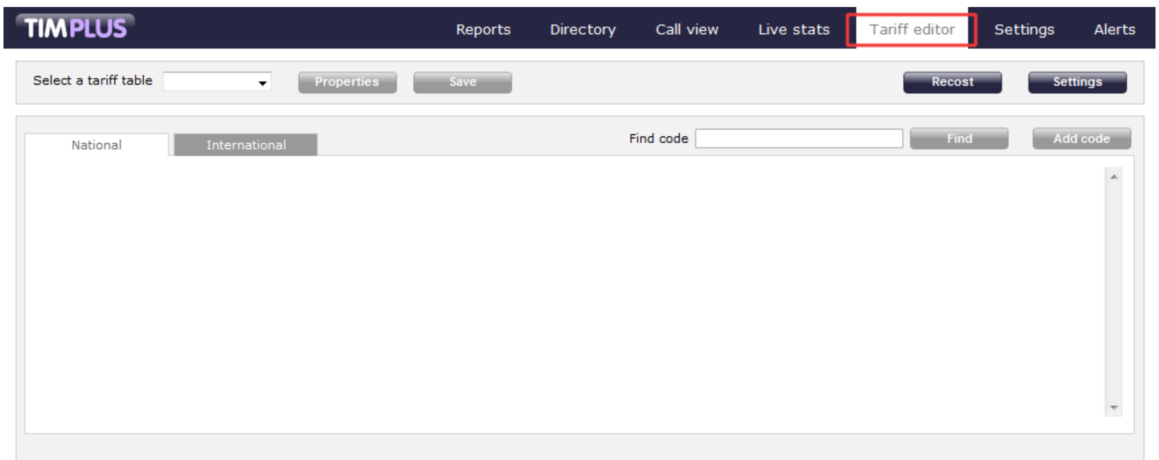
## General properties

**General properties**

- Accessing the tariff editor
- Selecting a tariff table
- Tariff properties
- Recosting calls
- Tariff settings

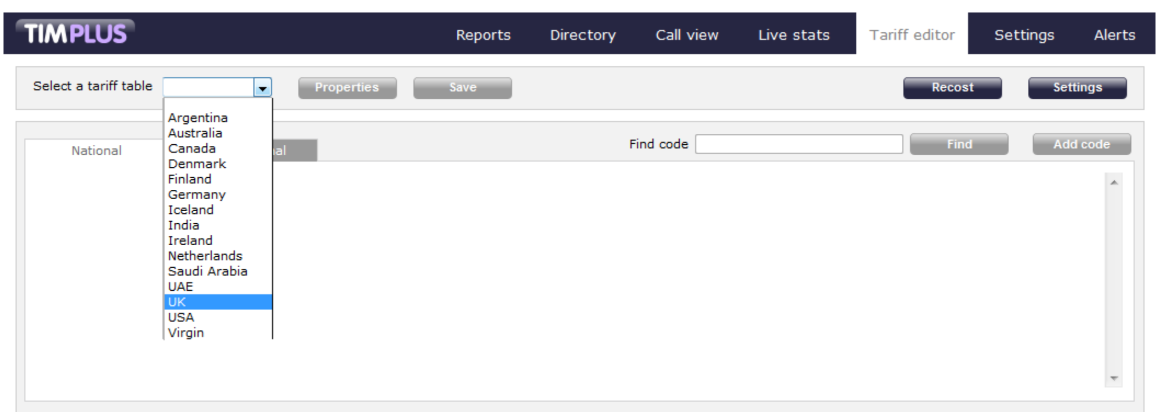
## Accessing the tariff editor

To access the tariff table, click on the Tariff editor tab from the menu bar, as shown below:

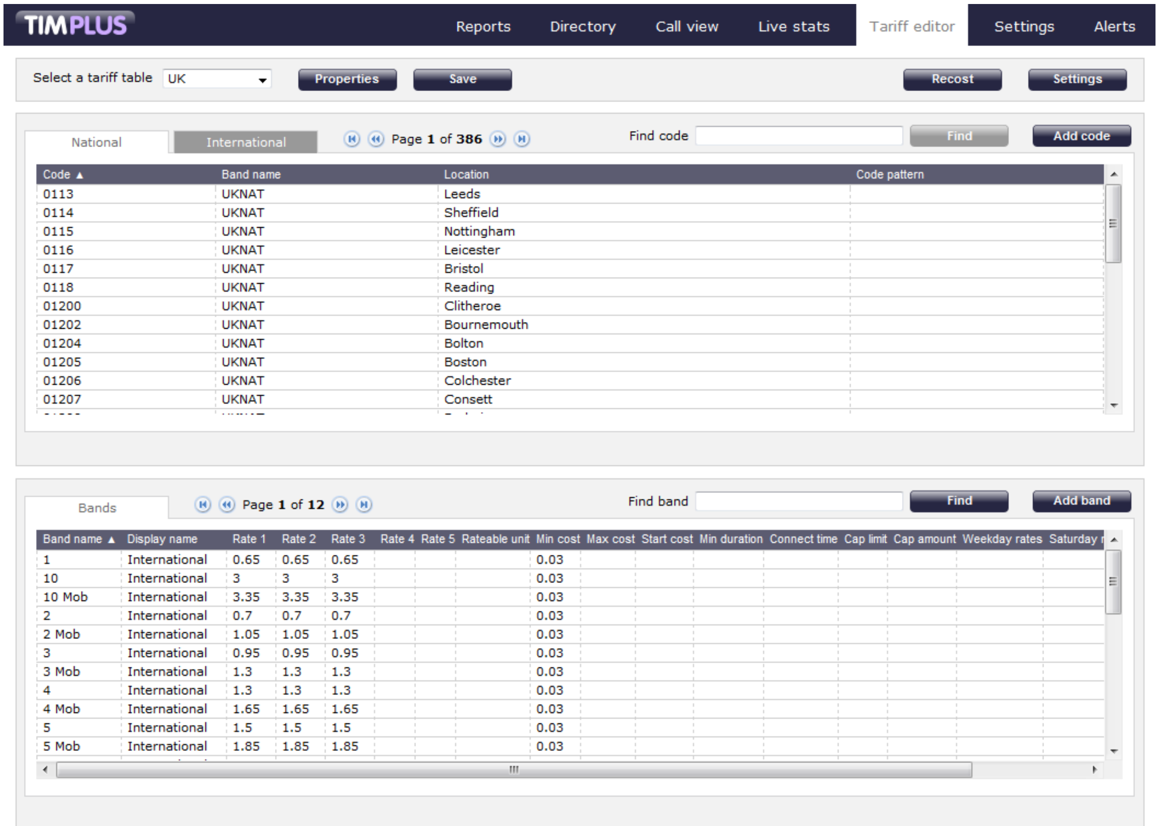



## Selecting a tariff table

To select a tariff table, expand the drop-down list on the left-hand side of the screen and choose from the available options, as shown below:

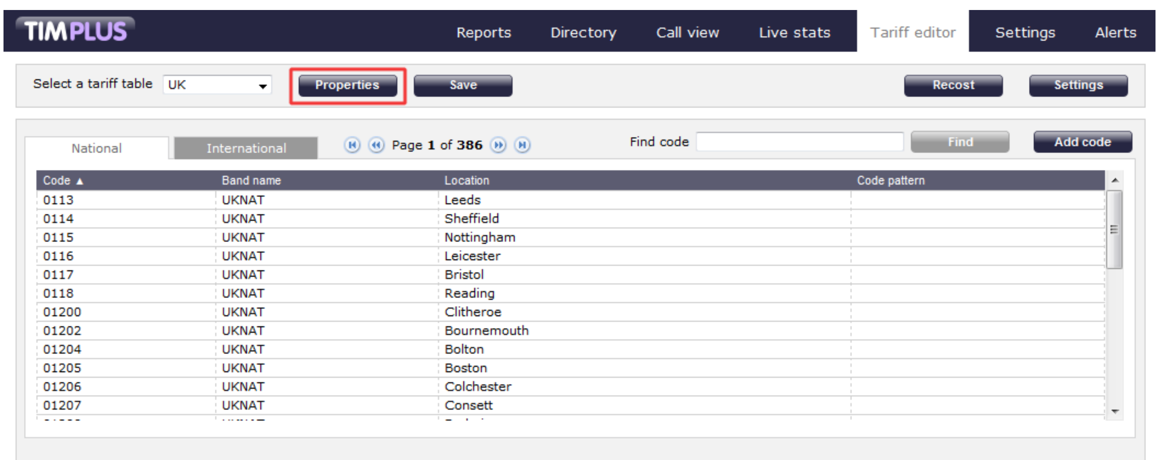



Once a tariff has been selected, the following screen will be displayed:

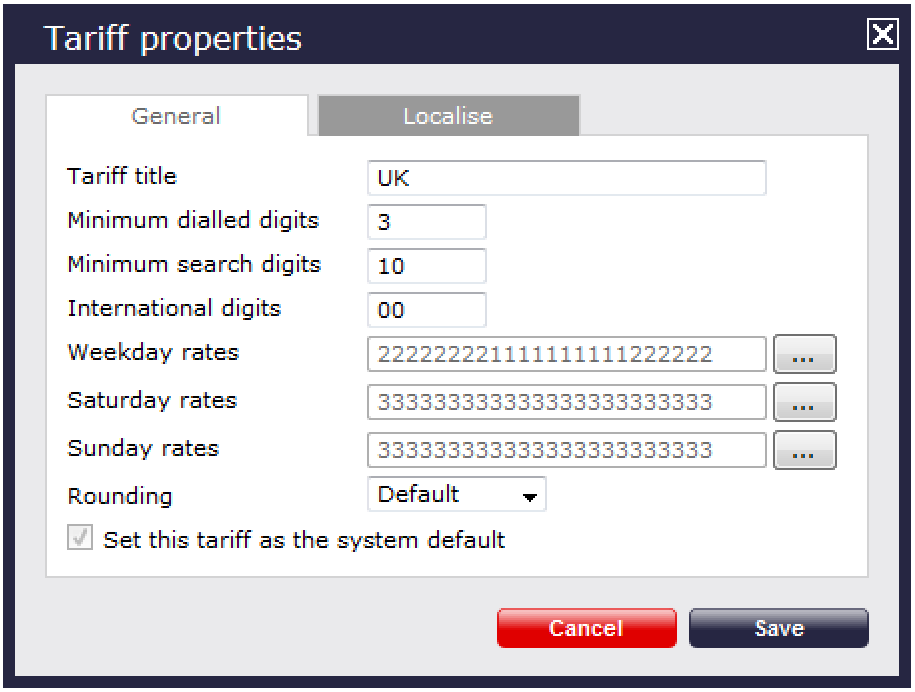


## Tariff properties

To configure the general properties of your tariff table, click on the Properties button, as shown below:

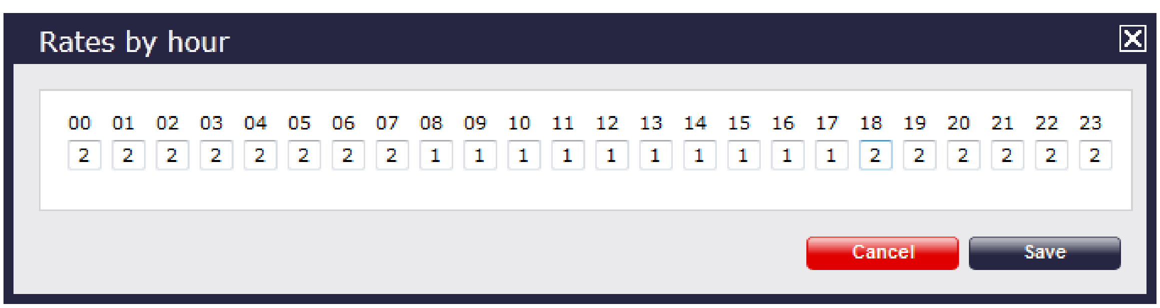


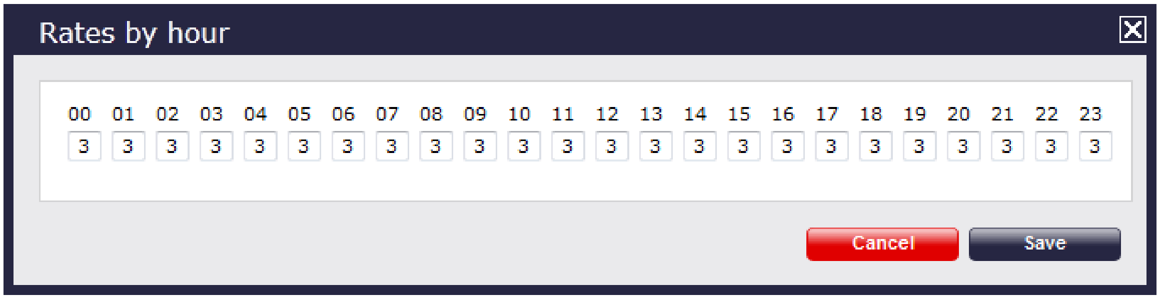
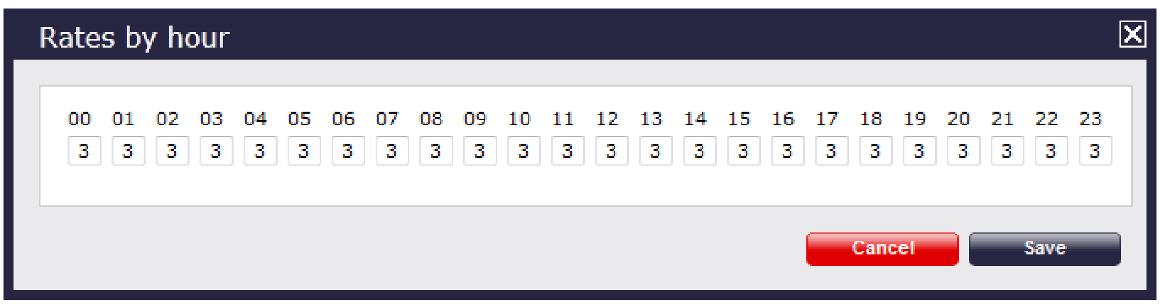
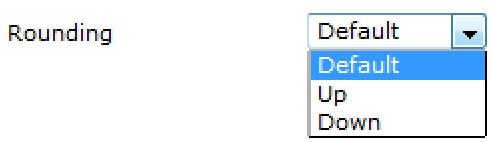
A new window will open where you can configure the properties of your tariff table. Each field in this window is described in the table below:




| Field name | Description |
| --- | --- |
| **Tariff title** | The name of the tariff table. |
| **Minimum dialled digits** | The minimum number of dialled digits required for the call to be logged. |
| **Minimum search digits** | The minimum number of search digits required to start allocating a charge to a call. TIM Plus starts from 10 digits and works backwards in order to find the closest tariff match. |
| **International digits** | The digits used to dial internationally, e.g. all international calls made from UK begin with 00. |
| **Weekday rates** | The weekday rates you want to apply to calls for each hour of the day. For example, in the table below rate **2** applies from midnight to 7:59 and from 18:00 to 23:59, and rate **1** applies from 8:00 to 17:59. |

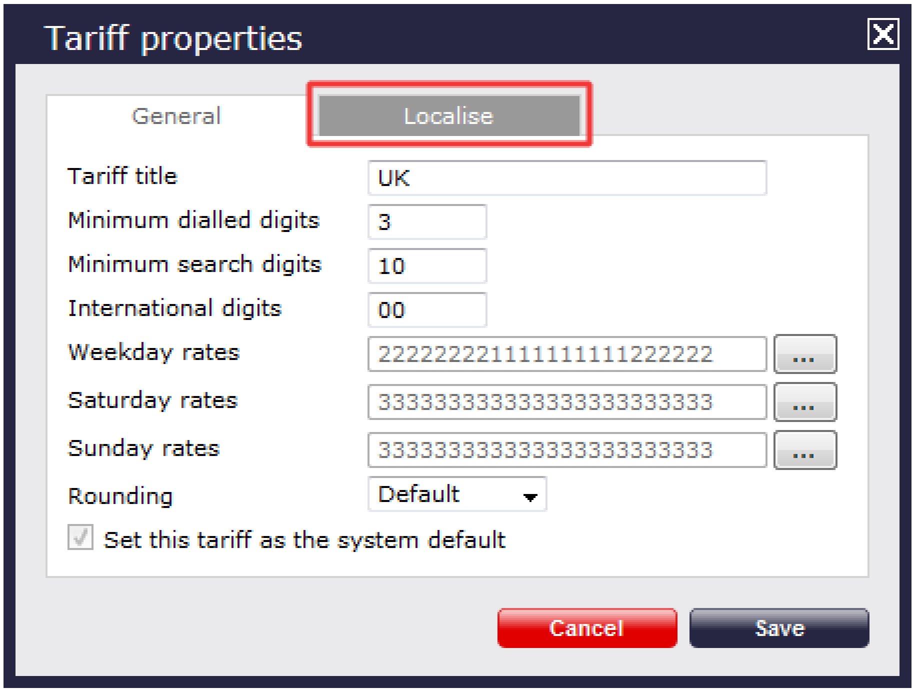

To see the rates in more detail, click on the ... button to expand, as shown below:



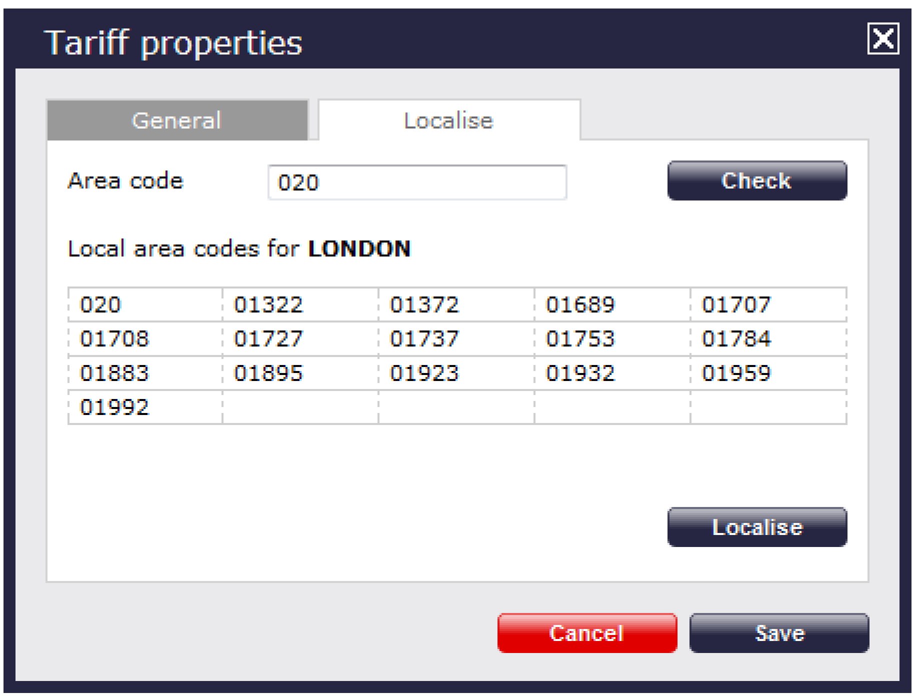
| | |
|---|---|
| **Saturday rates** | The Saturday rates you want to apply to calls for each hour of the day. For example, in the table below rate **3** applies at all times.<br><br><br>To see the rates in more detail, click on the ... button to expand, as shown below:<br><br> |
| **Sunday rates** | The Sunday rates you want to apply to calls for each hour of the day. For example, in the table below rate **3** applies at all times.<br><br><br>To see the rates in more detail, click on the ... button to expand, as shown below:<br><br> |
| **Rounding** | This option allows you to select whether you want to round decimal places up or down.<br><br> |

## Localising the tariff table

To inform TIM Plus which calls should be treated as local by your tariff table, click on the Localise tab, as shown below:

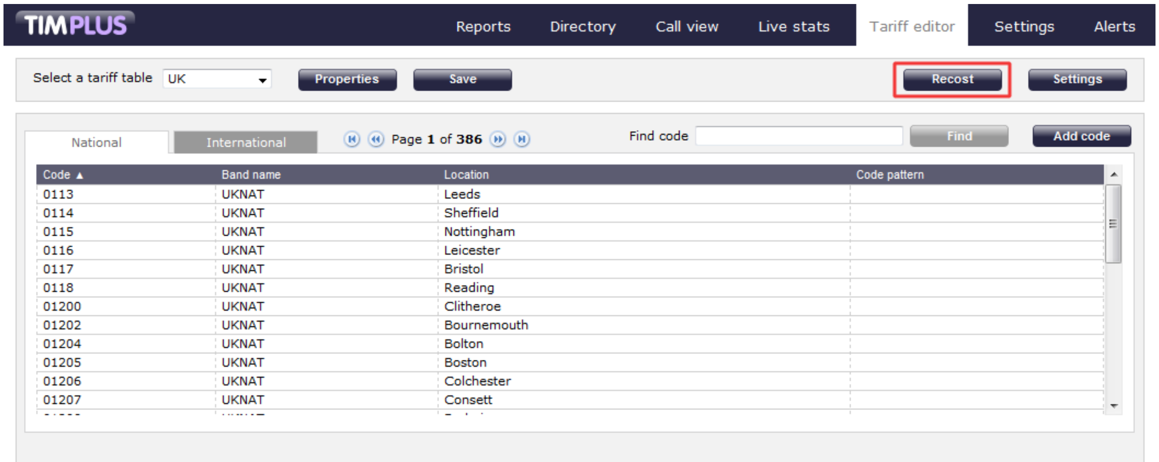



Enter your local dial code in the field provided and click on the Check button. The surrounding area codes will be listed automatically. Click on the Localise button at the bottom-right corner of the window to localise your tariff.

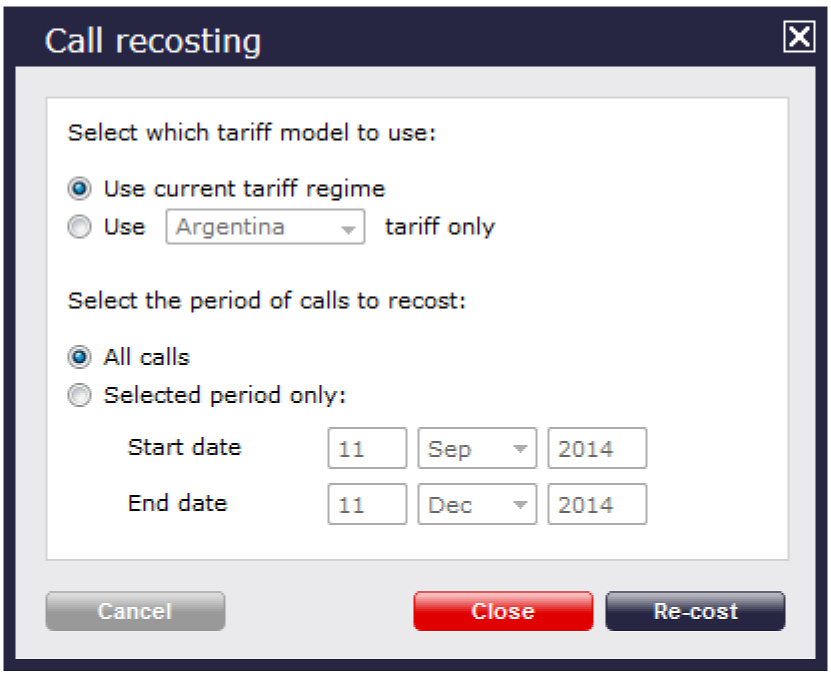



## Recosting calls

TIM Plus allows you to apply different rates to your already-logged calls, by re-running your data using a different tariff table. To recost calls, click on the Recost button, as shown below:



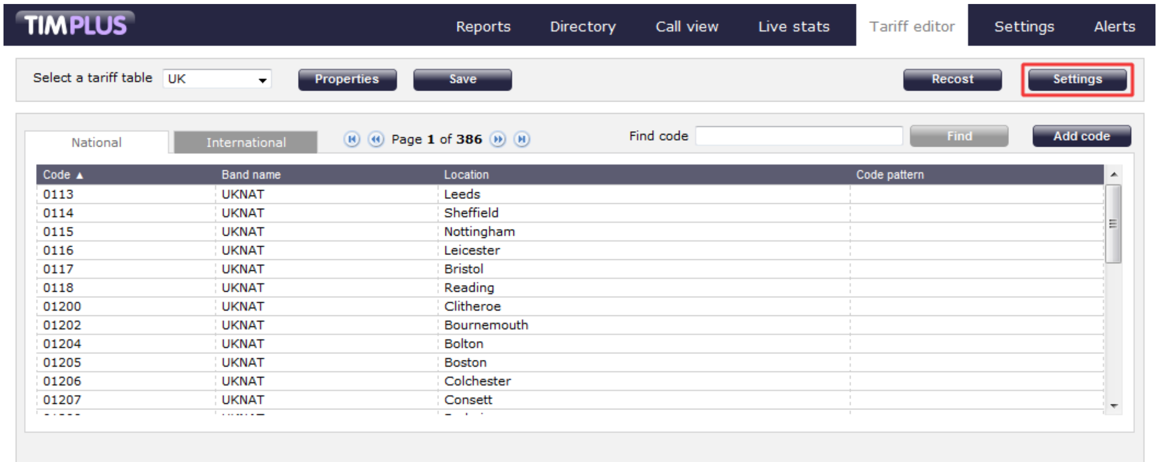

A new window will open, allowing you to select the tariff table and the period you want to recost calls for. If you want to recost all calls currently in the database, select the `All calls` option.



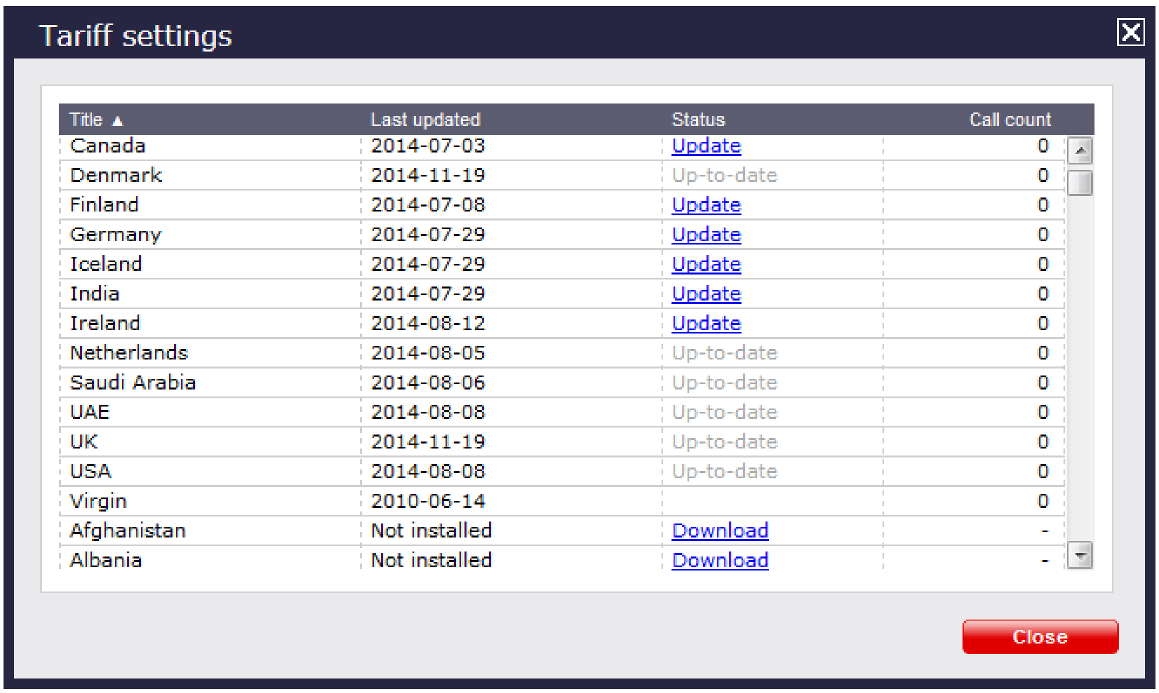

The recosting procedure entails removing the selected calls from the database and re-running the data using different rates. If this procedure is interrupted, you may lose calls.

## Tariff settings

To check the status of a tariff table, click on the Settings button, as shown below:



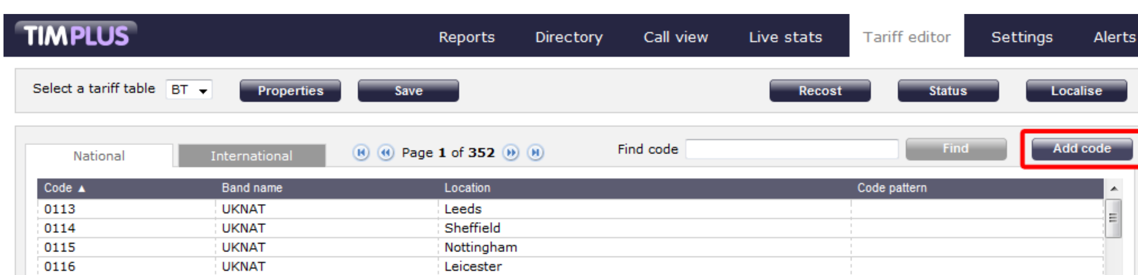

A new window will open, where you can update your current tariff table or download one that has not been installed by default.



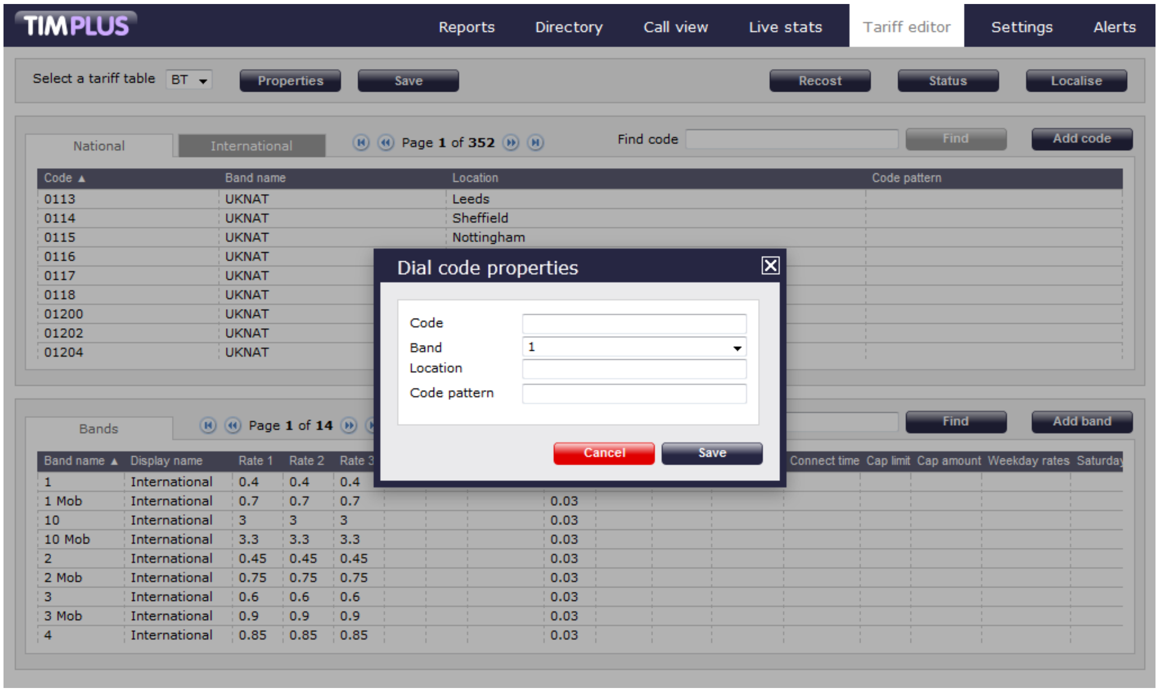

The `Call count` column will show the current number of calls that have been processed under the selected tariff.

## Adding a code

To add a code to the current tariff table, click on the Add code tab at the top-right corner of the screen, as shown below:



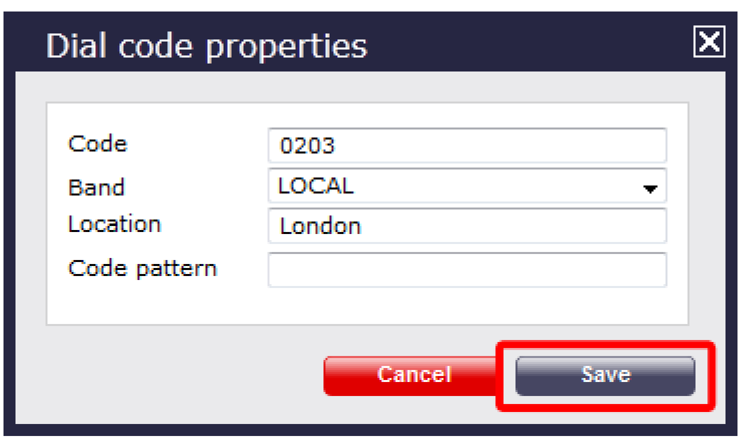

A new window will appear, where you can edit the properties of your dial code:




Each field in the **`Dial code properties`** window is described below:

| Field | Description |
|---|---|
| **Code** | The new code you want to add to the tariff table. |
| **Band** | The charge band you want to apply to the current dial code. |
| **Location** | The geographical location you want to associate with the current dial code. |
| **Code pattern** | If your code needs to match a specific digit pattern, use the **`#`** symbol to construct the pattern and mask the necessary digits. For example, enter **`020########*`** for a London phone number, which indicates that the number must start with 020 and to be followed by at least eight digits in order to be valid. |

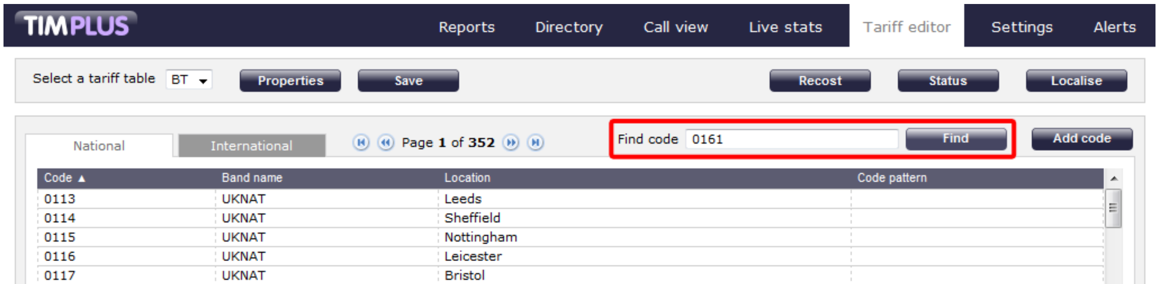
When you have finished configuring these properties, click on the Save button to apply the changes.



