



**Advanced call analytics
for large multi-site organisations**

Product Documentation

Last Updated: February 2016

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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 of the software, although a single copy of TIM Enterprise may be used to log an unlimited number of telephone systems.

Your support contract, if applicable, covers support for all sites logged by the single installation.

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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 Enterprise®:

- **CPU:** 3 GHz Dual-Core x86/x86-64
- **Memory:** 3 GB
- **Hard disk:** 160 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)

Software

The TIM Enterprise® service is accessed solely through a web browser and, whilst any modern standards-compliant browser should be sufficient to access the service, we always test on the following browsers:



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

The browser must have Javascript enabled when accessing the TIM Enterprise service.

Network

The operating system must have a TCP/IP network subsystem and the computer must be connected to such a network.



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.

Automatic e-mails

To enable TIM Enterprise to send automatic email notifications, such as missed call alarms or scheduled reports, you must provide an SMTP interface to an existing email server accessible from the PC running TIM Enterprise.

Summary

- TIM Enterprise 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 Enterprise 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
- TIM Enterprise can utilise one of three flavours of SQL server: Microsoft SQL Server, Oracle MySQL, Native (SQLite).

Setup

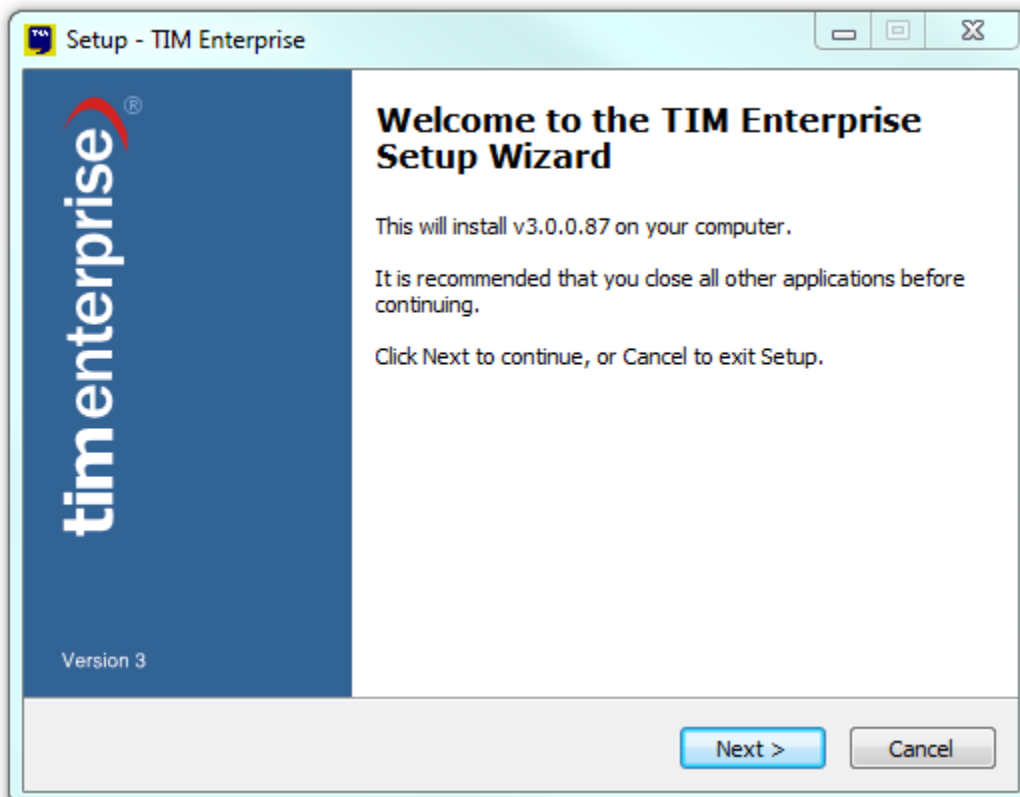
Obtaining and installing TIM Enterprise

Log on to the [Tri-Line Gateway](#) using the credentials you created when you first enquired about TIM Enterprise. 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 a 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.

Tariffs

Progress 1 2 3 4 5 6 7

The list below shows tariff tables that are already installed, along with those available for download. To install a new tariff, click the "Download" link alongside it. (Additional tariffs can be added later)

You must also select a default tariff to use when calls are not explicitly costed by other tariffs.

📁 Ireland	✔ Installed	
📁 Netherlands	✔ Installed	
📁 Saudi Arabia	✔ Installed	
📁 UAE	✔ Installed	
📁 UK	✔ Installed	★ Default
📁 USA	✔ Installed	Set as default
📁 Afghanistan	↓ Download	
📁 Albania	↓ Download	
📁 Algeria	↓ Download	
📁 American Samoa	↓ Download	
📁 Andorra	↓ Download	
📁 Angola	↓ Download	

← Back
Next →

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 Enterprise` product.
4. In the `Software license` panel, click on the `Activate now` link.
5. Paste the product code in the text box provided.
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 setup wizard.


Connecting to your PBX

3COM


3COM VCX


These instructions help you configure your 3COM VCX 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 Enterprise receives FTP transfers from this PBX.

Support Files

 3Com VCX-NBX.TDT

 3Com VCX-NBX.TDS

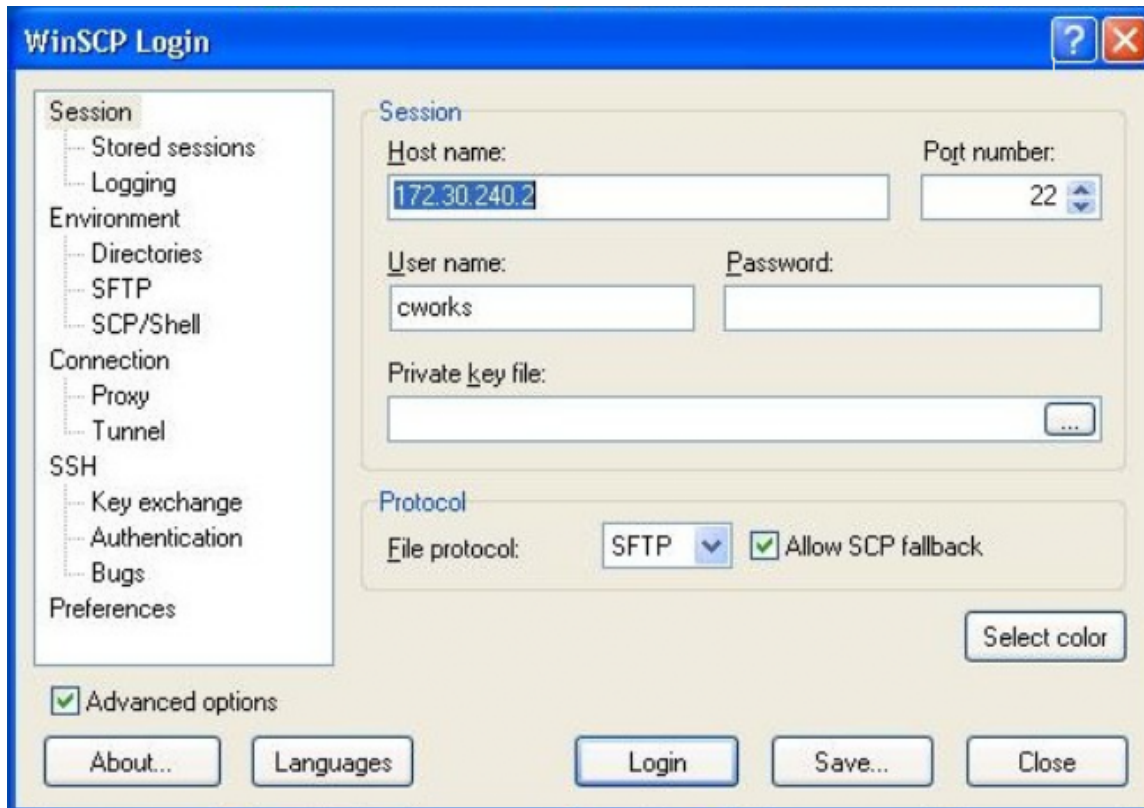
Required Tasks

Configure the SMDR output

Configure TIM Enterprise

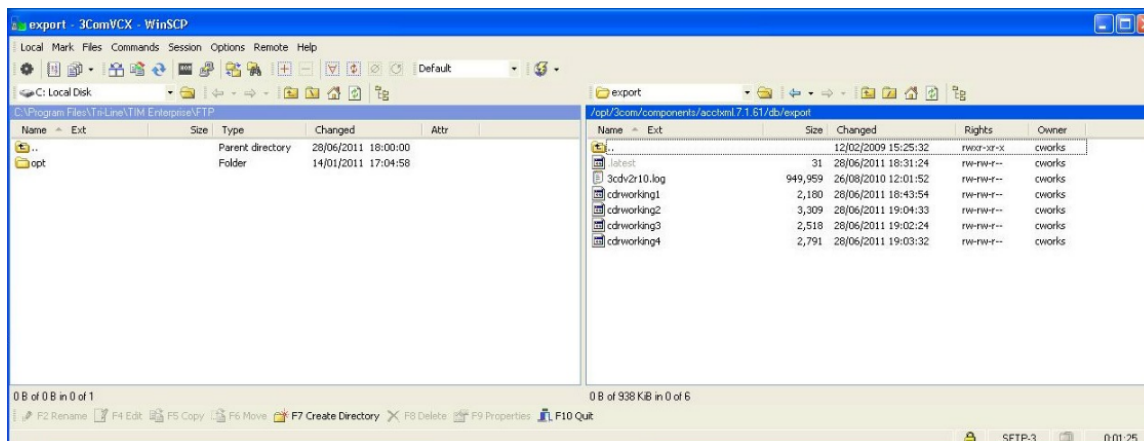
Configuring your SMDR output

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.

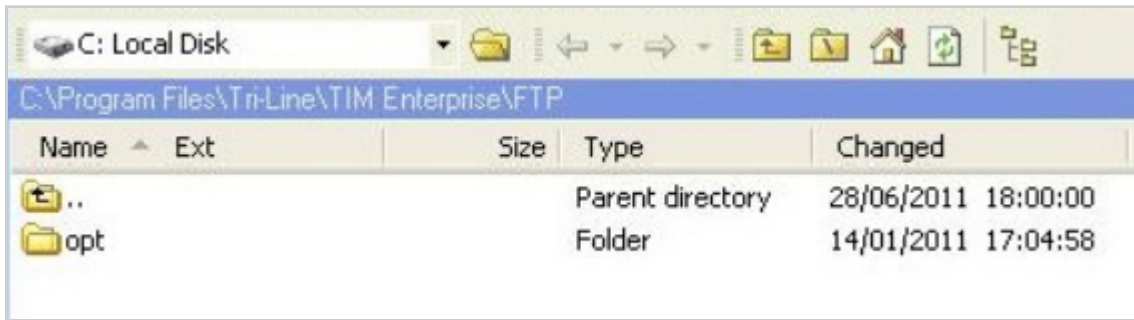


Field	Description
Host name	The IP address or host name of the phone system
Port number	The port number for the SFTP transfer. The default port number is 22
User name	The username required to log in to your 3COM VCX phone system
Password	The password required to log in to your 3COM VCX phone system

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 Enterprise.



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 Enterprise to process the XML files, you need to create a batch file containing the following lines:

```
xcopy/Y "C:\Program Files\Tri-Line\TIM Enterprise\FTP\*.XML"
"C:\Program Files\Tri-Line\TIM Enterprise\spool\*.{sitecode}"
cd "\Program Files\Tri-Line\TIM Enterprise\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. The site ID will be displayed in the general properties of the site object in the Directory.

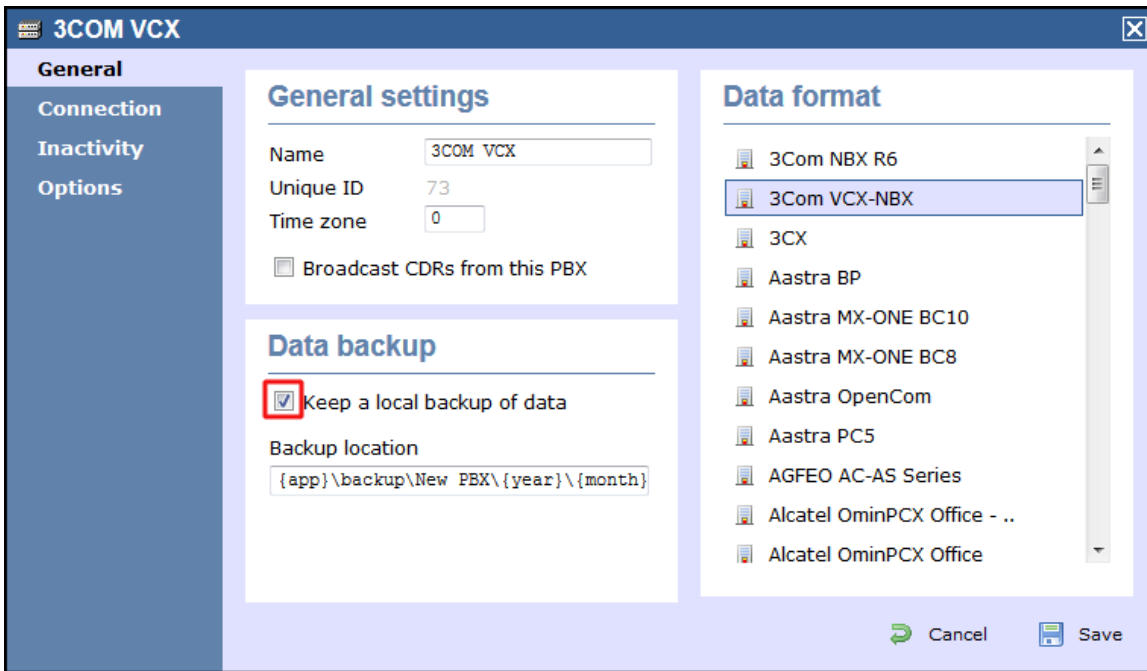
The batch file will change the `.xml` file extension to the designated site code and move the files in the `spool` folder for processing.

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

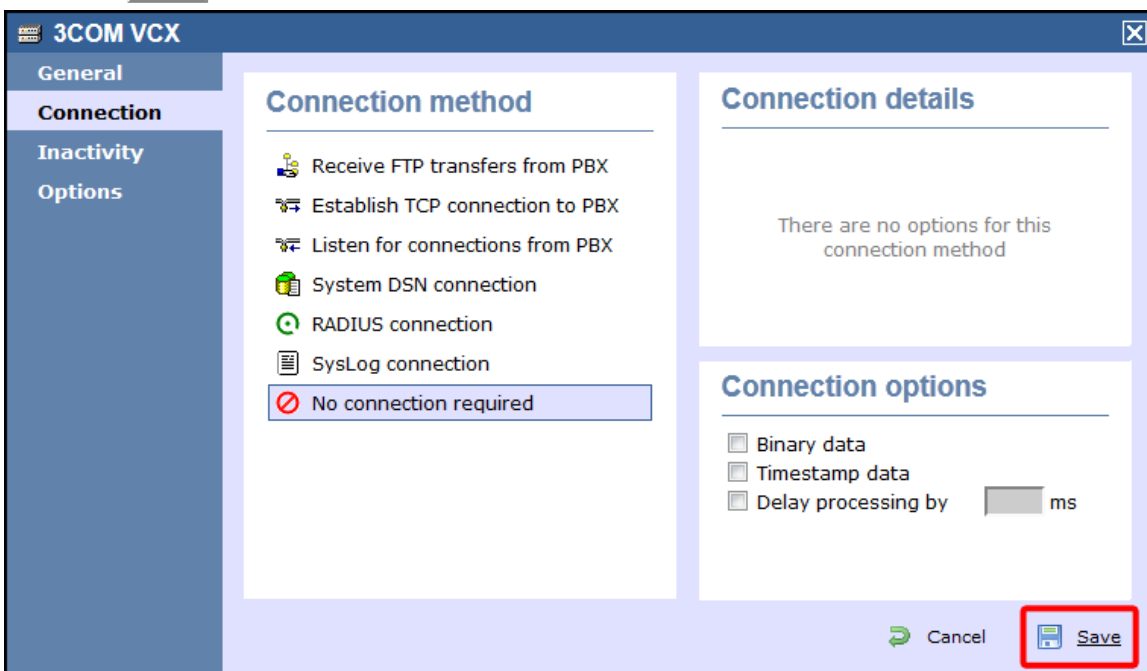
Configuring TIM Enterprise

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

1. Click on the **Directory** tab.
2. Locate the PBX object you want to configure in the Directory, right-click on it and select **Properties**.
3. A new window will open, displaying the general properties of the PBX object. In the **General** tab, select **3Com VCX-NBX** from the Data format list and tick the **Keep a local backup of data** box, as shown below:




4. Click on the **Connection** tab and select **No connection required** from the Connection method list.
5. Click on the **Save** button to apply the changes.




3CX

3CX (below v14)

These instructions help you configure your 3CX 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 Enterprise listens for connections from this PBX.

Support Files

-  3CX.TDT
-  3CX.TDS
-  CDRTemplate-Socket.xml

Required Tasks


- Configure the SMDR output
- Configure TIM Enterprise


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:


Downloads

-  **Full install package**
TIM Plus


-  **Upgrade package**
TIM Plus

-  **Documentation**
Product documentation for your TIM Plus

Software license [View license certificate](#)


 **This product is licensed**
The license for this product is valid and up-to-date.

Maintenance

 **This product is maintained**
You have maintenance until **19 September 2020**, giving you full access to our technical support resources during this time.

Related downloads

Download executables and documents related to the PBXs you are using with this software

Name	Version
3CX 3CX interface file for this TIM Enterprise.	 TDT file (zip)

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 Enterprise\config`, overwriting any existing files with the same name.

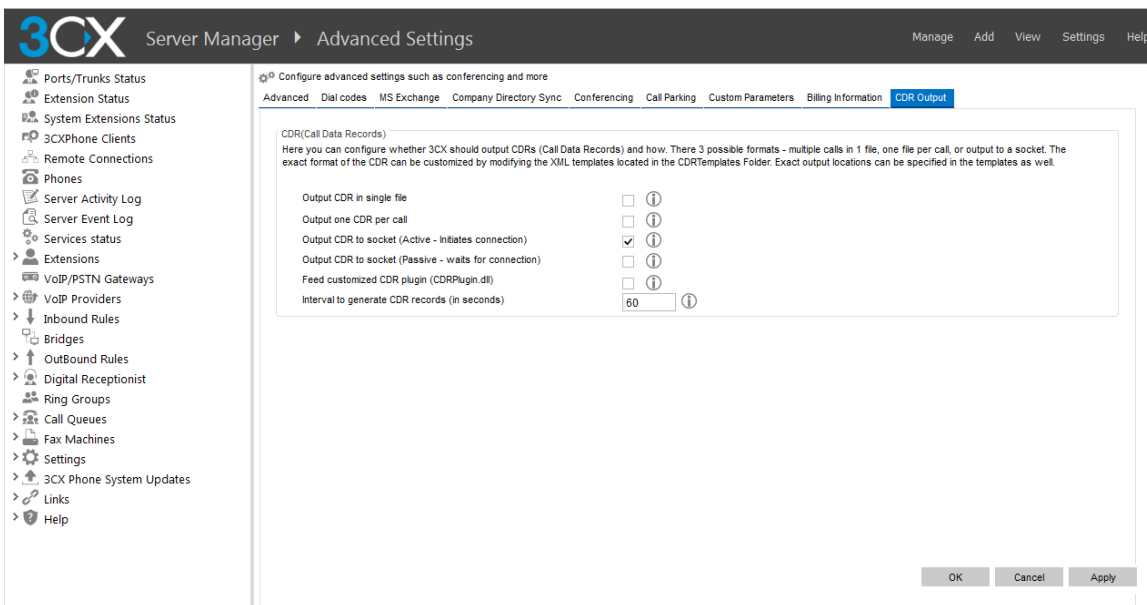
Configure the interface file

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;;," />
</CallTemplate>
```