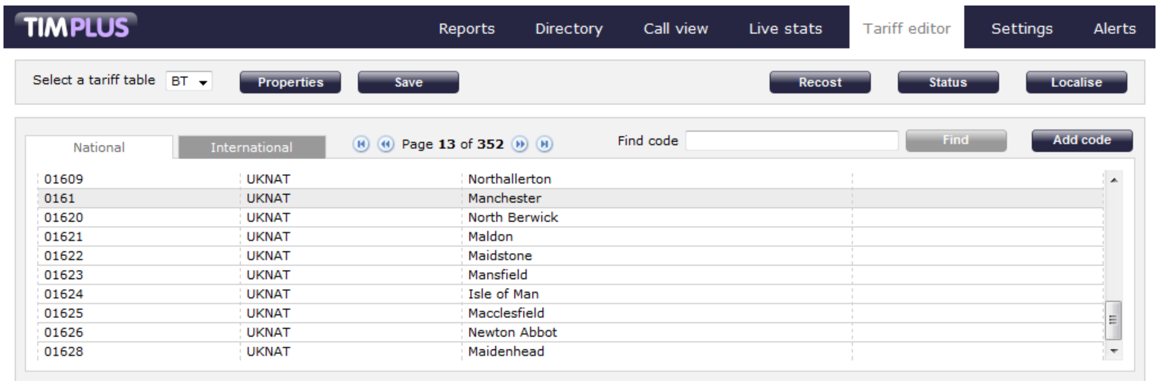
# Finding a code or location

## Search for a dial code

To locate a dial code in the tariff table, enter it in the search box provided, as shown below:

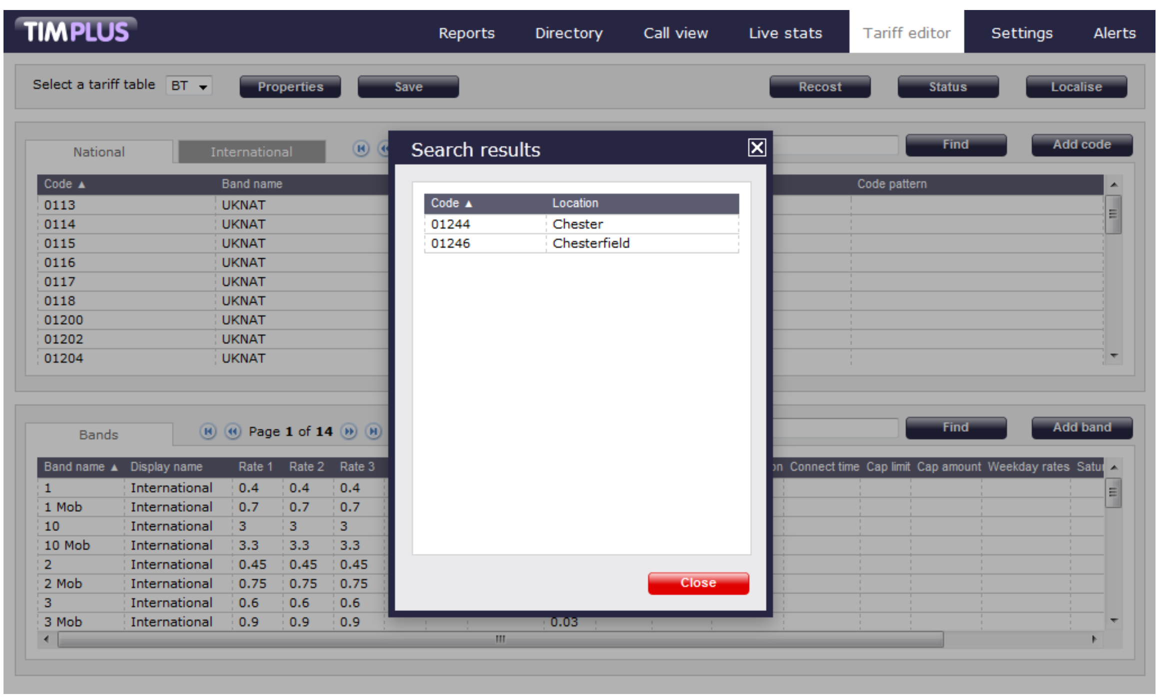



The dial code and its matching destination will show highlighted in grey, as shown below:



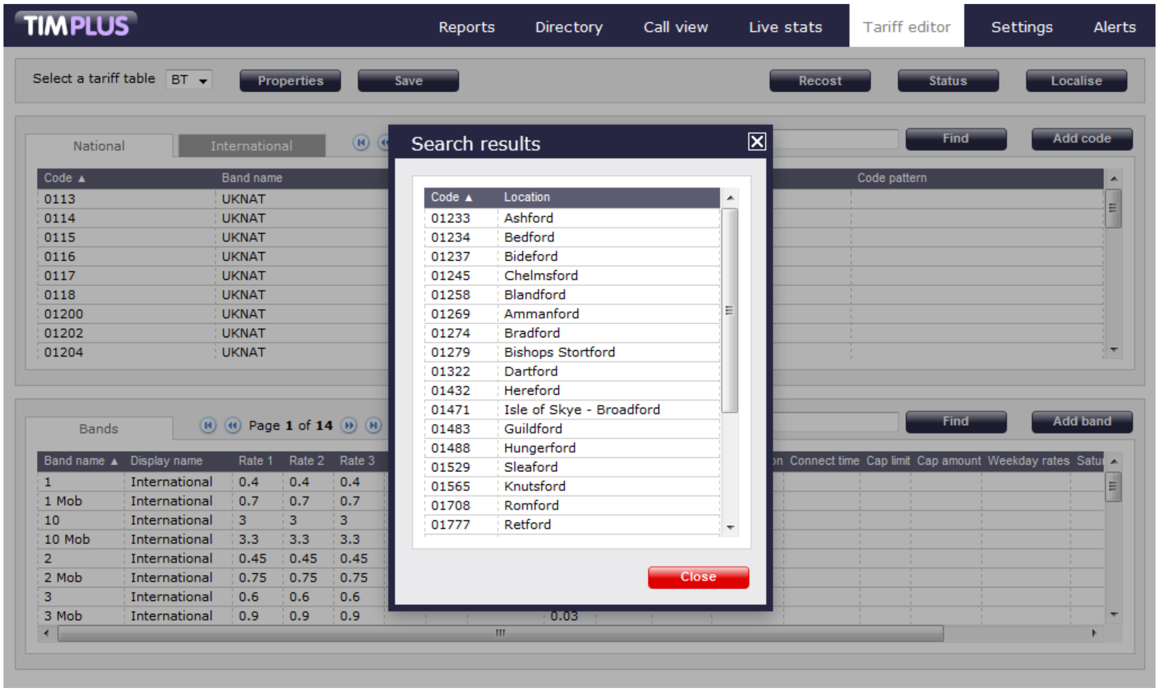

## Search for a location

To search for a location in the tariff table, enter its name in the search box. The results will show all locations containing that name. In the example below the search word was `Chester`:



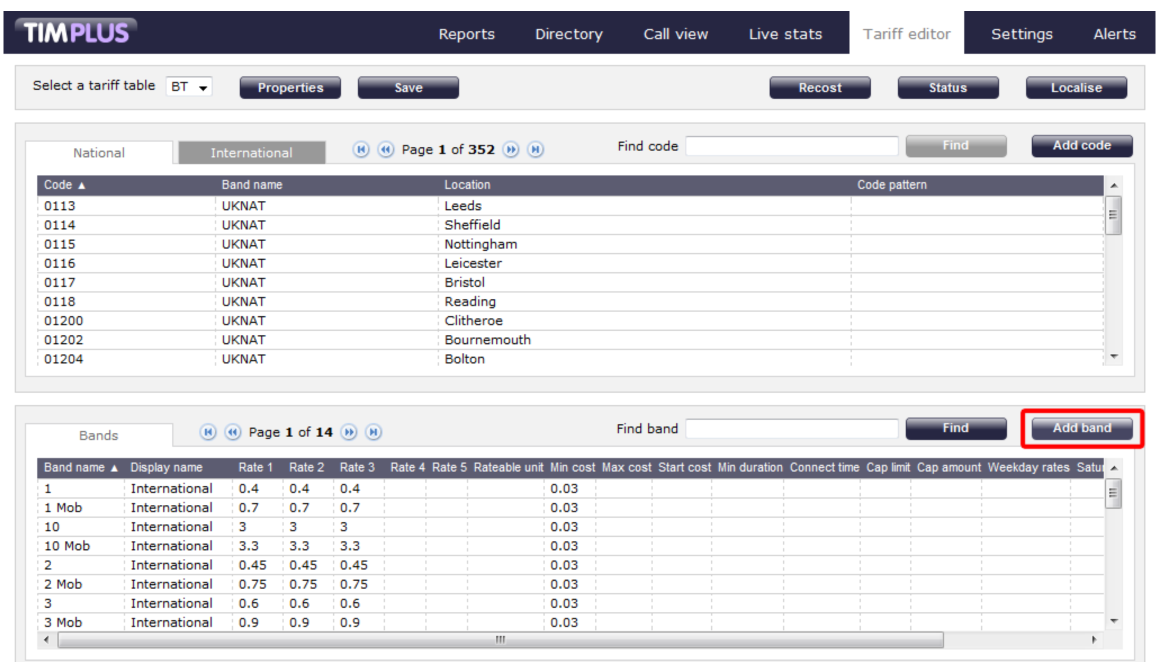
### Search for a partial code or location

To search for a name or number that is contained in a string, use `*` character before or after the number or name you have entered. In the example below, the string `*ford` was entered:

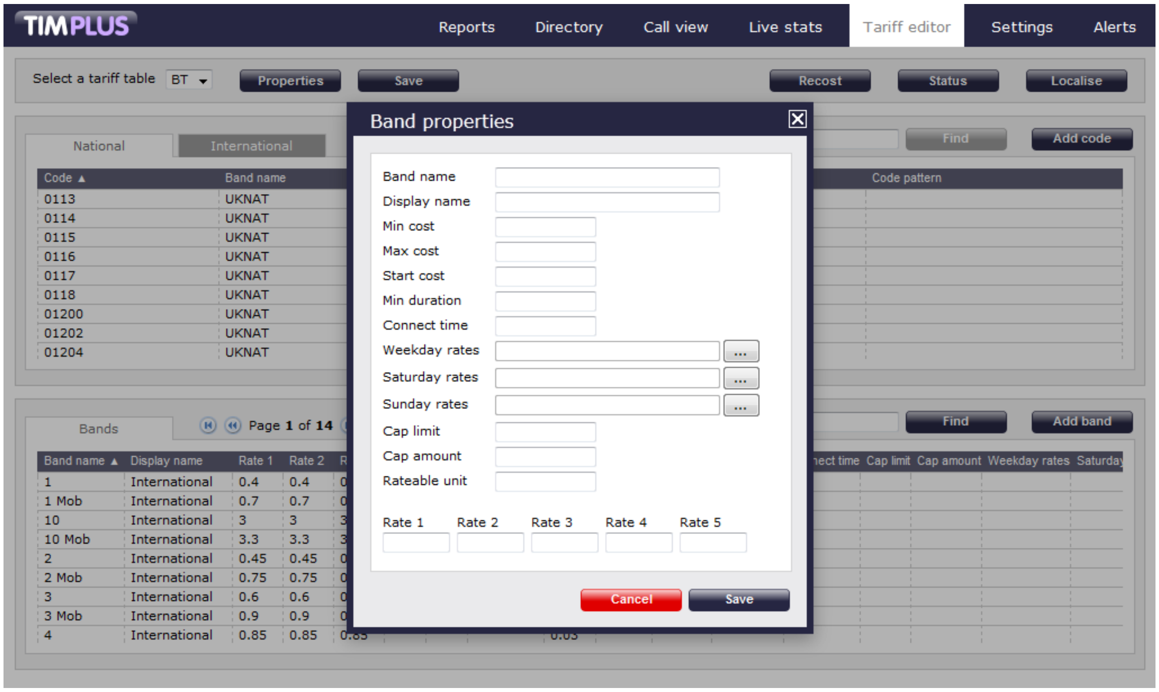



# Adding a band

To add a new band to the current tariff table, click on the Add band tab, as shown below:




A new window will appear, where you can edit the properties of your band:

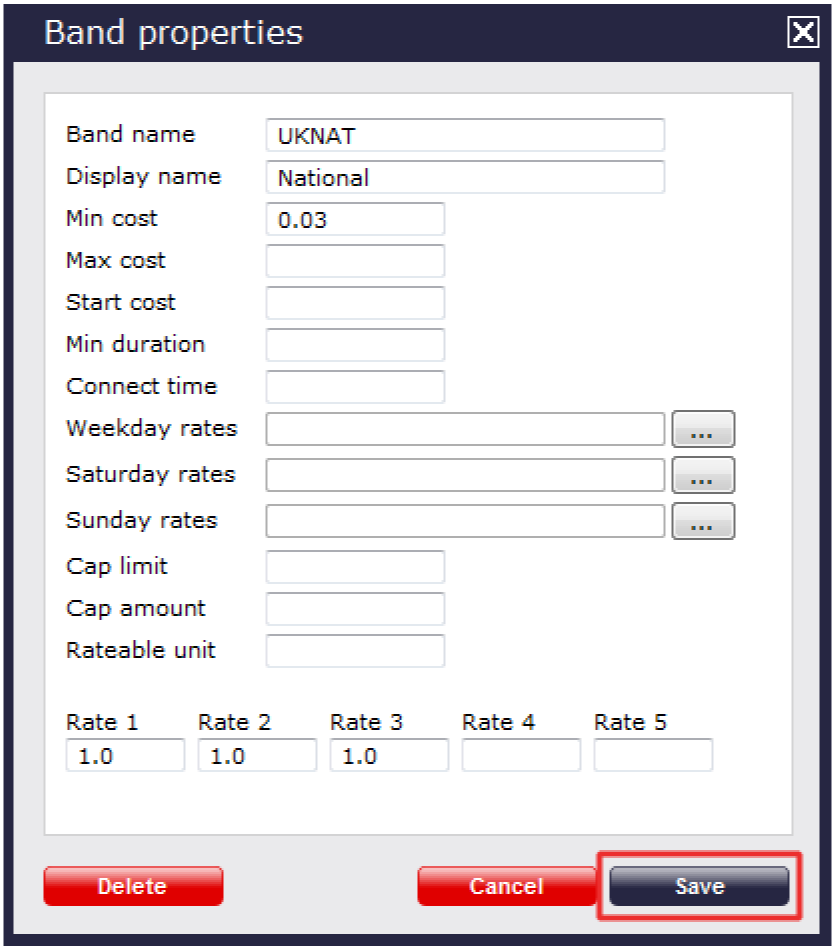



Each field in the **Band properties** window is described below:

| Field | Description |
|---|---|
| **Band name** | The name of the band |
| **Display name** | The band name displayed in the call view or reports |
| **Min cost** | The minimum cost of a call, regardless of whether the call totals less at the defined rate |
| **Max cost** | The maximum cost a call can reach, regardless of whether the call totals more at the defined rate |
| **Start cost** | The starting cost of a call, regardless of its duration |
| **Min duration** | The number of seconds a call must last in order to be chargeable |
| **Connect time** | A fixed period of time that is added to each call's duration |
| **Weekday rates** | The call rates during weekdays |
| **Saturday rates** | The call rates during Saturdays |
| **Sunday rates** | The call rates during Sundays |
| **Cap limit** | The maximum duration (in seconds) you want to restrict certain calls to |

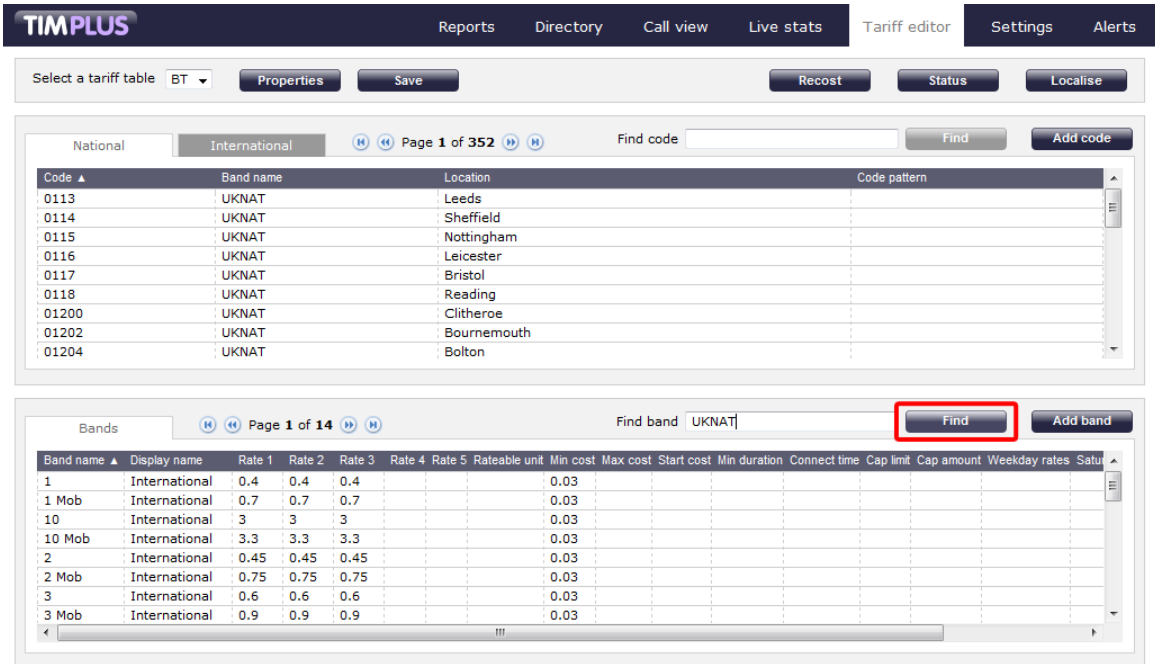
| | |
|---|---|
| **Cap amount** | The maximum charge for a call to a particular number |
| **Rateable unit** | The unit of time (in seconds) that a call's duration is divided into, when used as a multiplier to determine the cost of a call. By default, the rateable unit in TIM Plus is 1 - per second - but could be changed to 60 to enable per minute billing, for example. |

When you have finished configuring these properties, click on the Save button to apply the changes.

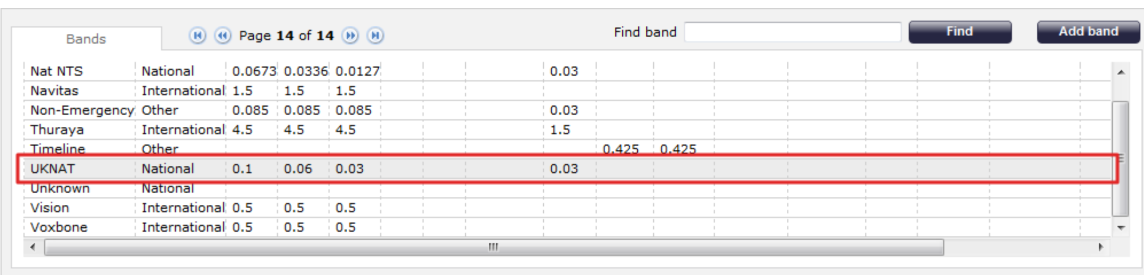



## Finding a band

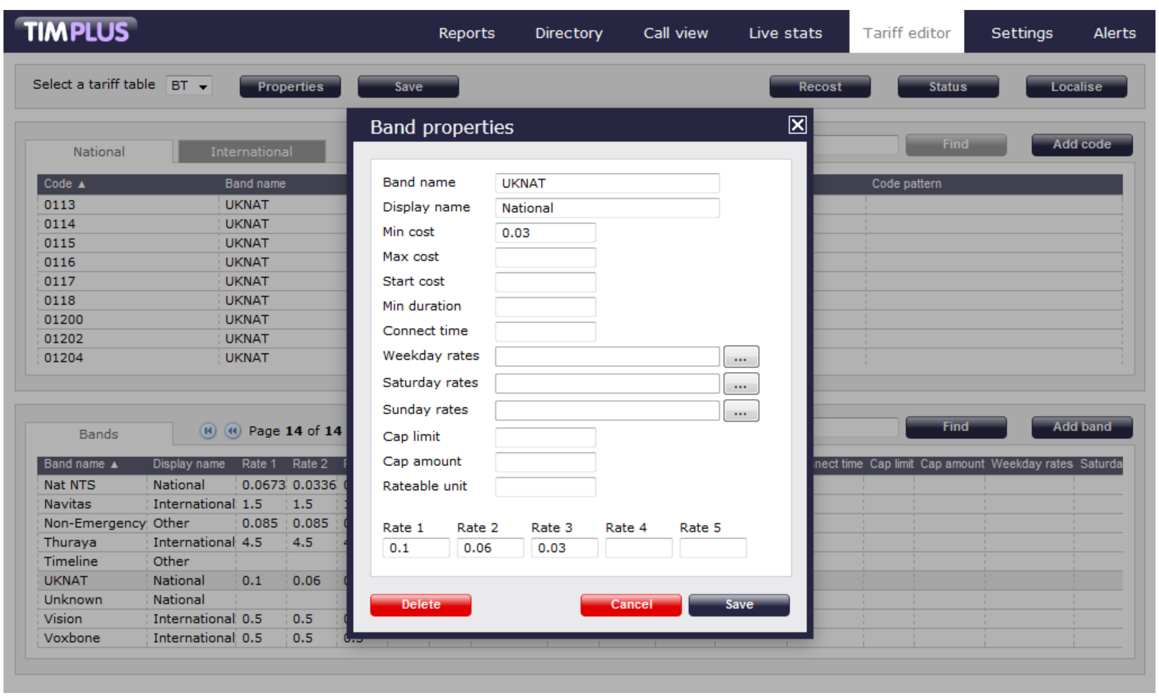
To locate a band in the tariff table, enter its name in the search box and click on the Find button, as shown below:




The matching band will show highlighted in grey, as shown below:

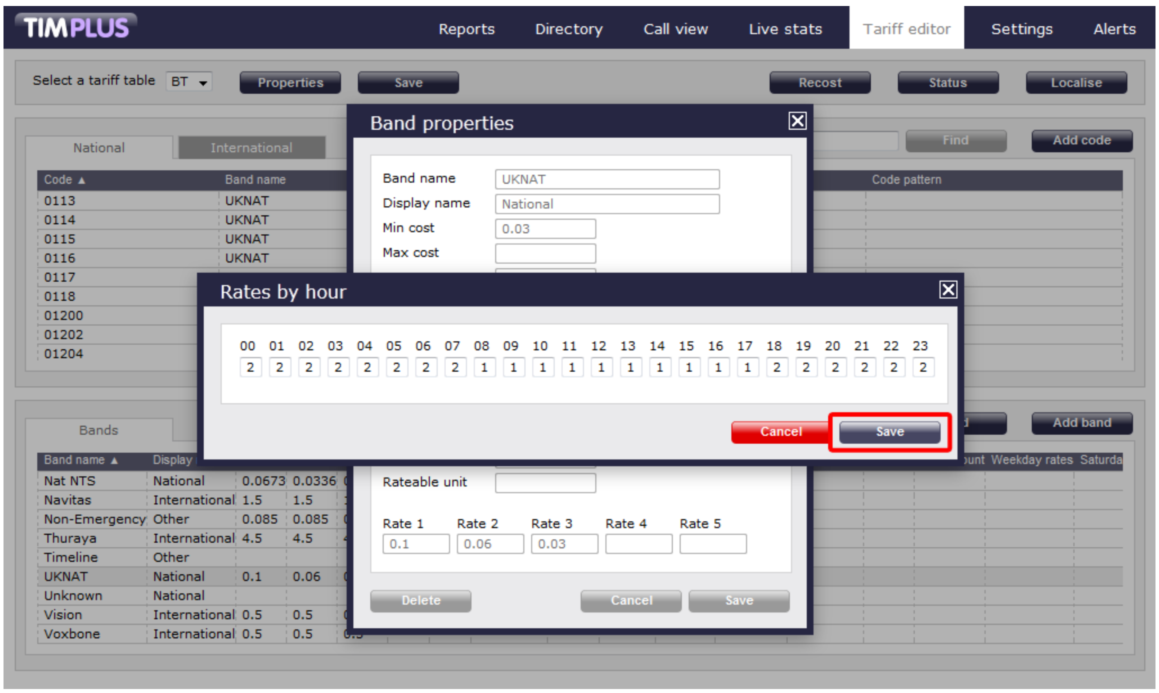



To configure the properties of the selected band, click on it to open the `Band properties` window, as shown below:



To see the applied rates, click on the ... button, as shown below:


A new window will open, where you can update the current rates. To apply any changes, click on the Save button.




## Settings

## Web users

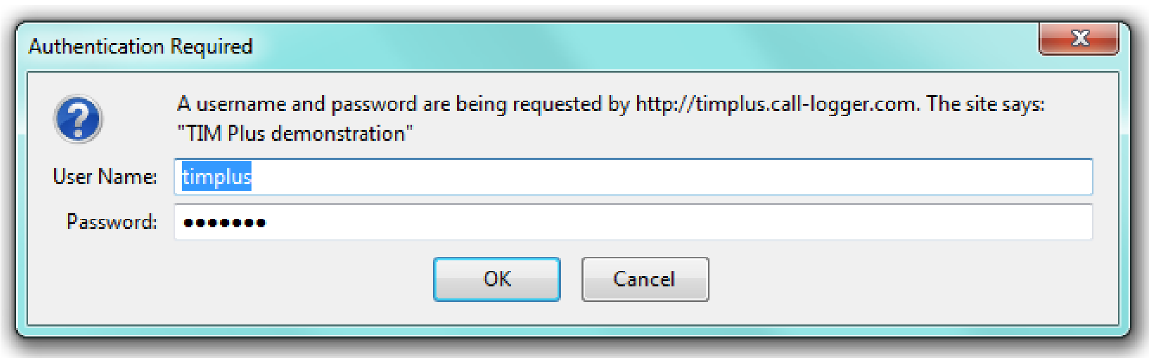
### Web users overview

**Web users overview**



## What is a web user?

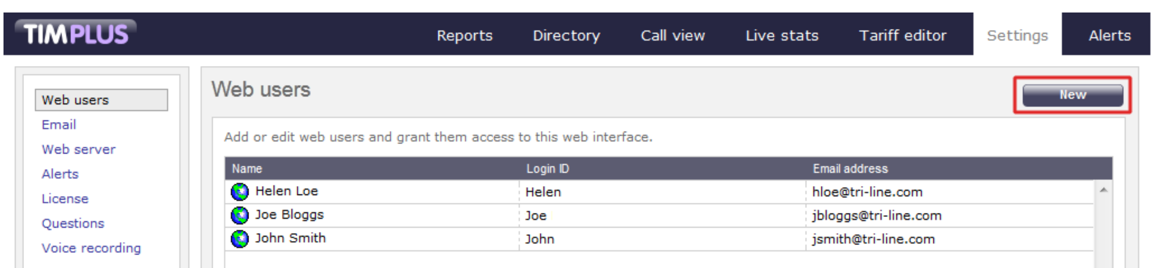
To access TIM Plus you are required to enter a username and password in the web browser, which form a login credential known as `Web user`. The login account for each user can be restricted to a specific site or user group, allowing you to have full control over their Directory privileges.



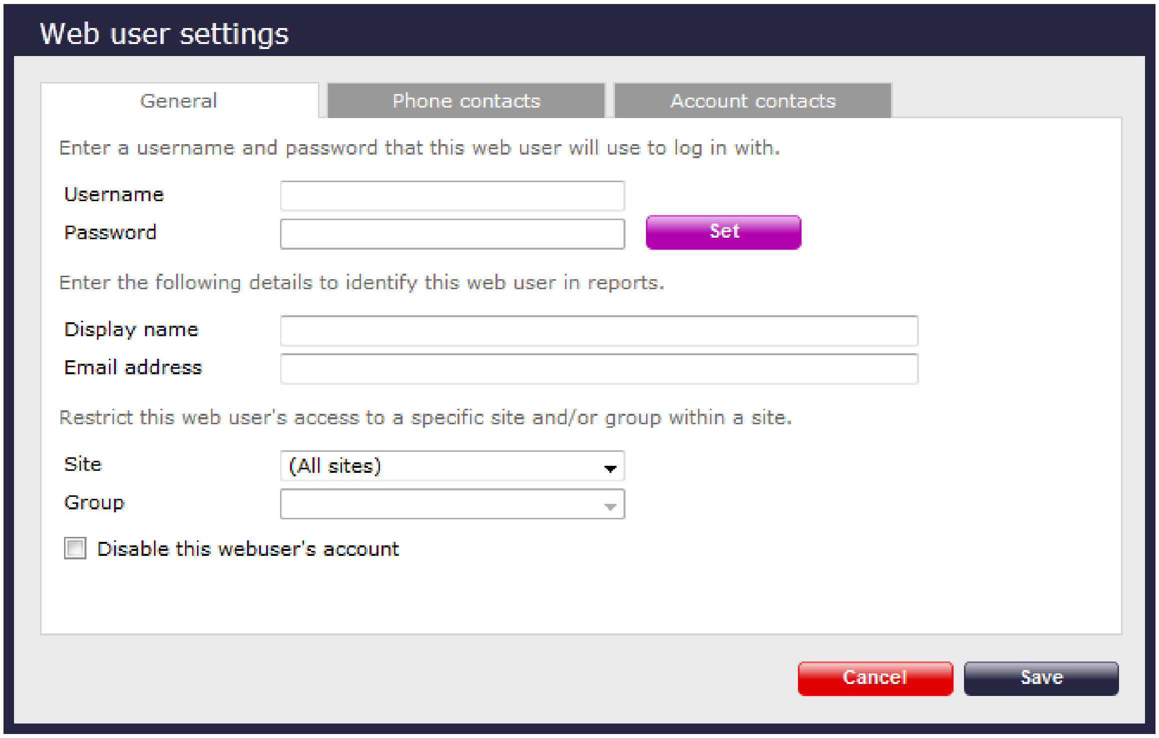

There is no limit on the amount of web users you are allowed to create in the system.

## Adding a web user

To add a new web user, click on the New button, as shown below:

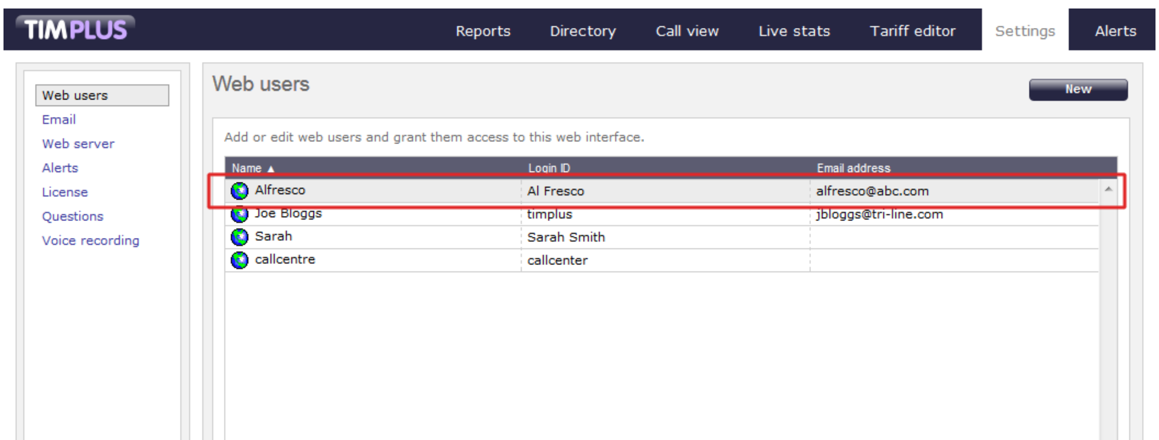



A new window will open, allowing you to configure the properties of the web user. When you have entered all the details, click on the Save button to apply the changes.

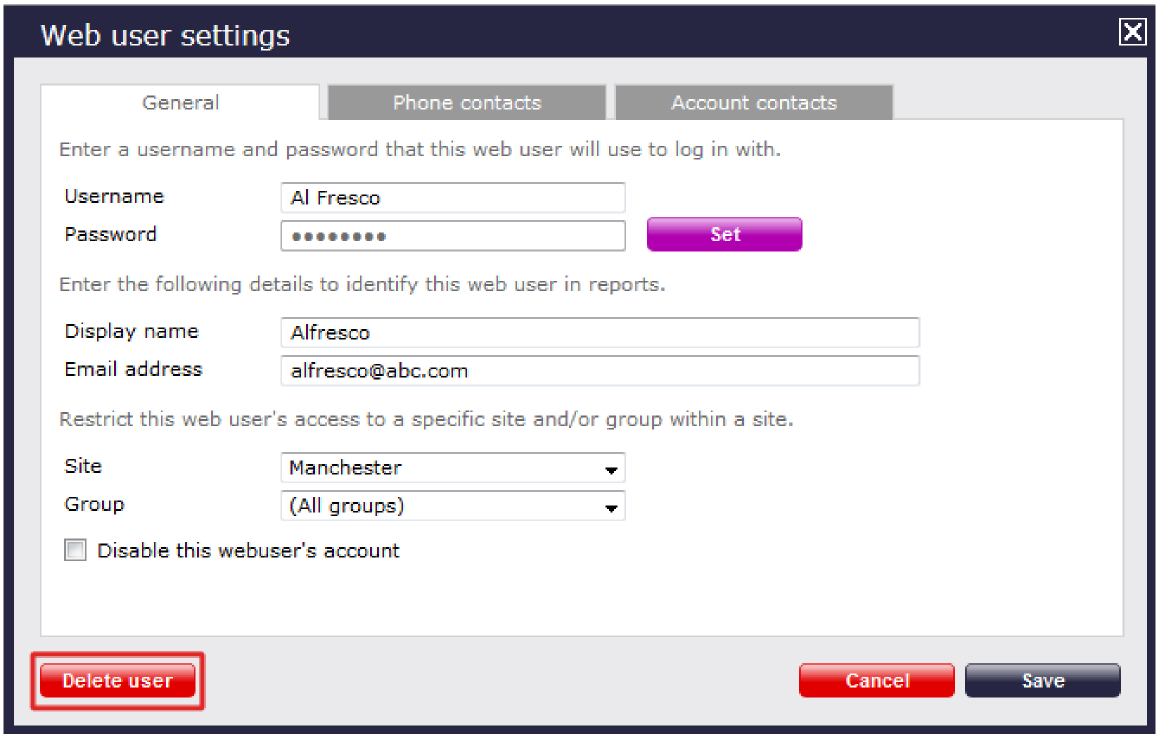



## Deleting a web user

To delete a web user from the system, select it from the **`Web users`** list, as shown below:




The **`Web users settings`** window will appear. Click on the Delete button at the bottom-left corner of the window to remove the web user from the system:



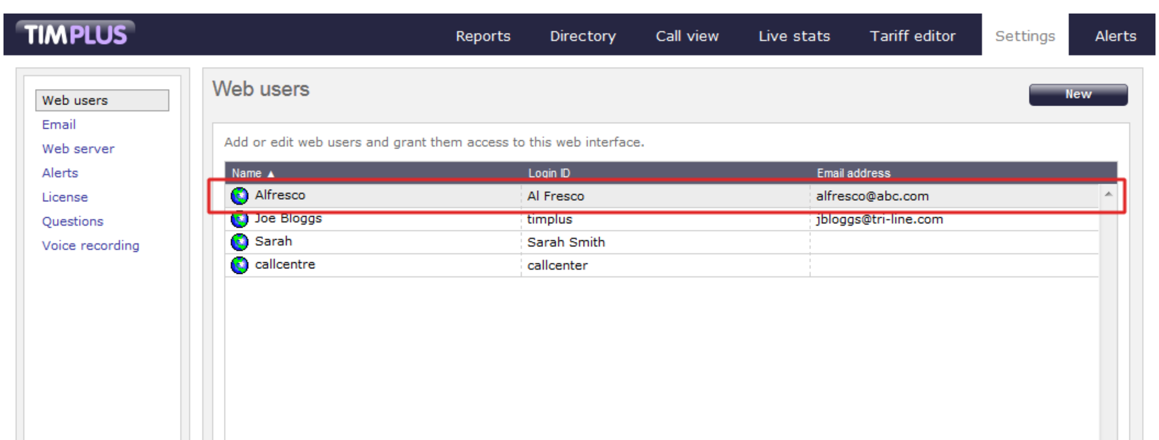

## Configuring a web user

**Configuring a web user**

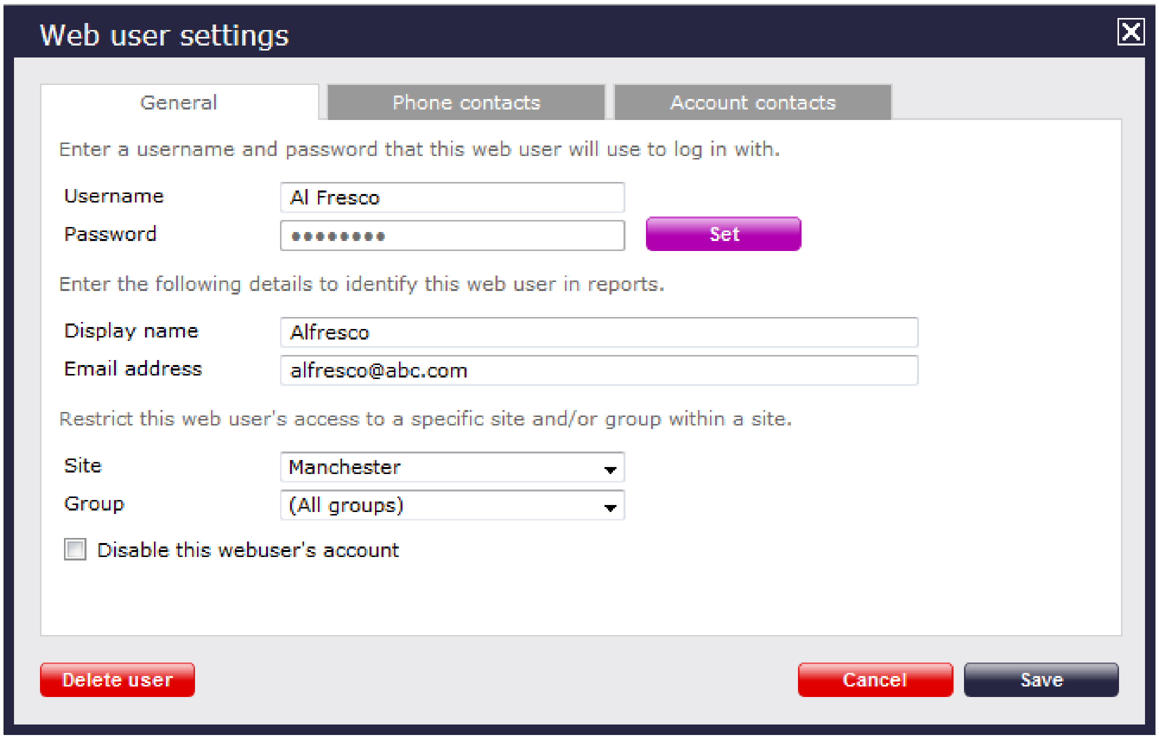
- Overview
- General properties
- Phone contacts
- Account contacts

## Overview

To configure the properties of a web user, select it from the `Web users` list, as shown below:



A new window will open, where you can configure the properties of the selected web user.

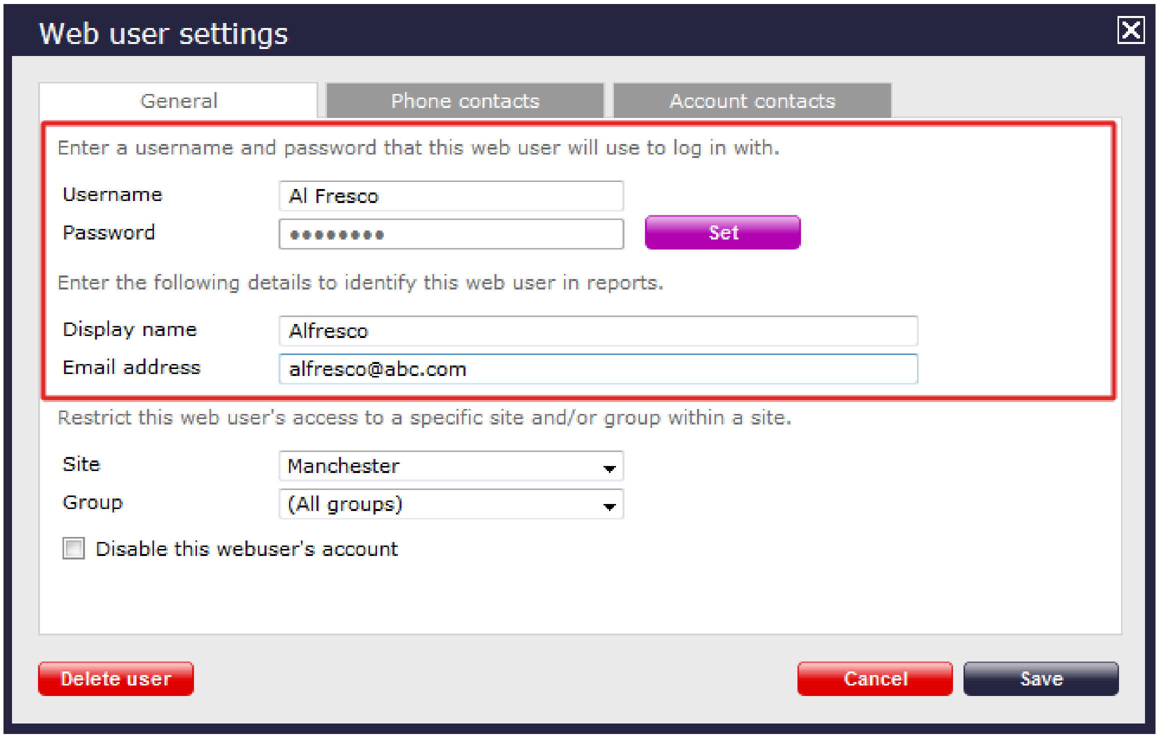



Each tab in this window is described below:

## General properties

The General tab allows you to configure the login credentials of the currently-selected web user and apply any directory restrictions, if required.