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:

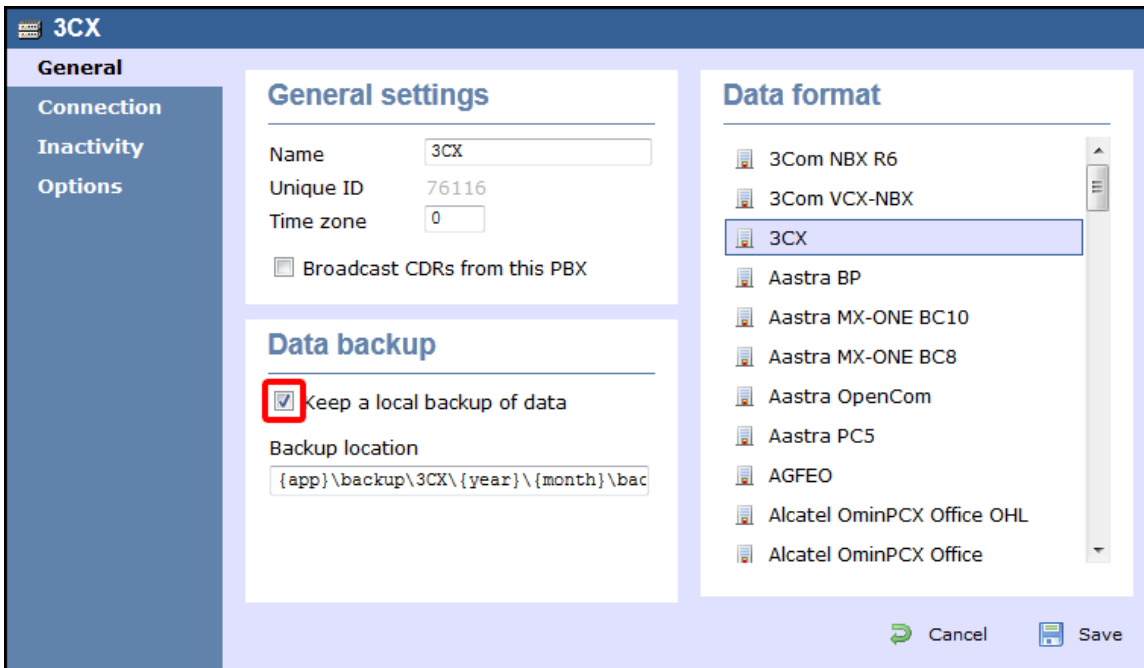


3. Enable the tick box for `Output CDR to Socket (Active - Initiates connection)` and click `Apply`.
4. Under `3CX Phone System`, click `Service Status` and within the `Service Name` section, select `3CX PhoneSystem Call History`.
5. Click `Restart` to load the new XML file.

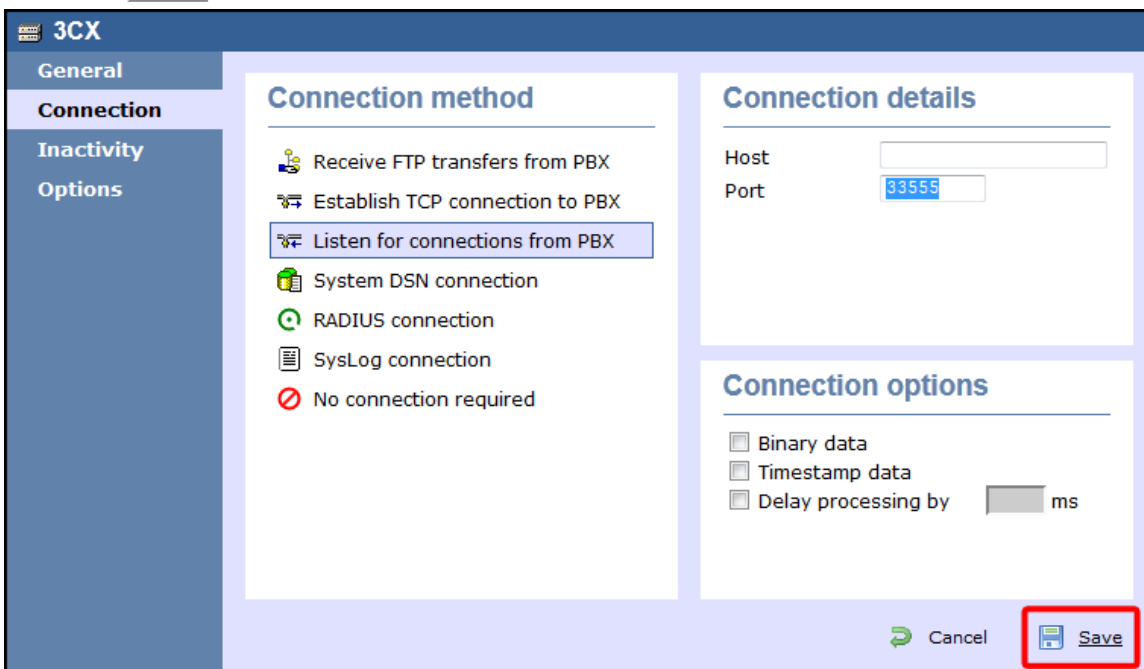
Configuring TIM Enterprise

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

1. Log in to TIM Enterprise and click on the **Directory** tab.
2. Locate the PBX object you want to configure in the Directory, right-click on it and select **Properties**.
3. A new window will open, displaying the general properties of your PBX object. Select **3CX** from the **Data format** list and tick the box **Keep a local backup of data**.




4. Click on the **Connection** tab and select **Listen for connections from PBX** from the **Connection method** 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 Enterprise. Contact your system maintainer if you are not familiar with the configuration of your PBX.

Connection Type

 TIM Enterprise establishes a TCP connection to this PBX.

Support Files

 3CX v14 SP2+.TDS

 3CX v14 SP2+.TDT

Required Tasks

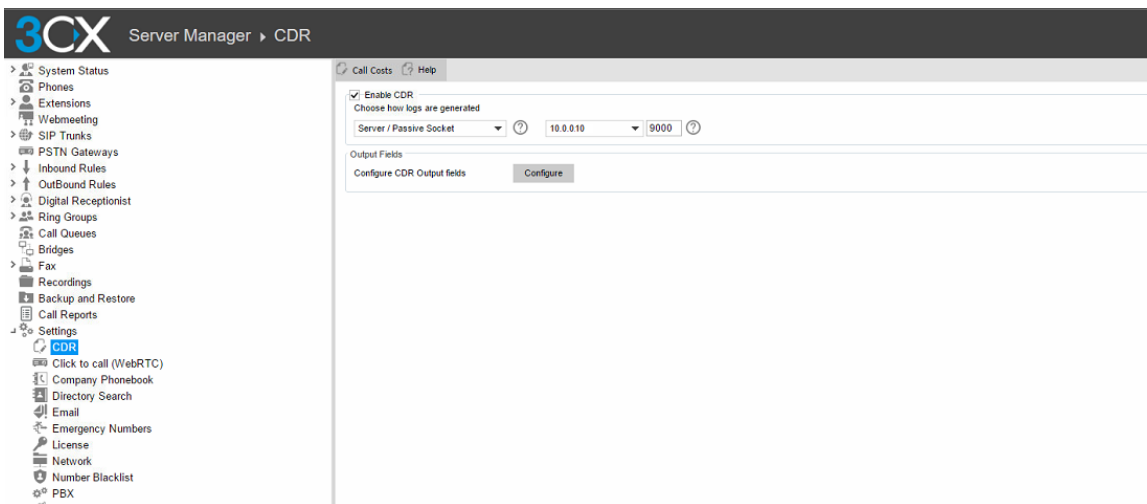
Configure the SMDR output

Configure TIM Enterprise

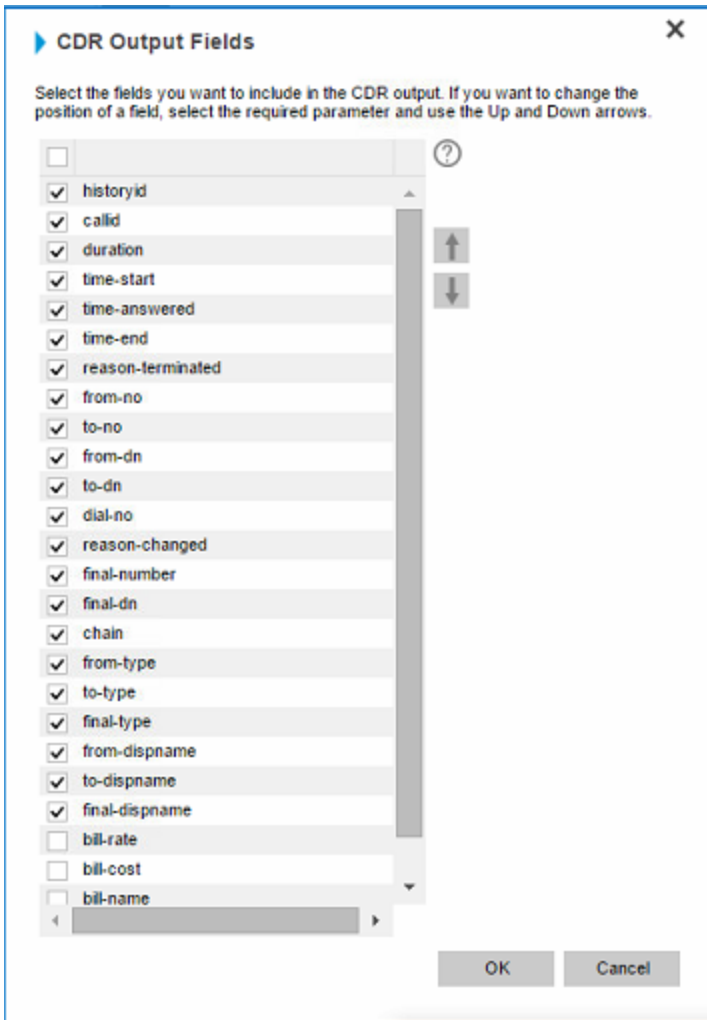
Configure the SMDR output

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 Enterprise 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:

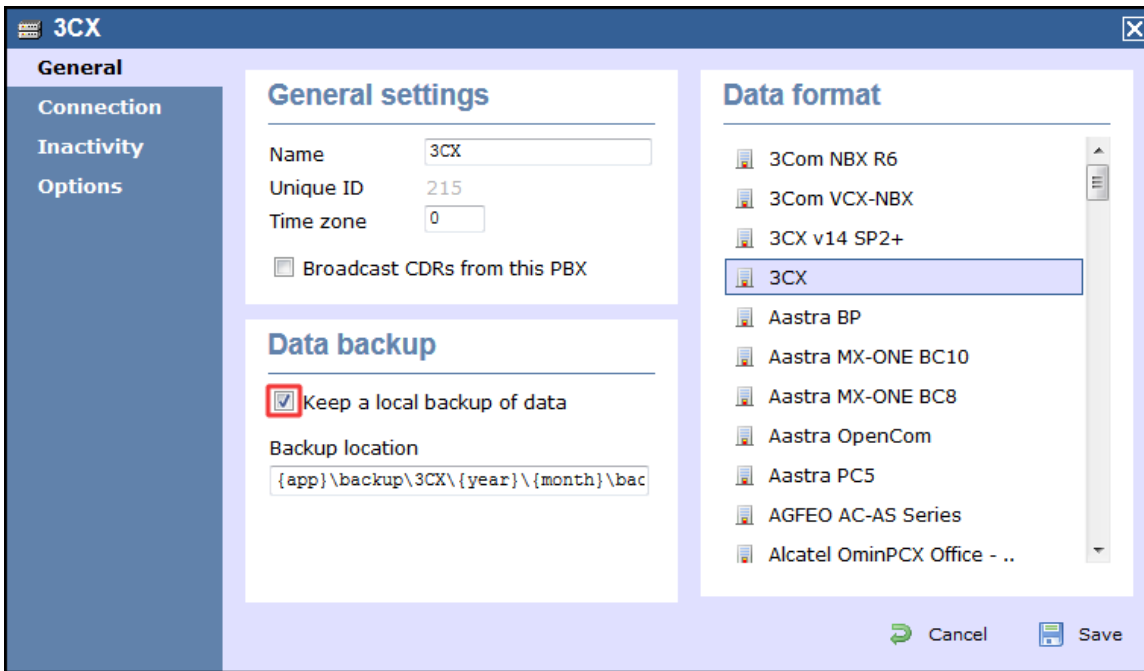


5. Click **OK** to save the changes.

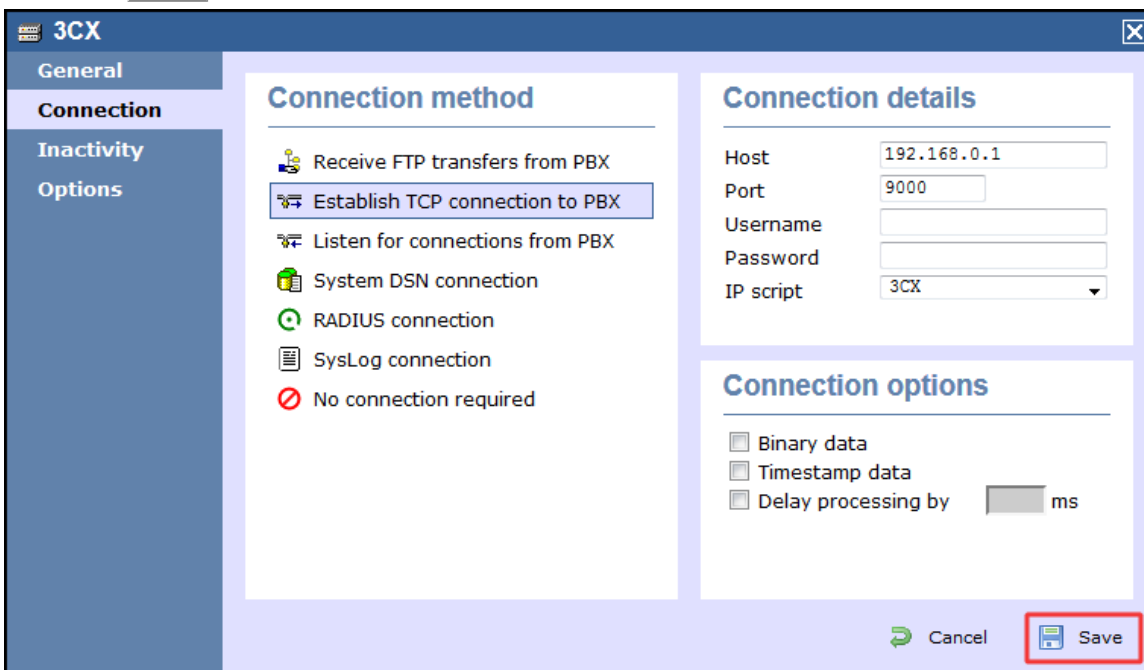
Configure TIM Enterprise

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

1. Click on the **Directory** tab.
2. Locate the PBX object you want to configure in the Directory, right-click on it and select **Properties**.
3. A new window will open, displaying the general properties of your PBX object. Select **3CX** from the **Data format** list and tick the **Keep a local backup of data** box, as shown below:



4. Click on the **Connection** tab and select **Establish TCP connection to PBX** from the Connection method list.
5. In the **Host** field, enter the IP address of your telephone system.
6. In the **Port** field, enter the port number you have configured in the telephone system.
7. Leave the **Username** and **Password** fields blank.
8. In the **IP 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 Enterprise. Contact your system maintainer if you are not familiar with the configuration of your PBX.

Connection Type

 TIM Enterprise 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 Enterprise

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 shown in the screenshot below:

Configuration - >

- Boards ...
- Extensions ...
- Dect ...
- Trunks ...
- Directory
- Number series
- System >
- Groups
- Facilities
- Features
- Interfaces
 - I/O Ports >
 - Application I/O >
 - CTI >
 - Flexible CIL Format >**
- Maintenance >

Record length

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

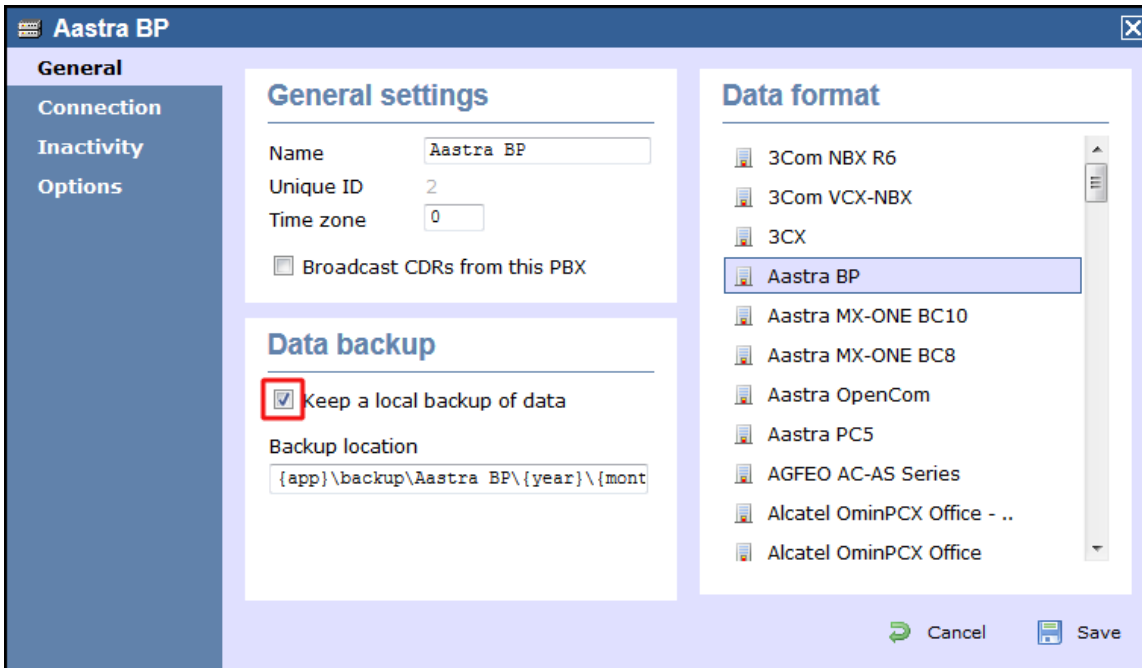
The Aastra BP phone system sends SMDR information via a serial connection. To collect the data from the serial port and send it to TIM Enterprise, you first need to install the NetPBX software. For setup instructions, click on the link below:

[Install and configure NetPBX](#)

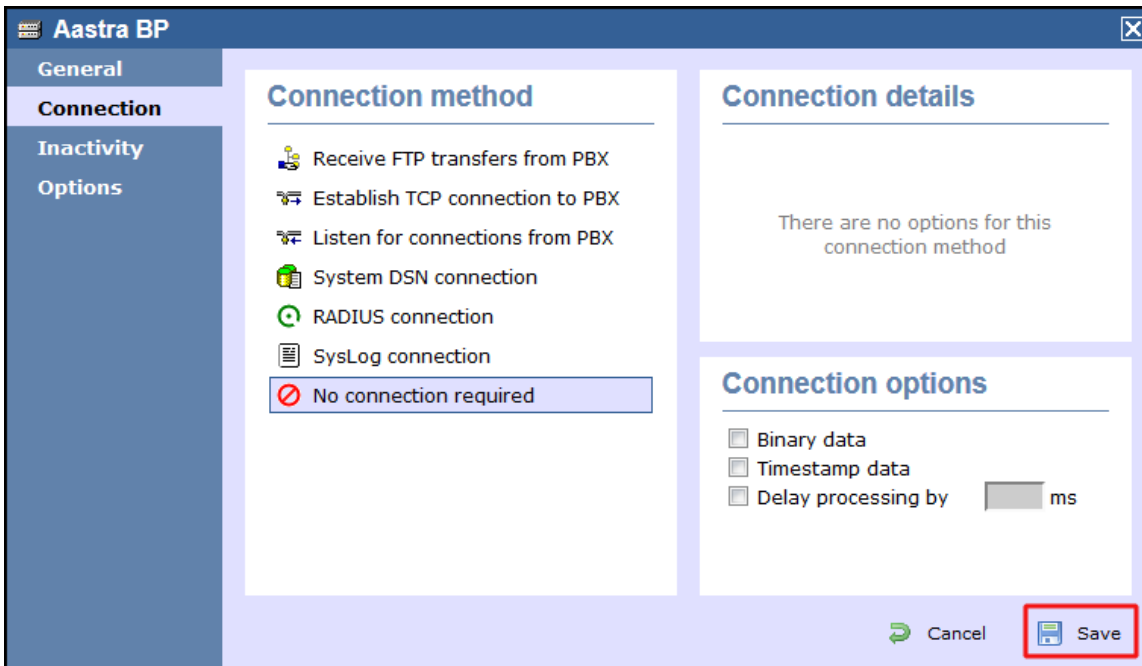
Configuring TIM Enterprise

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

1. Click on the **Directory** tab.
2. Locate the PBX object you want to configure in the Directory, right-click on it and select **Properties**.
3. A new window will open, displaying the general properties of your PBX object. Select **Aastra BP** from the **Data format** list and tick the **Keep a local backup of data box**, as shown below:



4. Click on the **Connection** tab and select **No connection required** from the **Connection method** 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 Enterprise 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 Enterprise](#)

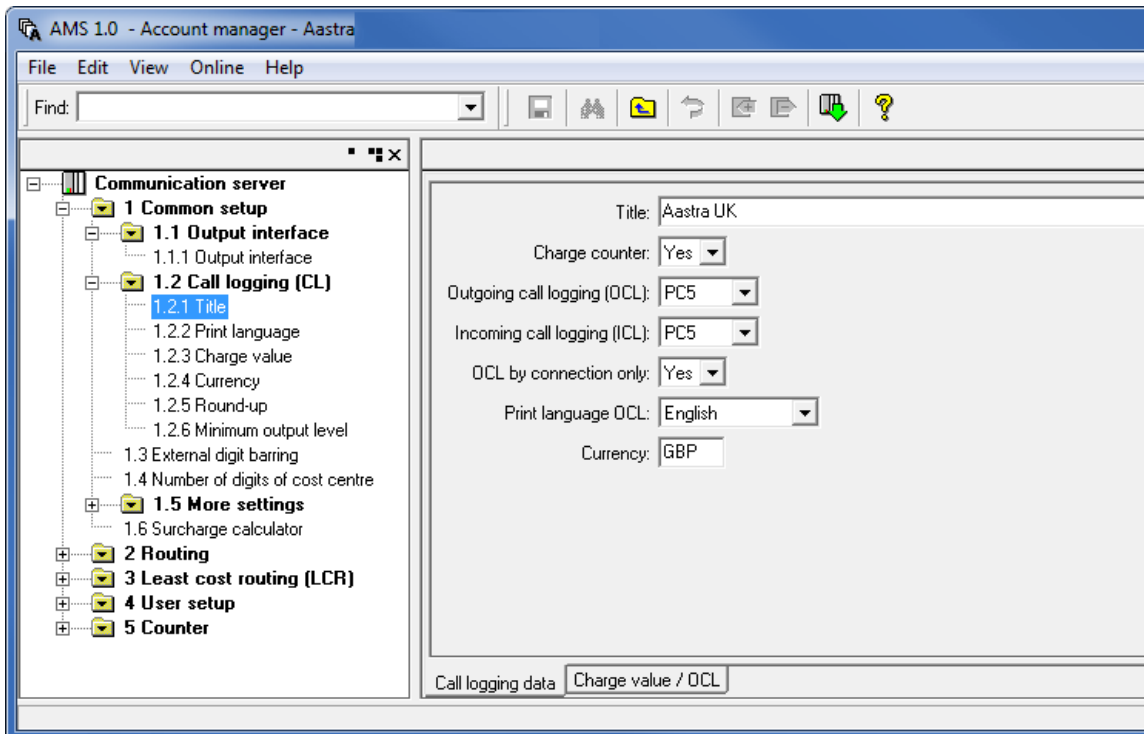
Configuring the SMDR output



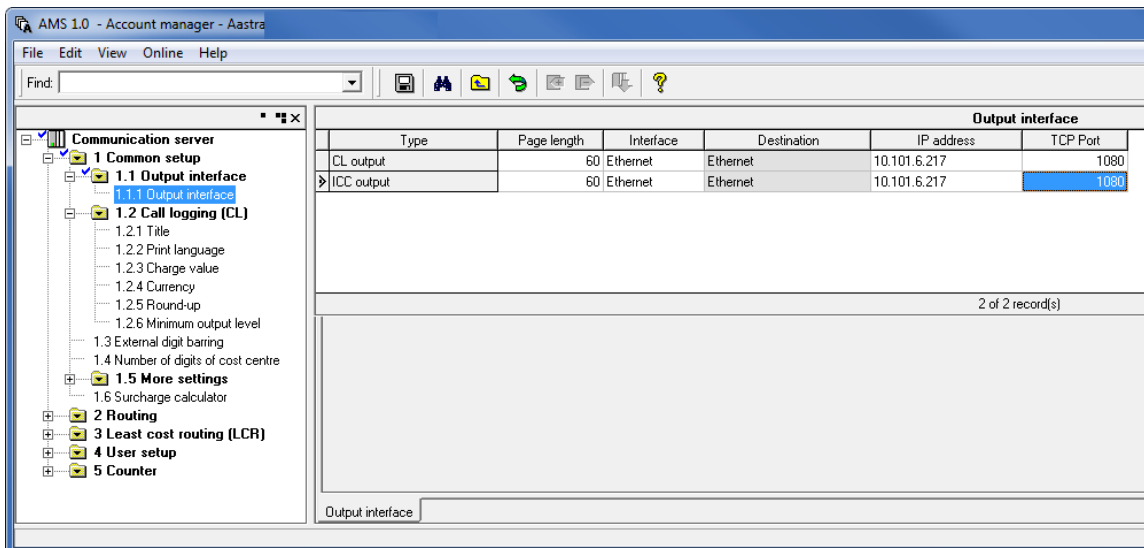
The Aastra Intelligate Series can output SMDR information in multiple formats. You should always select the **PC5** format for use with TIM Enterprise.

The screenshots below display 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 Enterprise

The OIP Server has a very basic call logging module. If you intend to install TIM Enterprise 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 Enterprise, the OIP Server will overwrite some of the required settings.

Installing NetPBX

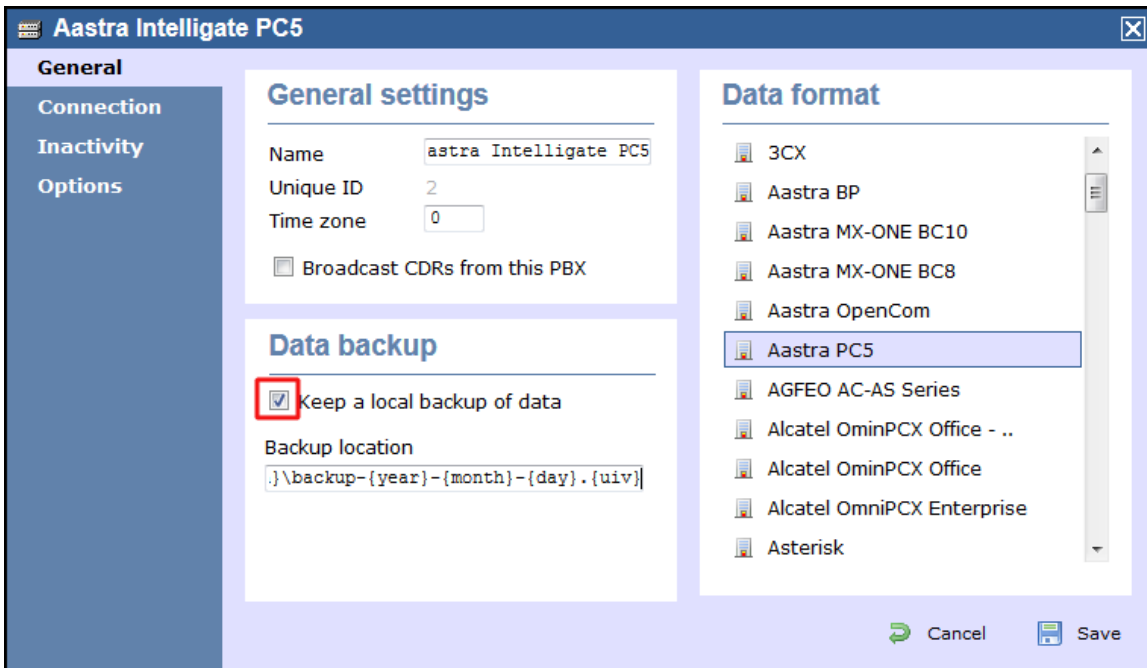
If your Aastra Intelligate has been configured to send SMDR data via a serial connection, you first need to install the NetPBX software to collect the data from the serial port and send it to TIM Enterprise. For setup instructions, click on the link below:

Install and configure NetPBX

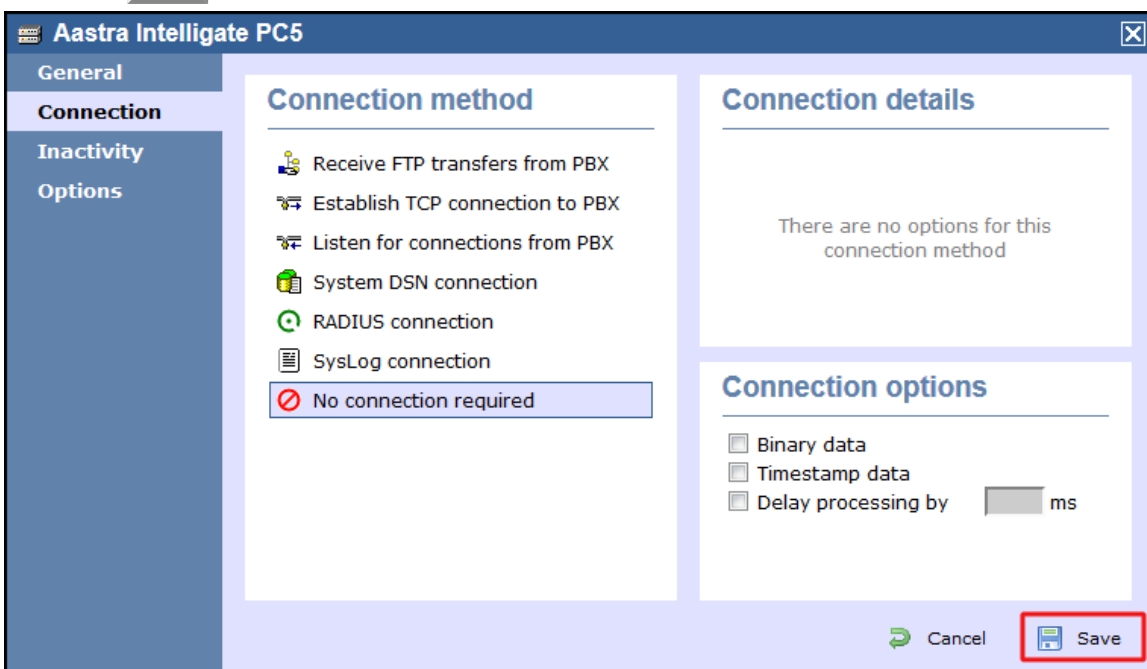
Configuring TIM Enterprise

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

1. Click on the **Directory** tab.
2. Locate the PBX object you want to configure in the Directory, right-click on it and select **Properties**.
3. A new window will open, displaying the general properties of your PBX object. Select **Aastra PC5** from the **Data format** list and tick the **Keep a local backup of data** box, as shown below:



4. Click on the **Connection** tab and select **No connection required** from the **Connection method** list.
5. Click on the **Save** button to apply the settings



Aastra Intelligate Series - IP 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 Enterprise listens for connections from this PBX.

Support Files

 Aastra_PC5.TDT

 Aastra_PC5.TDS

Required Tasks

Configure the SMDR output

Configure TIM Enterprise

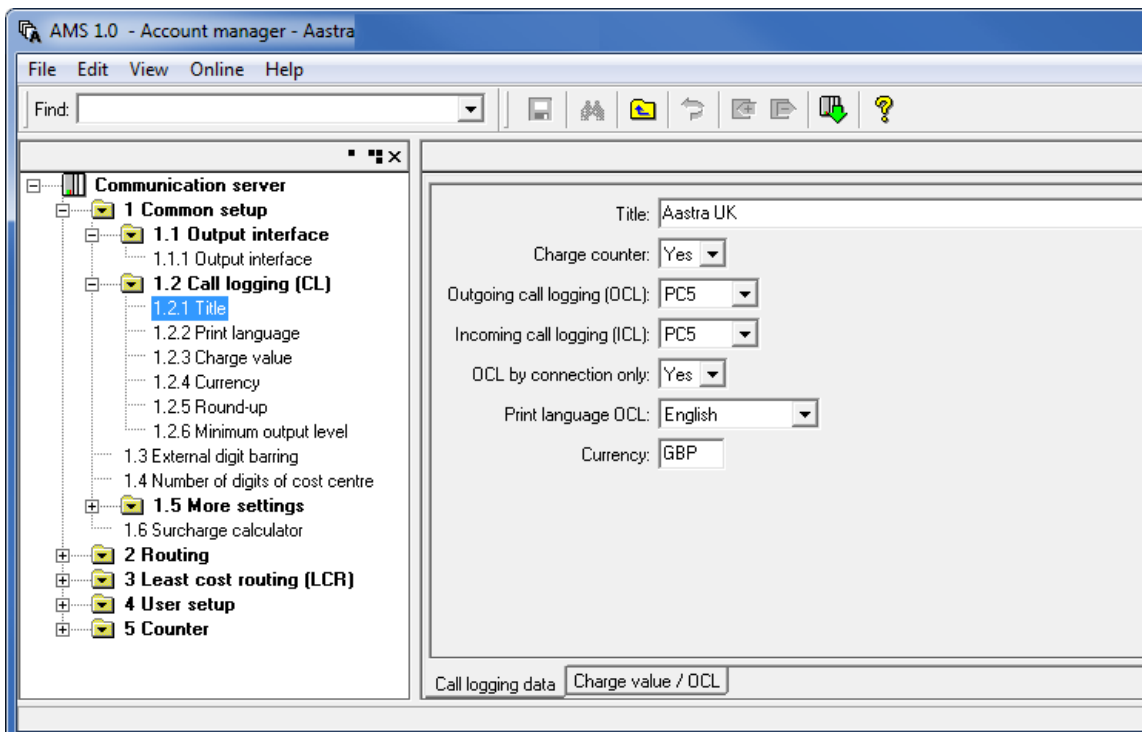
Configuring the SMDR output



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

The screenshots below display how the Aastra Intelligate Series should be configured:

Setting the SMDR format to PC5



The screenshot shows the 'AMS 1.0 - Account manager - Aastra' application window. The left pane displays a tree view of the configuration structure:

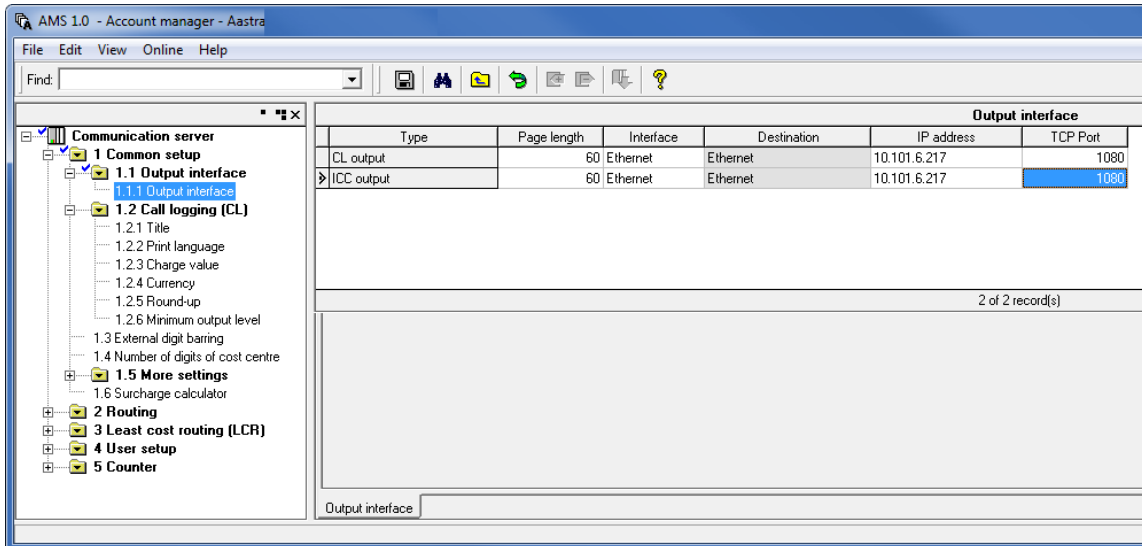
- Communication server
 - 1 Common setup
 - 1.1 Output interface
 - 1.1.1 Output interface
 - 1.2 Call logging (CL)
 - 1.2.1 Title
 - 1.2.2 Print language
 - 1.2.3 Charge value
 - 1.2.4 Currency
 - 1.2.5 Round-up
 - 1.2.6 Minimum output level
 - 1.3 External digit barring
 - 1.4 Number of digits of cost centre
 - 1.5 More settings
 - 1.6 Surcharge calculator
 - 2 Routing
 - 3 Least cost routing (LCR)
 - 4 User setup
 - 5 Counter

The right pane shows the configuration details for the selected '1.2.1 Title' item:

- Title: Aastra UK
- Charge counter: Yes
- Outgoing call logging (OCL): PC5
- Incoming call logging (ICL): PC5
- OCL by connection only: Yes
- Print language OCL: English
- Currency: GBP

At the bottom, there is a 'Call logging data' section with a dropdown menu set to 'Charge value / OCL'.

Setting the SMDR format to TCP/IP



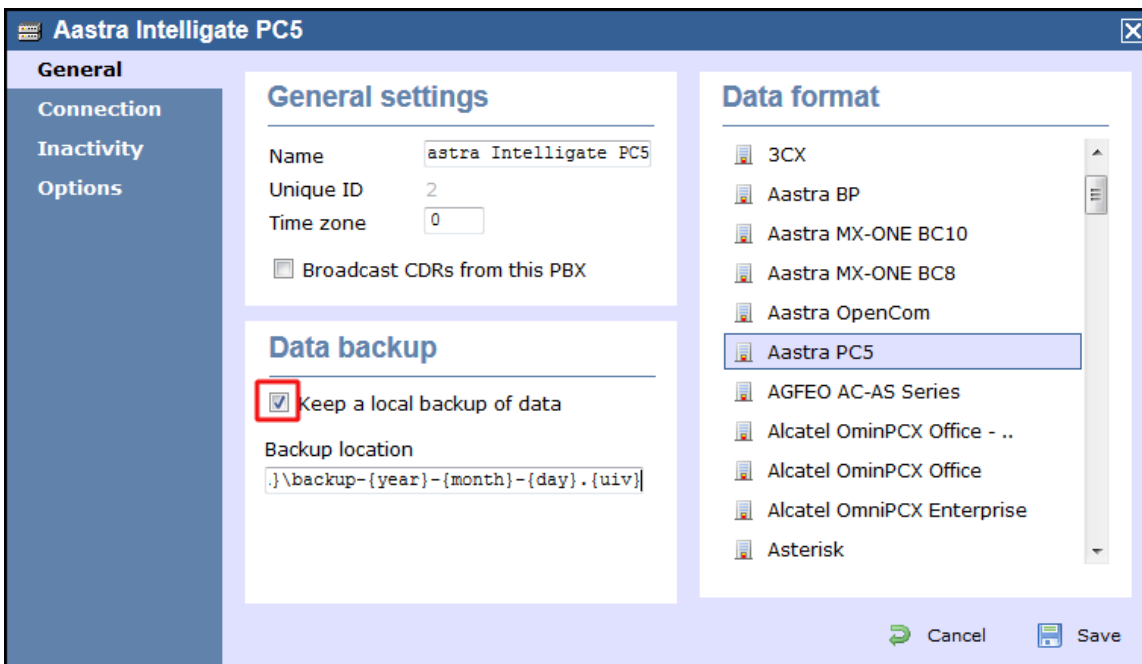
OIP Server and TIM Enterprise

The OIP Server has a very basic call logging module. If you intend to install TIM Enterprise 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 Enterprise, the OIP Server will overwrite some of the required settings.

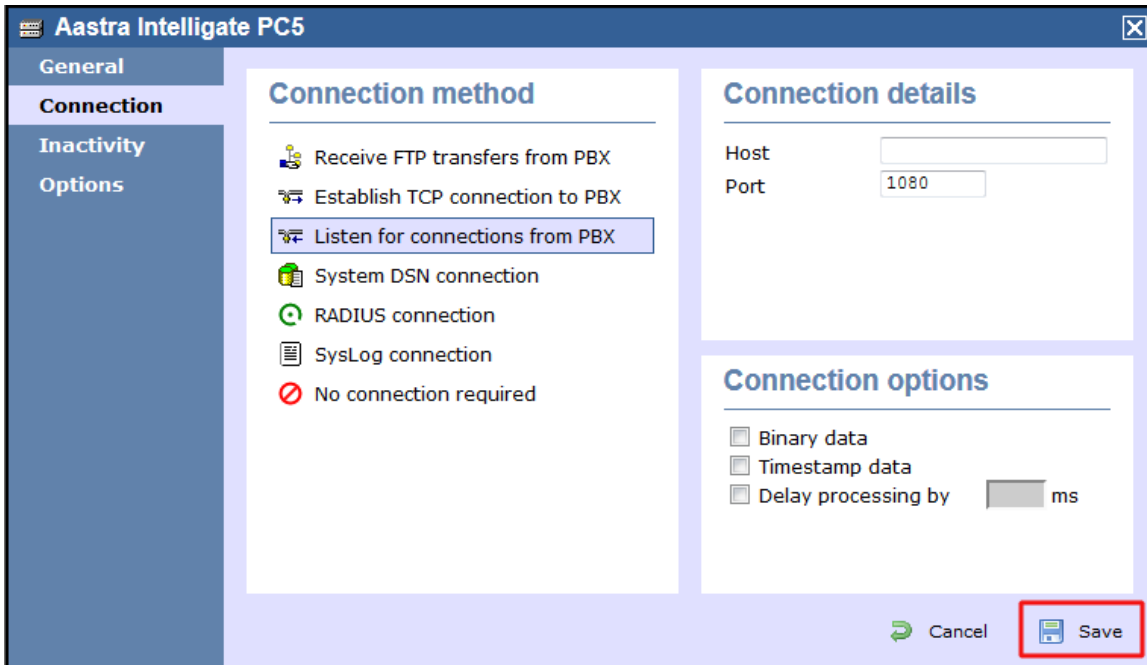
Configuring TIM Enterprise

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

1. Log in to TIM Enterprise and click on the **Directory** tab.
2. Locate the PBX object you want to configure in the Directory, right-click on it and click **Properties**.
3. A new window will open, displaying the general properties of your PBX object. Select **Aastra PC5** from the **Data format** list and tick the **Keep a local backup of data** box, as shown below:



- Click on the **Connection** tab and select **Listen for connections from PBX** from the Connection method list.
- Leave the **Host** field blank.
- In the **Port** field, enter **1080**, the default port number for your Aastra Intelligate phone system.
- 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 Enterprise. Contact your system maintainer if you are not familiar with the configuration of your PBX.

Connection Type

 TIM Enterprise 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 Enterprise

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
```

```

mc - /var/opt/eri_sn/call_logging
Left  File  Command  Options  Right
-----
<- /var/opt/eri_sn/call_logging
Name      Size  MTime
log0.0.dat 45451 Sep 27 15:55
log0.1.dat 563230 Sep 28 21:48
log0.2.dat 661380 Sep 29 21:15
log0.3.dat 699281 Sep 30 18:55
log0.4.dat 634049 Oct 1 18:56
log0.5.dat 419327 Oct 2 15:32
log0.6.dat 142242 Sep 26 17:48

/var/opt/eri_sn/call_logging
Name      Size  MTime
log0.0.dat 45451 Sep 27 15:55
log0.1.dat 563230 Sep 28 21:48
log0.2.dat 661380 Sep 29 21:15
log0.3.dat 699281 Sep 30 18:55
log0.4.dat 634049 Oct 1 18:56
log0.5.dat 419327 Oct 2 15:32
log0.6.dat 142242 Sep 26 17:48

Hint: Do you want lynx-style navigation? Set it in the Configuration dialog.
eri_sn_admin@OSP-MXSVR1:/var/opt/eri_sn/call_logging>
:Help 2Menu 3View 4Edit 5Copy 6RenMov 7Mkdir 8Delete 9PullIn 10Quit

```



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 Enterprise):

```

callinfo_output_set -output 0 -lim 1 -type file -subtype general
-local -dbname /var/opt/eri_sn/call_logging/log0 -format ": {stoptime
mdl10date L 4 4}{stoptime mdl10time L 4 4}{stoptime second OR 2 2}
{duration mdl10duration 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 OR 3 3}
{ringTimeCounter OR 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 OR 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 OR 3 3}
{ringTimeCounter OR 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 Enterprise 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
```

Add the following two commands for the same primary MX-One, in order to send the data to TIM Plus:

```
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
mdl10date L 4 4}{stoptime mdl10time L 4 4}{stoptime second OR 2 2}
{duration mdl10duration 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 OR 3 3}
{ringTimeCounter OR 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 Enterprise

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

1. Click on the **Directory** tab.
2. Locate the PBX object you want to configure in the Directory, right-click on it and select **Properties**.
3. A new window will open, displaying the general properties of your PBX object. Select **Aastra MX-ONE** from the **Data format** list and tick the **Keep a local backup of data** box, as shown below:

The screenshot shows the MX-One configuration window with the following sections:

- General settings:**
 - Name: MX-One
 - Unique ID: 2
 - Time zone: 0
 - Broadcast CDRs from this PBX
- Data backup:**
 - Keep a local backup of data
 - Backup location: {app}\backup\MX-One\{year}\{month}\
- Data format:**
 - 3Com NBX R6
 - 3Com VCX-NBX
 - 3CX v14 SP2+
 - 3CX
 - Aastra BP
 - Aastra MX-ONE - BC13** (selected)
 - Aastra MX-ONE BC10
 - Aastra MX-ONE BC8
 - Aastra OpenCom
 - Aastra PC5
 - AGFEO AC-AS Series

Buttons: Cancel, Save

- Click on the **Connection** tab and select **Listen for connections from PBX** from the Connection method list.
- Leave the **Host** field blank.
- In the **Port** field, enter the port number you have configured in the phone system.
- Click on the **Save** button to apply the settings.