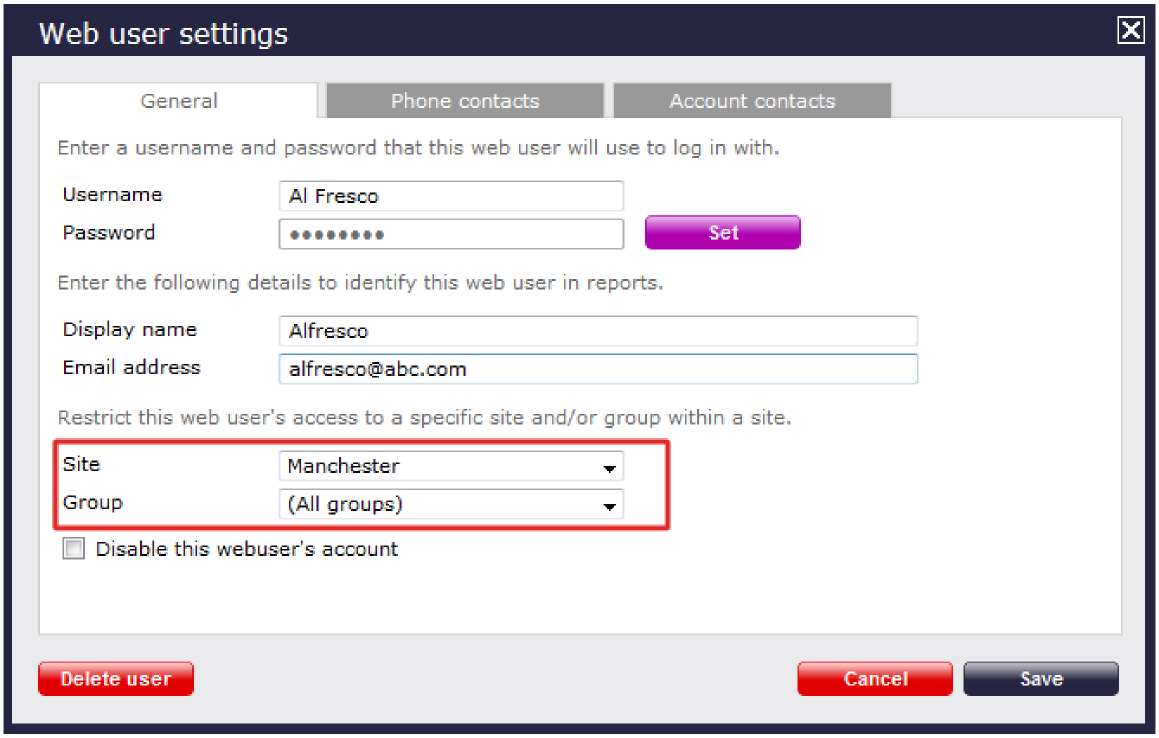
#### Configuring a web user's credentials




| Field | Description |
|---|---|
| **Username** | The username the web user will use to log in with |
| **Password** | The password the web user will use to log in with |
| **Display name** | The name you want the web user to be identified in the reports |
| **Email address** | The email address of the web user; this can also be used when scheduling reports |

### Configuring a web user's Directory access

TIM Plus allows you to restrict a web user's access to specific parts of the Directory. To apply any restrictions, select from the drop-down list the site and group you want to allow the web user to access. If you select `All sites`, the web user will be able to access all parts of the Directory.



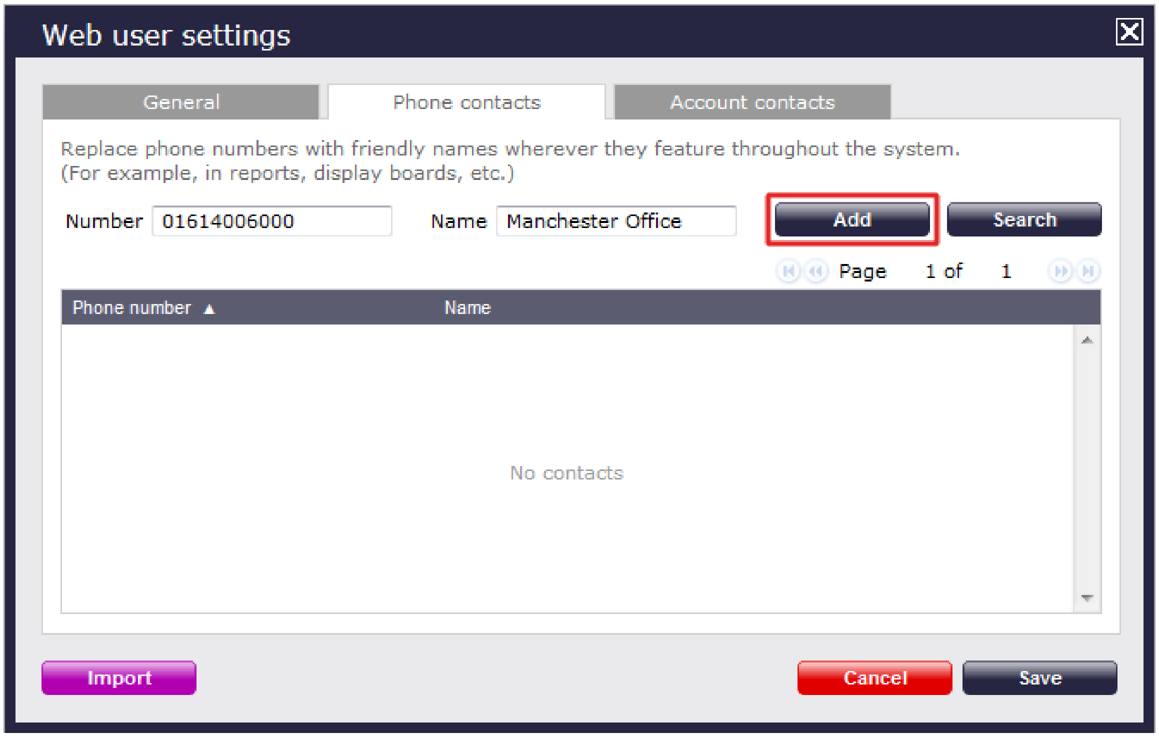

| Field | Description |
|---|---|
| **Site** | The site to which the web user will be allowed access. If you don't want to restrict the current web user to a specific site, select `All sites`. |
| **Group** | The user group - within the previously selected site - to which the web user will be allowed access. If you don't want to restrict the current web user to a specific group, select `All groups`. |

## Phone contacts

The Phone contacts tab allows you to add a list of contacts to each individual web user, replacing phone numbers with friendly names wherever they feature throughout the system, e.g. in reports, display boards, etc.

### Adding phone contacts manually

To manually add a phone contact to the currently-selected web user, enter the telephone number and the name you want to associate with it, then click on the Add button, as shown below:

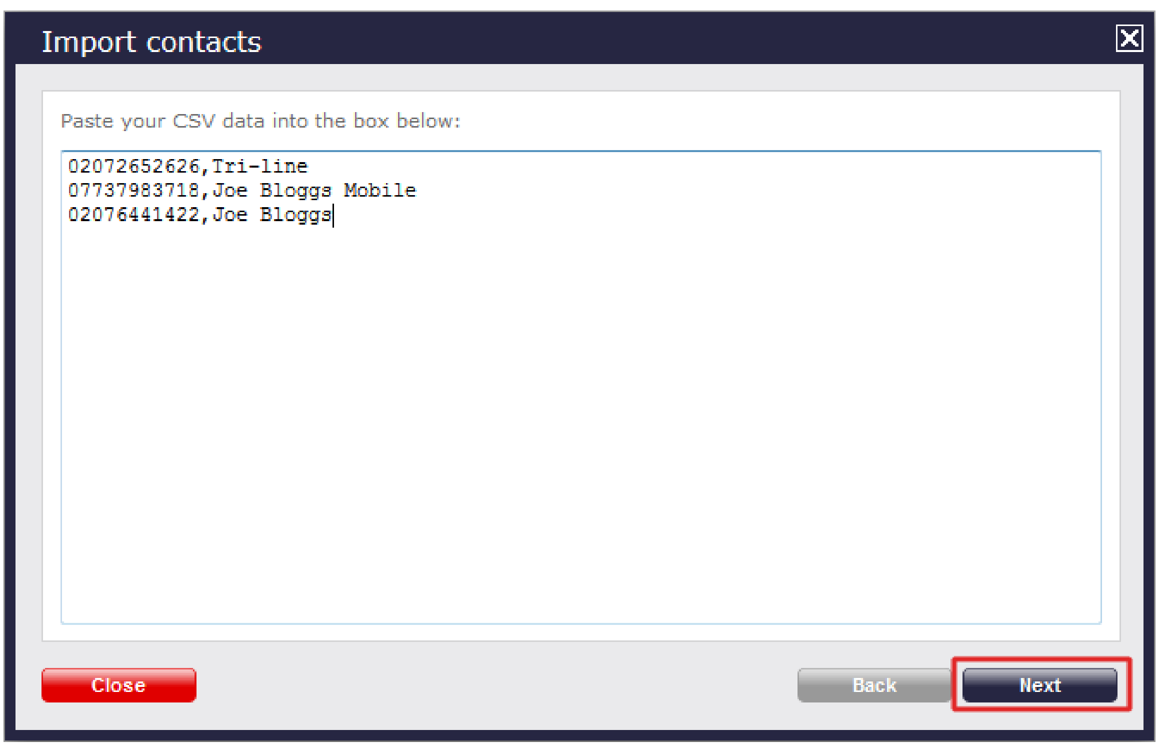



To add a range of DDI numbers, enter the first part of the phone number only, and use ** as a wild character, e.g. enter `020726526**` for Tri-line's DDIs.

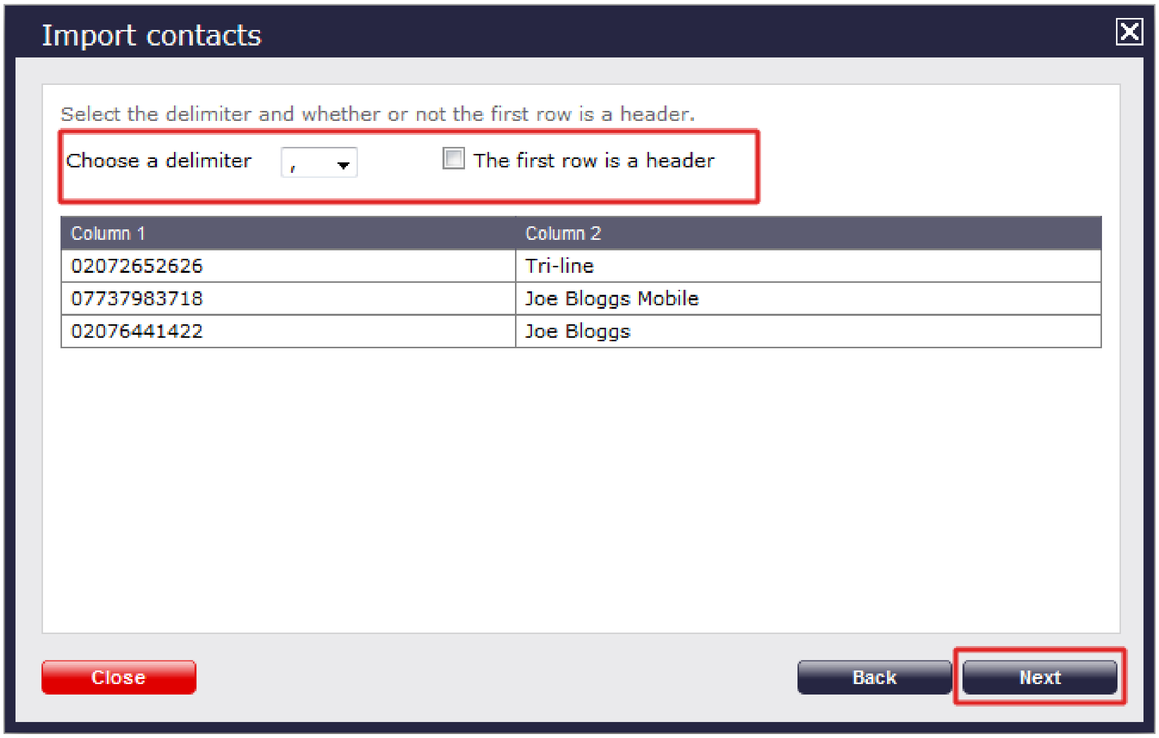
### Importing phone contacts

To automatically import phone contacts in the system from an existing list, arrange your data in CSV format comprising of two columns separated by a common delimiter, such as comma, dash, semicolon, tab or space.

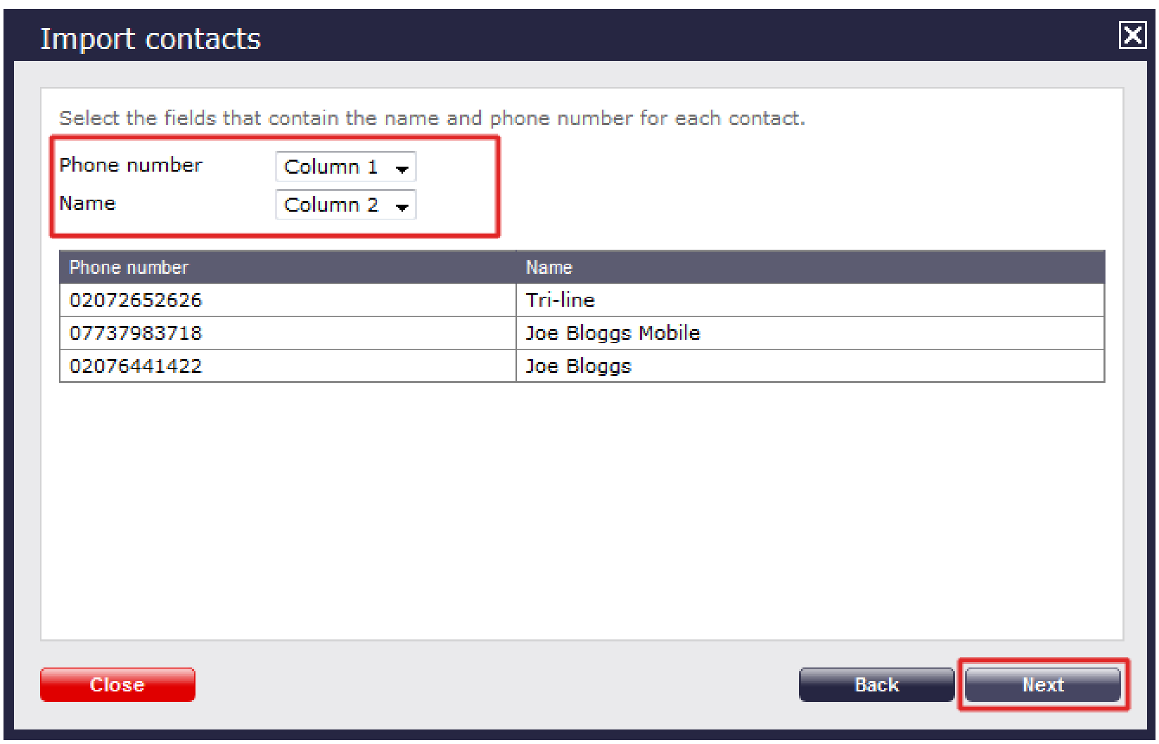
Click on the **Import** button and paste the CSV list in the box provided, then click on the **Next** button.



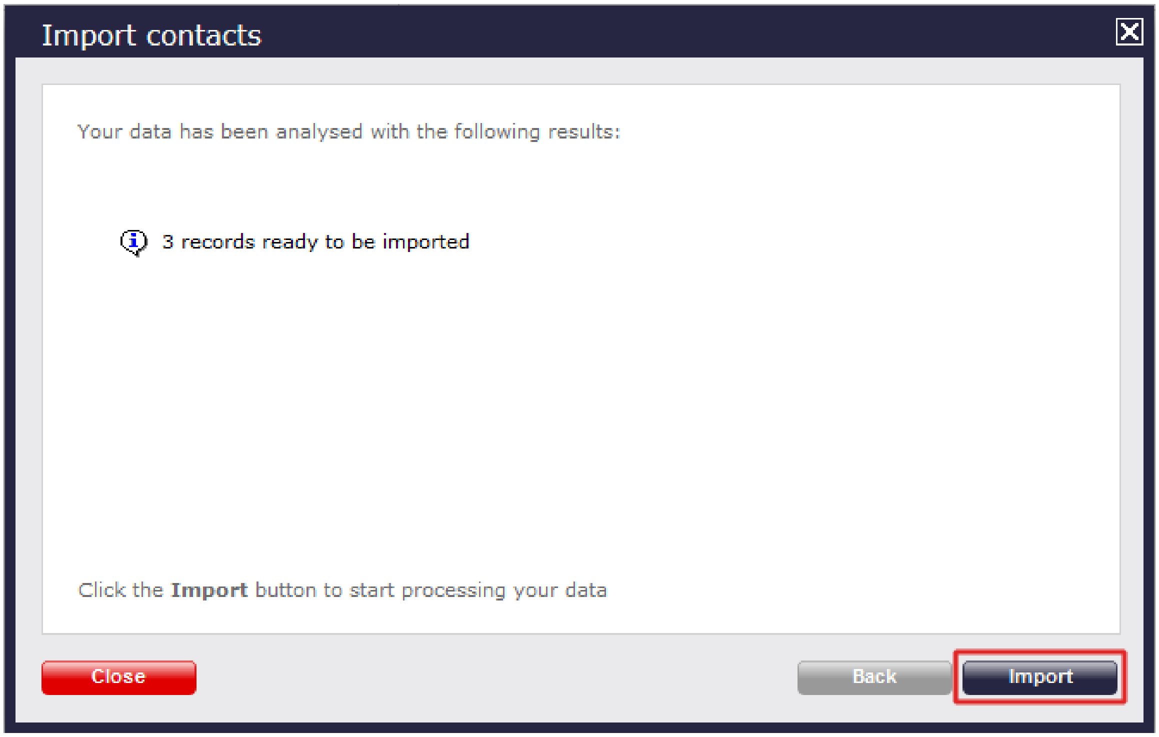

Choose from the drop-down list the delimiter you want to use to separate the two columns, and whether you want to use the first row as a header:



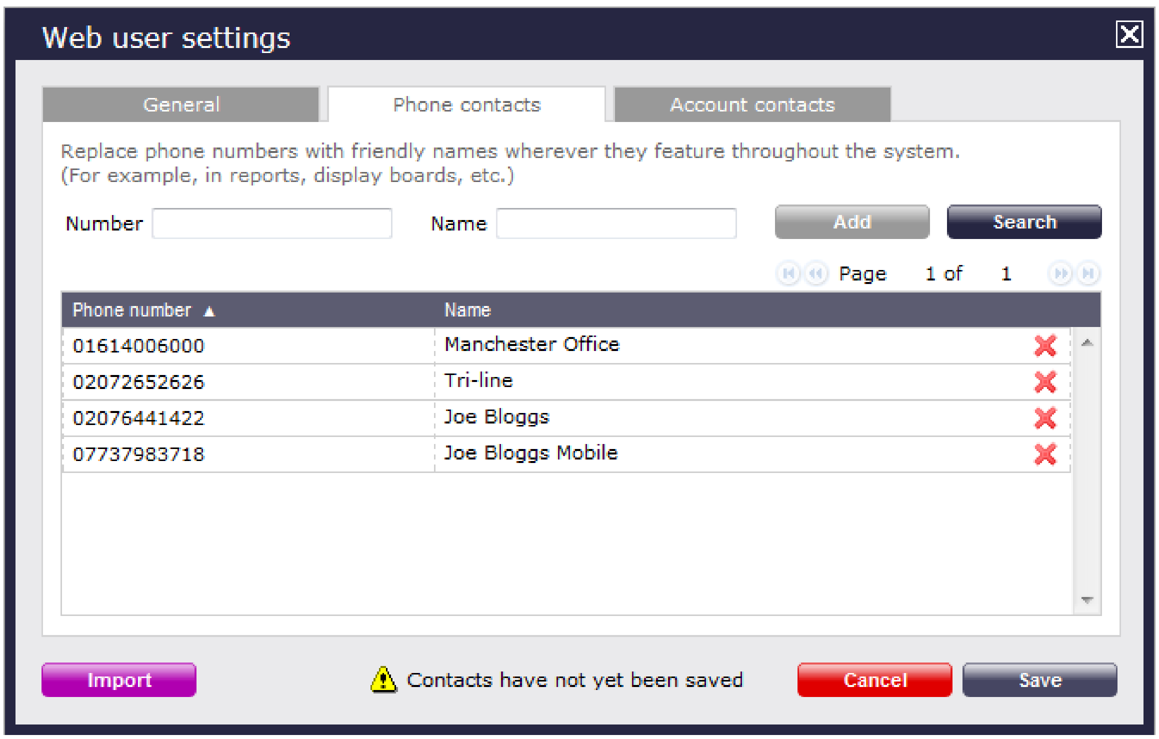

Select the column you want to use for the name and phone number information, then click on the Next button, as shown below:




The system will analyse your data and will return the number of phone contacts ready to be imported:

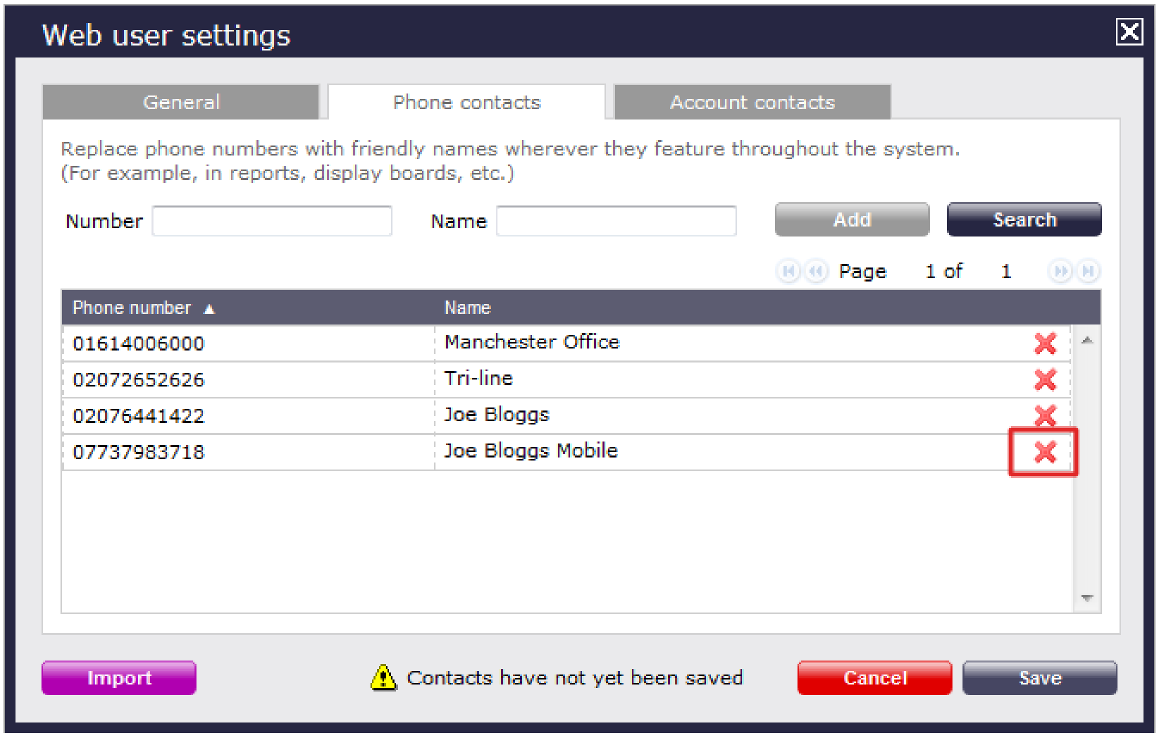



Click on the Import button to automatically import the contacts in the system, as shown below:



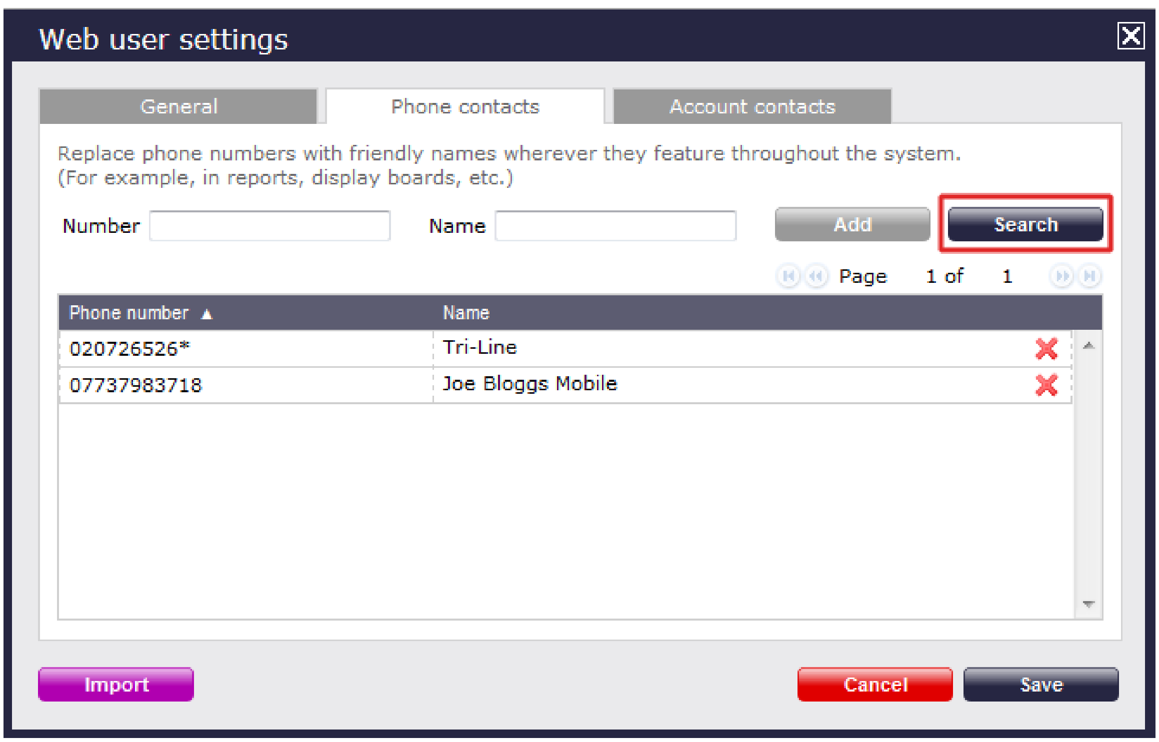

### Deleting a phone contact

If you no longer want a name associated with a particular phone number, click on the ✖ icon alongside it to delete it, as shown below:

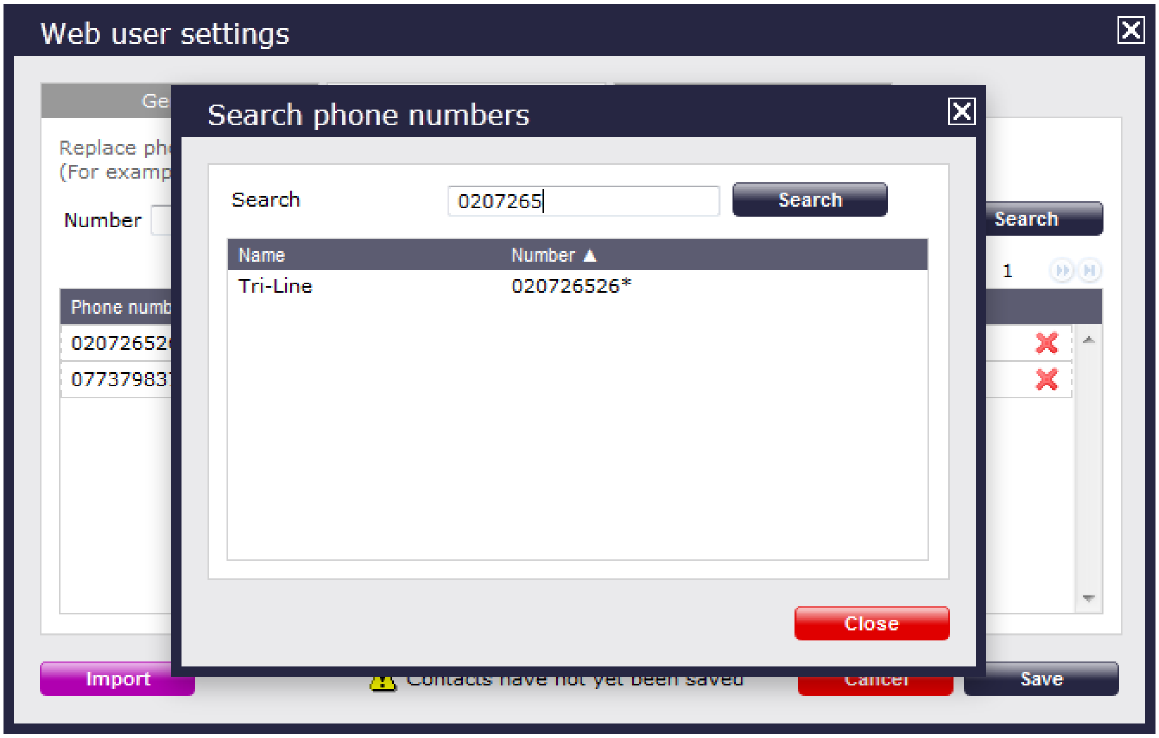



**Searching for a phone contact**

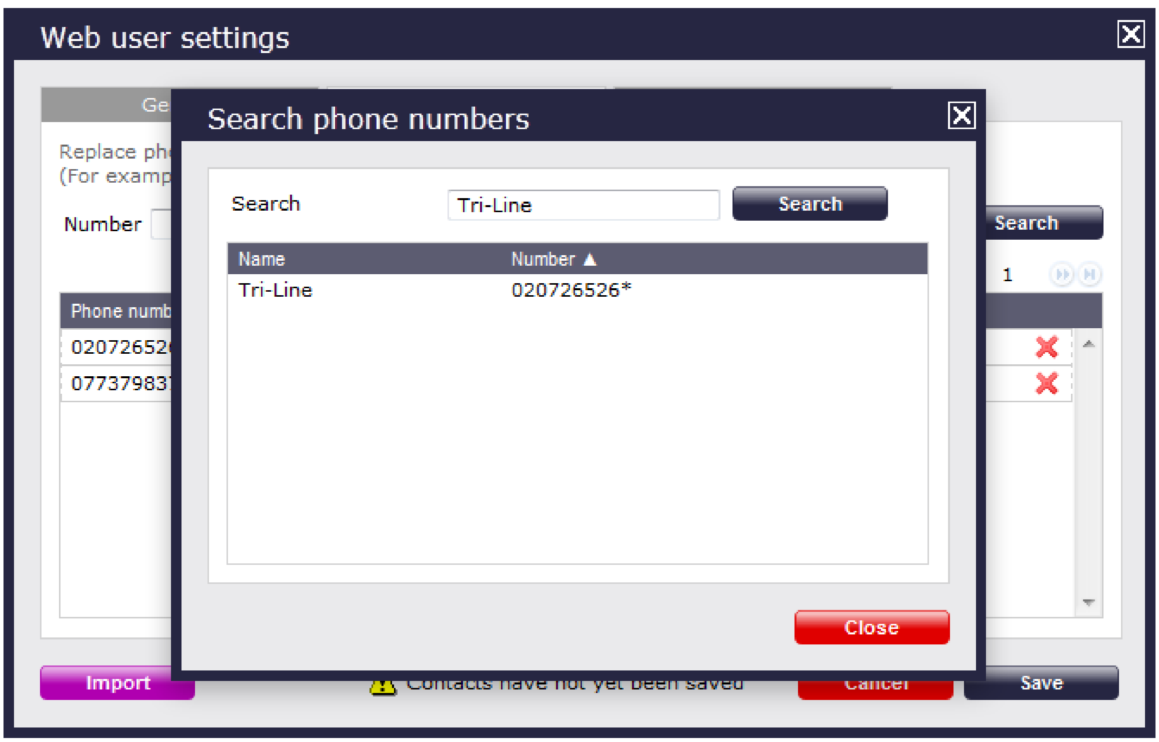
To search for a number in your existing list of contacts, click on the Search button, as shown below:




A new window will open, where you can enter the phone number you are looking for, as shown below:




Follow the same procedure to search for a location name:

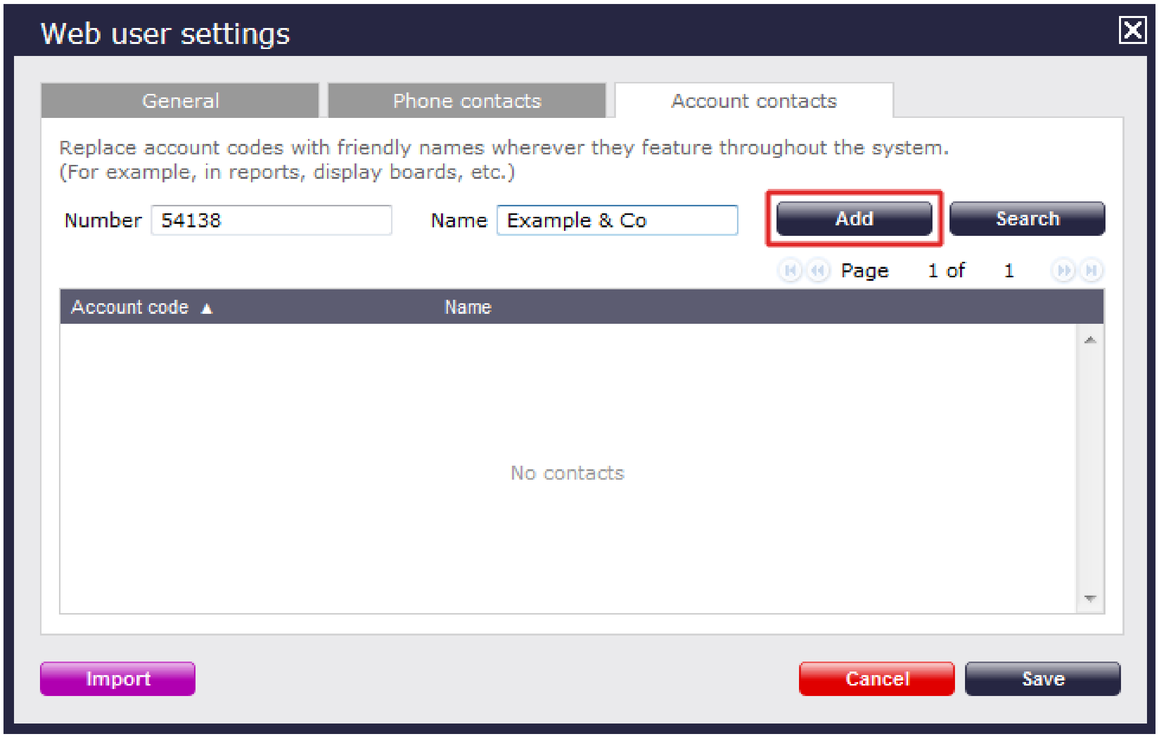



## Account contacts

The Account contacts tab allows you to add a list of contacts to each individual web user, replacing account codes with friendly names wherever they feature throughout the system, e.g. in reports, display boards, etc.

### Adding account code contacts manually

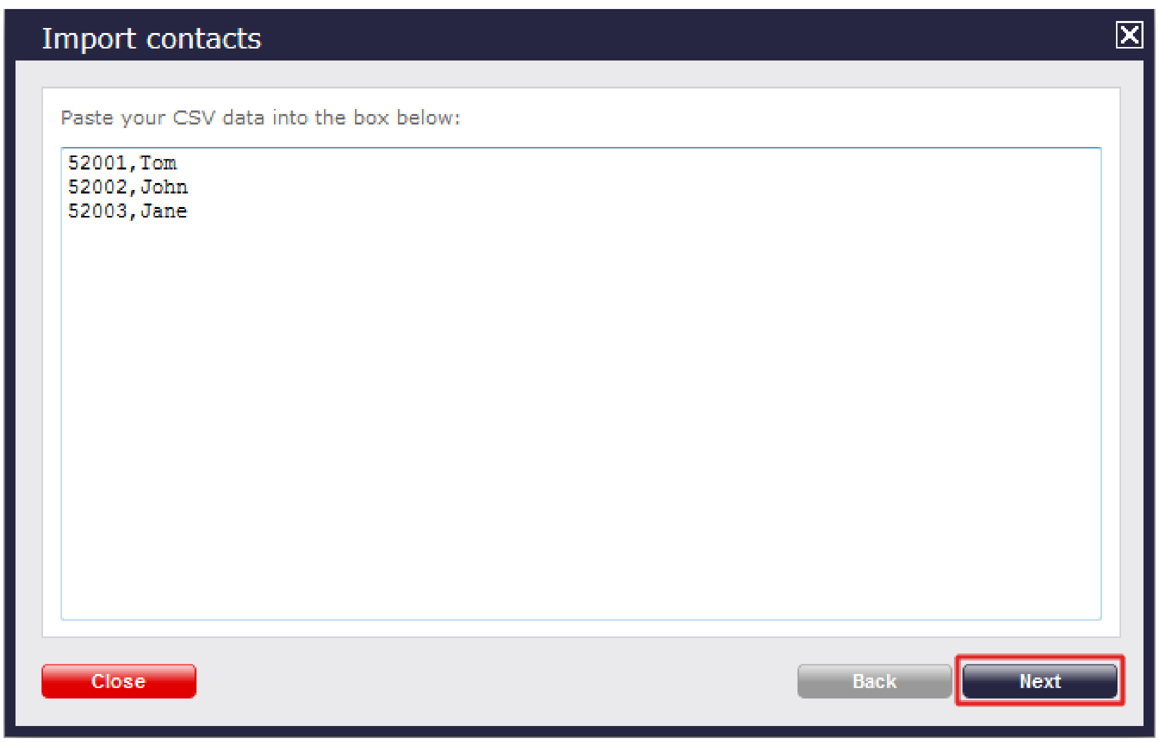
To manually add an account code contact, enter the account code number and the name you want to associate with it, then click on the Add button, as shown below:



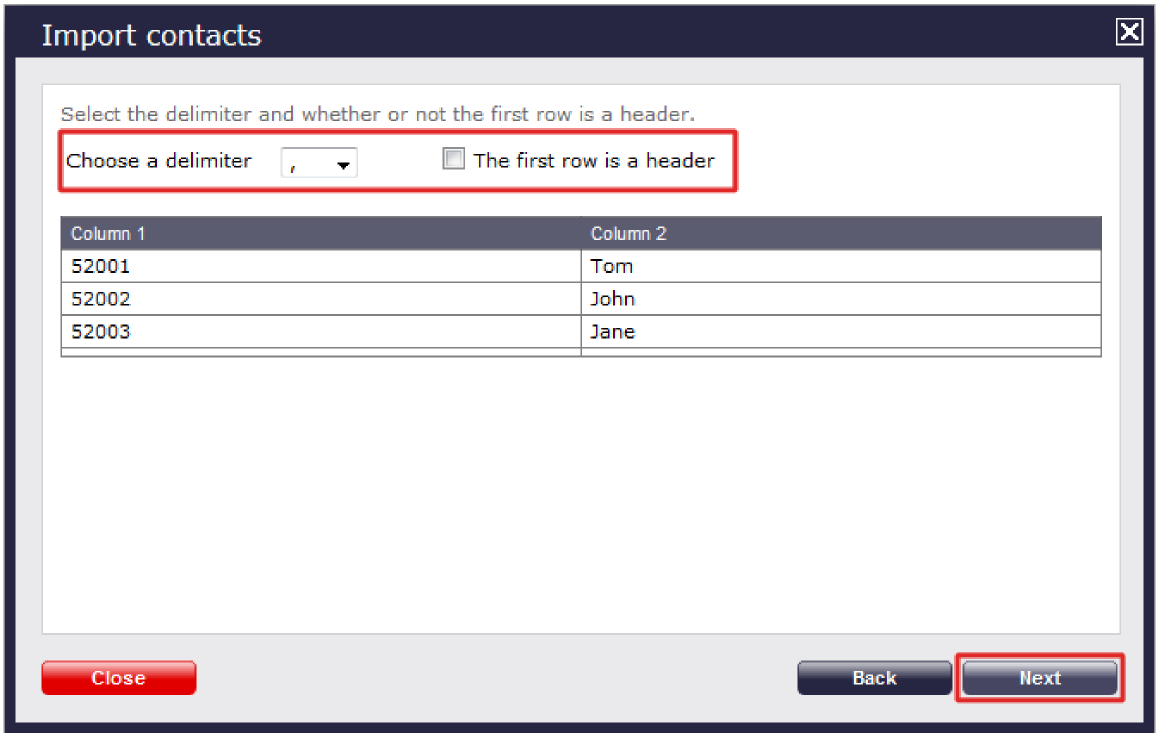

**Importing account code contacts**

To automatically import account code contacts in the system from an existing list, arrange your data in CSV format comprising of two columns separated by a common delimiter, such as comma, dash, semicolon, tab or space.

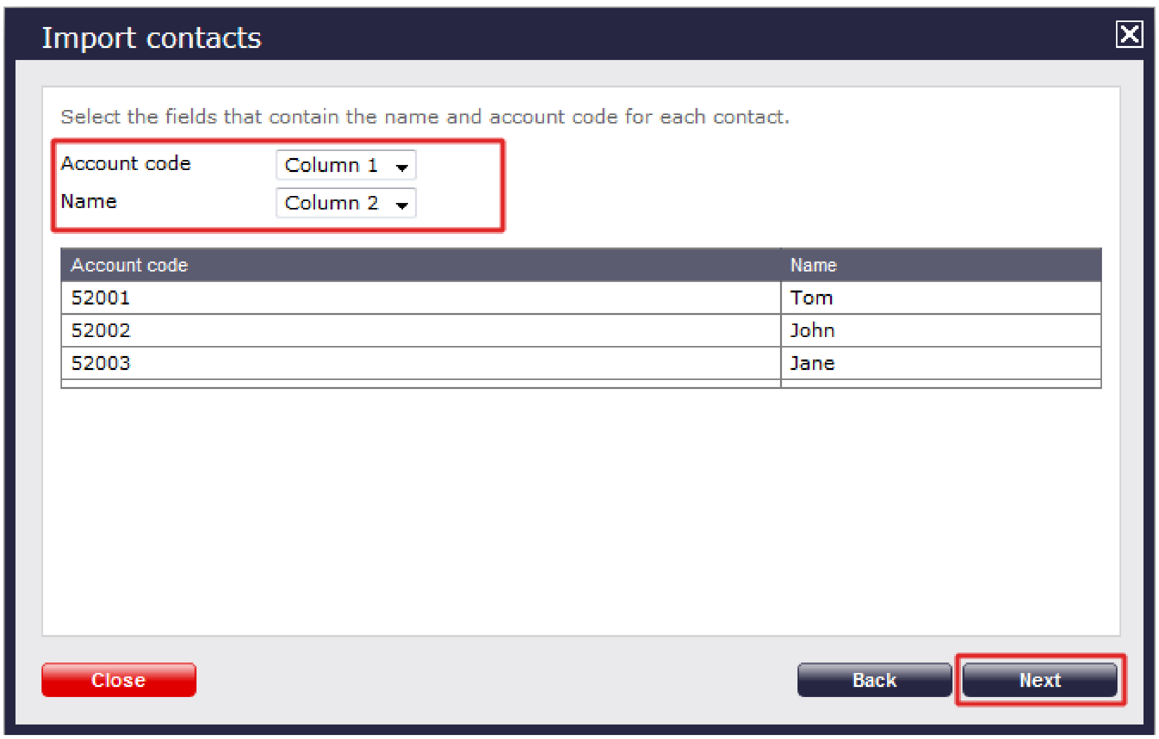
Click on the Import button and paste the CSV list in the box provided, then click on the Next button:



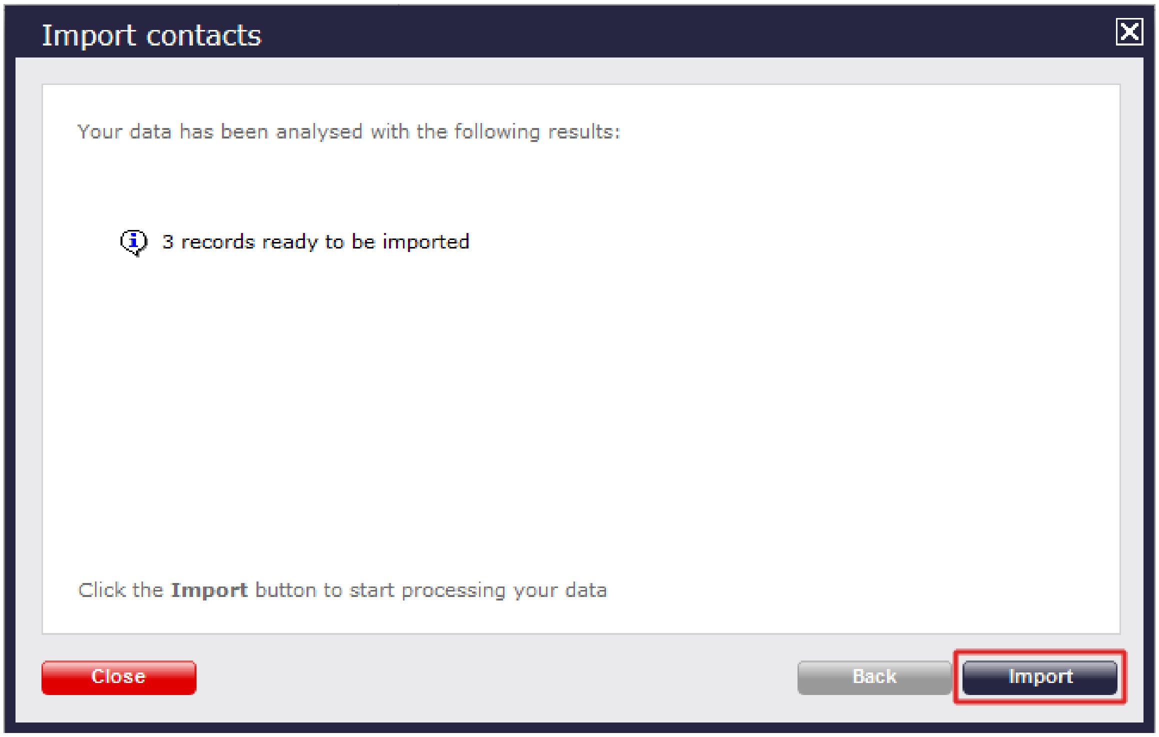

Choose from the drop-down list the delimiter you want to use to separate the two columns, and whether you want to use the first row as a header:



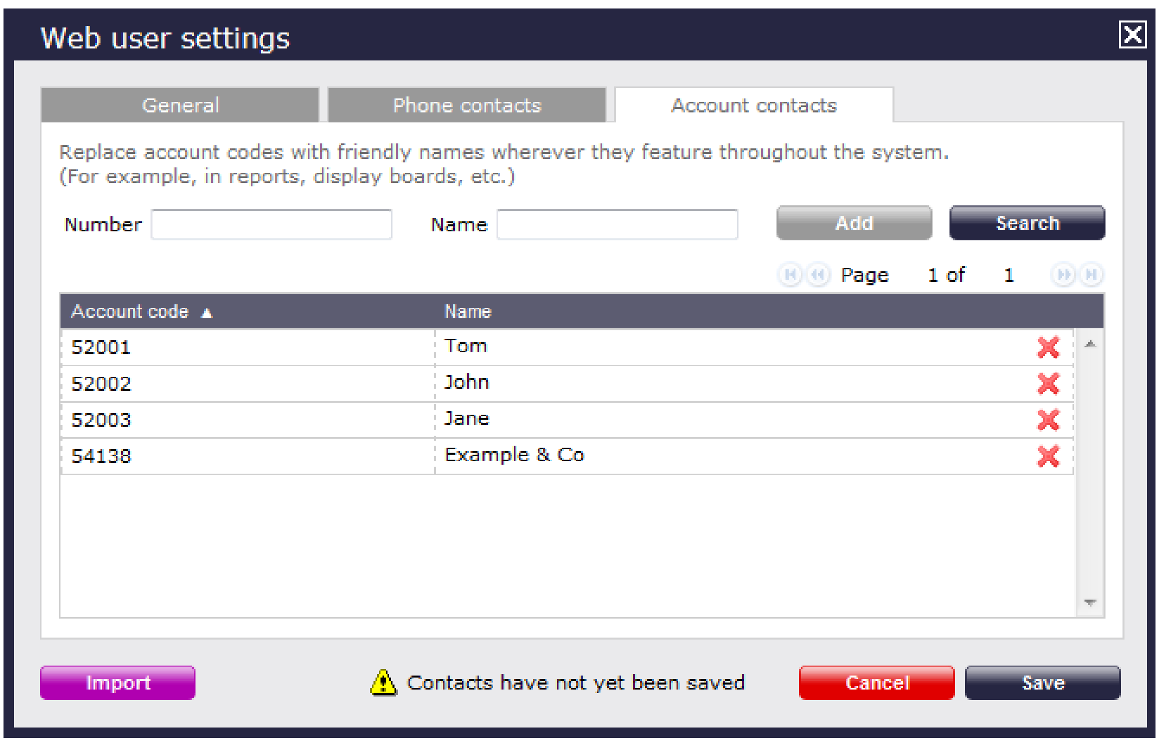

Select the column you want to use for the name and account code information, then click on the Next button, as shown below:




The system will analyse your data and will return the number of contacts ready to be imported:

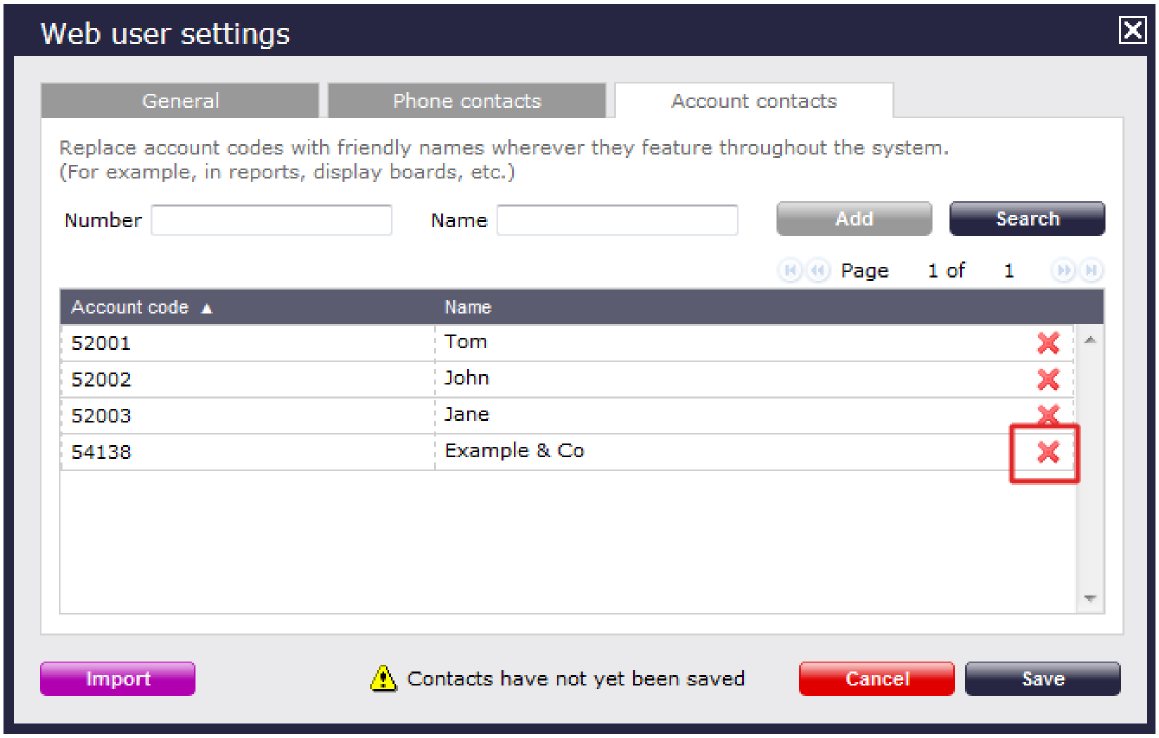



Click on the Import button to automatically import the contacts in the system.



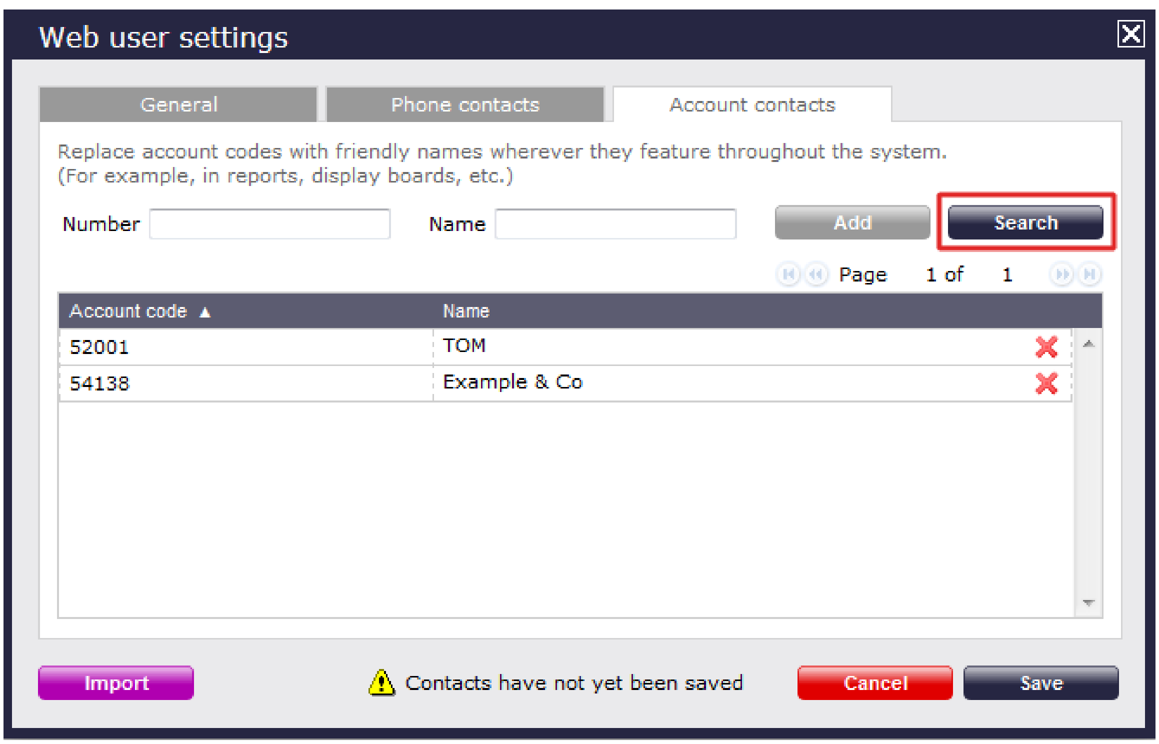

**Deleting an account code contact**

If you no longer want a name associated with a particular account code number, click on the icon alongside it to delete it, as shown below:

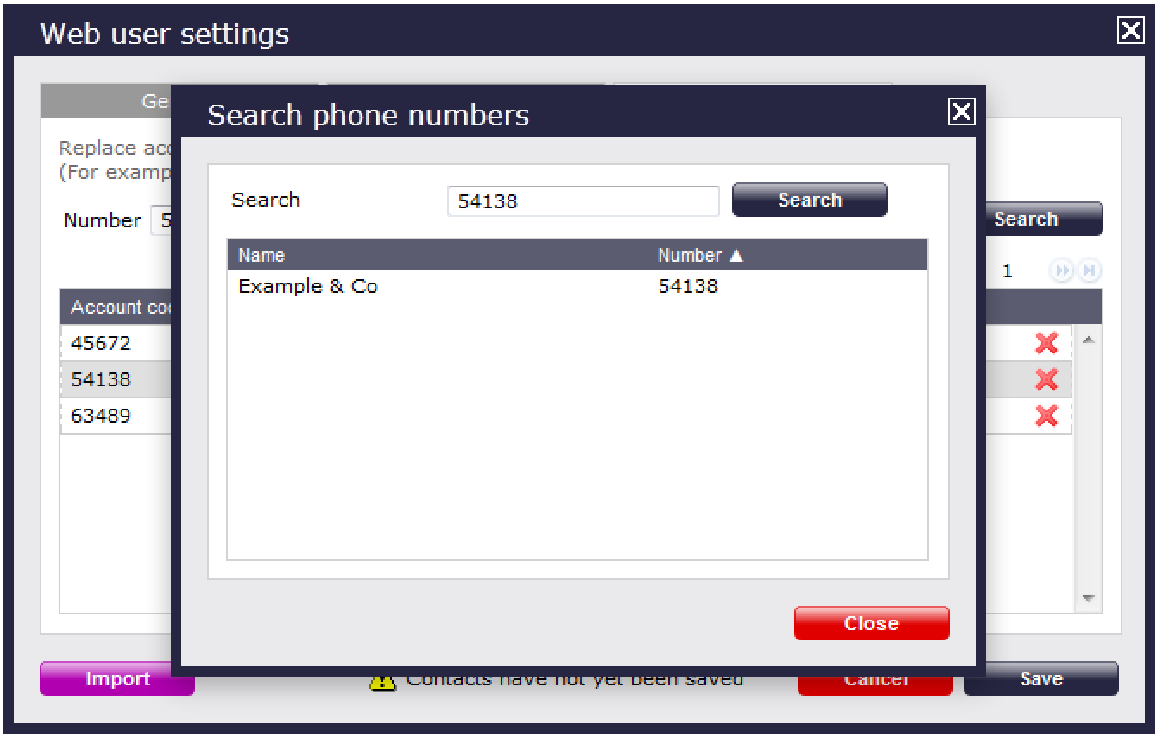



### Searching for an account code

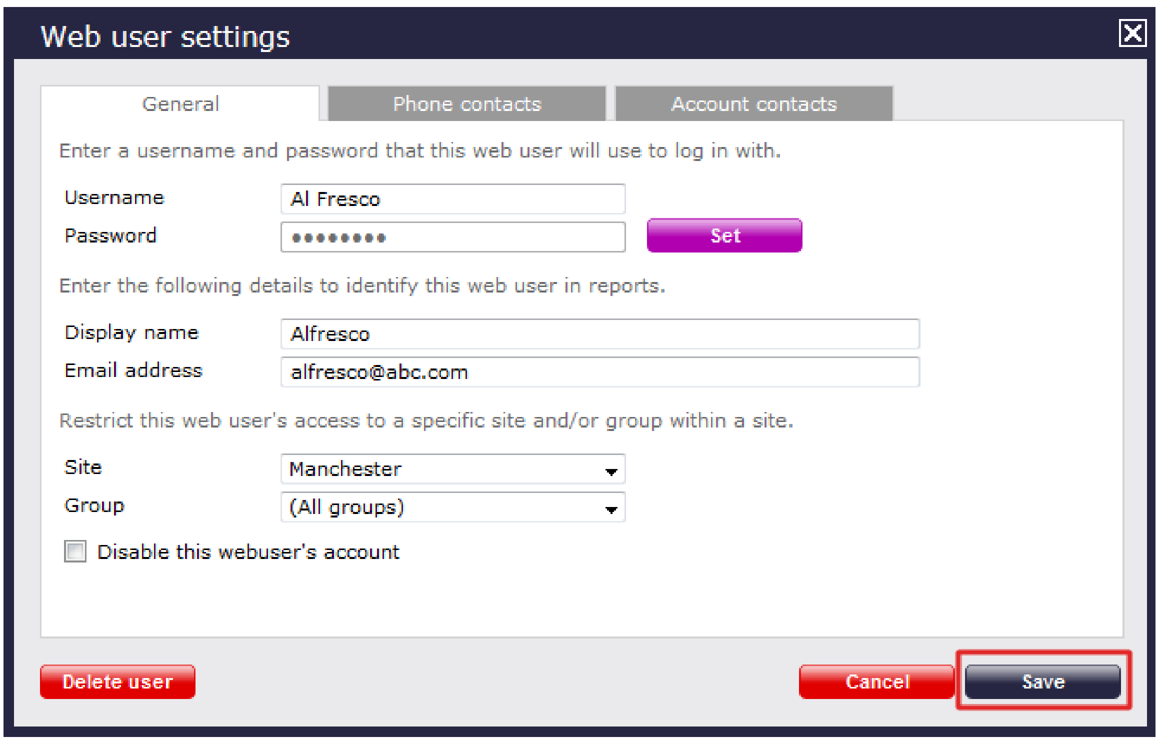
To search for an account number in your existing list of contacts, click on the Search button, as shown below:




A new window will open, where you can enter the account code you are looking for, as shown below:

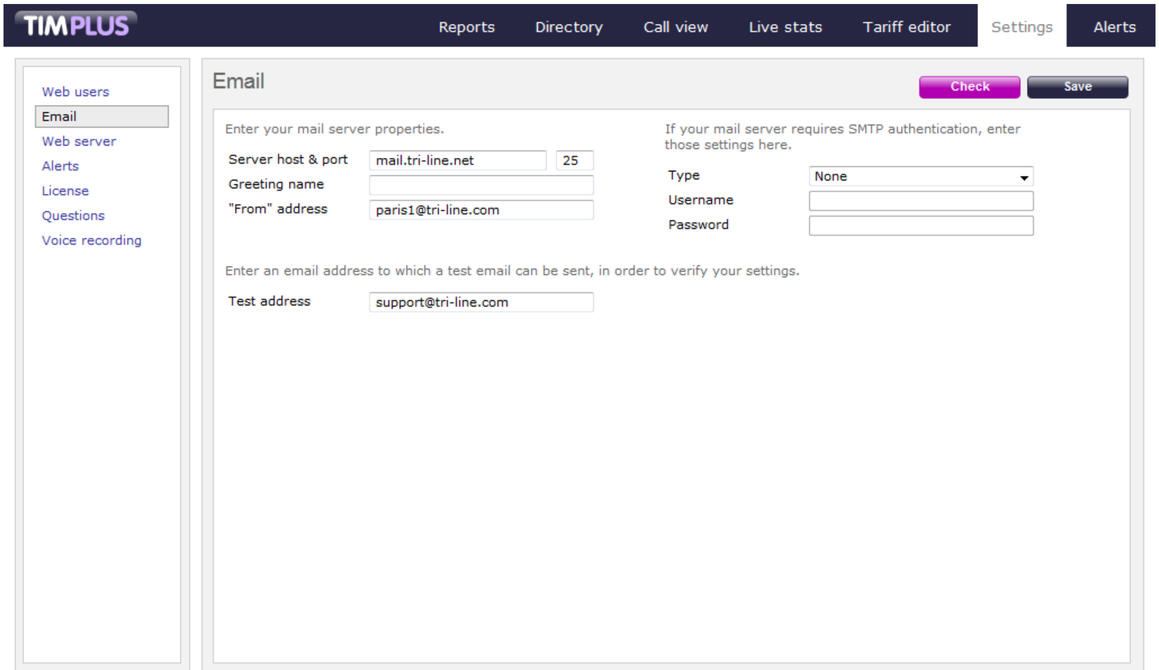



When you have configured the properties of your web user, click on the Save button to apply the changes, as shown below:




## Email

This section allows you to configure the details of your mail server in order to enable TIM Plus to send out scheduled reports, call alarms, missed call notifications or system alerts.



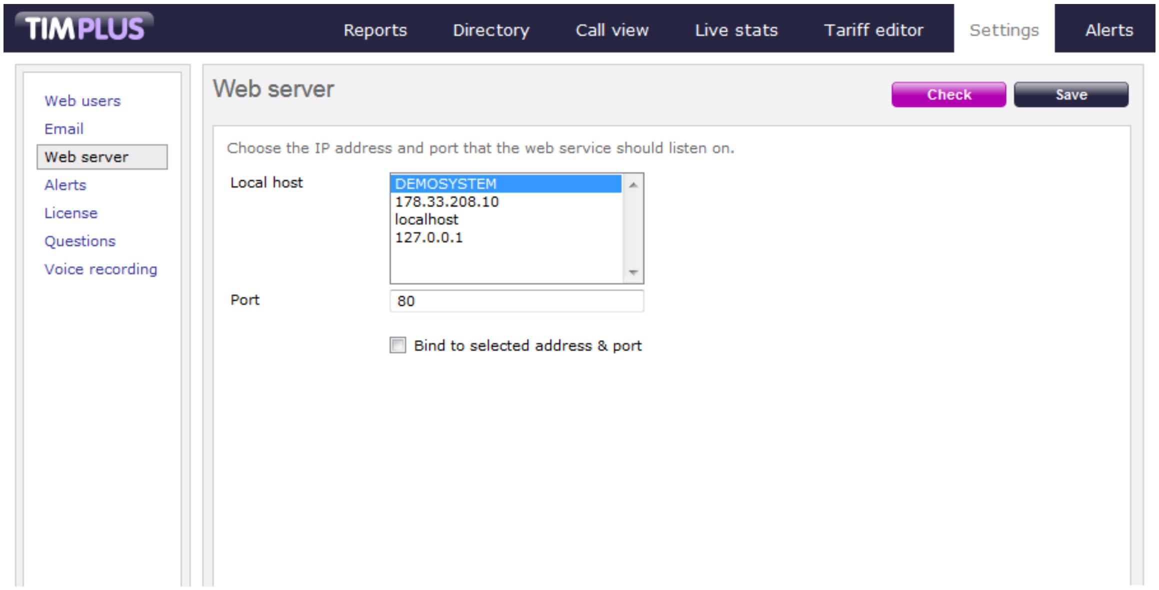

The table below contains a description of each field in this section.

| Field name | Description |
|---|---|
| **Server host & port** | The IP address or host name of your company's mail server and the port number, which by default is 25. |
| **Greeting name** | The `Greeting name` required by your mail server to identify the computer that is sending the email. In most cases, this is the network name of the server running TIM Plus. |
| **"From" address** | The email address that will appear in the `From` section of any emails sent from TIM Plus. |
| **Test address** | The email address you want to use to send a test email, in order to verify your email settings. |
| **Type** | The authentication method used by your mail server. Choose **None** if the authentication is automatic or not used. |
| **Username** | Enter the username of the SMTP authentication. |
| **Password** | Enter the password of the SMTP authentication. |

If you don't know any of the information required in this section, consult your system maintainer.

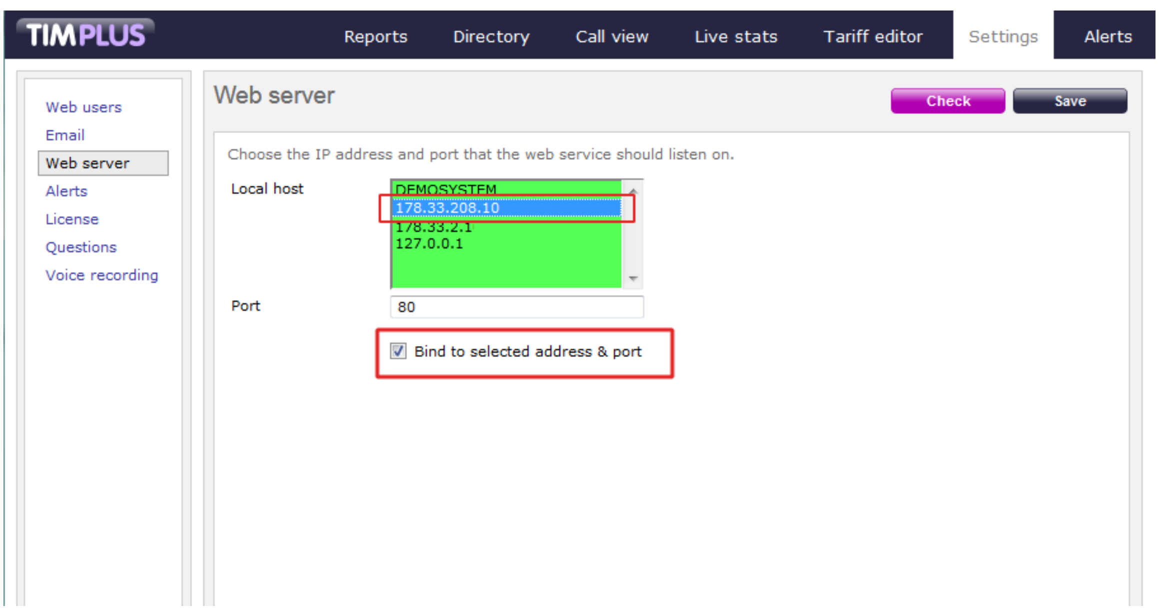
# Web server

TIM Plus has its own built-in web server and it can be accessed from any PC on your network without the need of any additional software. To configure, choose the IP address and port number that you want the web service to listen on.

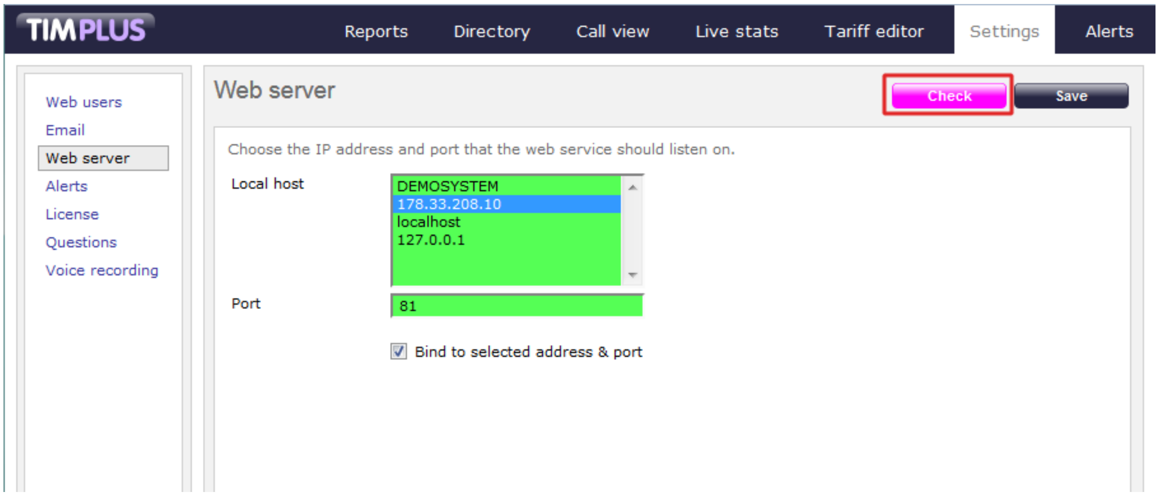



It is preferable that you use the hostname of the PC running TIM Plus rather than the IP address, especially on networks that use an automatic IP addressing scheme, such as DHCP

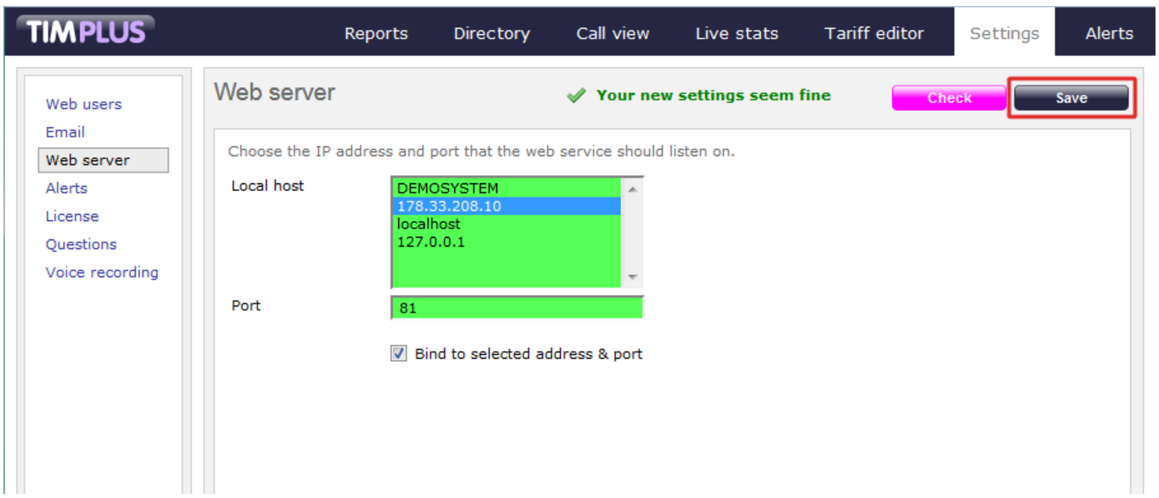
If the PC running TIM Plus has more than one IP address, you can choose the one you want TIM Plus to use and bind the web service to listen on that particular address:




To verify your settings, click on the Check button at the top-right corner of the screen, as shown below:




If your settings are fine, click on the Save button to apply the changes:

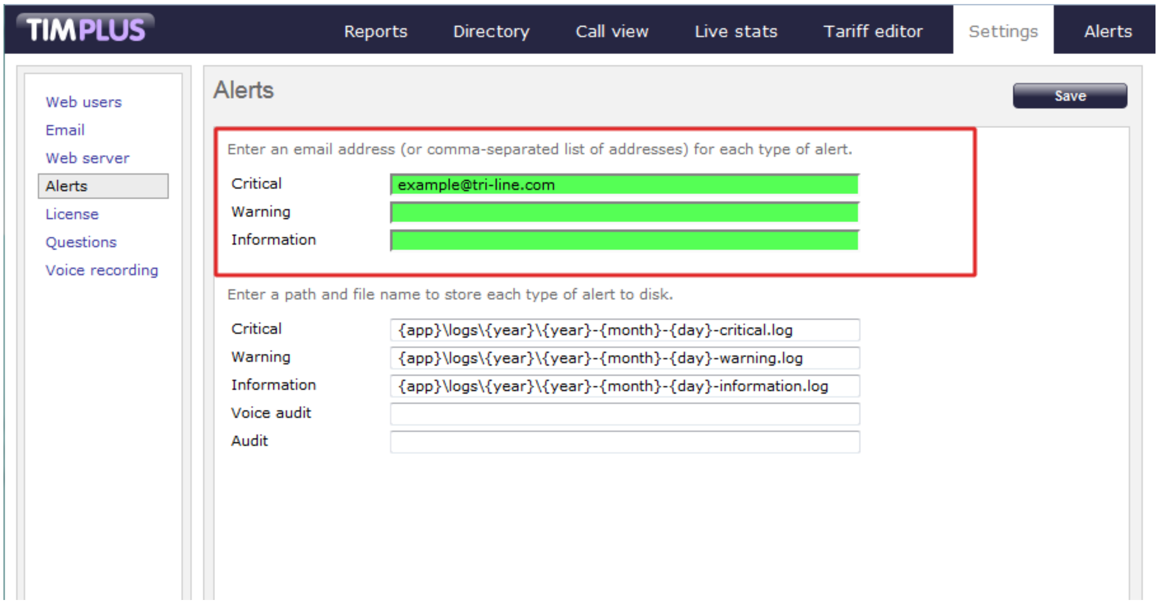



## Alerts

TIM Plus can be configured to raise an alert when particular events occur whilst the system is running. The alerts can be saved to a log file on disk or sent as an email notification. The table below describes the type of alerts emitted from TIM Plus:

| Alert | Description |
|---|---|
| **Critical** | A critical alert notifies you of any events that are detrimental to the system, e.g. database failure |
| **Warning** | A warning alert notifies you of any non-critical events that have occurred on the system, e.g. you have exceeded your license limit |
| **Information** | An information alert notifies you of any system events that have occurred on the system, e.g. if the application service has been restarted |
| **Voice audit** | An alert that notifies you of progress during call recording operations |
| **Audit** | Provides very detailed information about ongoing system events, primarily used for fault-finding |

To send an alert as a notification email, enter the email address in the text box alongside each type of alert, as shown below:

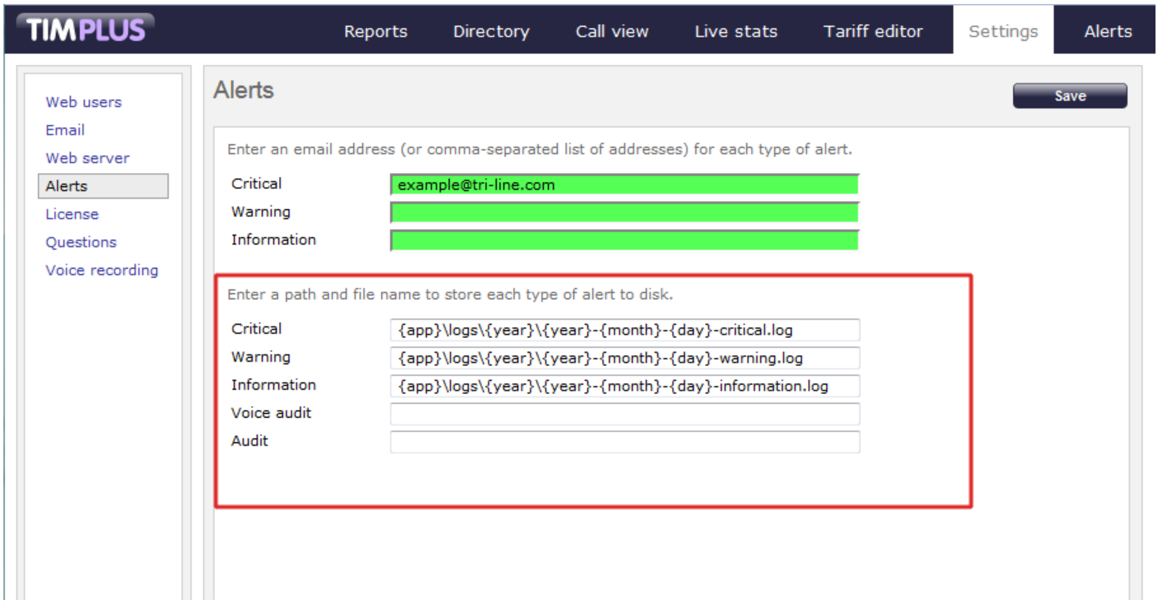



To send alerts to multiple email addresses, separate each entry with a semicolon.