The screenshot shows the MX-One configuration window with the following sections:


- Connection method:**
 - Receive FTP transfers from PBX
 - Establish TCP connection to PBX
 - Listen for connections from PBX** (selected)
 - System DSN connection
 - RADIUS connection
 - SysLog connection
 - No connection required
- Connection details:**
 - Host: []
 - Port: 9000
- Connection options:**
 - Binary data
 - Timestamp data
 - Delay processing by [] ms

Buttons: Cancel, Save



Aastra MX-ONE - Serial connection

These instructions help you configure your Aastra MX-ONE 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 Enterprise 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 Enterprise

Configuring your SMDR output

The Aastra MX-ONE supports multiple SMDR output formats. TIM Enterprise 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

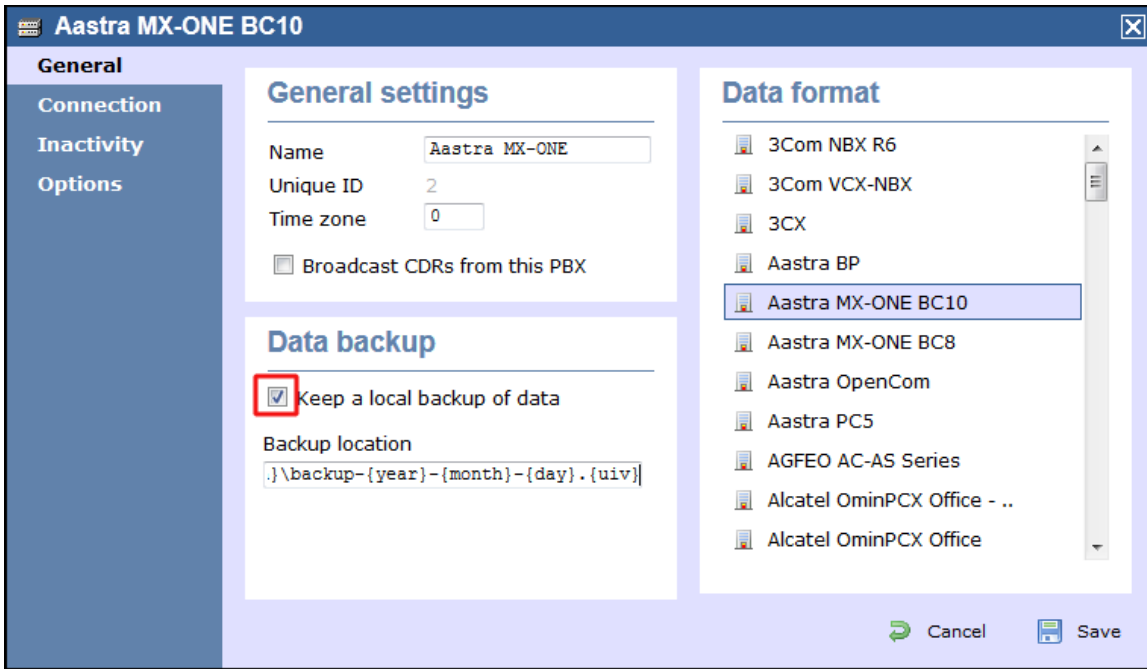
The Aastra MX-ONE phone system sends SMDR information via a serial connection. To collect the data from the serial port and send it to TIM Enterprise you first need to install the **NetPBX** software. For setup instructions, click on the link below:

[Install and configure NetPBX](#)

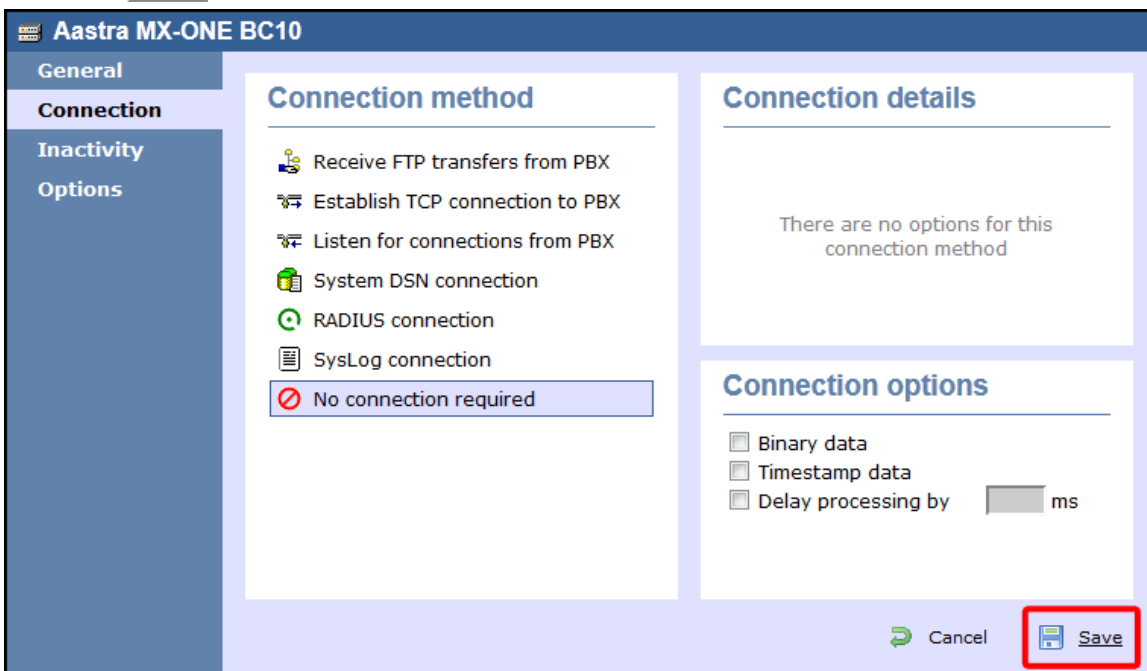
Configuring TIM Enterprise

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

1. Click on the **Directory** tab.
2. Locate the PBX object you want to configure in the Directory, right-click on it and select **Properties**.
3. A new window will open, displaying the general properties of your PBX object. Select **Aastra MX-ONE BC10** from the **Data format list** and tick the **Keep a local backup of data** box, as shown below:



4. Click on the **Connection** tab and select **No connection required** from the Connection method 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 Enterprise. Contact your system maintainer if you are not familiar with the configuration of your PBX.

Connection Type

 TIM Enterprise establishes a serial connection with this PBX.

Support Files

 AGFEO AC-AS Series.TDT
 AGFEO AC-AS Series.TDS

Required Tasks

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

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

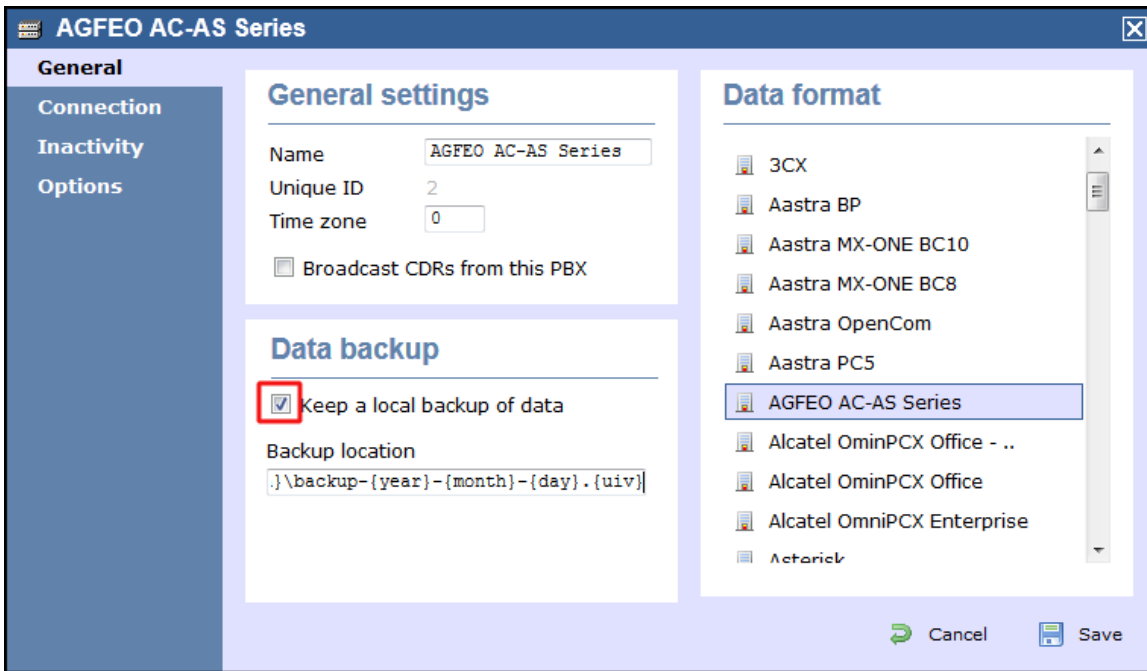
The AGFEO phone system sends SMDR information via a serial connection. To collect the call logging data from the serial port and send it to TIM Enterprise, you first need to install the NetPBX software. For setup instructions, click on the link below:

[Install and configure NetPBX](#)

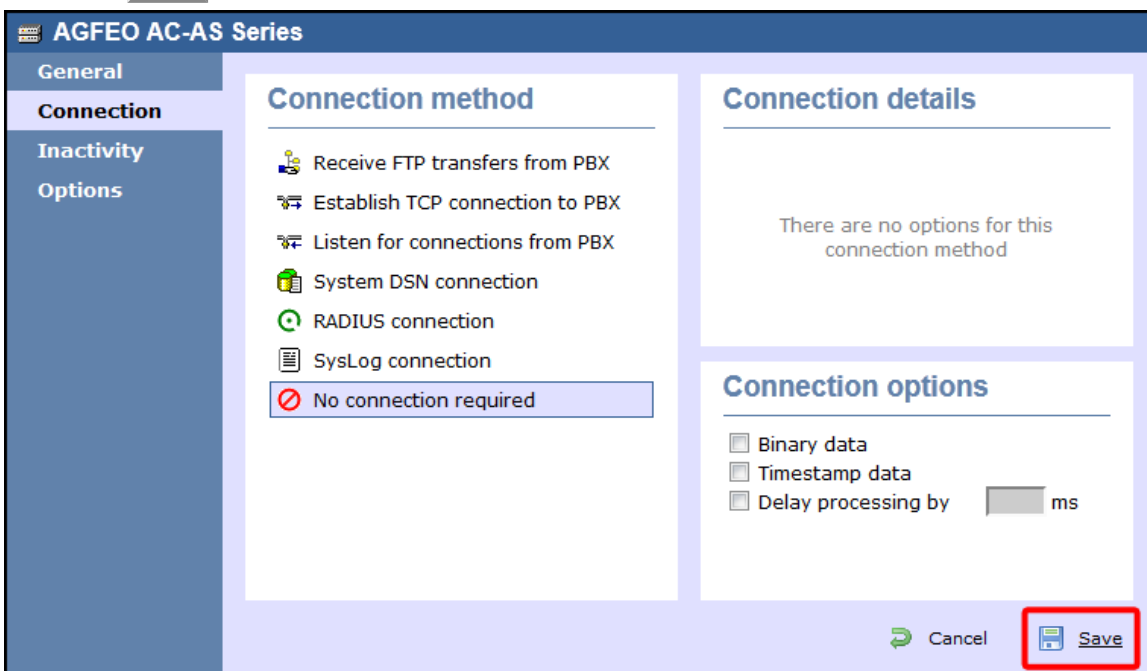
Configuring TIM Enterprise

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

1. Click on the **Directory** tab.
2. Locate the PBX object you want to configure in the Directory, right-click on it and select **Properties**.
3. A new window will open, displaying the general properties of your PBX object. Select **AGFEO AC-AS Series** from the **Data format list** and tick the **Keep a local backup of data** box, as shown below:



4. Click on the **Connection** tab and select **No connection required** from the Connection method 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 Enterprise. Contact your system maintainer if you are not familiar with the configuration of your PBX.

Connection Type
 TIM Enterprise 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 Enterprise

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:


Downloads

-  **Full install package**
TIM Plus
-  **Upgrade package**
TIM Plus
-  **Documentation**
Product documentation for your TIM Plus

Software license [View license certificate](#)


 **This product is licensed**
The license for this product is valid and up-to-date.

Maintenance

 **This product is maintained**
You have maintenance until **19 September 2020**, giving you full access to our technical support resources during this time.

Related downloads

Download executables and documents related to the PBXs you are using with this software

Name	Version
Alcatel 4400E	 TDT file (zip)

2. Extract the Alcatel_4400E.ZIP file onto your computer's Desktop. This ZIP file contains the following file: Alcatel_4400E.TDT.

- Copy the file into the C:\Program Files\Tri-Line\TIM Enterprise\config folder.

Installing NetPBX

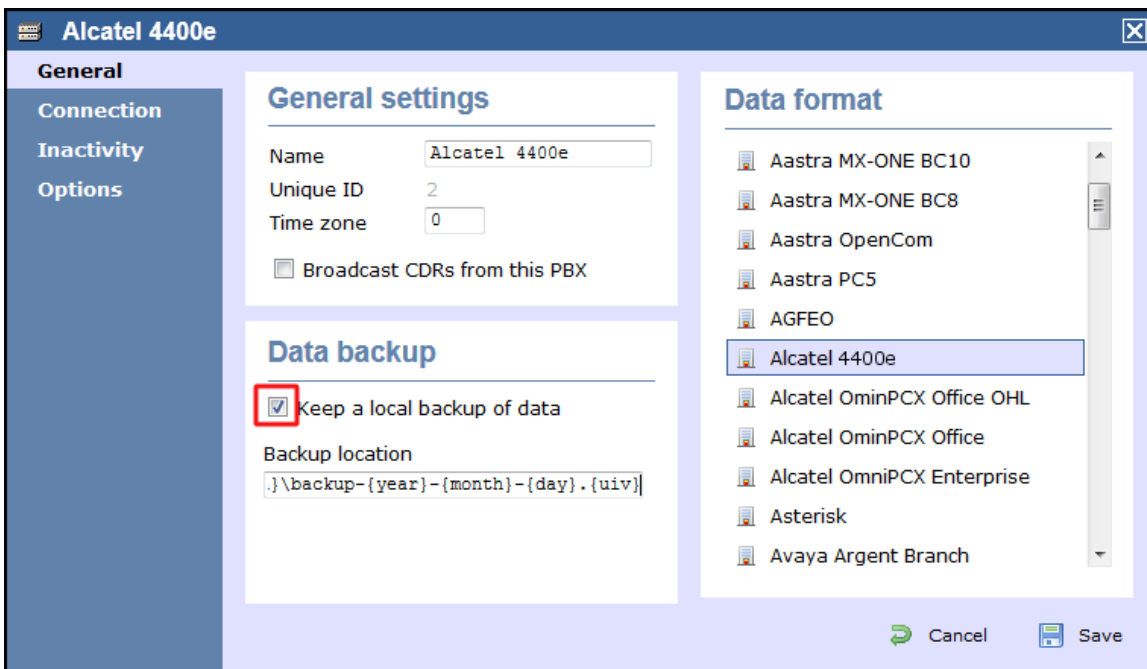
The Alcatel 4200-4400e phone system sends its call records via a serial connection. To collect the data from the serial port and send it to TIM Enterprise, you first need to install the [NetPBX](#) software. For setup instructions, click on the link below:

[Install and configure NetPBX](#)

Configuring TIM Enterprise

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

- Click on the **Directory** tab.
- Locate the PBX object you want to configure in the Directory, right-click on it and select **Properties**.
- A new window will open, displaying the general properties of your PBX object. Select **Alcatel 4400e** from the **Data format** list and tick the **Keep a local backup of data** box, as shown below:



- Click on the **Connection** tab and select **No connection required** from the **Connection method** list.
- Click on the **Save** button to apply the settings.