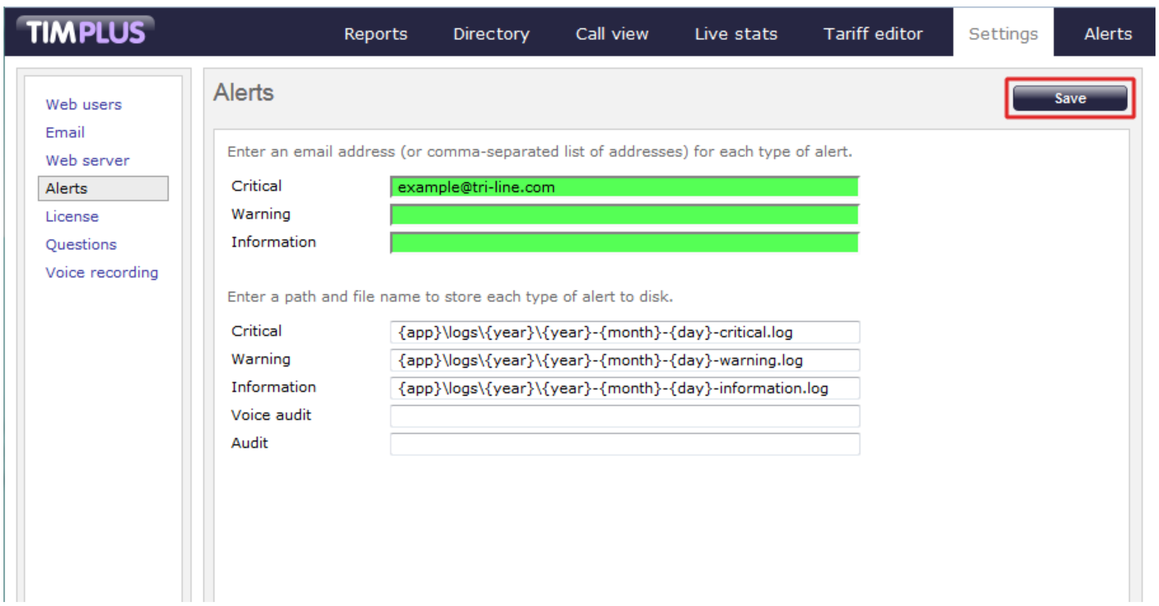
By default, the alerts are also outputted to a log file, using the following dynamic variables to define the path of the folder where the files will be stored: **`{app}\logs\{year}\{year}-{month}-{day}`**. The dynamic variables used to define the path are explained in the table below:

| Item | Description |
|---|---|
| **app** | The full installation path of TIM Plus |
| **year** | The year the data was captured in **yyyy** format |
| **month** | The month the data was captured in **mm** format |
| **day** | The day of the month when data was captured in **dd** format |

To choose a different location to store the logs files, overtype the existing entry.

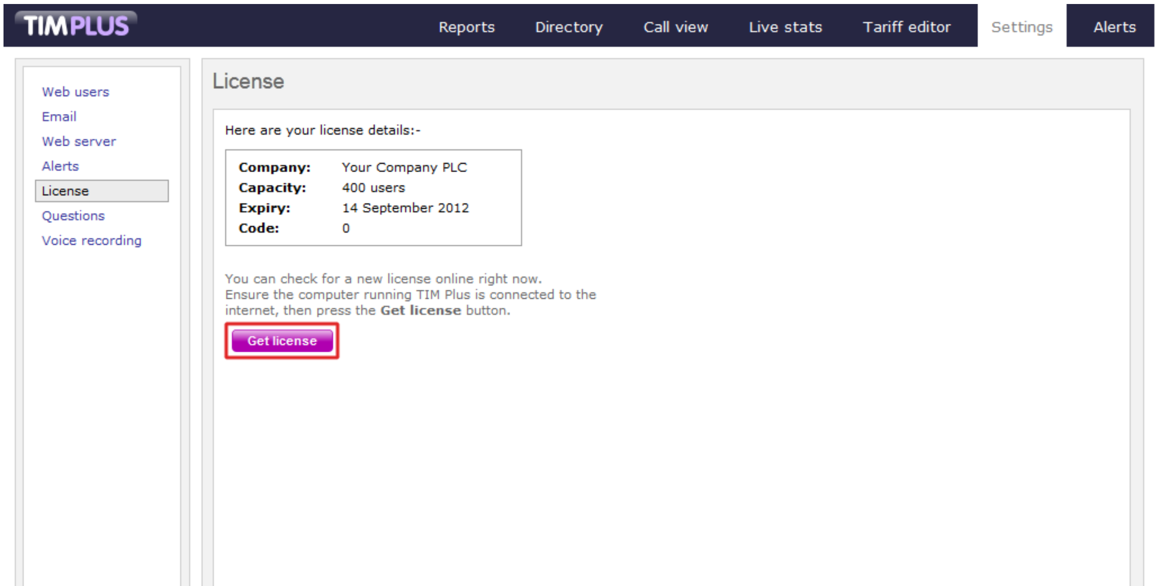



When you have finished configuring the settings, click on the Save button to apply the changes, as shown below:



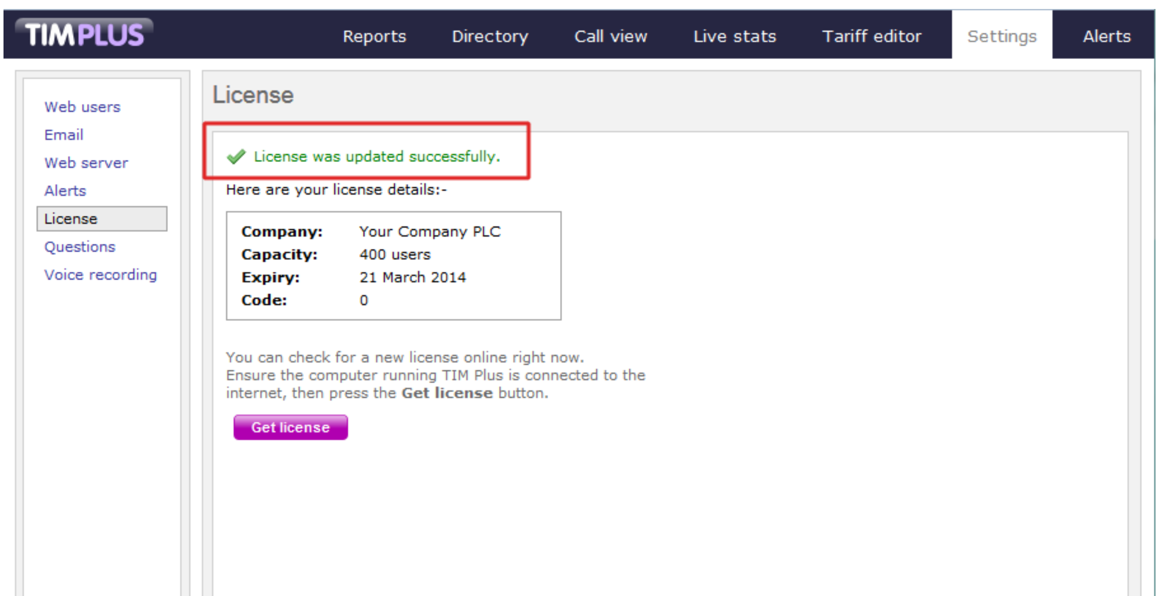

## License

This section allows you to view and update your software license. To retrieve your license automatically from our servers, click on the Get license button, as shown below:




Internet access is required to be able to connect to our servers and retrieve the license automatically.

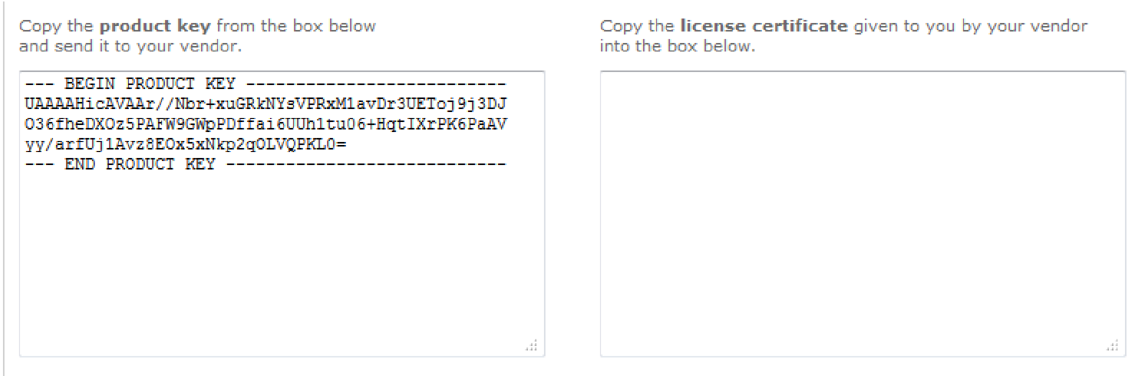
If the license updates successfully, the following message will be displayed:



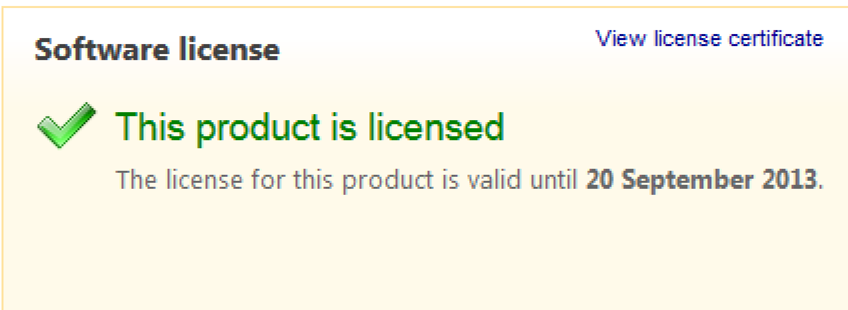

### Obtaining a license manually

If you cannot update your software license automatically, you can apply this manually by following the steps below:

1. Click on the Manual entry button from the `License` window. The following screen will appear:




2. Log in to the Gateway using your username and password.
3. In the **`Products`** panel, click on the TIM Plus product.
4. In the **`Software license`** panel, click on the **`View license certificate`** link, as shown below:




5. Copy the license certificate and paste it in the TIM Plus license box.

# Questions

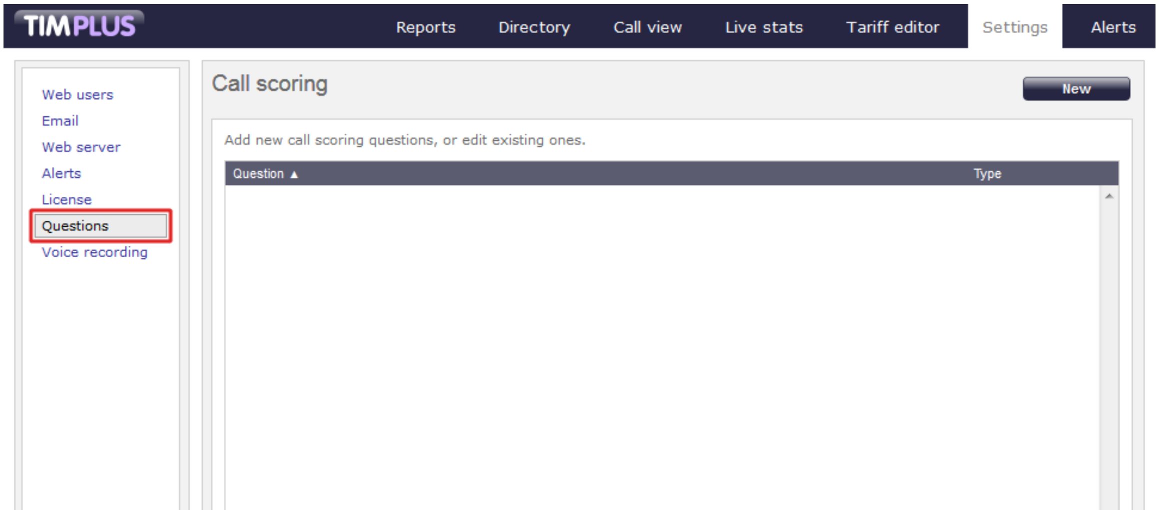
**Questions**



## Overview

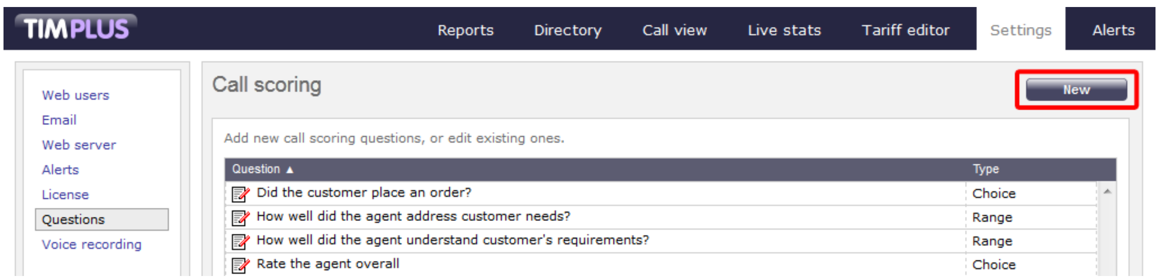
This section allows you to create your own score cards by defining a list of questions that must be completed for each call that you score, in order to rate calls for evaluation purposes.

To access the **`Questions`** section, click on the Questions button on the left-hand side menu. The following screen will be displayed:

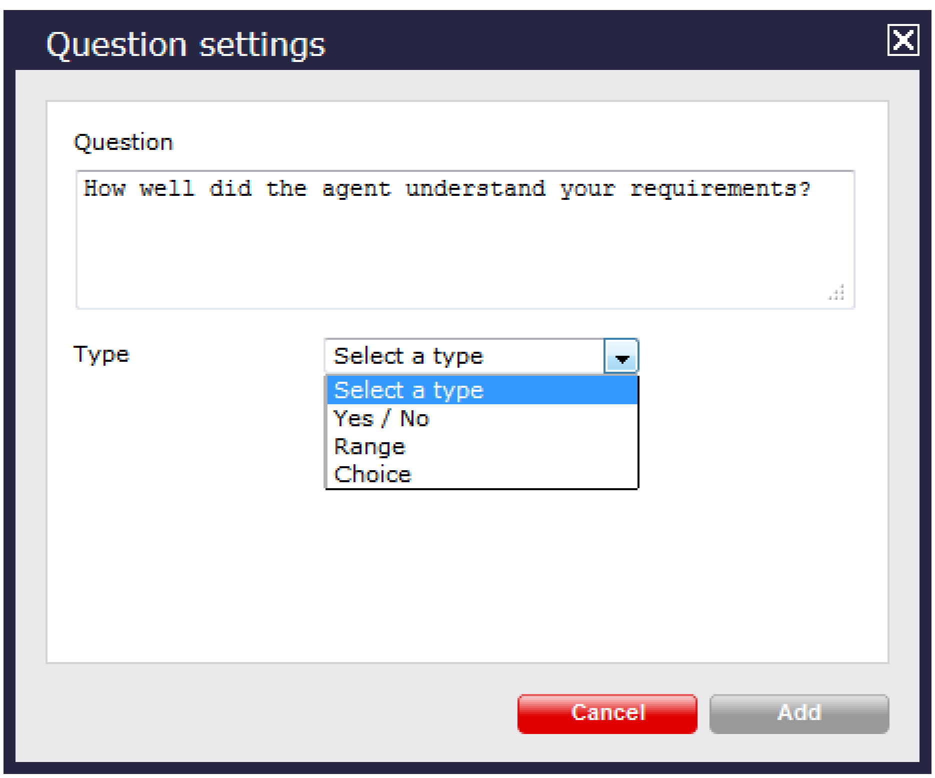



## Adding a question

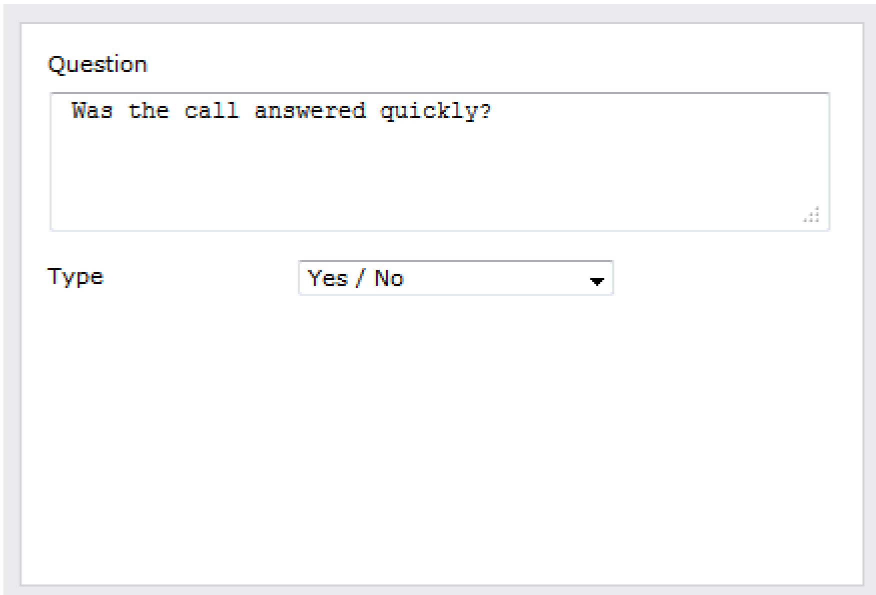
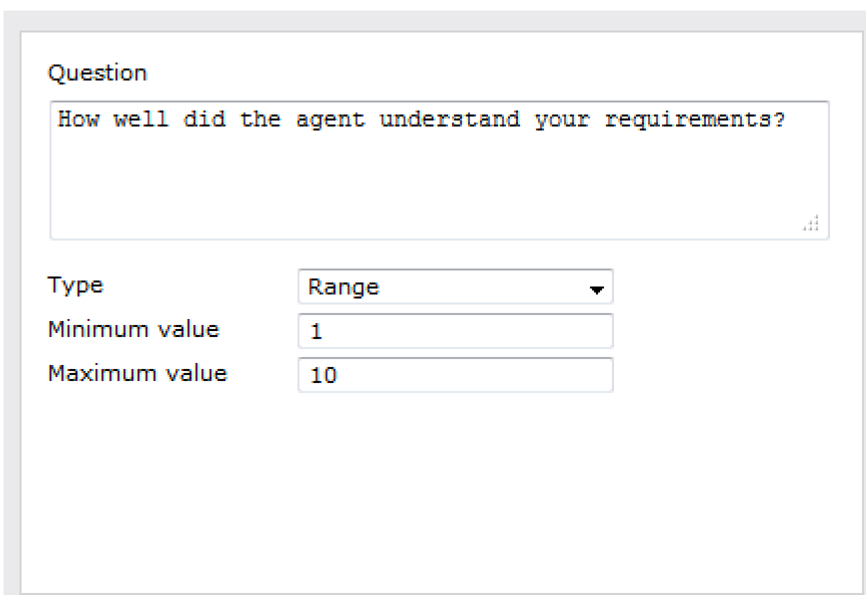
To add a question, click on the New button at the top-right of the screen, as shown below:



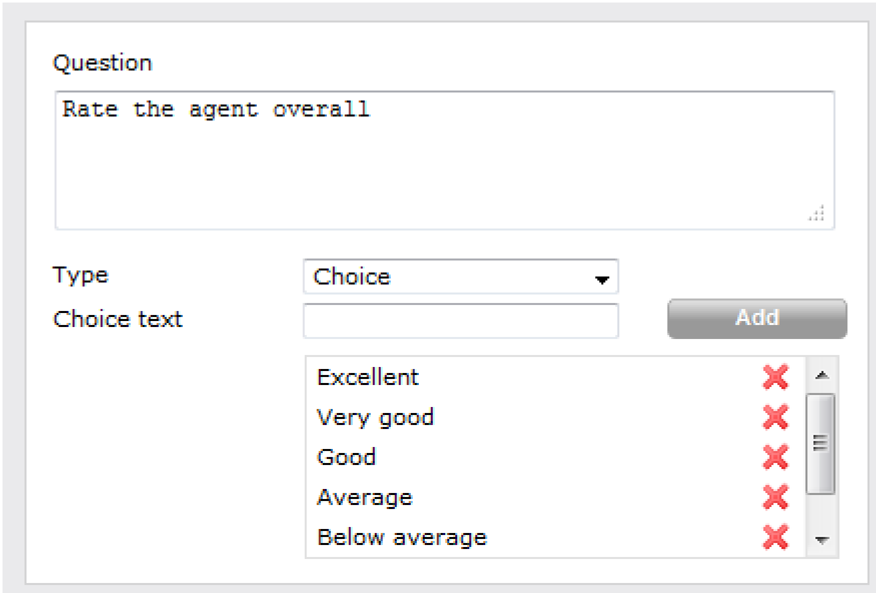

The **Question settings** window will appear, where you can enter your question and define its answer type:



Each answer type is explained in the table below:

| Answer type | Description |
|---|---|
| **Yes/No answer** | Calls will be rated based on a yes/no answer, e.g. Was the call answered quickly?   |
| **Range answers** | Calls will be rated based on a defined range of values, e.g. On a scale of 1 to 10, how well did the agent understand the caller's requirements?   |

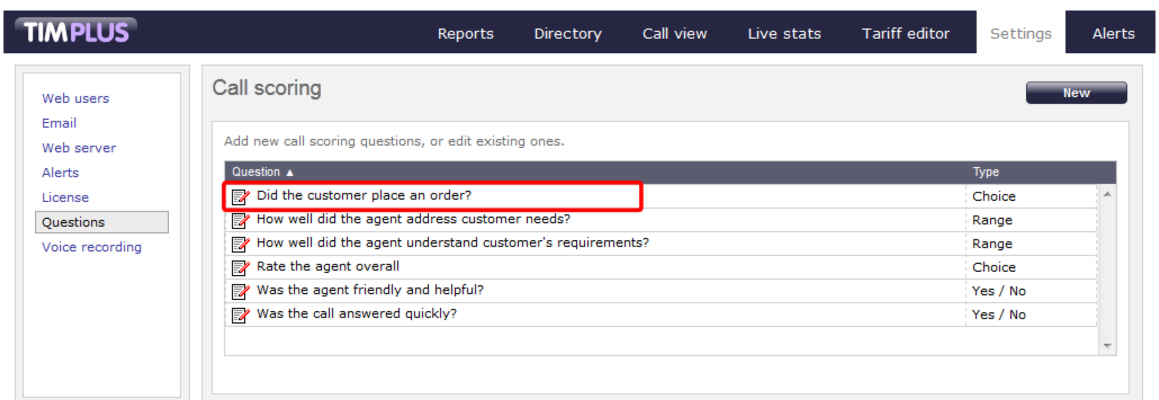
<table>
<tr>
<td>Multiple choice answers</td>
<td>
Calls will be rated according to a fixed set of pre-defined answers, e.g. excellent, good, average, below average, bad.



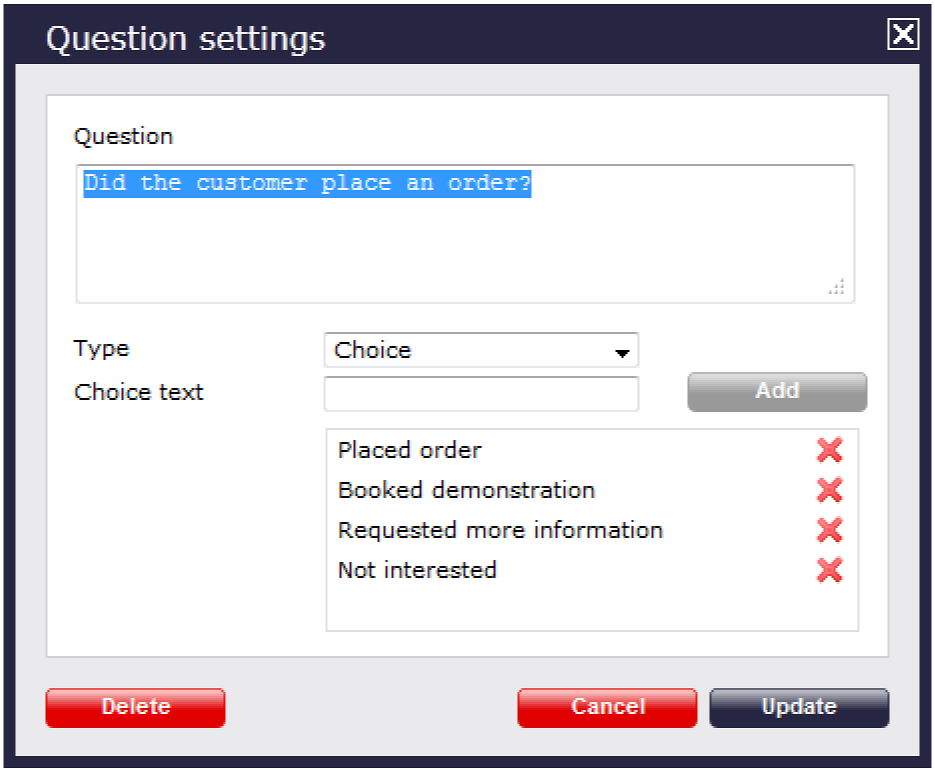

To remove an answer from the list, click on the ✖ icon.
</td>
</tr>
</table>

## Editing a question

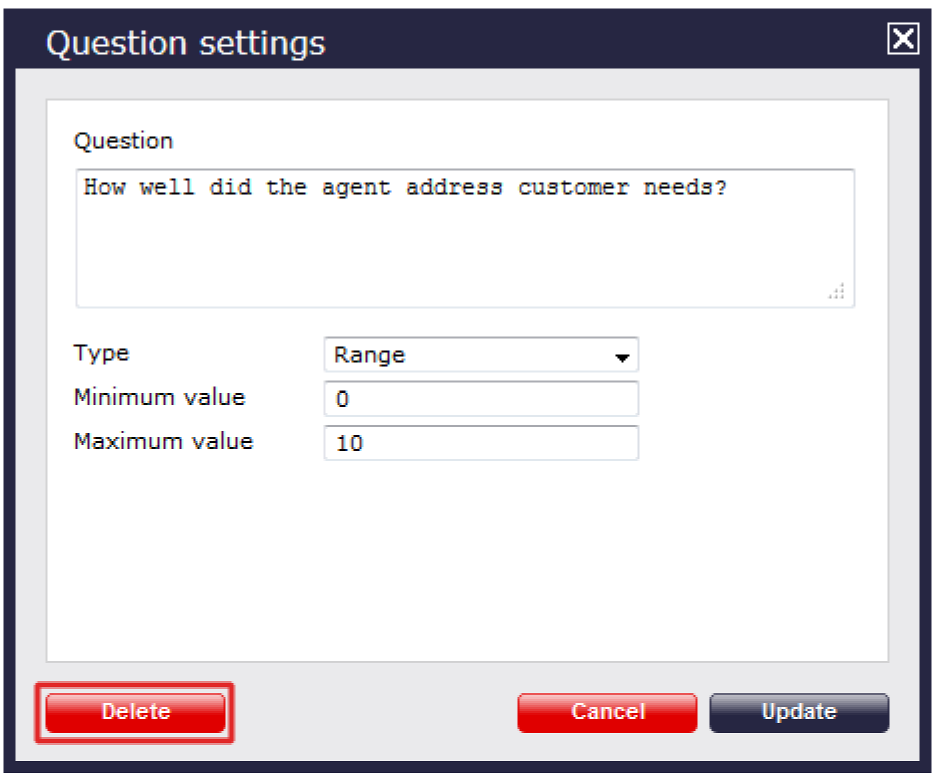
To edit a question, click on it to select it from the list of available questions, as shown below:




The **`Question settings`** window will open, where you can edit the question or modify its answer type:




To delete a question from the list, click on the Delete button at the bottom-left corner of the window, as shown below:



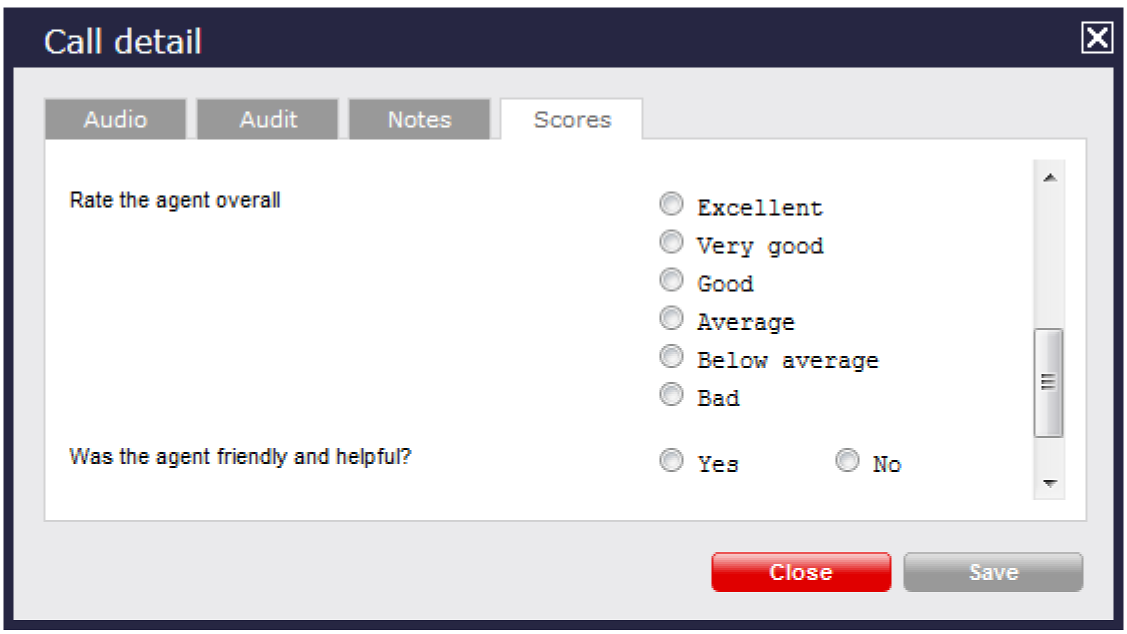

## Using the score cards

Once you have created your score cards, you can use them to score any call logged by the system. You can then run reports on these scored calls, in order to assess the performance of your staff.

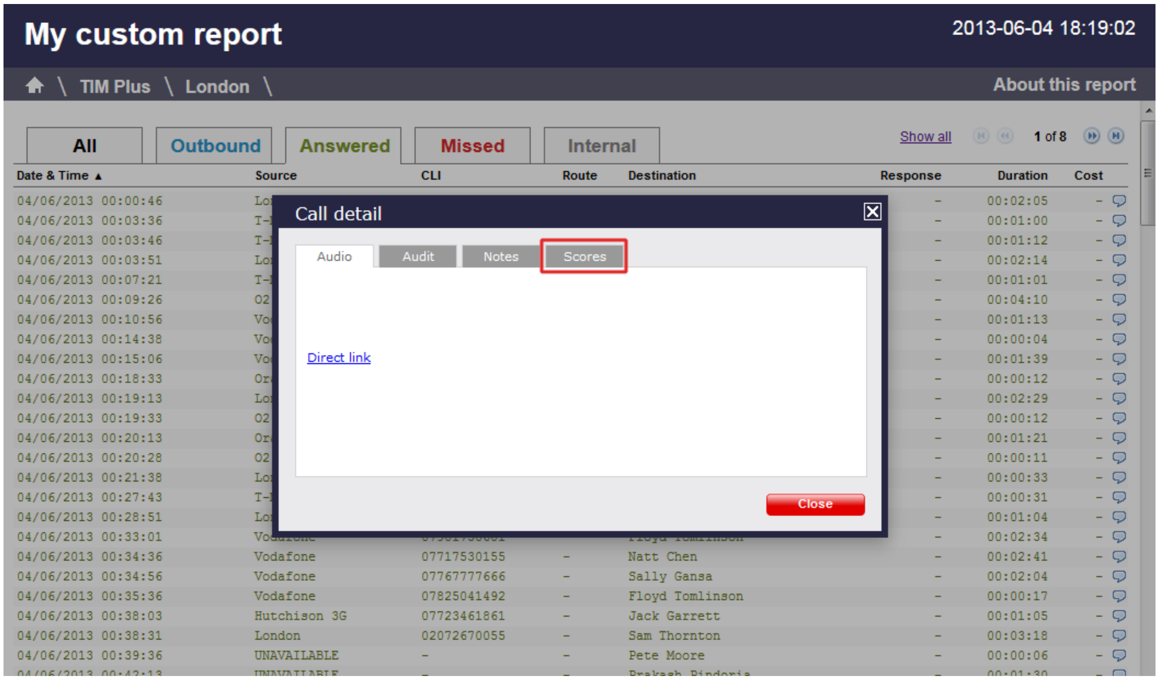
### Scoring a call

To score a call from the **Call view** screen, click on the icon, as shown below:


The **Call detail** window will open, where you can score the call using the previously-created score cards, as shown below:

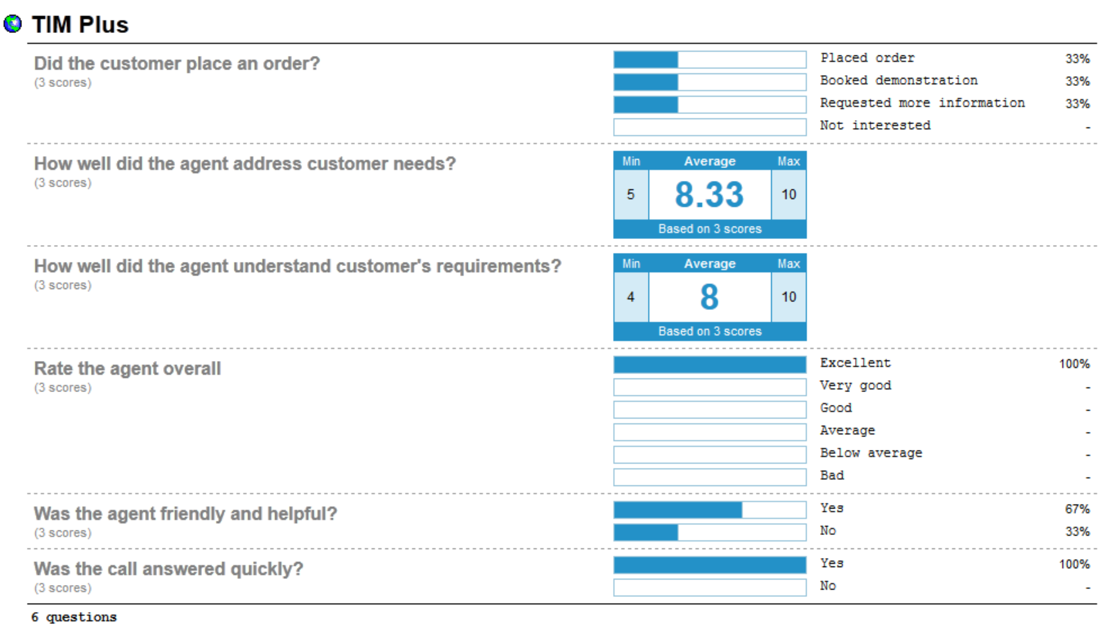



To score a call from an itemised report, click on it to display the **Call detail** window, then select the Score tab, as shown below:




### Reporting on scored calls

Use the `Call scoring` report to obtain a comprehensive analysis of answers to previously-scored calls. All question types are summarised and grouped into their respective category.




## Voice recording

**Voice recording**



## How it works

By adding one or more of our supported voice recording options, it is possible to store the audio recording of every telephone call that TIM Plus processes.

Which option you choose depends on what type of telephone calls you want to record. In most cases, the recording equipment is placed between your telephone system and your telephone lines (channels) and any phone calls that are made over those channels are intercepted, recorded, then sent to TIM Plus to be attached to the logged call.

To record calls over PSTN channels such as ISDN30 (PRI/E1/T1/J1), ISDN2 (BRI) or analogue POT lines, a piece of physical hardware - the Magic Box - is used to physically connect into your lines.

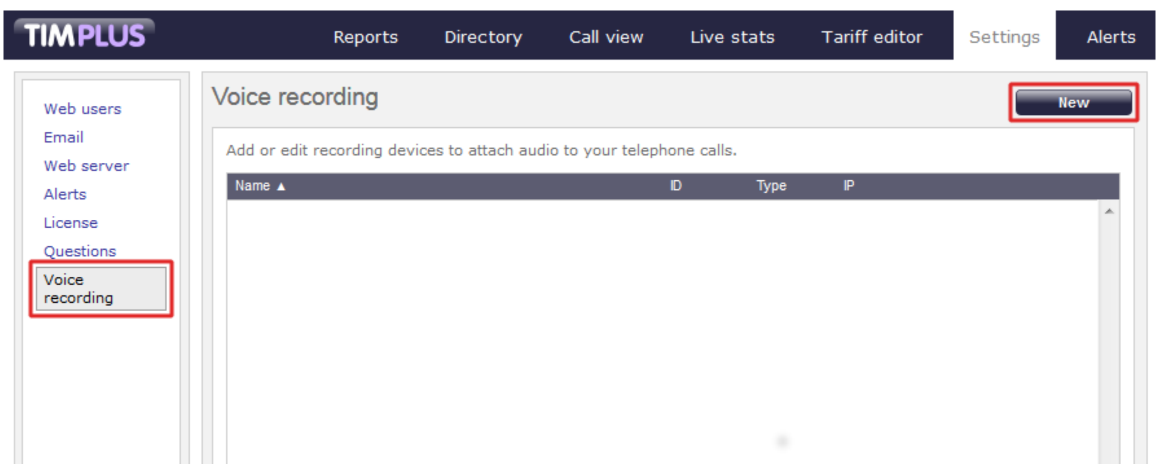
For VoIP (SIP) channels, a PC with a standard network interface card (NIC) can be used to capture the voice packets from strategic points in your voice network. If many simultaneous VoIP calls are expected, a dedicated computer with multiple NICs becomes necessary.

Any number of recording devices can be configured to provide their audio recordings to TIM Plus, and a hybrid network of both types of interface can be used in a single TIM Plus deployment.

## Adding recording equipment

After installing either a Magic Box or Echo into your voice network, you need to configure its presence in TIM Plus.

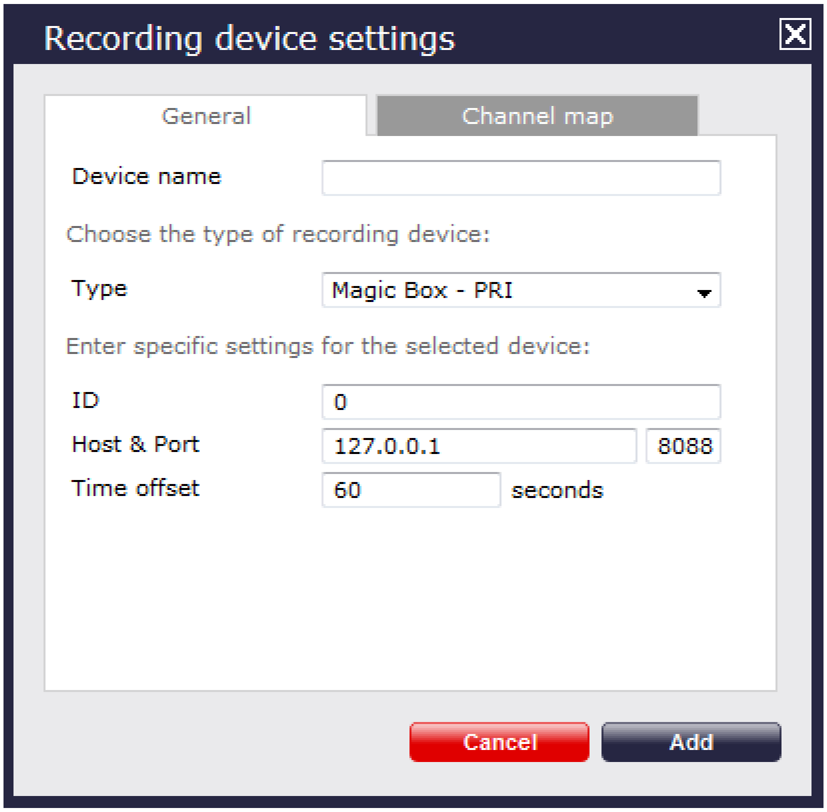
Ensuring you are logged in to TIM Plus as an administrator, click on the Settings tab and select the `Voice recording` option from the left-hand side menu. To add a new voice recording option, click on the New tab, as shown below:




A new window will appear, allowing you to configure the settings of your call recording device.

## Configuring your recording device

To configure your recording device, enter the following settings in the `Recording device settings` window:




| Setting | Description |
|---|---|
| **Device name** | The name of your recording device |
| **Type** | The type of telephone lines you are using: PRI, BRI, Analogue, VOIP |
| **ID** | The unique identifier of each call recording device |
| **Host & Port** | The IP address of the recording device, or computer to which the device is attached |
| **Time offset** | The time interval around which TIM Plus will search for calls when matching audio files |

### Voice recording- overview video

## Call obfuscation (PCI-DSS)

TIM Plus offers the ability to obfuscate (mask out) one or more sections of the audio of a telephone call with an audible tone, preventing the listener from hearing the original speech.

This is normally required for compliance in certain industries where regulations dictate that certain spoken information be masked out, e.g. the Payment Card Industry - Data Security Standard (PCI-DSS).

### Programmatic obfuscation

Throughout this guide, we will adopt the **`PCI-DSS`** example above, where telephone calls that contain spoken credit card information need to be masked out by an audible tone, but only during those parts of the call when the card details are being spoken, leaving intact the rest of the call audio.

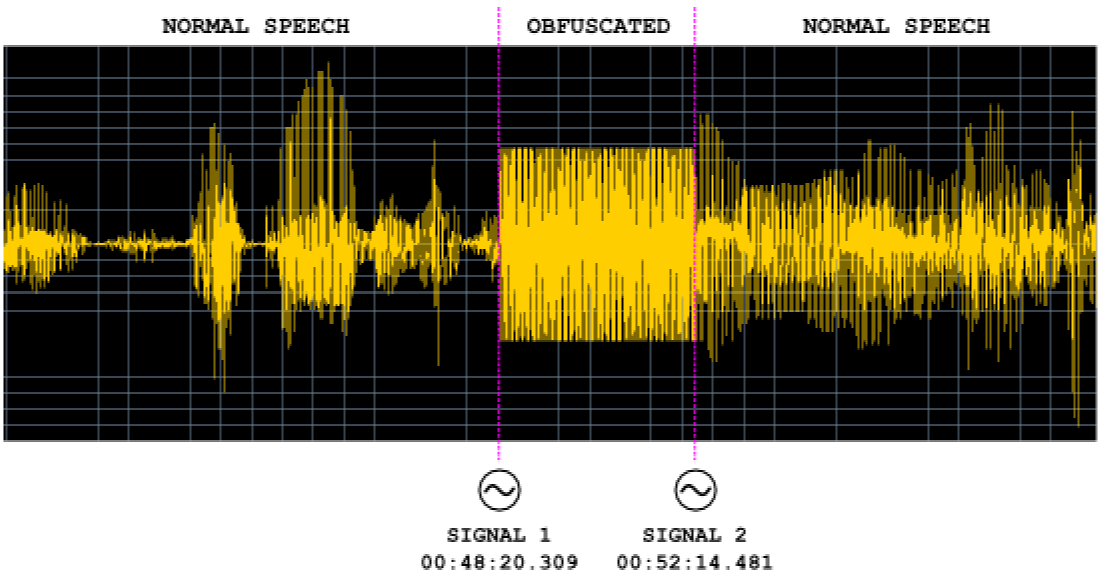
In this scenario, we will assume that agents (employees that make or receive telephone calls) utilise an in-house or third-party data entry system into which credit card detailed are entered using a computer.

### How it works

Considering TIM Plus (in conjunction with one or more Magic boxes) records the call audio at strategic boundaries in your telecom infrastructure - usually your organisation's telephone lines, rather than each user's telephone handset - some reconciliation is normally required between those boundaries and the actual agent that handled the call.

By default, this reconciliation occurs automatically in TIM Plus, which is how the agent-centric calls that you see in call reports are able to be associated (matched) with each call, as seen from the point of view of a telephone line which delivers calls to many agents.

During obfuscation, it is necessary that a user or device sends at least two signals to TIM Plus. Together, these two signals allow TIM Plus to mask out the audio between the two points in time that each signal was received.




At the point in time during an agent's call when obfuscation is necessary - e.g. *"Can I have your CVV number please?"* is spoken by the agent - a signal is sent by the agent to TIM Plus, which records the event along with the exact time it was sent. Similarly, when the sensitive part of the call has completed, a further signal is sent by the agent to TIM Plus, which is also being recorded.

A single telephone call can contain more than one obfuscation and the number of signals required is always twice the amount of obfuscations in a call.

### Assumptions

This guide assumes the following statements are true:

- You have a licensed copy of TIM Plus that includes voice recording
- Your installation is at least version 3.0.0.55

### Common solutions

Taking the example of masking out some digits of a phone call when a credit card number is being quoted, most solution providers modify the data entry system that an agent uses.

## Implementation

### HTTP request

To send a start or stop signal, a simple `HTTP GET` request must be sent to the TIM Plus web server.

Every request to the web server requires authentication, therefore you need to ensure that the relevant HTTP authentication headers are sent with your request and that the username and password combination match an existing web user object in the Directory.

The response status code will indicate success or failure.

### Request format

The request should be a `GET` request and take the following URL- encoded parameters, as per the following example:

```
http://192.168.0.1/signal.js?cmd=set&cat=4&type=1&objtype....
```

Valid parameters are described in the table below:

| Parameter | Description |
|---|---|
| `cat` | Signal category. For audio masking, this value is always `0x04` |
| `type` | The type of signal. Valid values for `0x04-category`signals are:<br>▪ `0x01 Mute On`<br>▪ `0x02 Mute Off` |
| `objtype` | The type of object that this signal relates to. This can be one of two values:<br>▪ `user` (a user object)<br>▪ `channel` (a channel object) |
| `objid` | The unique ID of the object type as specified by the `objtype`parameter (above). This is used to locate the object in the Directory<br><br>The region of the Directory to search in is specified by the `key` parameter (below) and governed by the access implied by the placement of the web user whose credentials are used to effect the web request |
| `key` | Specifies the key relating to a container object in the directory (or blank, implying the whole directory) whereby a search on the object specified by `objtype` and `objid` is performed below |

Return values are specified as `HTTP` response status code. Although the body of some responses may contain informational text, you should not rely on this text to make any decisions as to whether the request was successful or not.

Valid status codes are as follows:

| Parameter | Description |
|---|---|
| `200` | The signal was received and stored successfully |

| | |
|---|---|
| **400** | The request was not acceptable for one of the following reasons:<br>▪ An invalid **type** parameter was specified. The **type** parameter is specific to the category specified by the **cat** parameter. Further, the **type** value (e.g. 0x01) can be used in multiple categories<br>▪ The **objid** was missing. Specify the ID of the object you want the signal to relate to<br>▪ The **cat** and **type** parameters - category and signal type, respectively - must be specified and cannot be zero<br>▪ The version of TIM Plus you are running does not understand the **signal.js** script |
| **404** | The object specified by the combination of the **objtype** and **objid** parameters - and optionally the **key** para meter - could not be found |
| **500** | **Internal Server Error** prevented the signal from being stored successfully. This may be due to a badly-configured database, or the lack of a **signals** table in the TIM Plus database |

## DTMF obfuscation

The system permits manual obfuscation of calls using a DTMF key sequence at the user's handset. When a user enters a specified sequence of digits, the obfuscation begins, and any audio will be immediately and irreversibly overwritten with the tone specified in the **/audio/obfuscation/tones/** section of the **settings.xml** file. To stop obfuscation, the **stop** key sequence must be entered, whereupon the audio will be written normally to the call's stream.

The **start** and **stop** key sequences can be defined in the **settings.xml** file located in **{app}\ProgramData\Tri-Line\Echo**, using the **dtmfStart** and **dtmfStop** elements. The following **settings.xml** snippet is an example of a configuration to enable manual call obfuscation when a user enters ******

```
<audio>
    <obfuscation>
        <dtmfStart>**</dtmfStart>
        <dtmfStop>##</dtmfStop>
        <dtmfTimeout>2000</dtmfTimeout>
        <stopTimeout>50000</stopTimeout>
        <toneFile>
            <default>{app}/tones/alaw.wav</default>
            <codec id="0">{app}/tones/ulaw.wav</codec>
            <codec id="8">{app}/tones/alaw.wav</codec>
        </toneFile>
    </obfuscation>
</audio>
```

The **dtmfTimeout** element was provided to prevent a situation where extra digits have been erroneously entered, and therefore making it impossible to enter the correct sequence. After the specified DTMF timeout has passed, all the digits previously entered will be cleared. This also ensures that obfuscation does not occur during normal negotiation of DTMF telephone selection menus (inbound or outbound). To set a DTMF entry timeout, specify the value (in milliseconds) using the **dtmfTimeout** element.

Additionally, an obfuscation timeout can be specified to automatically stop the obfuscation after a specified period of time, to prevent the entire remaining call from being obfuscated in case the user forgets to manually stop the obfuscation. This timeout period can be specified (in milliseconds) using the **stopTimeout** element.

For the changes to take effect, access the Windows Services and restart the Echo service.

### Custom tones

Custom tones can be added to the call recorder in order to obfuscate part of a call recording. Since the tones are raw byte data that replace portions of the original WAV audio, they must respect the codec of the original file, e.g. a-law, u-law, etc., and use the same sample size and rate, e.g. 16-bit, 8 KHz.

Once the files have been encoded accordingly, they should be copied to the following location: **`{app}\ProgramData\Tri-Line\Echo\tones`**.

To enable the system to use these custom tones during the obfuscation, open the **`settings.xml`** file, located in **`{app}\PrgramData\Tri-Line\Echo`** and add the following snippet, specifying the filename of the custom tone using the **`codec`** element. The **`id`** attribute determines the codec type, e.g. "0" = u-law, "8" = a-law, as per RFC3551 (page 32). A **`default`** element can also be added as the fall-back tone to use.

```
<audio>
    <obfuscation>
        <toneFile>
            <default>{app}/tones/alaw.wav</default>
            <codec id="0">{app}/tones/ulaw.wav</codec>
            <codec id="8">{app}/tones/alaw.wav</codec>
        </toneFile>
    </obfuscation>
</audio>
```

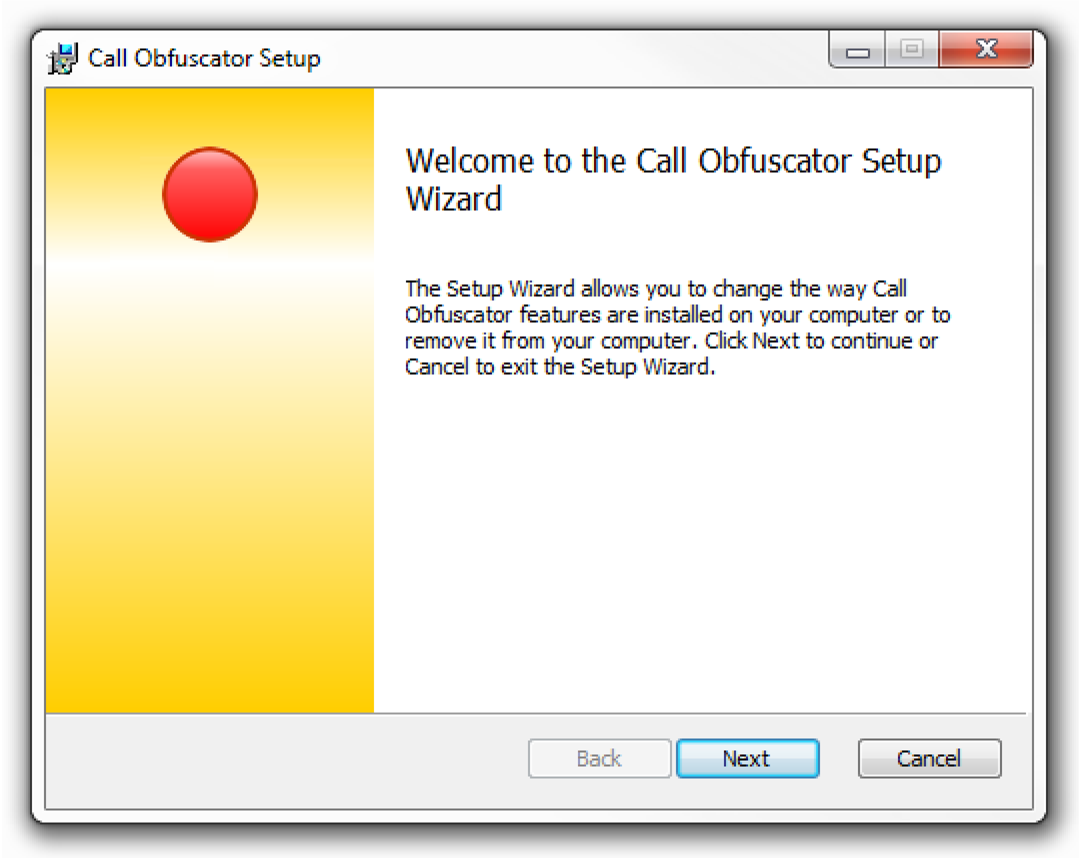
A <default> element can be added as the fall-back tone to use.

## Call obfuscator

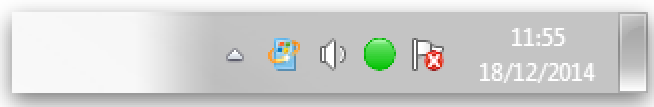
To obtain a copy of the Call Obfuscator application, contact our Technical Support team.

To install and configure the **`Call Obfuscator`** application, follow the steps below:

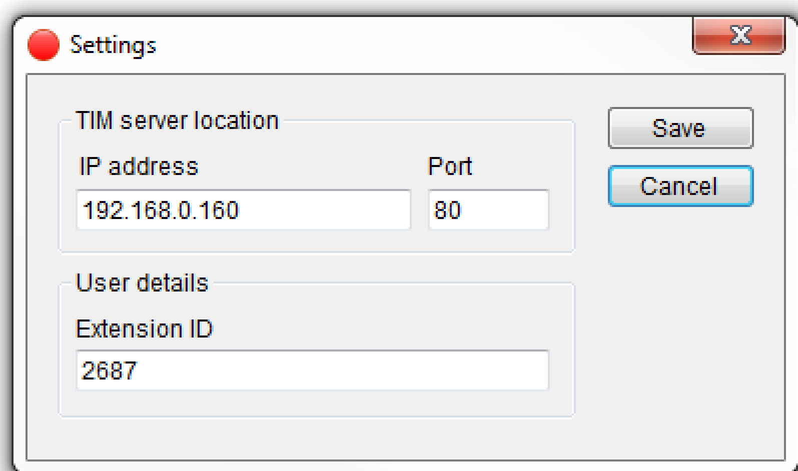
1. Double-click on the setup package and follow the wizard in order to complete the installation.




2. Start the application from the `All programs` list and notice the  icon appearing in the system tray.




- Right-click on the icon and select `Settings`. A new window will open allowing you to configure the application.




| **Field** | **Description** |
| --- | --- |

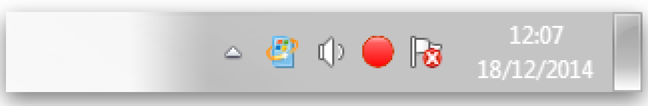
| | |
|---|---|
| IP address | The IP address of the PC running TIM Plus |
| Port | The port number that TIM Plus is listening on |
| Extension ID | The extension number of the user whose calls should be obfuscated by this instance of the Call Obfuscator |

A web user with the following credentials must exist in the call logger, in order to authenticate the `http` request sent by the application:

username: **`admin`**

password: **`tntnet`**

1. During a phone call, start the obfuscation by left-clicking on the icon which, after some milliseconds, will change to , indicating that the call is currently being obfuscated.




2. To stop an obfuscation, click on the icon, which will revert to , indicating that the obfuscation has ceased.
3. To exit the application, right-click on the icon and select `Exit`.

Multiple obfuscations can be performed on a single call by repeatedly clicking the start and stop icon.

# Integration

## Programmatic audio retrieval

### Overview

Normally, to retrieve call audio recordings from TIM Plus, an authenticated web user must log in to the web interface, navigate to the desired call using the `Call View` screen or by running a report, click on the call, then play it using the built-in web-based call player.

It is also possible to programmatically retrieve call recordings using a two-step authenticated request process. This works in the following way:

- Obtain the `datasource`, `voicelocation` and `voicefilename` values from the `calls` table in the TIM Plus database for the call you want to retrieve.
- Request a security token from TIM Plus, by authenticating using an authorised web user's login credentials
- Request the call from the `Echo Service`, using the security token obtained above
- Receive the call audio in WAV format, forcibly obfuscated if any such events apply to the requested call

Below is an example code showing how to retrieve a voice recording from TIM Plus.

## C# Example Source

This is a very simple example of some `C#` code to request a call's voice recording from TIM Plus. A more complex example would describe passing parameters in the class's constructor, for instance, but this should demonstrate the logic behind the procedure.

Use the following code to request a security token from TIM Plus, plugging in the appropriate values for `_datasource`, `_voicefilename`, and `_voicelocation` for the call you want to retrieve. These values are obtained directly from the calls database table.

A security token in this context is a URL which is used to obtain the actual voice recording from the `Echo Service`.

**Simple call retrieval example**

```
using System;
using System.Net;
using System.Text;

private class GetAudioFile
{
    string dataSource = "\\3\\";
    string voiceFilename = "344f91cf-ba35-48e4-8080-a80a3816f5e7";
    string voiceLocation = "4";
    string echoUrl = "";
    using (WebClient client = new WebClient())
    {
        client.Headers["User-Agent"] = "3rd-Party-Agent";
        client.Credentials = new NetworkCredential("username",
"password");

        byte[] responseBody =
client.DownloadData("http://enterprise.example.com/voice.wav?cmd=g
etvmsg&datasource=" + System.Uri.EscapeDataString(dataSource) +
                              "recordingid=" +
System.Uri.EscapeDataString(voiceFilename) +
                              "voicelocation=" +
System.Uri.EscapeDataString(voiceLocation) +
                              "salt=" +
System.DateTime.Now.Ticks);

        echoUrl = Encoding.UTF8.GetString(responseBody);
    }

 if (!string.IsNullOrEmpty(echoUrl))
 {
  // Use another WebClient object to query the URL provided in
"echoUrl" to retrieve the actual call recording...
 }
}
```

Assuming the request was successful (and the response status was a `200 OK`), the variable `rtaUrl` will now contain a full URL which you must request in a similar way, using another `System.Net.WebClient` object.

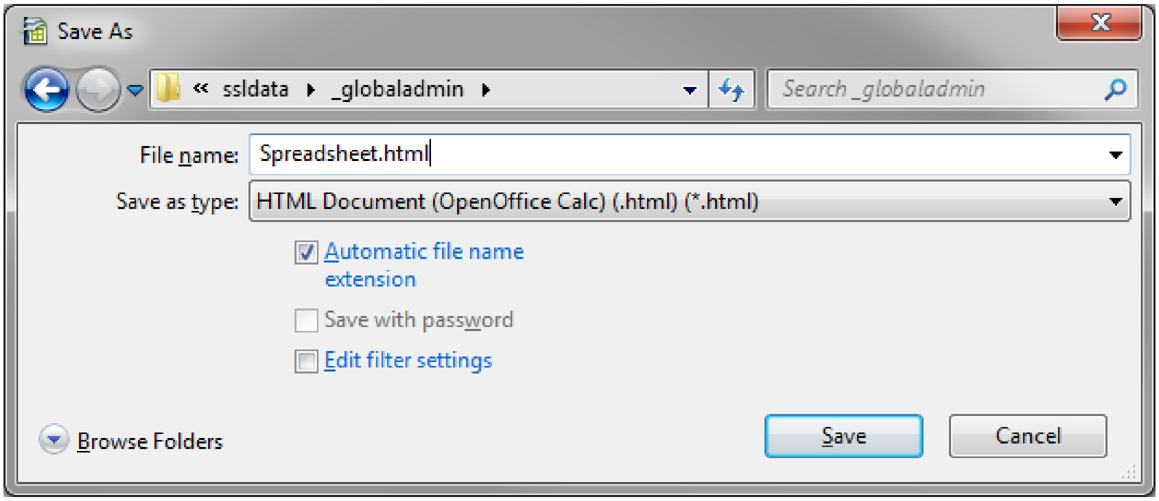
The security token URL is valid for one minute (60 seconds).

# Knowledgebase

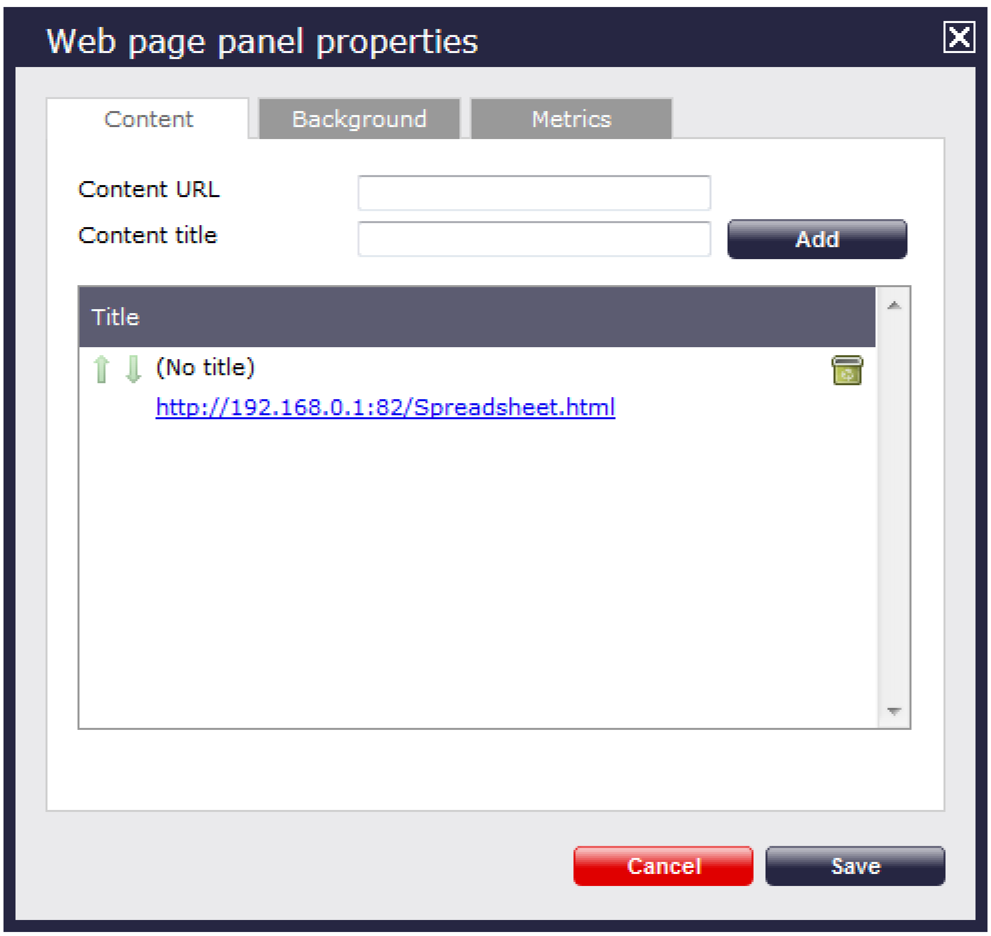
## Adding an Excel spreadsheet to a Display board

To add a spreadsheet file to a Display board, follow the steps below:

1. Open your spreadsheet document and save it in `HTML` format, using the `Save as` option, as shown below:




2. Save the document in the web folder of TIM Plus, located by default in **`{app}\TIM Plus\ssldata\_globaladmin`**.
3. In the **`Live stats`** section of TIM, create a new display board from blank and add a Web panel .
4. In the **`Content URL`** field of the web panel properties, enter the IP address and port number of TIM Plus followed by name of HTML file, as shown below:



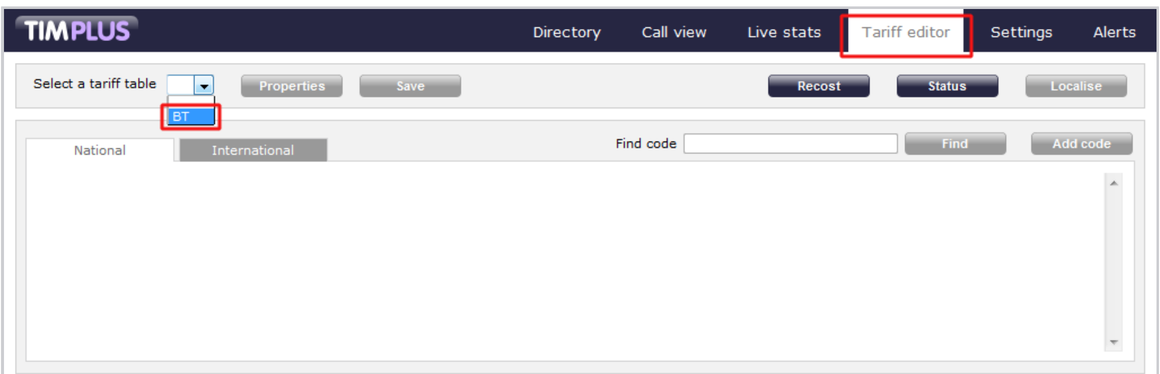

5. If your spreadsheet contains a graph or chart, create a folder to store the resulting image and update the URL accordingly.
6. Save the changes and your wallboard should now display your spreadsheet.

In order for the spreadsheet to show on the display board, the web panel background should be set to a colour different to that of the spreadsheet itself.

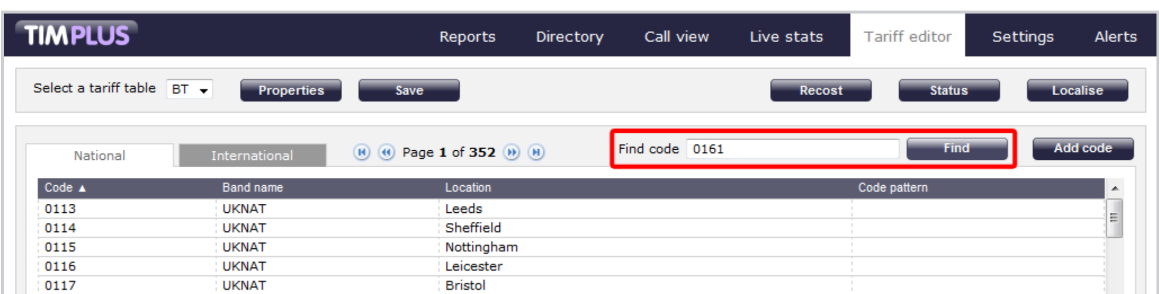
## Amending call charges

To modify call charges for a specific dial code or destination, follow the steps below:

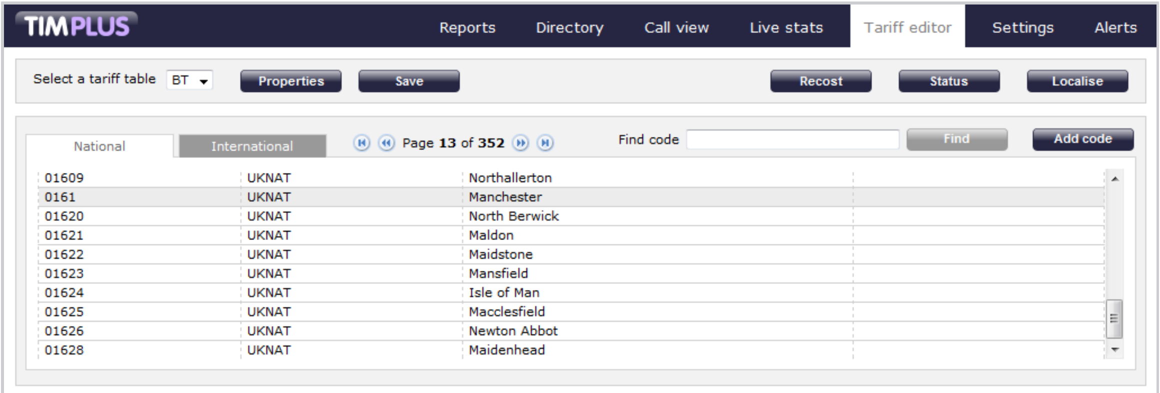
1. Log in to TIM Plus, click on the **Tariff editor** tab and select the tariff you want to amend from the drop-down list, as shown below:



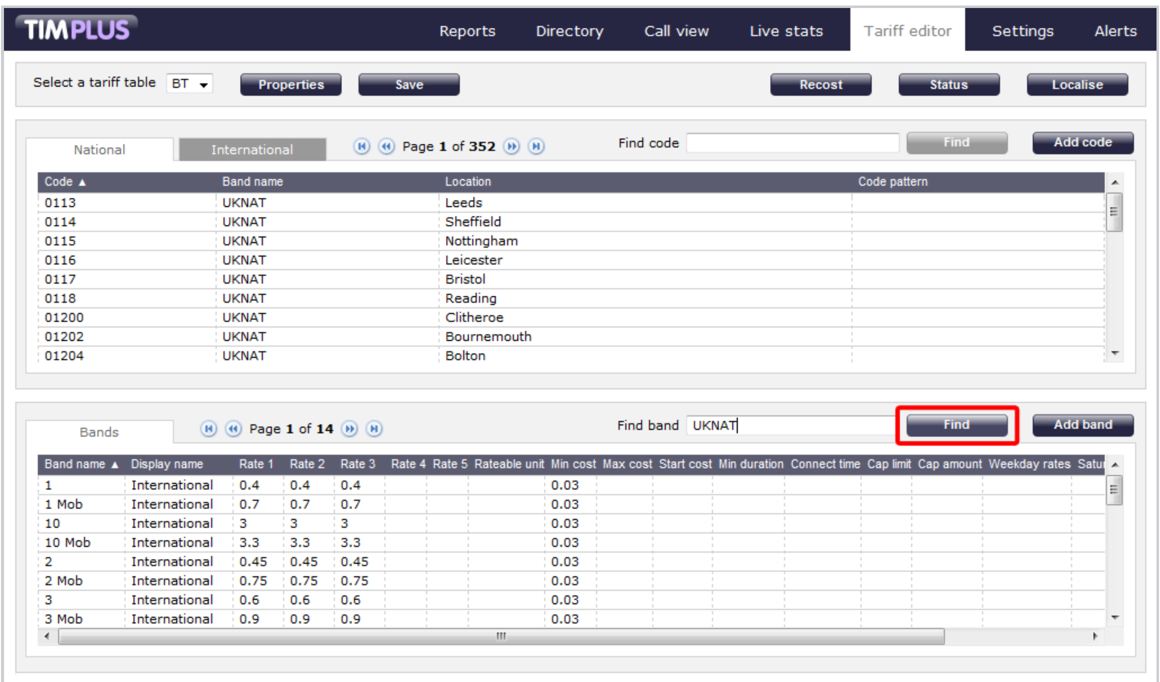

2. Locate the dial code for which you want to amend the charges, by entering the code in the search box provided.



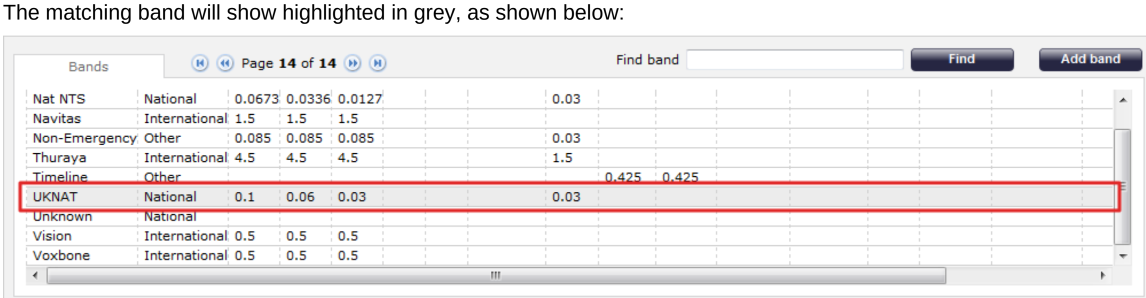

3. The matching dial code will be highlighted in grey, showing its associated charge band and destination name.



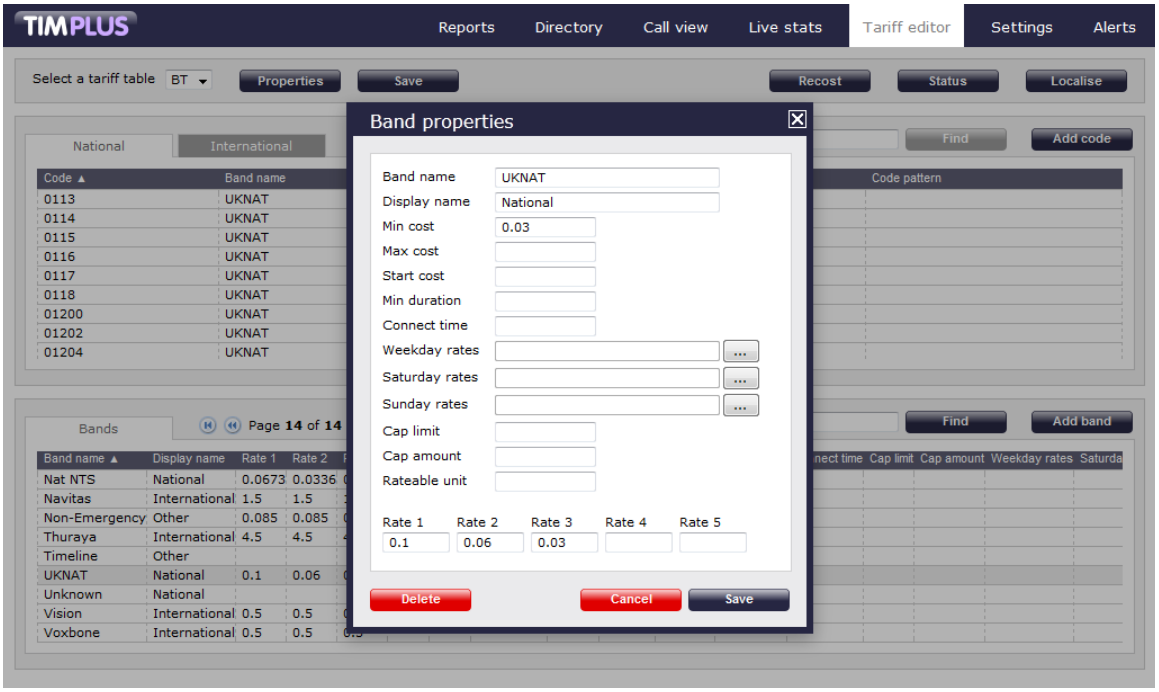

4. Enter the name of the charge band in the **Find band** search box, as shown below:



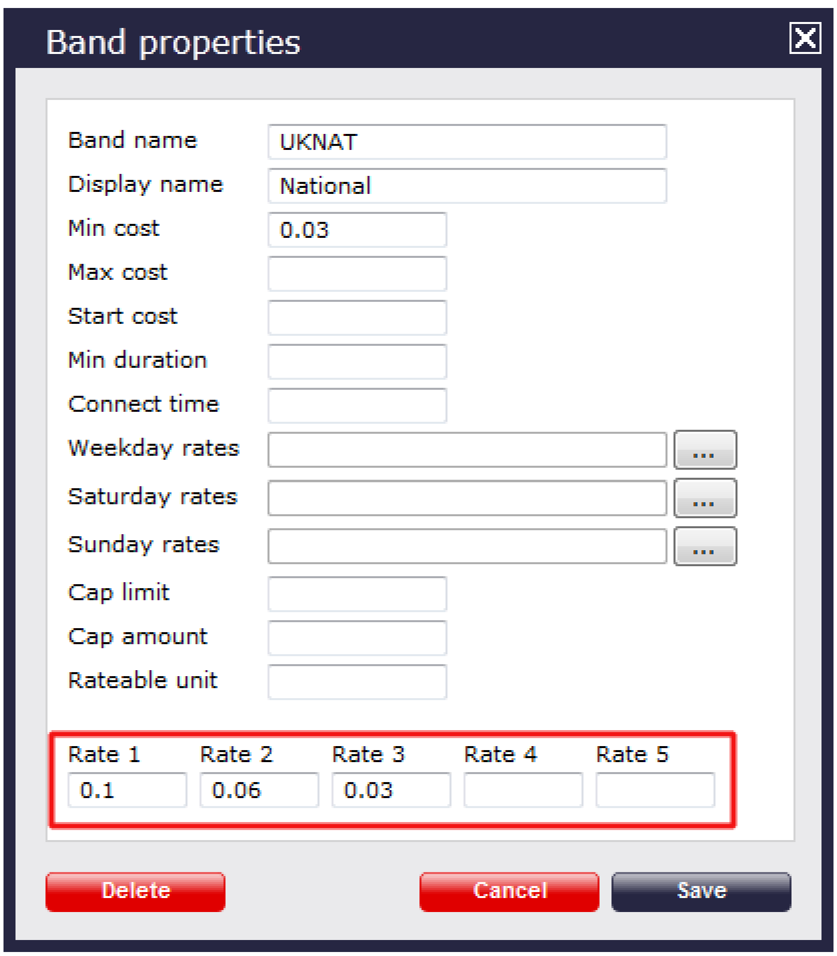

5. The matching band will show highlighted in grey, as shown below:



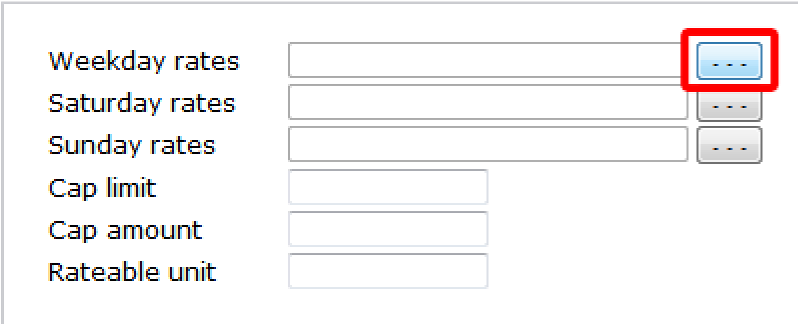

6. To configure the properties of the selected band, click on it to open the **Band properties** window.



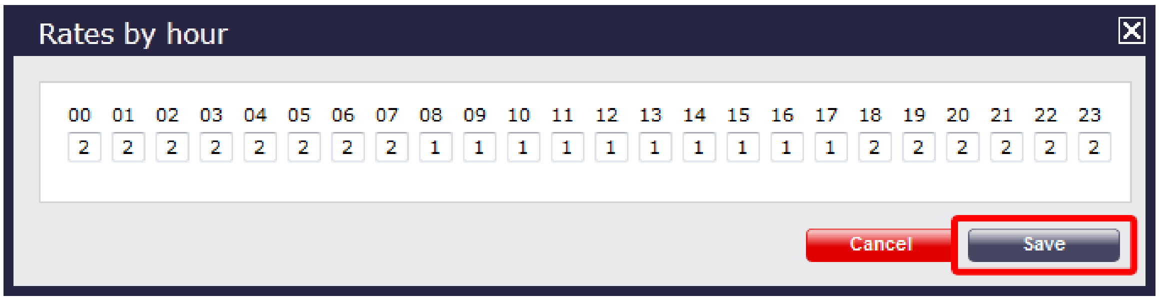

7. To change the existing charges, e.g. `Rate 1`, `Rate 2`, etc, enter the preferred values in the field provided.




8. To see how each rate is applied, click on the ... button.




9. A new window will open, where you can edit the rate times. To apply any changes, click on the OK button.




# Automatic web login

## Background

All of the web pages and scripts that TIM Plus serves are protected by a login that is provided by a user when entering their username and password into a pop-up dialog presented by their web browser.