The screenshot shows the configuration interface for an Alcatel 4400e system. On the left is a navigation menu with options: General, Connection, Inactivity, and Options. The 'Connection' tab is selected. The main area is divided into two panels: 'Connection method' and 'Connection details'. Under 'Connection method', several options are listed with icons: Receive FTP transfers from PBX, Establish TCP connection to PBX, Listen for connections from PBX, System DSN connection, RADIUS connection, SysLog connection, and 'No connection required' (which is highlighted with a red border). The 'Connection details' panel contains the text: 'There are no options for this connection method'. Below these panels is a 'Connection options' section with three checkboxes: 'Binary data', 'Timestamp data', and 'Delay processing by' followed by a text input field and 'ms'. At the bottom right, there are 'Cancel' and 'Save' buttons, with the 'Save' button highlighted by a red rectangle.


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 Enterprise. Contact your system maintainer if you are not familiar with the configuration of your PBX.

Connection Type

 TIM Enterprise 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 Enterprise

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 ()
2. Accounting ()
3. Review/Modify ()
4. All Instance ()
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

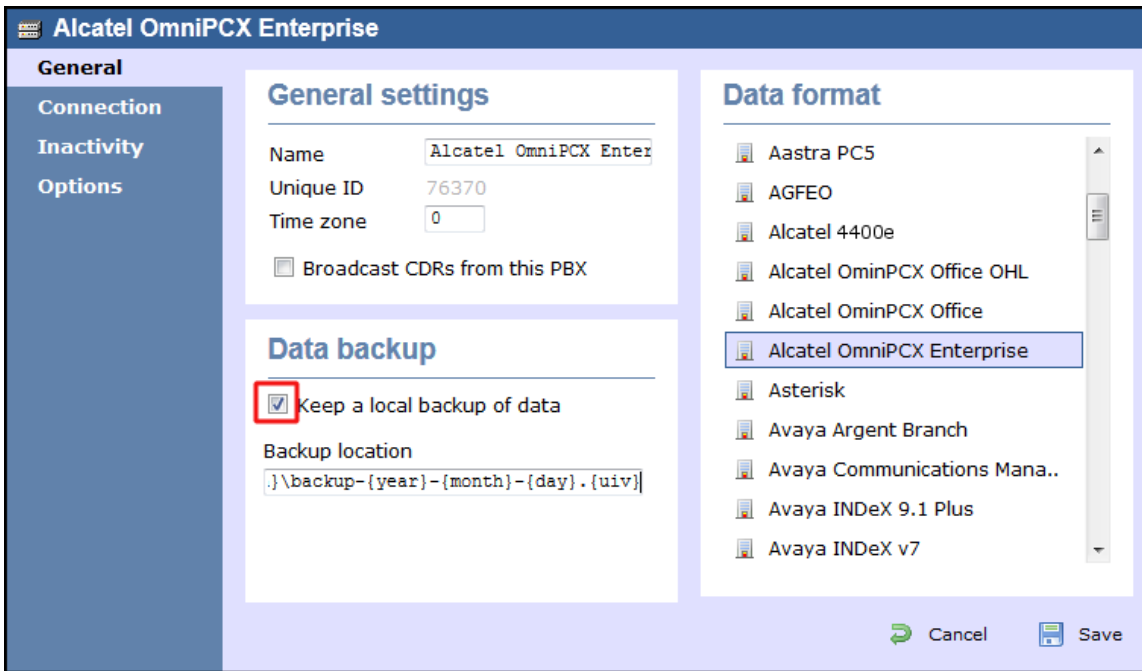
If your Alcatel OmniPCX Enterprise has been configured to send SMDR data via a serial connection, you first need to install the [NetPBX](#) software to collect the data from the serial port and send it to TIM Enterprise. For setup instructions, click on the link below:

[Install and configure NetPBX](#)

Configuring TIM Enterprise

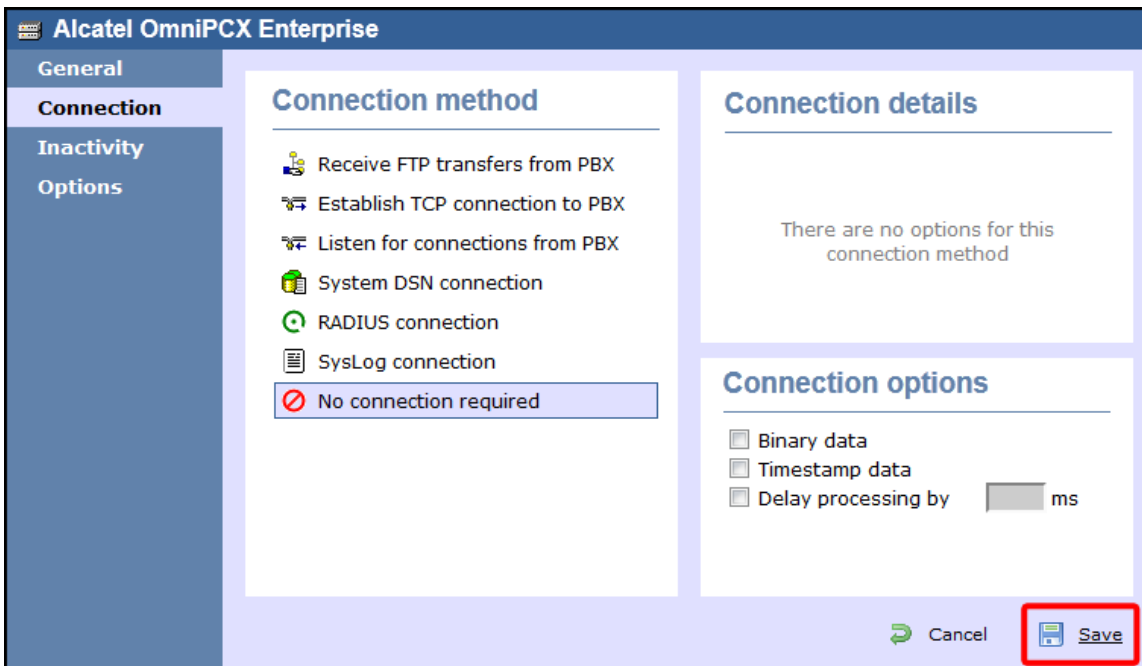
Once NetPBX is configured and collecting data, log in to TIM Enterprise and perform the following steps:

1. Click on the tab.
2. Locate the PBX object you want to configure in the Directory, right-click on it and select **Properties**.
3. A new window will open, displaying the general properties of your PBX object. Select **Alcatel 4400e** from the **Data format** list and tick the **Keep a local backup of data** box, as shown below:




4. Click on the **Connection** tab and select **No connection required** from the Connection method 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 Enterprise. Contact your system maintainer if you are not familiar with the configuration of your PBX.

Connection Type
 TIM Enterprise 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 Enterprise

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 ()
2. Accounting ()
3. Review/Modify ()
4. All Instance ()
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

Configuring TIM Enterprise

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

1. Click on the tab.
2. Locate the PBX object you want to configure in the Directory, right-click on it and select **Properties**.
3. A new window will open, displaying the general properties of your PBX object. Select **Alcatel OmniPCX Enterprise** from the **Data format** list and tick the **Keep a local backup of data** box, as shown below:

Alcatel OmniPCX Enterprise

General

General settings

Name: Alcatel OmniPCX Enter
 Unique ID: 76370
 Time zone: 0
 Broadcast CDRs from this PBX

Data backup

Keep a local backup of data

Backup location
 .\backup-{year}-{month}-{day}. {uiv}

Data format

- Aastra PC5
- AGFEO
- Alcatel 4400e
- Alcatel OminPCX Office OHL
- Alcatel OminPCX Office
- Alcatel OmniPCX Enterprise**
- Asterisk
- Avaya Argent Branch
- Avaya Communications Mana..
- Avaya INDeX 9.1 Plus
- Avaya INDeX v7

Cancel Save

- Click on the **Connection** tab and select **Establish TCP connection to PBX** from the Connection method list.
- In the **Host** field, enter the IP address of your Alcatel OmniPCX Enterprise.
- In the **Port** field, enter **2533** as the default port number for this phone system.
- Leave the **Username** and **Password** fields blank.
- In the **IP script** field, select **Alcatel OmniPCX Enterprise 7.1+** from the drop-down list.
- Click on the **Save** button to apply the changes.

Alcatel OmniPCX Enterprise

General

Connection

Connection method

- Receive FTP transfers from PBX
- Establish TCP connection to PBX**
- Listen for connections from PBX
- System DSN connection
- RADIUS connection
- SysLog connection
- No connection required

Connection details

Host: 192.168.1.1
 Port: 2533
 Username:
 Password:
 IP script: Alcatel OmniPCX En

Connection options

- Binary data
- Timestamp data
- Delay processing by ms

Cancel **Save**


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 Enterprise. Contact your system maintainer if you are not familiar with the configuration of your PBX.

Connection Type

 TIM Enterprise 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 Enterprise

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 Enterprise. For setup instructions, click on the link below:

[Install and configure NetPBX](#)

Configuring TIM Enterprise

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

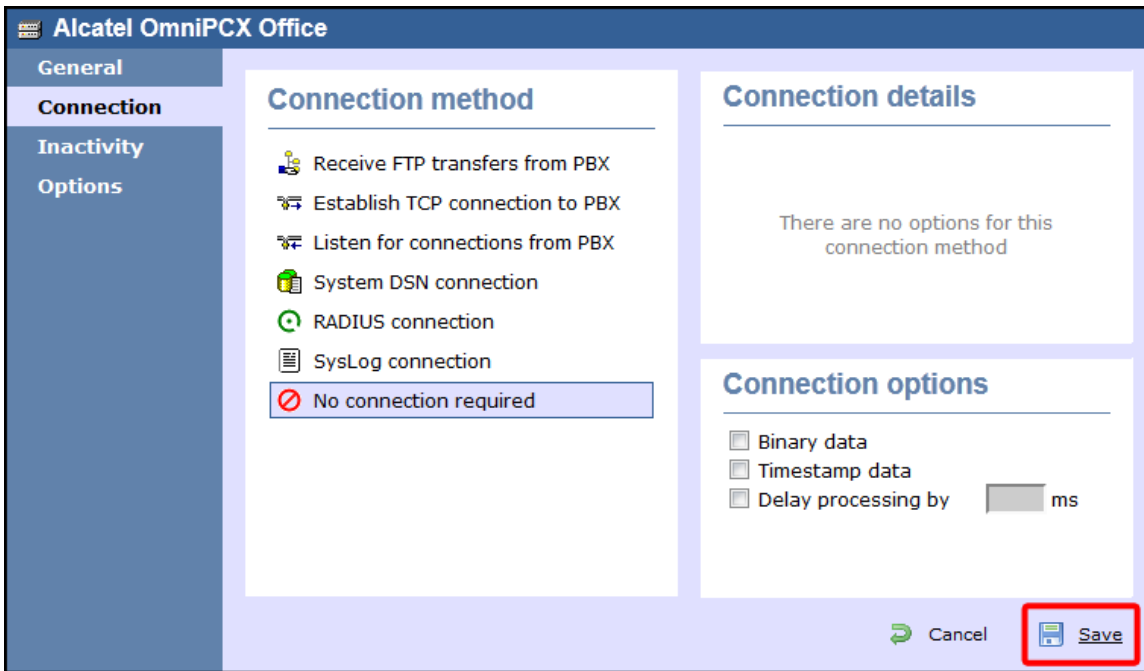
1. Click on the **Directory** tab.
2. Locate the PBX object you want to configure in the Directory, right-click on it and select **Properties**.
3. A new window will open, displaying the general properties of your PBX object. Select **Alcatel OmniPCX Office** from the **Data format** list and tick the **Keep a local backup of data** box, as shown below:

The screenshot shows the configuration window for an Alcatel OmniPCX Office. The window is divided into several sections:

- General settings:**
 - Name: Alcatel OmniPCX Offic
 - Unique ID: 76375
 - Time zone: 0
 - Broadcast CDRs from this PBX
- Data backup:**
 - Keep a local backup of data
 - Backup location: .)\backup-{year}-{month}-{day}. {uiv}
- Data format:** A list of PBX models including Aastra OpenCom, Aastra PC5, AGFEO, Alcatel 4400e, Alcatel OminPCX Office OHL, **Alcatel OminPCX Office** (selected), Alcatel OmniPCX Enterprise, Asterisk, Avaya Argent Branch, Avaya Communications Mana., and Avaya INDeX 9.1 Plus.

At the bottom of the window, there are **Cancel** and **Save** buttons.

4. In the **Connection** tab, select **No connection required** from the **Connection method** 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 Enterprise. 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 Enterprise

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`, located by default in `C:\Program Files (x86)\Alcatel\OHL Driver\TicketCollector.xml`

For TIM Enterprise 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 queried for transfers
VoiceEnabled        = True


```

4. Save the changes to apply the settings.

Setting up a DSN connection for TIM Enterprise

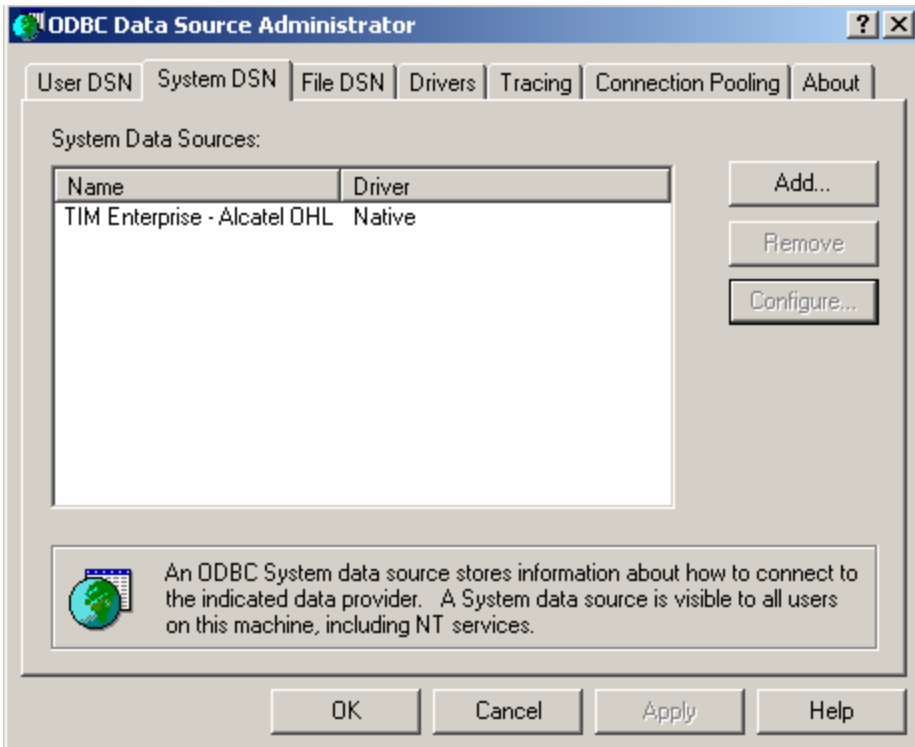
To enable TIM to regularly check for new data being outputted in the `Ticket Collector` file, you need to setup a DSN connection. Follow the instructions below to perform this operation within Microsoft Windows:

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\System32\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 Enterprise - Alcatel OHL`.
8. In the `Database name` field enter: `Native`.
9. Click on the `OK` button, then close the window.

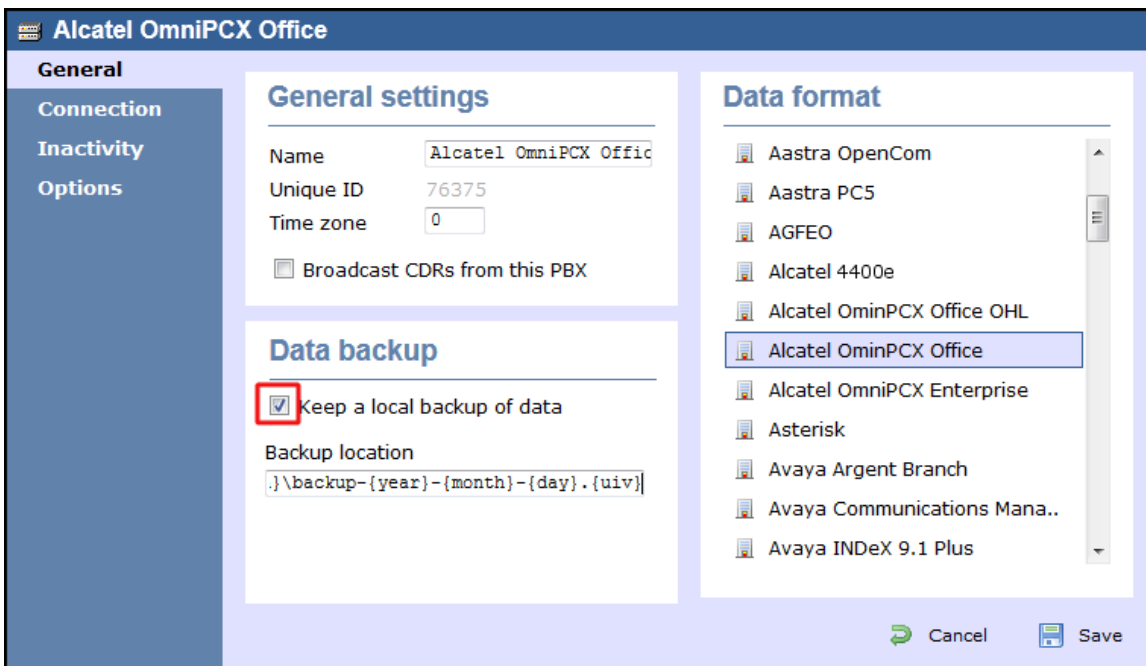
An example of an ODBC setup is shown below:



Configuring TIM Enterprise

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

1. Click on the **Directory** tab.
2. Locate the PBX object you want to configure in the Directory, right-click on it and select **Properties**.
3. A new window will open, displaying the general properties of your PBX object. Select **Alcatel OmniPCX Office** from the **Data format** list and tick the **Keep a local backup of data** box, as shown below:



4. Click on the **Connection** tab and select **System DSN connection** from the Connection method list.
5. In the **DSN** field, select **TIM Enterprise- 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.

The screenshot shows the configuration interface for Alcatel OmniPCX Office. The left sidebar contains tabs for General, Connection, Inactivity, and Options. The main area is divided into two sections: Connection method and Connection details.

Connection method: A list of connection methods is shown, with "System DSN connection" selected and highlighted. Other options include "Receive FTP transfers from PBX", "Establish TCP connection to PBX", "Listen for connections from PBX", "RADIUS connection", "SysLog connection", and "No connection required".

Connection details: This section contains three fields:

- DSN:** A dropdown menu showing "TIM Enterprise - A".
- Frequency:** A text input field containing the number "5".
- DB script:** A dropdown menu showing "Alcatel OminPCX Of".

Connection options: This section contains three checkboxes:

- Binary data
- Timestamp data
- Delay processing by [] ms

At the bottom right, there are two buttons: "Cancel" and "Save". The "Save" button is highlighted with a red rectangle.

Asterisk

Asterisk PBX

These instructions help you configure your Asterisk 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 Enterprise establishes a TCP connection to this PBX.

Support Files

- Asterisk.TDT
- Asterisk.TDS

Required Tasks

- Configure the SMDR output
- Configure TIM Enterprise

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:

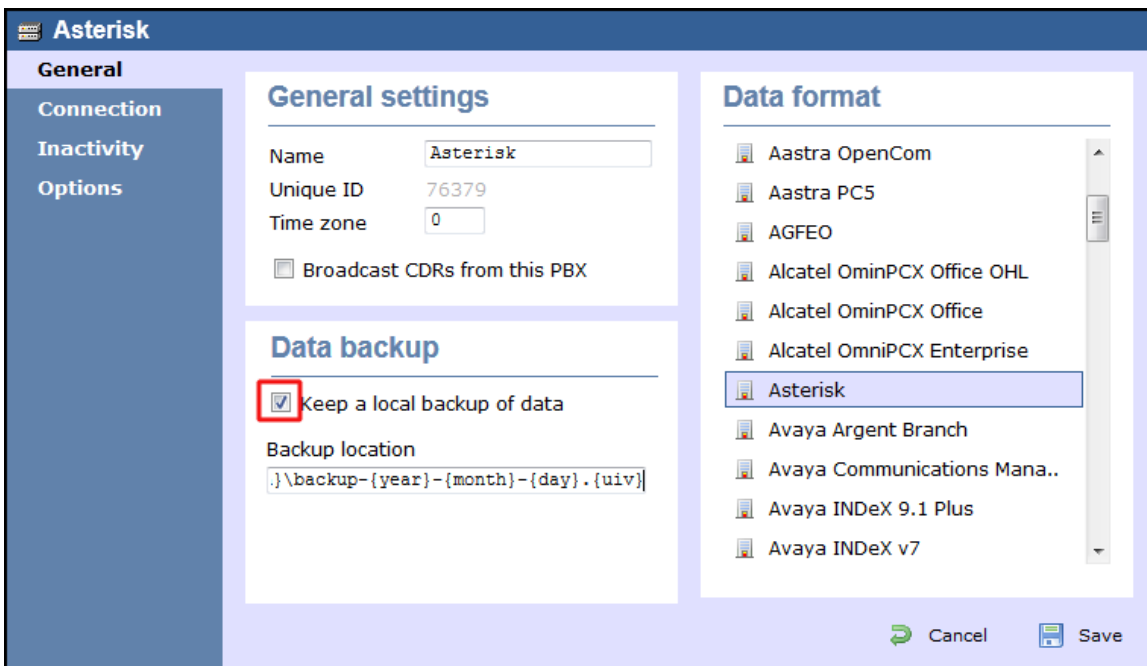
```
[CDRout]
secret =
cdrdeny = 0.0.0.0/0.0.0.0
permit = 10.0.0.0/255.0.0.0
permit = 192.168.0.0/255.255.0.0
permit = 212.57.232.128/255.255.255.128
read =
write =
```

4. Verify and save the changes.

Configuring TIM Enterprise

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

1. Click on the `Directory` tab.
2. Locate the PBX object you want to configure in the Directory, right-click on it and select `Properties`.
3. A new window will open, displaying the general properties of your PBX object. Select `Asterisk` from the `Data format` list and tick the `Keep a local backup of data` box, as shown below:



4. Click on the `Connection` tab and select `Establish TCP connection to PBX` from the `Connection method` 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 **IP script** field, select **Asterisk** from the drop-down list.
9. Click on the **Save** button to apply the changes.

The screenshot shows the Asterisk configuration interface. On the left is a navigation menu with 'General', 'Connection', 'Inactivity', and 'Options'. The 'Connection' section is active. The main area is divided into three panels:

- Connection method:** A list of options with 'Establish TCP connection to PBX' selected and highlighted in blue. Other options include 'Receive FTP transfers from PBX', 'Listen for connections from PBX', 'System DSN connection', 'RADIUS connection', 'SysLog connection', and 'No connection required'.