In some situations, it is desirable to suppress this dialog box demanding the username and password. An example might be the deployment of a stand-alone computer displaying a pre-defined wallboard on a large screen; it would become tedious having to log in to the web page every time that computer is restarted.

Different web browsers behave differently when asked to automatically log in to web sites. Variously, they range from complete prohibition of the practise to permitting it only if certain system parameters are configured.

## Specifics

In this article, details of how to allow automatic logging-in to a web page concerns the Microsoft Internet Explorer (version 6 and above) browsers only. Please consult your browser documentation for a solution related to your own choice of browser.

The solution involves creating a specially-crafted URL in the following form:

```
http://username:password@serverhost/
```

## Solution

Although including the username and password in a URL is disabled by default on Windows Internet Explorer since it is considered a security risk, you can override this restriction by making the following changes to the Windows Registry.

Since you'll be exposing a username and password as part of a URL, it is recommended that you create a dedicated web user object inside the TIM Plus directory that will be used solely for this purpose.  See the Web users page for details of how to set up a web user.

Open Windows Registry Editor, **REGEDIT.EXE**, from the Windows **Start Menu** and locate the following registry key:

- for a **32-bit** system:

```
HKEY_LOCAL_MACHINE\Software\Microsoft\Internet
Explorer\Main\FeatureControl\FEATURE_HTTP_USERNAME_PASSWORD_DISABL
E
```

- for a **64-bit** system:

```
HKEY_LOCAL_MACHINE\Software\Wow6432Node\Microsoft\Internet
Explorer\Main\FeatureControl\FEATURE_HTTP_USERNAME_PASSWORD_DISABL
E
```

Inside this registry key, add the following **DWORD** entries:

```
IEXPLORE.EXE  (Set DWORD value to 0, zero)
EXPLORER.EXE  (Set DWORD value to 0, zero)
```

Close the Registry Editor and create a bookmark in Internet Explorer, specifying the URL as per the following example:

```
http://USERNAME:PASSWORD@HOSTNAME/display/?suiv=12345
```

Replace the following entries:

- **USERNAME** replace with the username of the web user you use to access the page
- **PASSWORD** replace with the password of the web user you use to access the page
- **HOSTNAME** replace with the host name or IP address of the machine running TIM Plus

### References

This information is available in more detail at the Microsoft Support site:

http://support.microsoft.com/kb/834489

## Blacklisted users

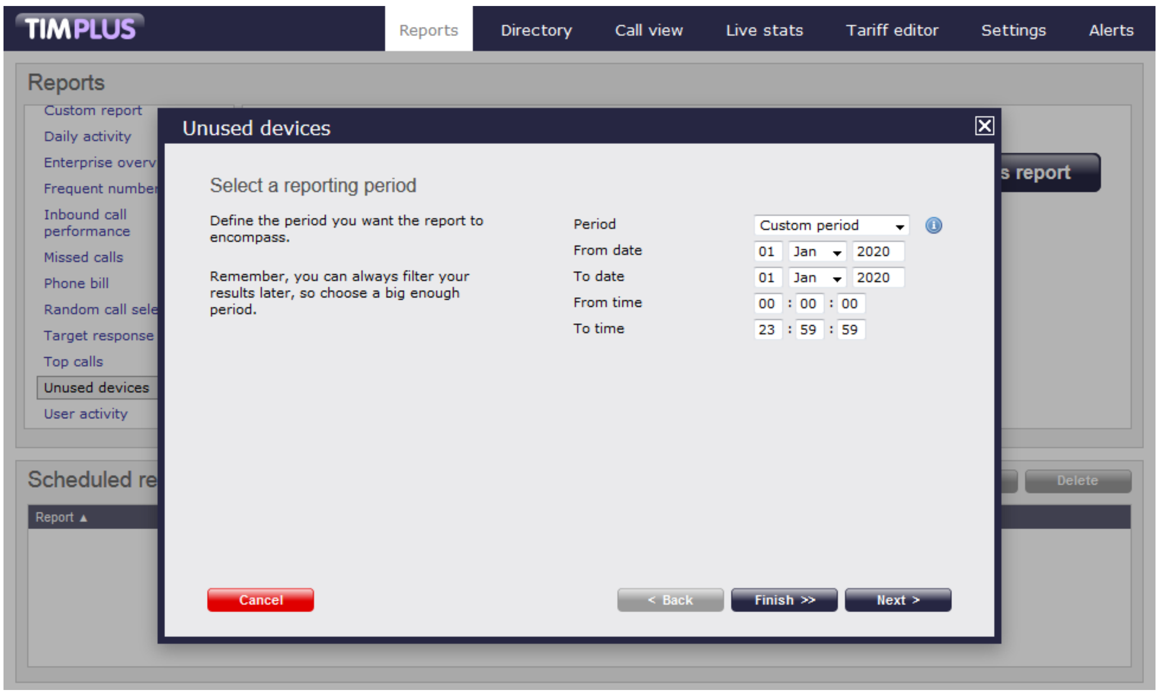
**Blacklisted users**



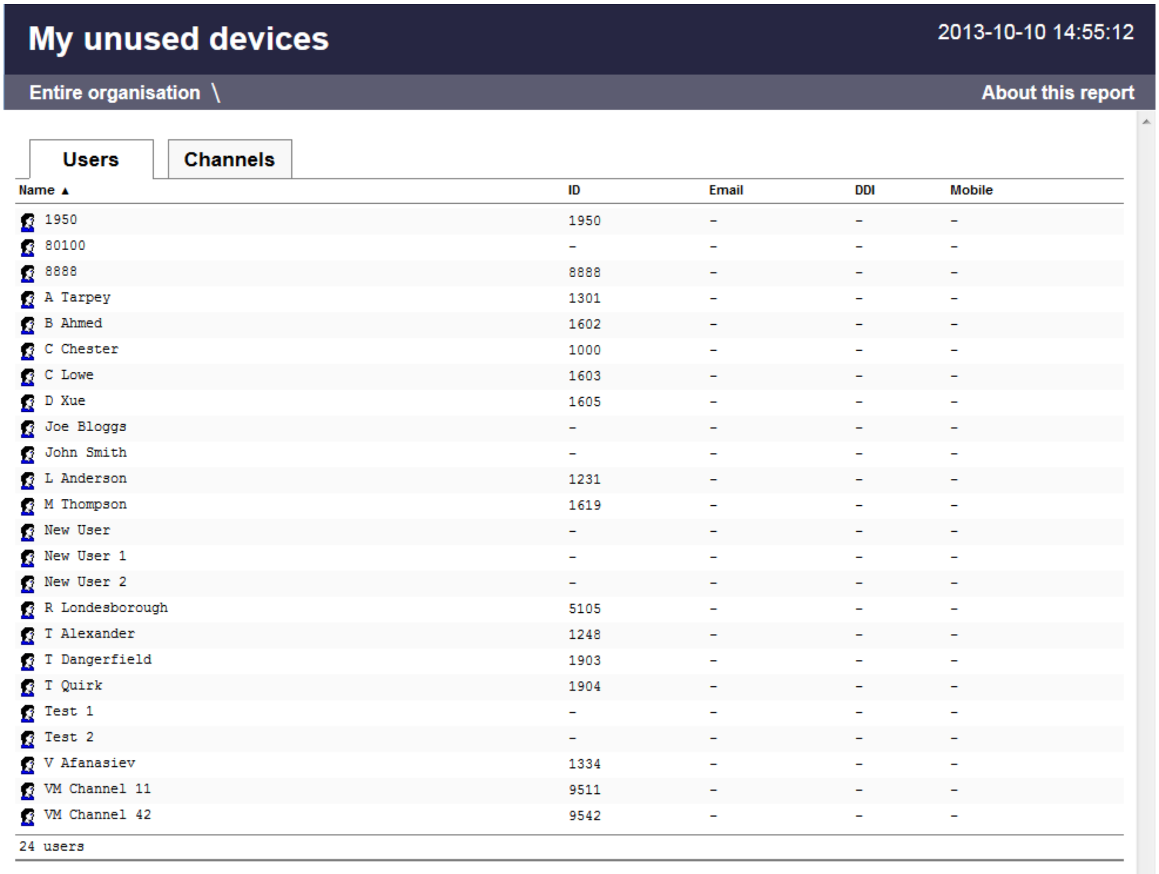
## What are blacklisted users?

Blacklisted users are created in the system when your software license is insufficient for the number of users picked up in the Directory. The users will be blacklisted at random and they will not be logging calls.

To identify the total number of users currently logged in the system, you can run a `Unused devices` report for a period of time when no calls were made or received. The best option is to select a date in the future, e.g. **01-01-2020**.




The report will display the total number of users picked up in the system.


My unused devices 2013-10-10 14:55:12
Entire organisation \ About this report
Users | Channels

| Name ▲ | ID | Email | DDI | Mobile |
|---|---|---|---|---|
| 1950 | 1950 | - | - | - |
| 80100 | - | - | - | - |
| 8888 | 8888 | - | - | - |
| A Tarpey | 1301 | - | - | - |
| B Ahmed | 1602 | - | - | - |
| C Chester | 1000 | - | - | - |
| C Lowe | 1603 | - | - | - |
| D Xue | 1605 | - | - | - |
| Joe Bloggs | - | - | - | - |
| John Smith | - | - | - | - |
| L Anderson | 1231 | - | - | - |
| M Thompson | 1619 | - | - | - |
| New User | - | - | - | - |
| New User 1 | - | - | - | - |
| New User 2 | - | - | - | - |
| R Londesborough | 5105 | - | - | - |
| T Alexander | 1248 | - | - | - |
| T Dangerfield | 1903 | - | - | - |
| T Quirk | 1904 | - | - | - |
| Test 1 | - | - | - | - |
| Test 2 | - | - | - | - |
| V Afanasiev | 1334 | - | - | - |
| VM Channel 11 | 9511 | - | - | - |
| VM Channel 42 | 9542 | - | - | - |

24 users

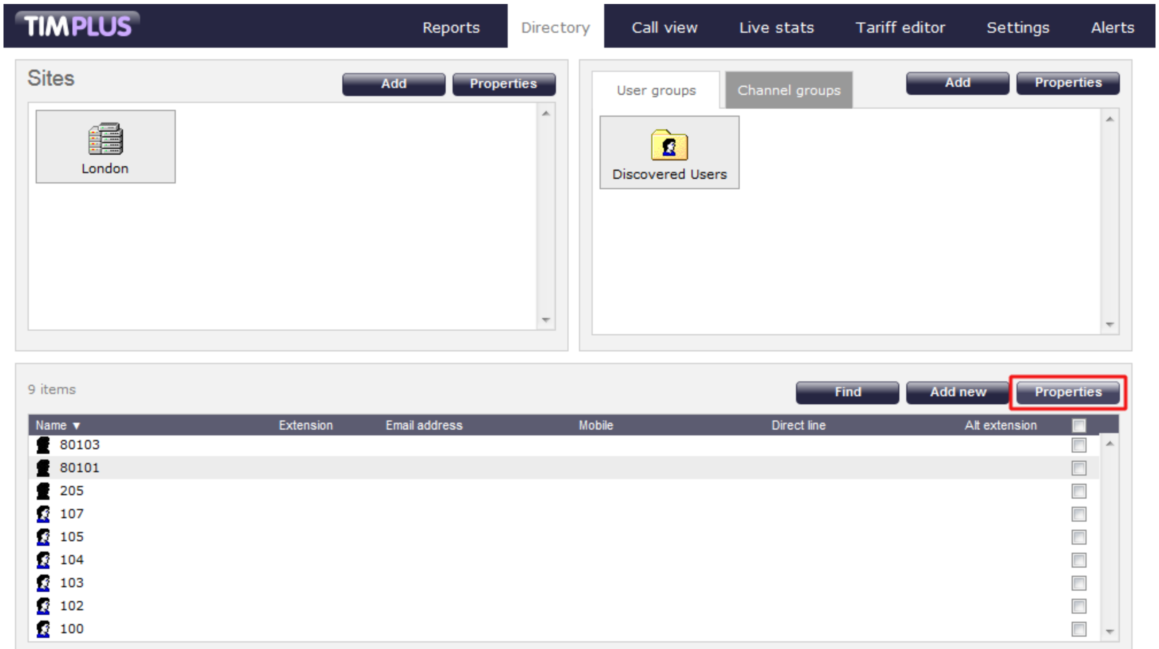
If the total number of users exceeds your license count, you can contact our Sales team to purchase more licenses for your users, alternatively you can check if any of the following applies:

- DDI numbers are picked up as extensions, in which case you can merge the DDIs with their extension number or set them to not log calls
- you have old extensions that you don't wish to monitor, in which case you can set them to not log calls

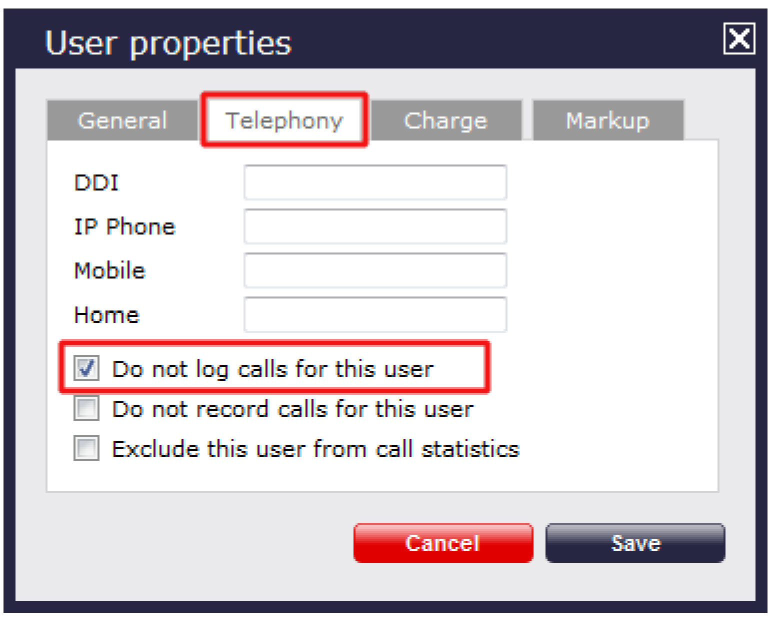
## Setting users to not log calls

Follow the steps below to set a user to not log calls:

1. Locate the extension you want to set to **`Do not log`** in the Directory, select it from the list and click on the Properties button, as shown below:




2. The **User properties** window will open. Click on the Telephony tab and tick the **Do not log calls for this user** box.

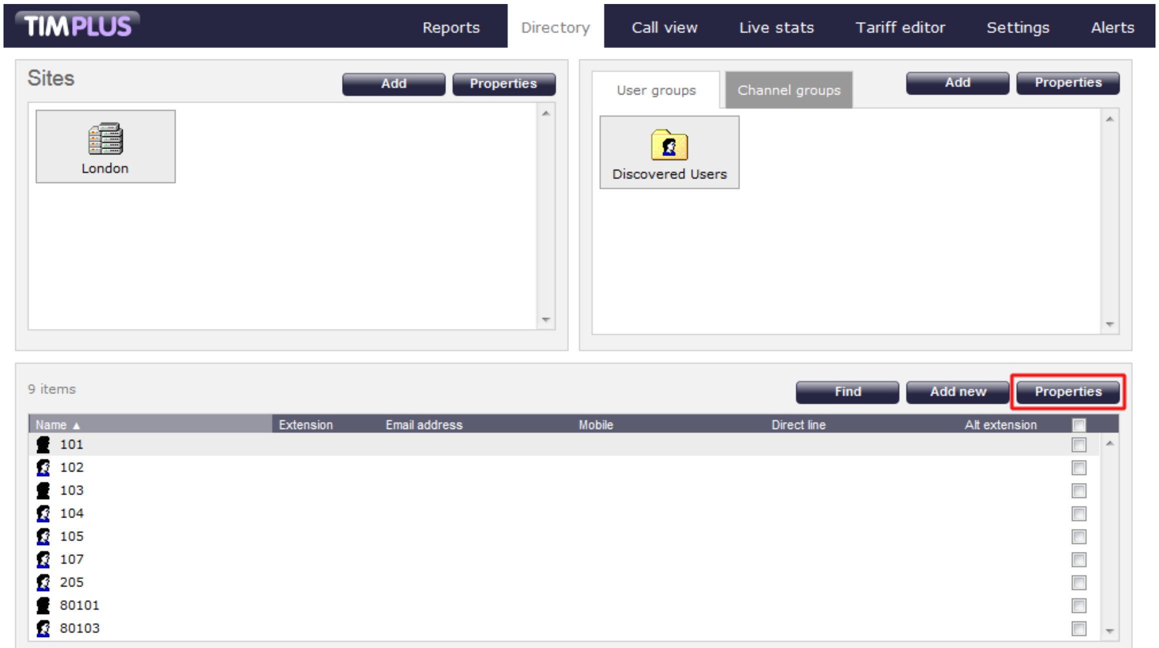



For the changes to take effect, you need to restart the TIM Pus service.

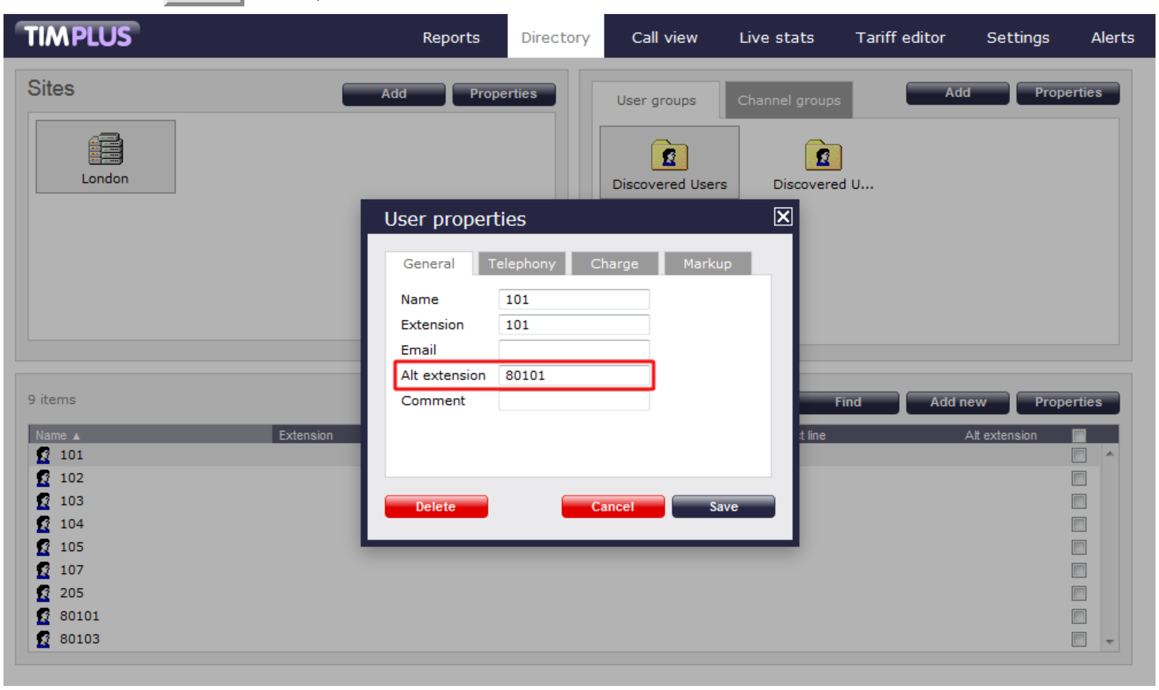
## Merging a DDI with its extension

Follow the steps below to merge a DDI with its extension:

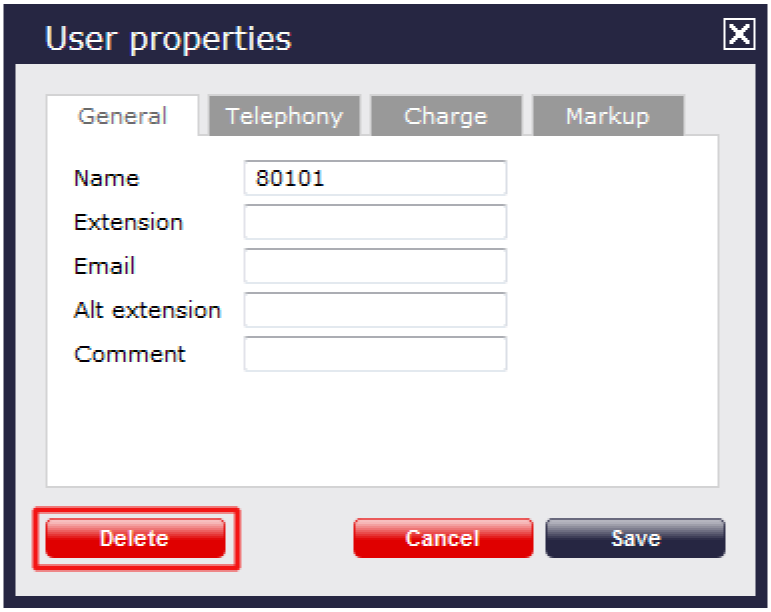
1. Locate in the Directory the extension you want to merge, select it from the list and click on the Properties button, as shown below:




2. A new window will open, displaying the general properties of the user. In the `Alt extension` field, enter its DDI number and click on the Save button, as shown below:




3. Locate in the Directory the users object created for the DDI number and delete the user from the `User properties` window, as shown below:




For the changes to take effect, you need to restart the TIM Plus service.

## Cisco specific

### CDRs were being sent but have now stopped

If you stopped receiving data from your Cisco UCM, you need to restart the `CDR Services` on the `Publisher` node.

DO NOT delete the `Call Accounting` and `Billing` server, as this will remove any CDRs that have not been sent.

To restart the CDR services, log in to the `Cisco Unified Serviceability` screen and select `Tools -> Control Center -> Network Services` from the main menu. Locate the `CDR services` section in the list and restart the following services in the order specified below;

1. `Cisco Database Layer Monitor` (Depending on Cisco UCM version, you may not have this service)
2. `Cisco CDR Repository Manager`
3. `Cisco CDR Agent`
4. `Cisco CAR Scheduler` (if sending CMRs)

| | | | | |
|---|---|---|---|---|
| ○ | Cisco Change Credential Application | Running | Wed Apr 3 14:30:07 2013 | 42 days 06:13:15 |

**CDR Services**

| | Service Name | Status | Start Time | Up Time |
|---|---|---|---|---|
| ○ | Cisco CDR Repository Manager | Running | Wed May 15 19:42:05 2013 | 0 days 00:01:17 |
| ○ | Cisco CDR Agent | Running | Wed May 15 19:42:49 2013 | 0 days 00:00:33 |
| ○ | Cisco CAR Scheduler | Starting | | |
| ◉ | Cisco SOAP - CallRecord Service | Running | Wed Apr 3 14:26:51 2013 | 42 days 06:16:31 |
| ○ | Cisco CAR DB | Running | Thu Oct 11 03:32:17 2012 | 216 days 17:11:05 |

**Security Services**

| | Service Name | Status | Start Time | Up Time |
|---|---|---|---|---|
| ○ | Cisco Trust Verification Service | Running | Thu Oct 11 03:31:35 2012 | 216 days 17:11:47 |

CDRs should now be sent to the configured **`Call Accounting and Billing`** server, i.e. the machine running TIM Plus.

## Importing historic data from Cisco UCM

#### Exporting CDR/CMR records

The following procedure describes how to export CDR/CMR into a dump file. This information was taken from Export CDR/CMR Records Configuration section of Cisco's documentation.

1. Go to the **`CDR Analysis and Reporting`** section and select **`CDR -> Export CDR/CMR`** option.The Export CDR/CMR records window will display.
2. In the **`From`** and **`To`** date drop-down list boxes, choose a date range for the CDR/CMR **`dump.TXT`** file.
3. In **`Select`** records, check the **`CDR`** and/or **`CMR`** check box.
4. Click Export to File .

#### Re-running the data

To re-run the CDRs in TIM Plus, you need to rename the dump file extension from **`.TXT`** to the unique identifier of your PBX object in TIM Plus. To obtain the ID of a site, hover the mouse pointer over it on the Directory page in TIM Plus and the site ID will be displayed as a tooltip as shown below:


After renaming the file extension, copy it into the following location on the computer running TIM Plus: `C:\Program Files\Tri-Line\TIM Plus\spool\`.

TIM Plus will now process the data and it should be visible on the `Call view` screen.

## RADIUS server retransmit

RADIUS server retransmition occurs when the connection to the RADIUS server fails or a response pack is not received by the UCME. When this happens, the default behaviour of the UCME is to try to reconnect three more times. This can lead to memory problems on the UCME, if there is a high number of packets failing. To avoid this, the global retransmit count can be amended accordingly, and it can also be configured differently for each RADIUS server.

To change the global setting, log in in the UCME CLI and enter the following commands:

| Step | IOS Commands |
|---|---|
| 1 | `conf t` |
| 2 | `radius-server retransmit 0` |
| 3 | `exit` |
| 4 | `wr` |

To change a specific RADIUS server settings, log in to the UCME CLI and enter the following commands:

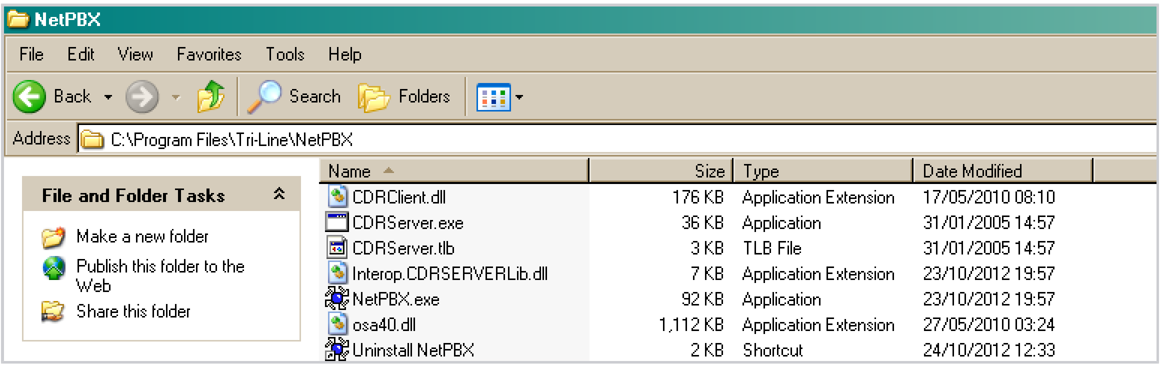
| Step | IOS Commands |
|---|---|
| 1 | `conf t` |
| 2 | `radius server` SERVER_NAME |
| 3 | `retransmit 3` |
| 4 | `exit` |
| 5 | `wr` |

With the above configuration, the specific server for which these settings apply will try to resend data if there is a failure, whilst the others will give up if the initial packet is lost.

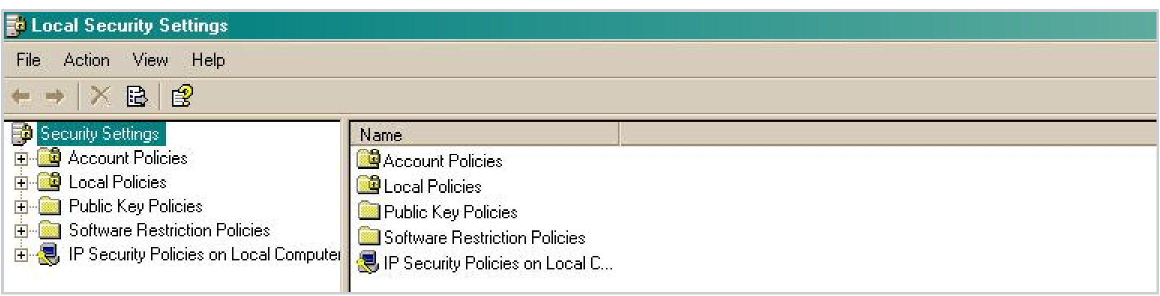
## Connecting BCM v3.7 or below with NetPBX

Follow the instructions below to connect a BCM v3.7 or below with NetPBX:

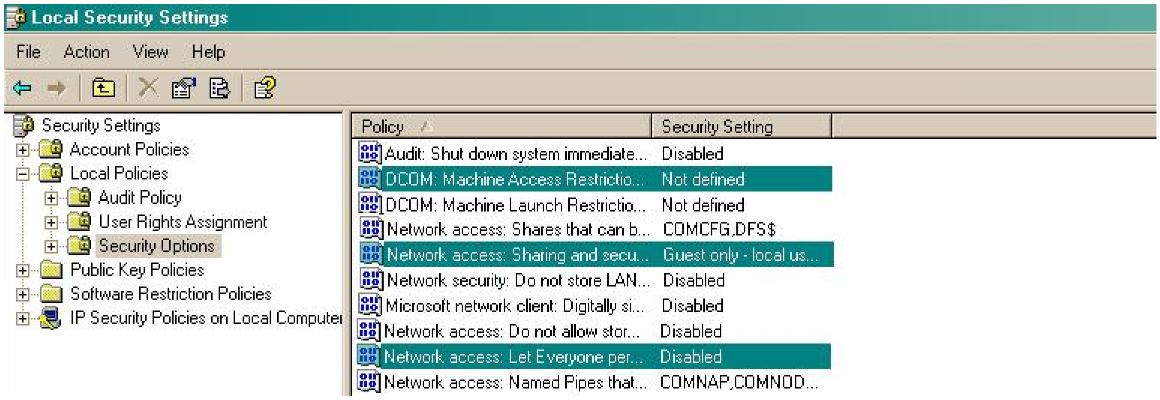
1. Make sure the **CDRServer.EXE** and **Interop.CDRSERVERLib.dll** files are placed in the same folder as **NetPBX.EXE**, usually located in **{pf}\Tri-Line\NetPBX**.




2. Register **CDRServer.EXE** by running the command line with administrator privileges and typing the following command under the directory path of the NetPBX folder: **CDRServer.EXE/regserver**.
3. Open the computer's local security policies: **Start -> Control Panel -> Administrative Tools -> Local Security Policy.**



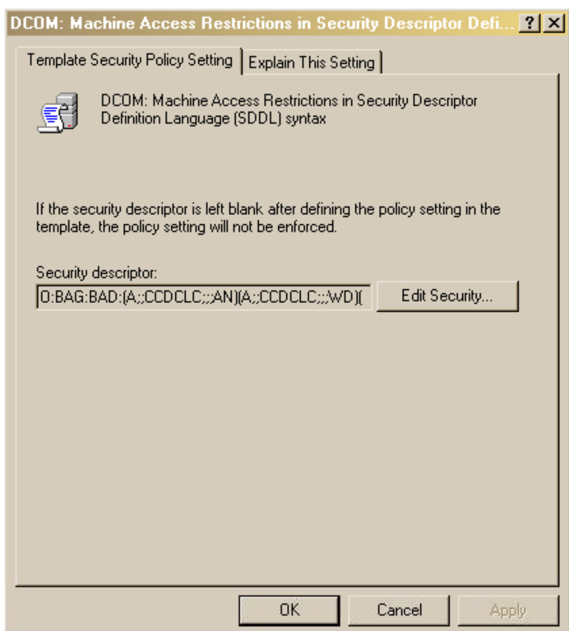

4. Within the **Security Settings\Local Policies\Security Options** tree, change the following items as highlighted in the screenshot below:

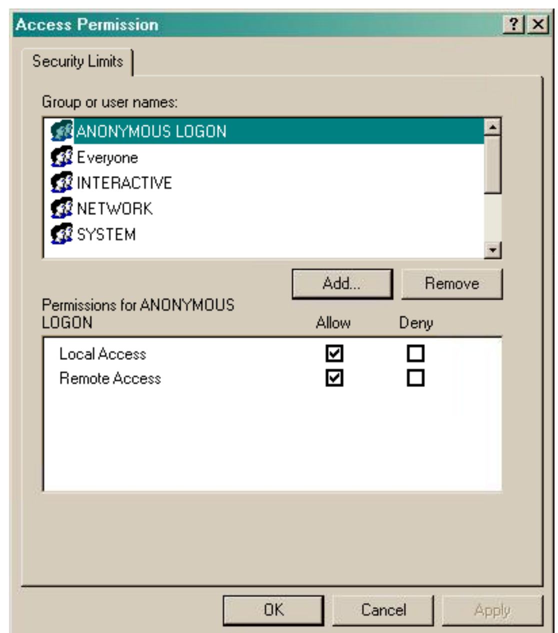



a. **`Network Access: Let Everyone permissions apply to anonymous users`**. Set this to **`Enabled`**.

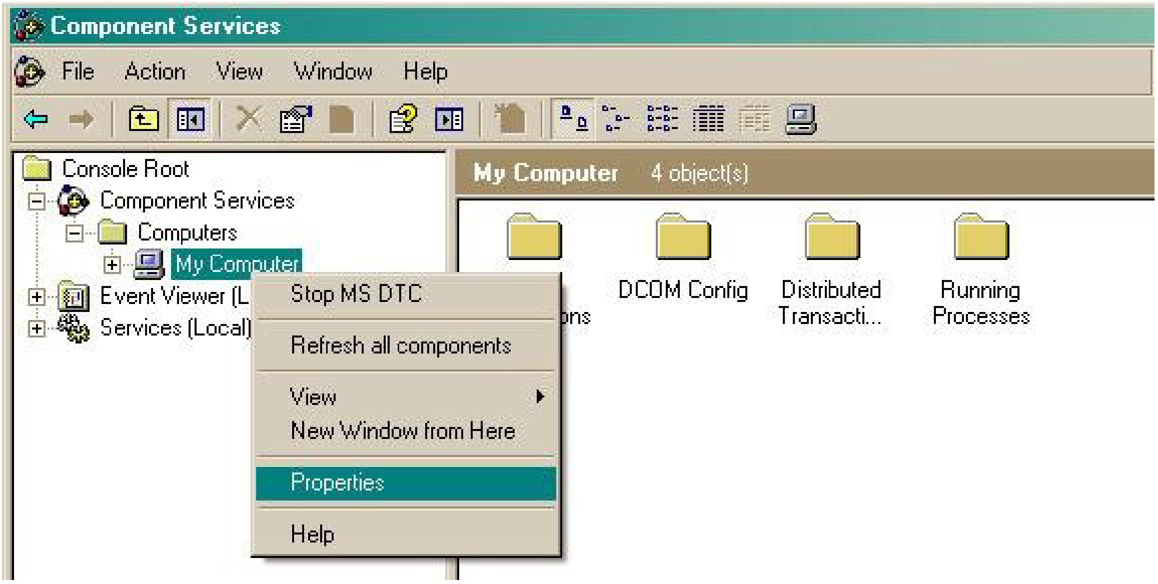
b. **`Network Access: Sharing security model for local accounts`**. Set this to **`Classic`**.

c. **`DCOM: Machine Access Restrictions`**: Click on Edit Security and add the following user accounts: **`Anonymous, Everyone, Interactive, Network, System`**. Set each one to have full access rights.




5. Next step is to modify the way DCOM behaves on the computer by executing the DCOM configuration program: **`Start -> Run -> DCOMCNFG [enter]`**. Browse the tree to the following location: **`Console Root -> Component Services -> Computers -> My Computer`**. Righ-click on **`My Computer`** for Properties and amend or update the following options:

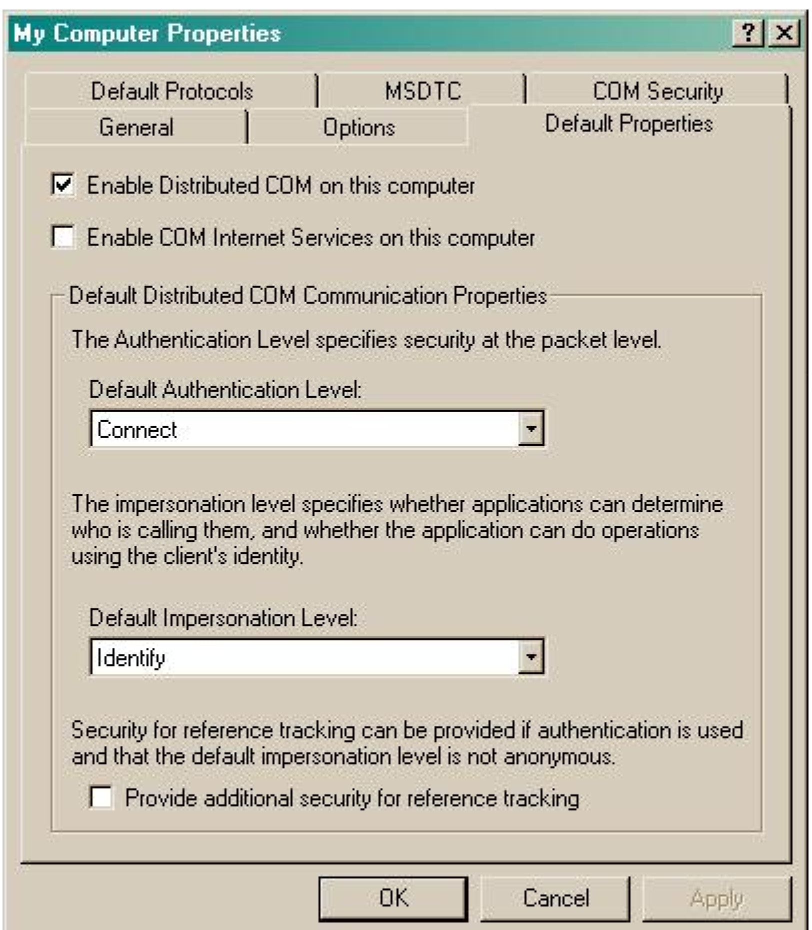



a. On the Default Properties tab:

**`Enable Distributed COM on this computer`**: tick the box for his option

**`Default Authentication Level`**: set this to **`Connect`**

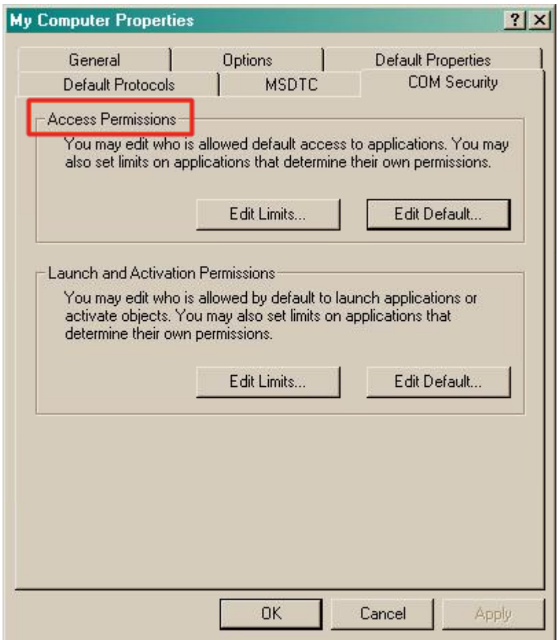
**`Default Impersonation Level`**: set this to **`Identify`**

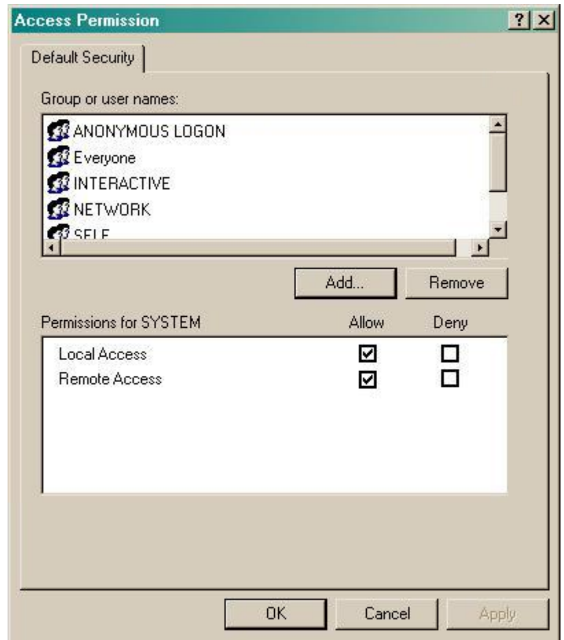


b. On the COM Security tab:

Go to the **`Access Permissions`** section and select Edit default .

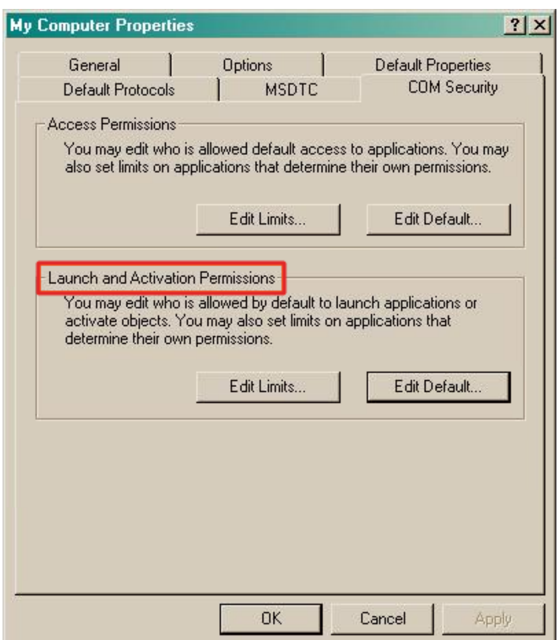
Add the following accounts and set both local and remote access permissions: **`Anonymous, Everyone, Interactive, Network, Local Service`** and **`System`**.

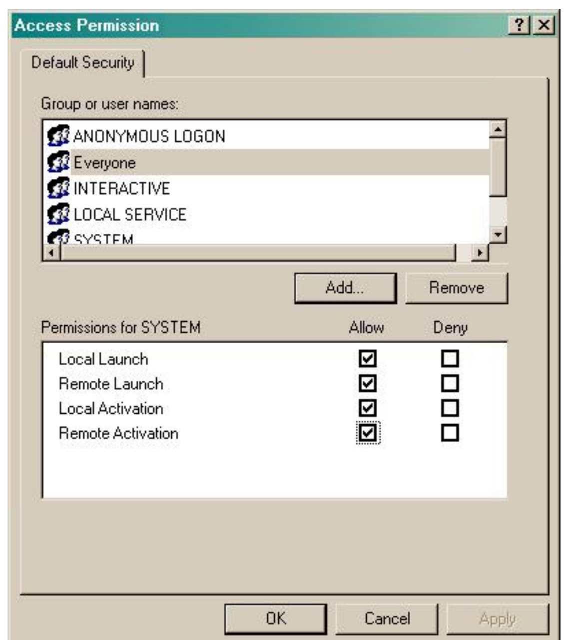



Go to the **`Launch and Activation Permissions`** section and click on Edit default tab.

Add or update the following accounts to give them all local and remote access permissions: **`Anonymous, Everyone, Interactive, Network, Local Service`** and **`System`**.



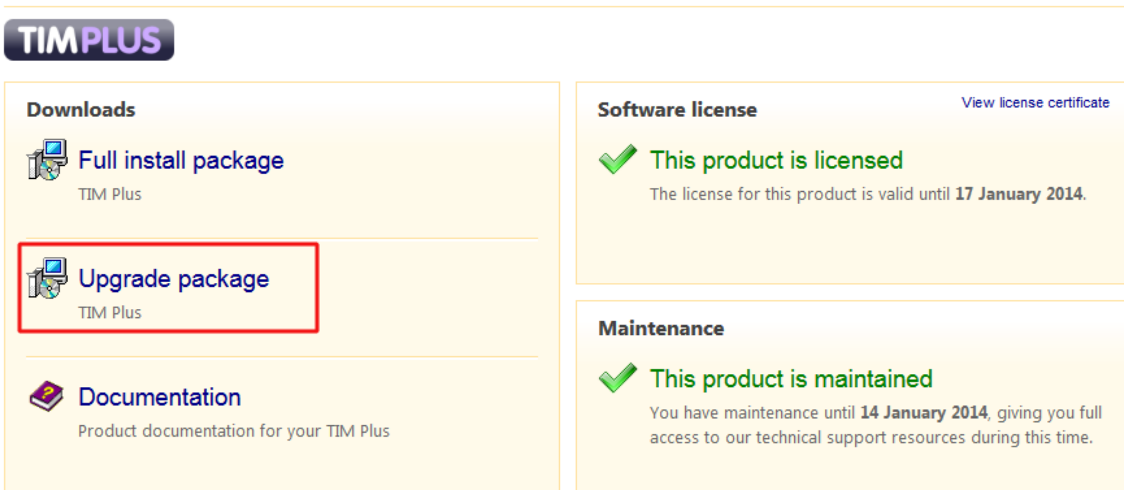
# Migrating TIM Plus

To migrate TIM Plus from one computer to another requires the following actions:

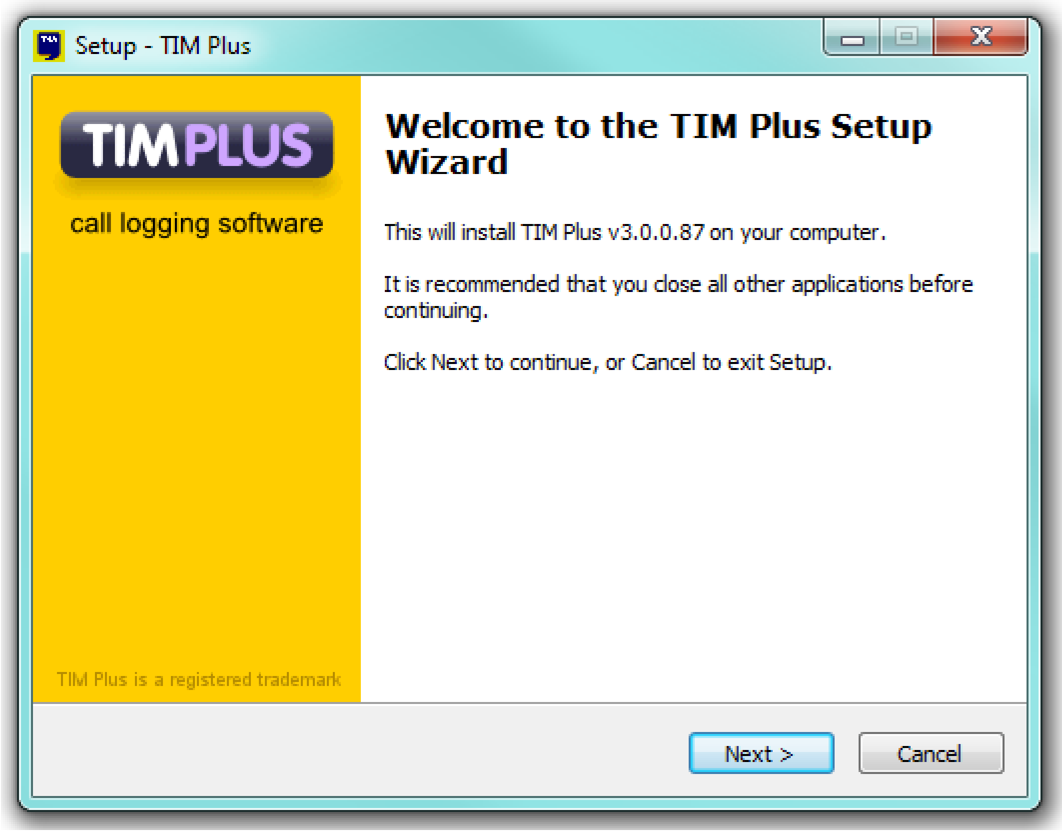
1. Upgrade TIM Plus on the old computer
2. Install TIM Plus on the new computer
3. Migrate the historical data

## Upgrading TIM Plus on the old computer

1. Log in to our Gateway and click on the TIM Plus product. Select the **`Upgrade package`** from the **`Downloads`** area and save the file on your computer.

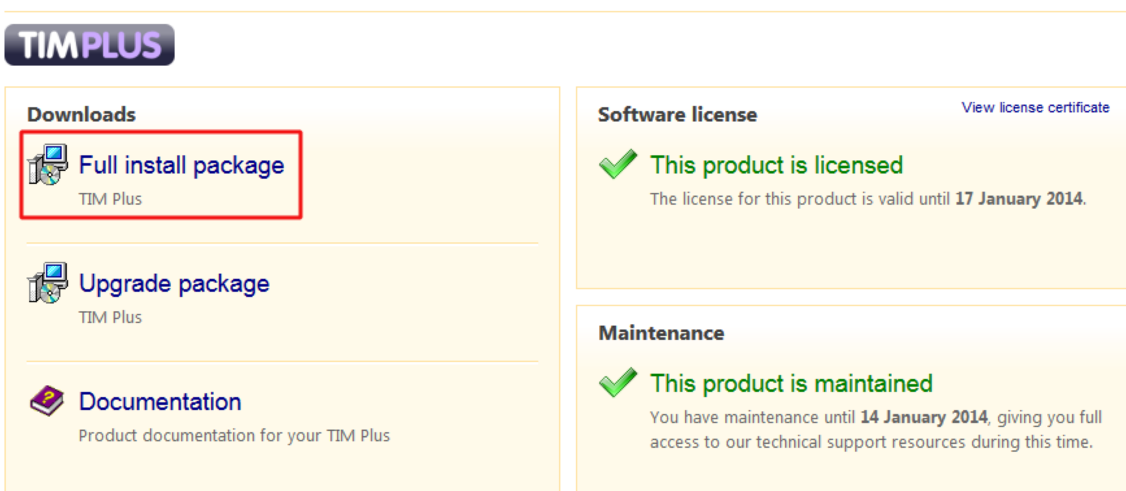



2. When you have downloaded the setup package, double-click on it and follow the setup wizard in order to complete the installation.

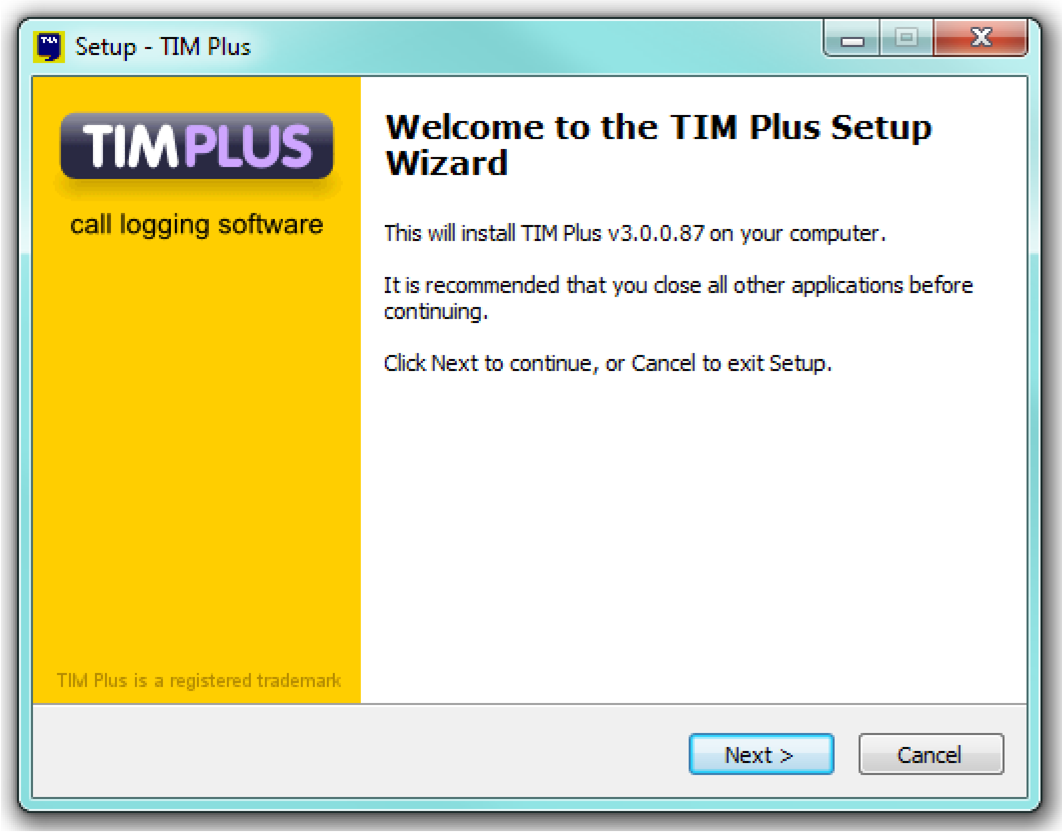



### Installing TIM Plus on the new computer

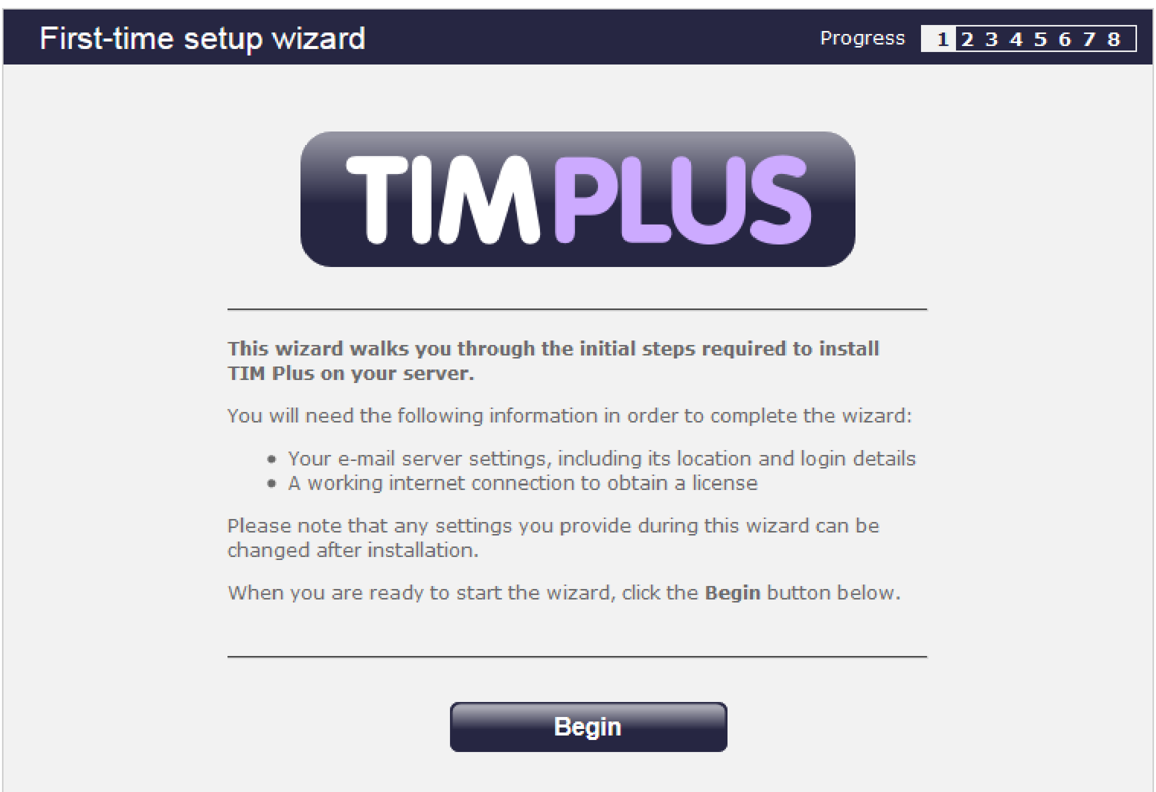
1. Log in to our Gateway and click on the TIM Plus product. Select the **`Full install package`** from the **`Downloads`** area and save the file on your computer.




2. To install TIM Plus, double-click on the setup package and follow the on-screen instructions.



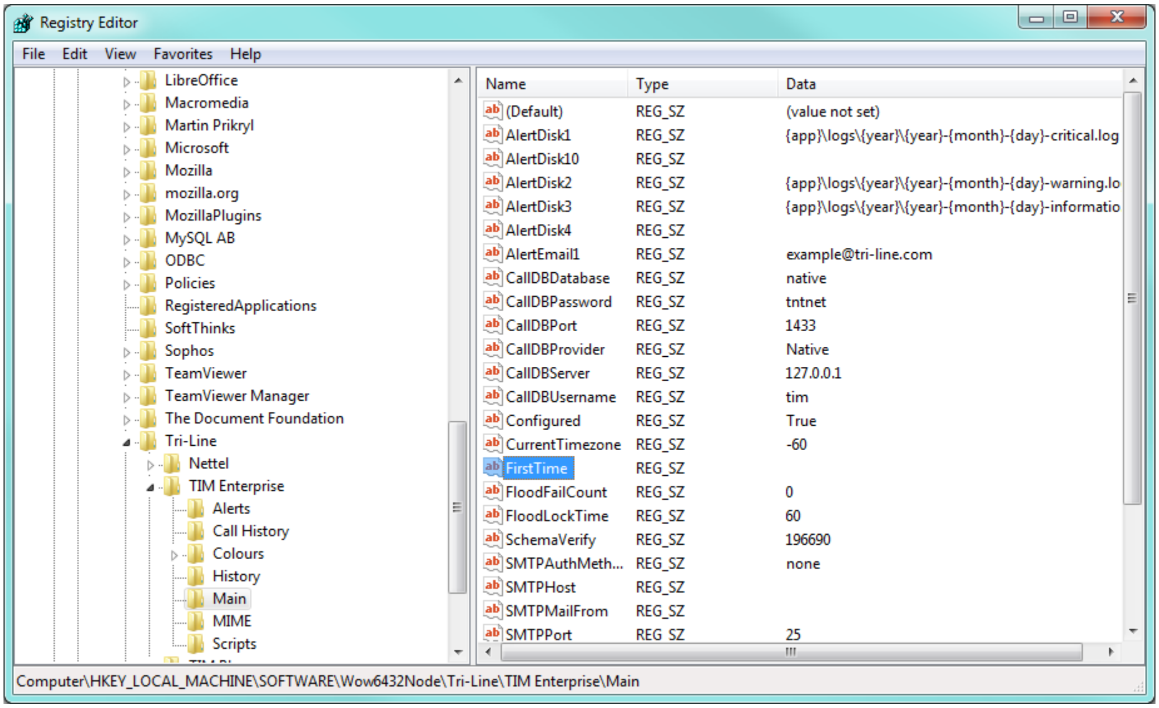

3. After installation, the `First-time setup wizard` screen will open automatically in a new web browser window.




4. Close the web page, access the Windows Services and stop the TIM Plus service.

5. Access Windows Registry Editor ( `Start -> Run -> regedit.exe` ) and remove the **`FirstTime`** value from the following Registry key:

```
HKEY_LOCALMACHINE\Software\Wow6432Node\Tri-Line\TIM Plus\Main
```




## Migrating the historical data

To restore your historical data on the new computer, copy the TIM Plus folder from the old machine, transfer it across on the new computer and paste it over the existing TIM Plus folder. This action will overwrite its content.

You can now start the TIM Plus service.

> At this stage of the process you will be asked to provide a license key for the new installation. Copy the product key into a text file and email it to our Technical Support team.

# Re-running data

Follow the steps below to re-run data in TIM Plus:

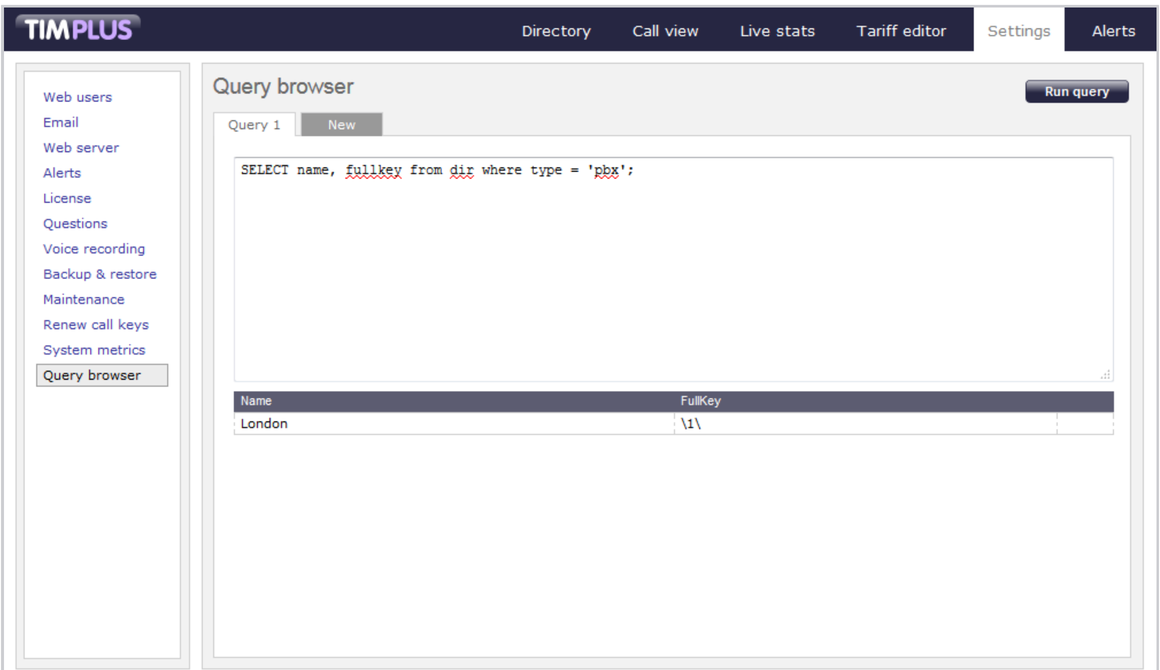
1. Take a copy of the data you want to re-run back in the system, stored by default in the **`backup`** folder of the main installation program.

```
{Program Files}\Tri-Line\TIM Plus\backup
```

2. Log in to TIM Plus as a **`root`** user, select the **`Settings`** tab and click on the Query browser button.

3. To check the datasource for the PBX object you want to delete calls for, enter the following query:

```
SELECT name, fullkey from dir where type = 'pbx';
```

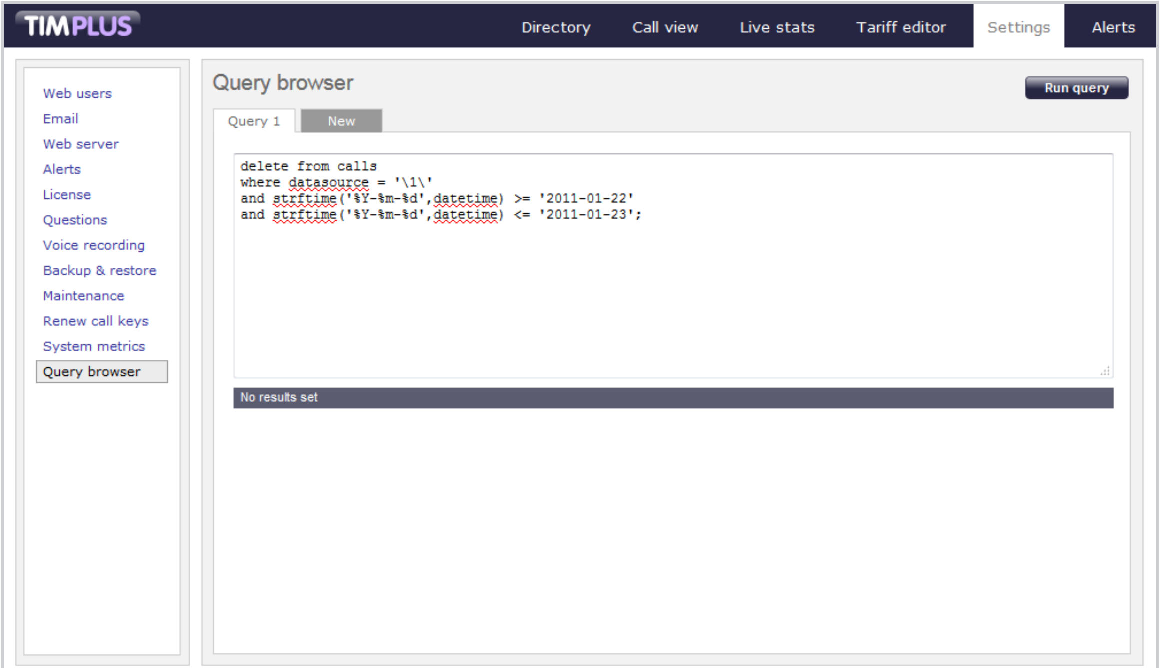



4. To delete calls for a specific PBX object and a specific time period, enter the following query:

```
delete from calls
where datasource = '\1\'
and strftime('%Y-%m-%d',datetime) >= '2011-01-22'
and strftime('%Y-%m-%d',datetime) <= '2011-01-23';
```

The **`datasource`** and **`datetime`** values must be modified accordingly, in order to match your requirements for the time period and the PBX object you want to delete calls for.

5. The query should return a **`No results set`** message, confirming the selected calls have been deleted.




6. To re-spool the data back in the system, copy the previously-saved backup files and paste them into the following location:

```
{Program Files}\Tri-Line\TIM Plus\spool
```

7. While the system is processing the data, you can click on the **Call view** screen to monitor the calls that are being logged.

> The time to re-spool the data will vary, depending on the amount and size of the files your system is processing.

## Running TIM Plus over SSL (HTTPS)

To configure TIM Plus to run over **HTTPS** (**HTTP** over **SSL**), you need a valid **SSL** certificate issued by a certificate authority (CA), such as **VeriSign** or **Thawte**. The certificate should be a **.PCX** file in **PKCS#12** format and containing an **SSL key**.

To apply the certificate to TIM Plus, follow the steps below:

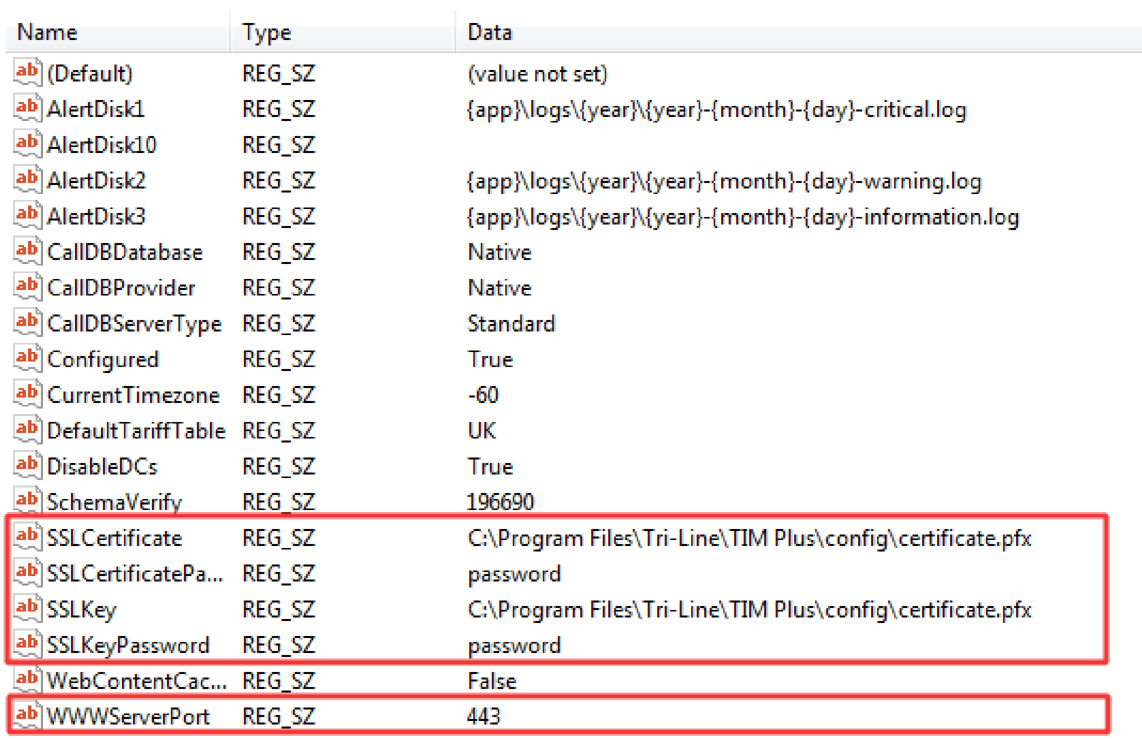
1. Place the certificate in the following location of the main TIM Plus installation folder: **{app}\Program Files (x86)\Tri-Line\TIM Plus\config**
2. Access Windows Registry Editor ( **Start -> Run -> regedit.exe** ) and go to the following Registry key:

```
HKEY_LOCALMACHINE\Software\Wow6432Node\Tri-Line\TIM Plus\Main
```

3. Add the following string values, amending the certificate name and password accordingly:

| String name | String value |
|---|---|
| `SSLKey` | `{app}\Program Files\Tri-Line\TIM Plus\config\certificate.pfx` |
| `SSLCertificate` | `{app}\Program Files\Tri-Line\TIM Plus\config\certificate.pfx` |
| `SSLCertificatePassword` | `password` |
| `SSLKeyPassword` | `password` |

4. Change the registry entry of the server port to 443, as shown below:



| Name | Type | Data |
|---|---|---|
| (Default) | REG_SZ | (value not set) |
| AlertDisk1 | REG_SZ | {app}\logs\{year}\{year}-{month}-{day}-critical.log |
| AlertDisk10 | REG_SZ | |
| AlertDisk2 | REG_SZ | {app}\logs\{year}\{year}-{month}-{day}-warning.log |
| AlertDisk3 | REG_SZ | {app}\logs\{year}\{year}-{month}-{day}-information.log |
| CallDBDatabase | REG_SZ | Native |
| CallDBProvider | REG_SZ | Native |
| CallDBServerType | REG_SZ | Standard |
| Configured | REG_SZ | True |
| CurrentTimezone | REG_SZ | -60 |
| DefaultTariffTable | REG_SZ | UK |
| DisableDCs | REG_SZ | True |
| SchemaVerify | REG_SZ | 196690 |
| SSLCertificate | REG_SZ | C:\Program Files\Tri-Line\TIM Plus\config\certificate.pfx |
| SSLCertificatePa... | REG_SZ | password |
| SSLKey | REG_SZ | C:\Program Files\Tri-Line\TIM Plus\config\certificate.pfx |
| SSLKeyPassword | REG_SZ | password |
| WebContentCac... | REG_SZ | False |
| WWWServerPort | REG_SZ | 443 |

5. Go to Windows services and restart the TIM Plus service.

# VAT rate adjustment

**VAT rate adjustment**



## Introduction

Every report in TIM Plus can be fully customised, from how they perform their calculations to the way they appear.

To amend a report, you need to edit its associated XSL or PDF script file, paying attention to the class of web user whose content you want to change, and which report format.

This document details how to change the tax rate in the `Phone Bill` report in both `Web` and `PDF` formats, for any web user with a class of `Administrator`.

Every report has a unique ID number which the system uses to identify the report type (the report ID for a `Phone Bill` report is `2` )

## Changing Web format

Open the following file in a plain text editor such as Notepad:

```
{Program Files}\Tri-Line\TIM
Plus\ssldata\_siteadmin\scripts\web\2.xsl
```

Look in the first few lines of code for the VAT amount, then change it to the new amount, respecting the decimal point and number of decimal places:

```
<?xml version="1.0" encoding="UTF-8" ?>
<xsl:stylesheet version="1.0" xmlns:xsl="http://www.w3.org/1999/XSL/Tran
<xsl:output media-type="text/html" encoding="UTF-8" method="html" />
<!-- Phone bill -->
    <xsl:variable name="vat">20.0</xsl:variable>
    <xsl:include href="all.xsl" />
    <xsl:template match="report">
        <html>
            <head>
                <title>
                    <xsl:value-of select="properties/name" />
                </title>
                <link rel="stylesheet" type="text/css" href="css/2.css"
                <link rel="stylesheet" type="text/css" href="furniture/c
                <link rel="stylesheet" type="text/css" href="furniture/c
                <link rel="stylesheet" type="text/css" href="furniture/c
                <script type="text/javascript" src="common/js/common.js"
                <script type="text/javascript" src="js/all.js" />
                <script type="text/javascript">
                <xsl:call-template name="definition" />
                </script>
            </head>
            <body onload="FixMozHeight();">
                <xsl:call-template name="load_frame" />
                <xsl:call-template name="optionssection" />
                <xsl:call-template name="filtersection" />
```

Save the file and run a new **Phone Bill** report in **Web** format to verify whether the amount has changed. If it hasn't then you may be running the report as a web user with a different web class than **Administrator**; in which case, modify the file in the path specified above, but choose the appropriate folder other than **_admin**.

## Changing PDF format

Again, in a plain text editor such as Notepad, edit the following file:

You'll notice that this is a Javascript file, and that it is located in the **\pdf** folder of the **\scripts** folder.

```
{Program Files}\Tri-Line\TIM Plus\ssldata\_admin\scripts\pdf\2.js
```

Search for the following line (the value shown below may be different on your system):

```
var _vat = 20.0;
```

Change the value to the new amount, then save the file.

Run a new **Phone Bill** report in **PDF** format to verify that the amount has changed.