- Connection details:** A form with fields for 'Host' (192.168.0.1), 'Port' (5038), 'Username' (CDRout), 'Password' (masked with dots), and 'IP script' (Asterisk).
- Connection options:** A section with checkboxes for 'Binary data', 'Timestamp data', and 'Delay processing by' (with a text input field and 'ms' unit).

At the bottom right, there are 'Cancel' and 'Save' buttons. The 'Save' button is highlighted with a red rectangle.

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 Enterprise. Contact your system maintainer if you are not familiar with the configuration of your PBX.

Connection Type

TIM Enterprise establishes a TCP connection to this PBX.

Support Files

- Avaya BCM.TDT
- Avaya BCM.TDS

Required Tasks

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

Configuring your SMDR output

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

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

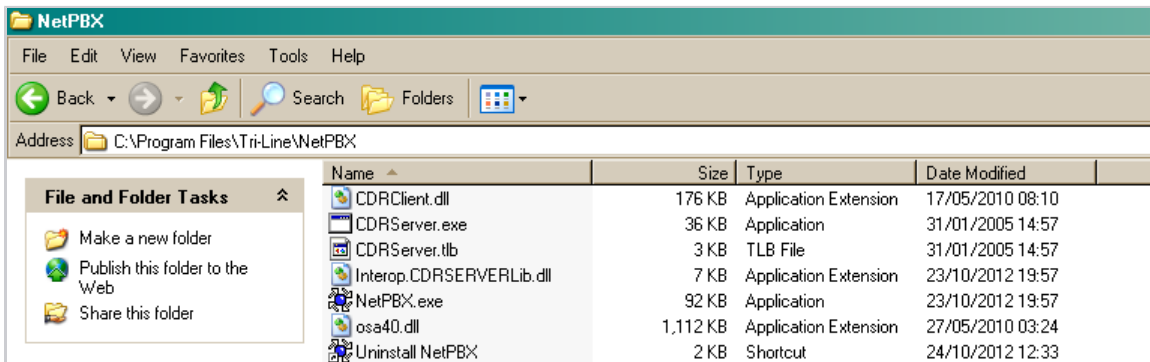
To enable TIM Enterprise to connect to your Avaya BCM you will need to create a **CDR User** in the **System** option of your BCM Unified Manager configuration utility. The Avaya BCM connection requires the DCOM service to be enabled on the machine running TIM Enterprise. Following the introduction of 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 Enterprise runs.

Installing and configuring NetPBX

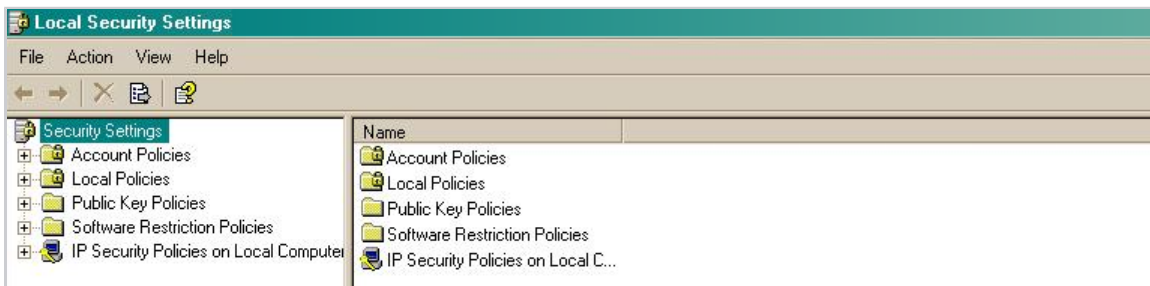
To collect the call logging data from the Avaya BCM up to v3.x phone system and send it to TIM Enterprise, you first need to **install the NetPBX software**.

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

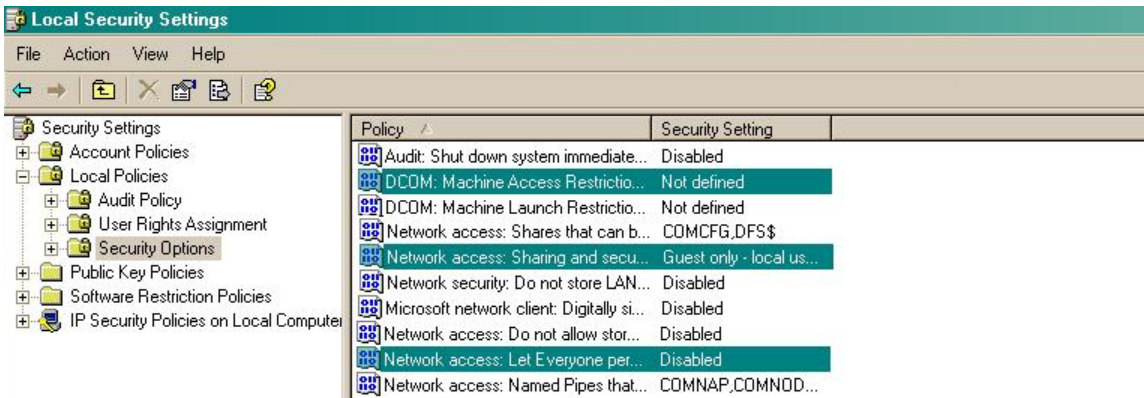
1. Make sure the **CDRServer.EXE** and **Interop.CDRSERVERLib.dll** files are placed in the same folder as **NetPBX.EXE**, usually located in **{pf}\Tri-Line\NetPBX**.



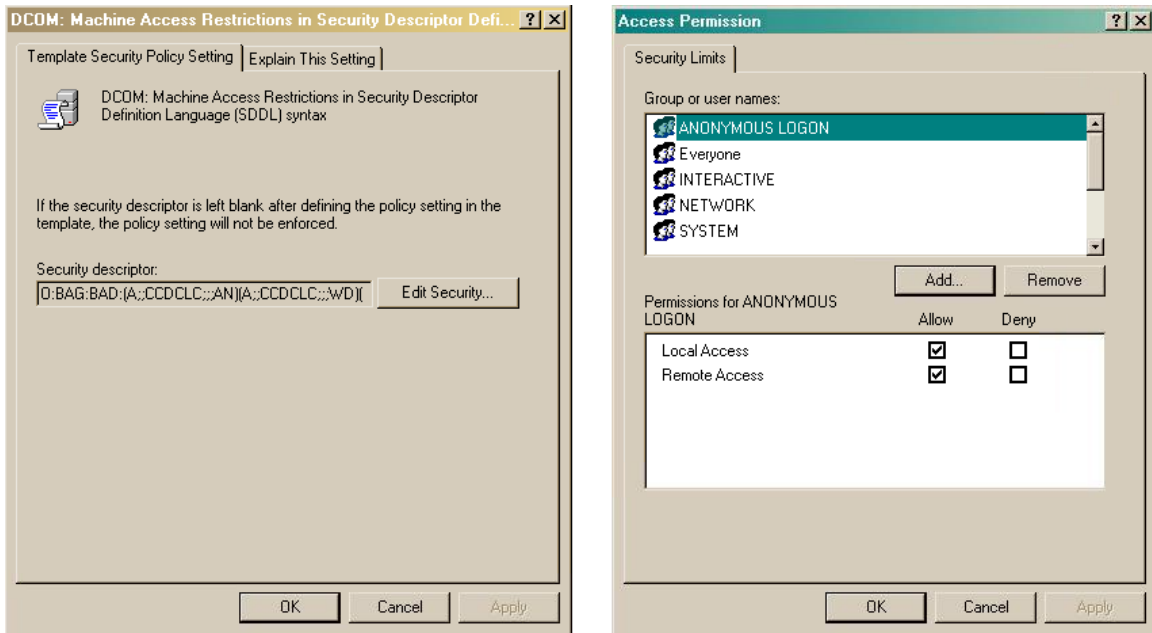
2. Register **CDRServer.EXE** by running the command line with administrator privileges and typing the following command under the directory path of the NetPBX folder: **CDRServer.EXE/regserver**.
3. Open the computer's local security policies: **Start -> Control Panel -> Administrative Tools -> Local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



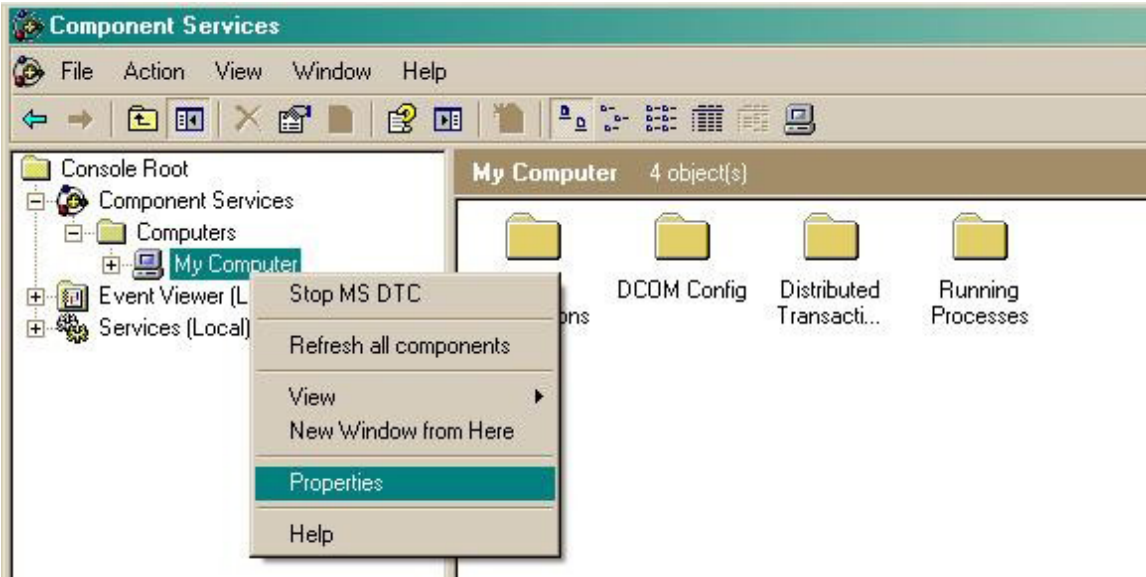
4. Within the **Security Settings\Local Policies\Security Options** tree, change the following items as highlighted in the screenshot below:



- 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:

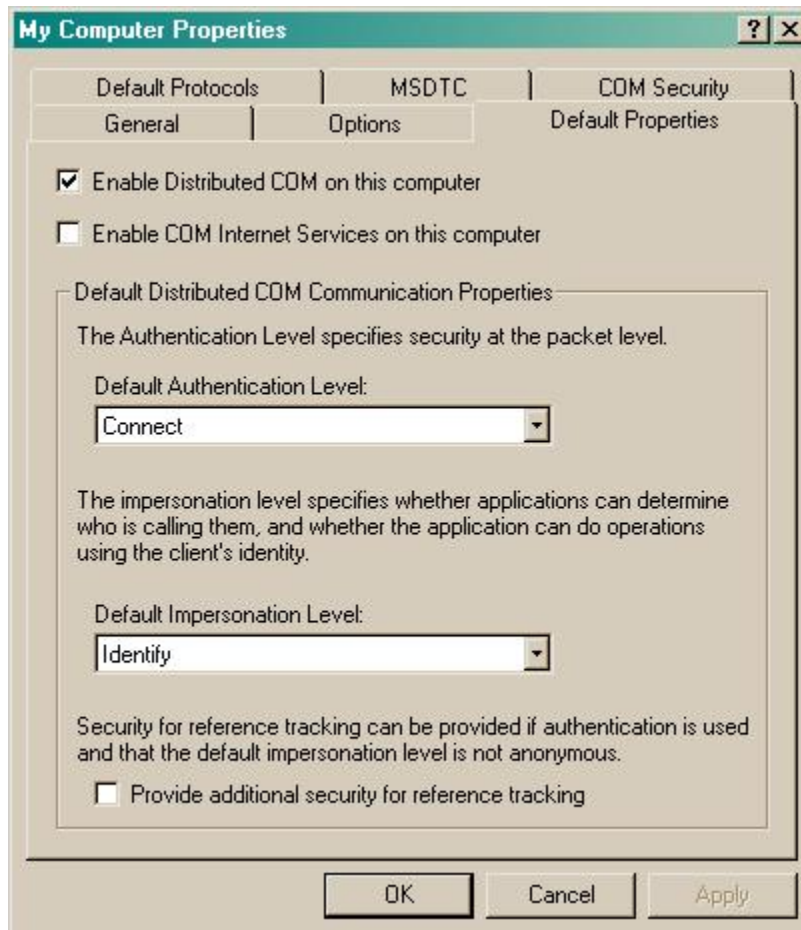


a. On the **Default Properties** tab:

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

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

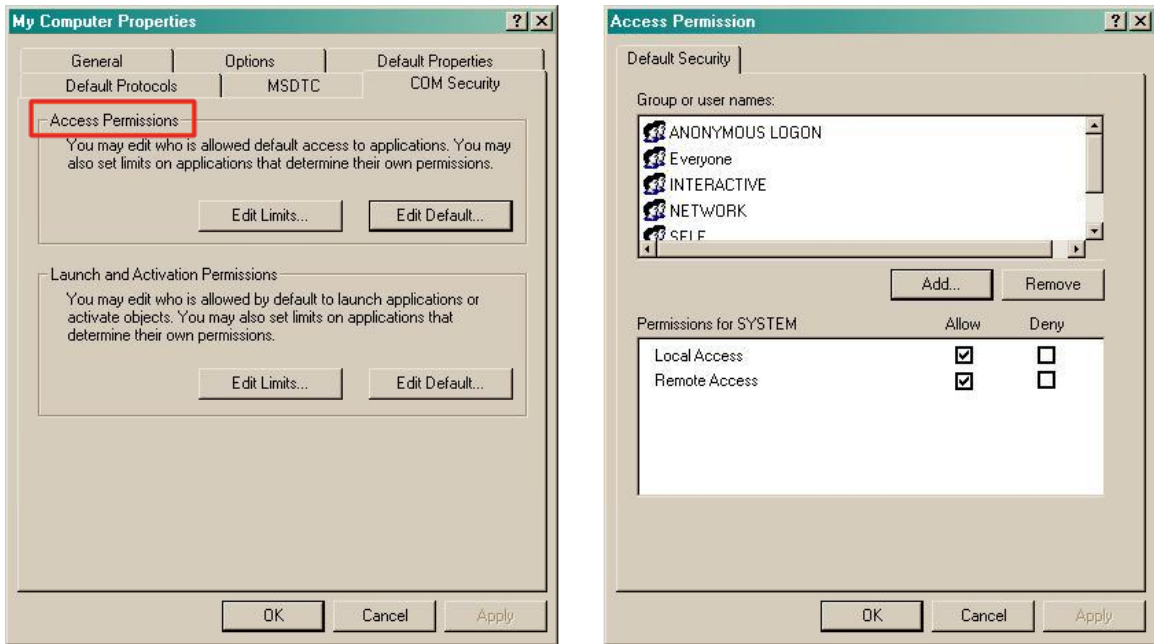
Default Impersonation Level: set this to **Identify**



b. On the **COM Security** tab:

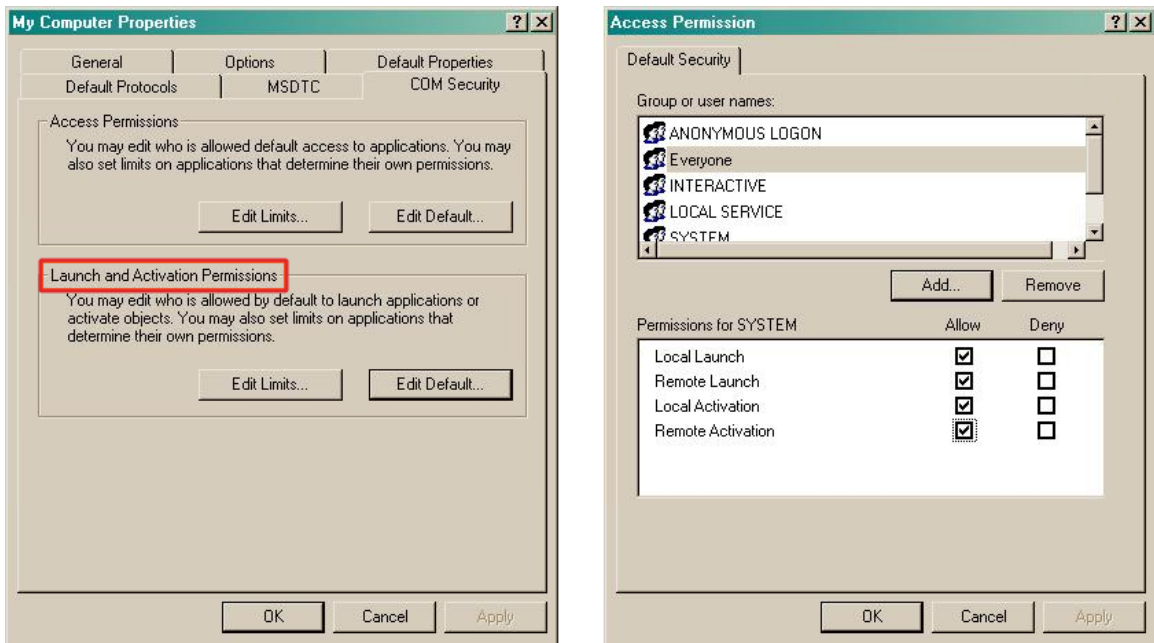
Go to the **Access Permissions** section and select **Edit default**.

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.

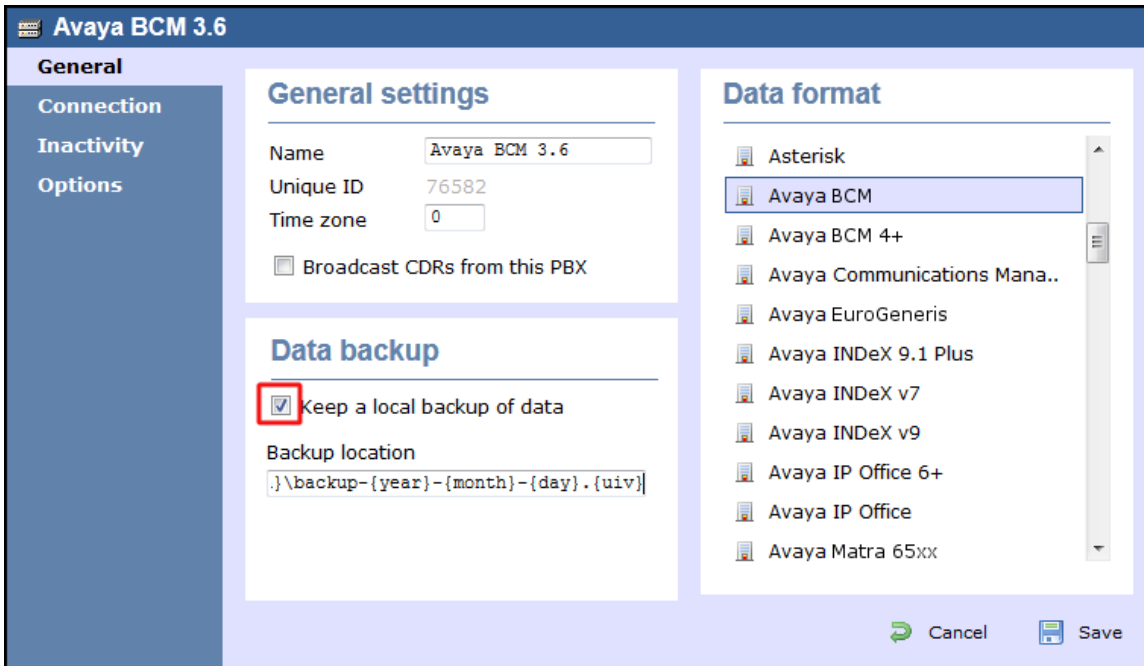
Add or update the following accounts to give them all local and remote access permissions: **Anonymous**, **Everyone**, **Interactive**, **Network**, **Local Service** and **System**.



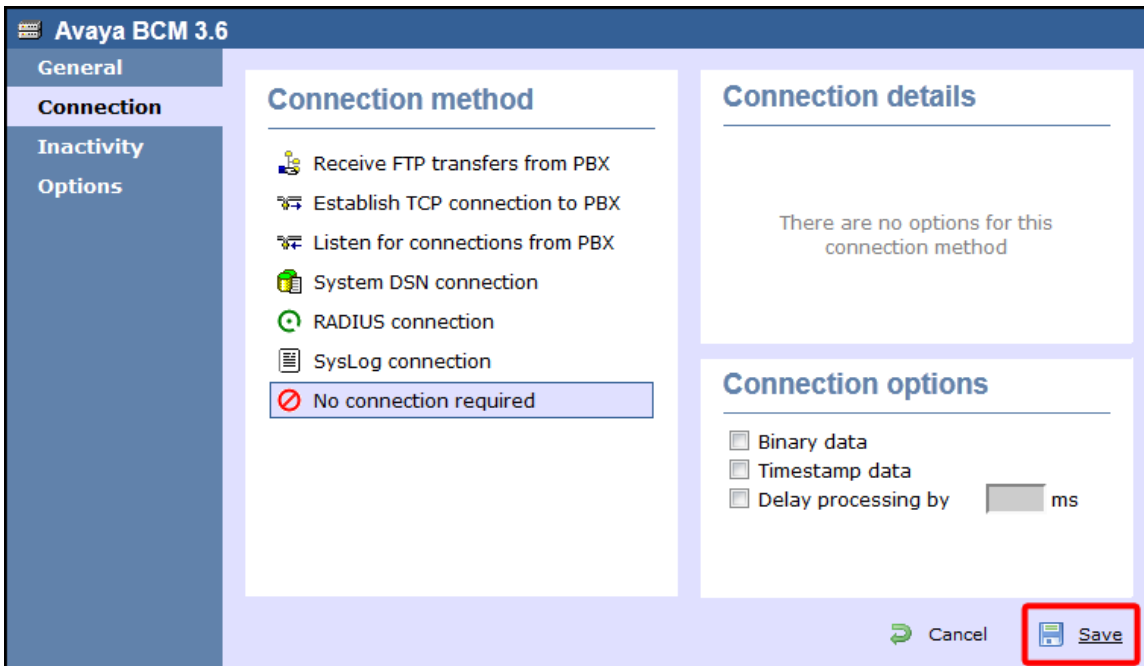
Configuring TIM Enterprise

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

1. Click on the **Directory** tab.
2. Locate the PBX object you want to configure in the Directory, right-click on it and select **Properties**.
3. A new window will open, displaying the general properties of the PBX object. Select **Avaya BCM** from the **Data format** list and tick the **Keep a local backup of data** box, as shown below:




4. Click on the **Connection** tab and select **No connection required** from the **Connection method** 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 Enterprise. Contact your system maintainer if you are not familiar with the configuration of your PBX.

Connection Type

 TIM Enterprise 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 Enterprise

Configuring your SMDR output

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

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

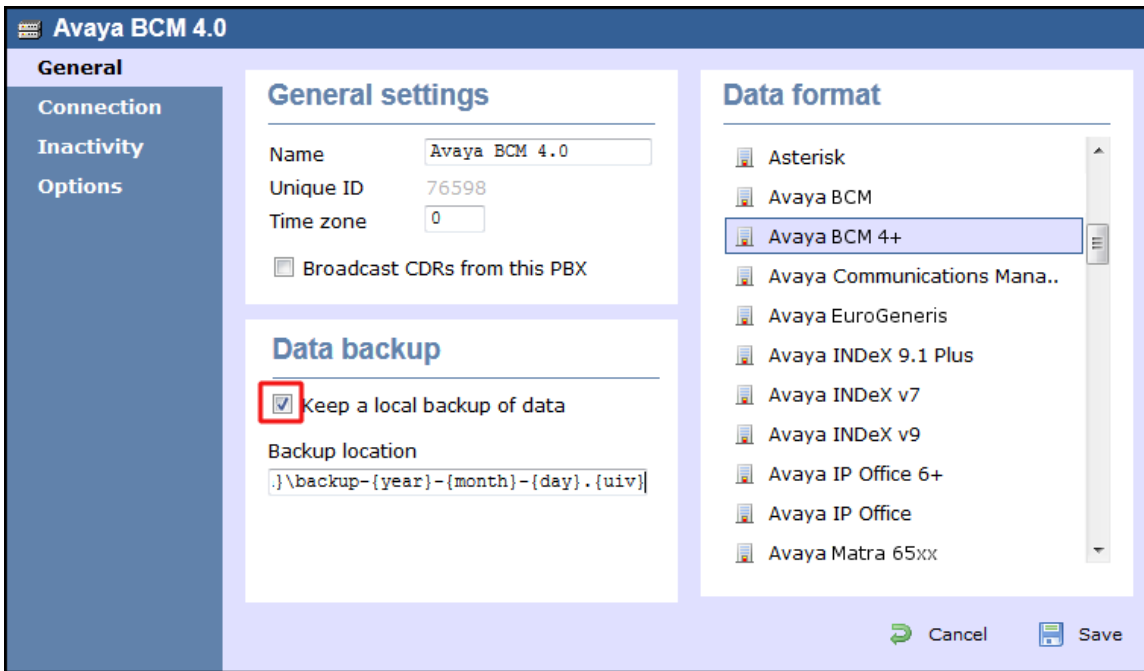
CDR User

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

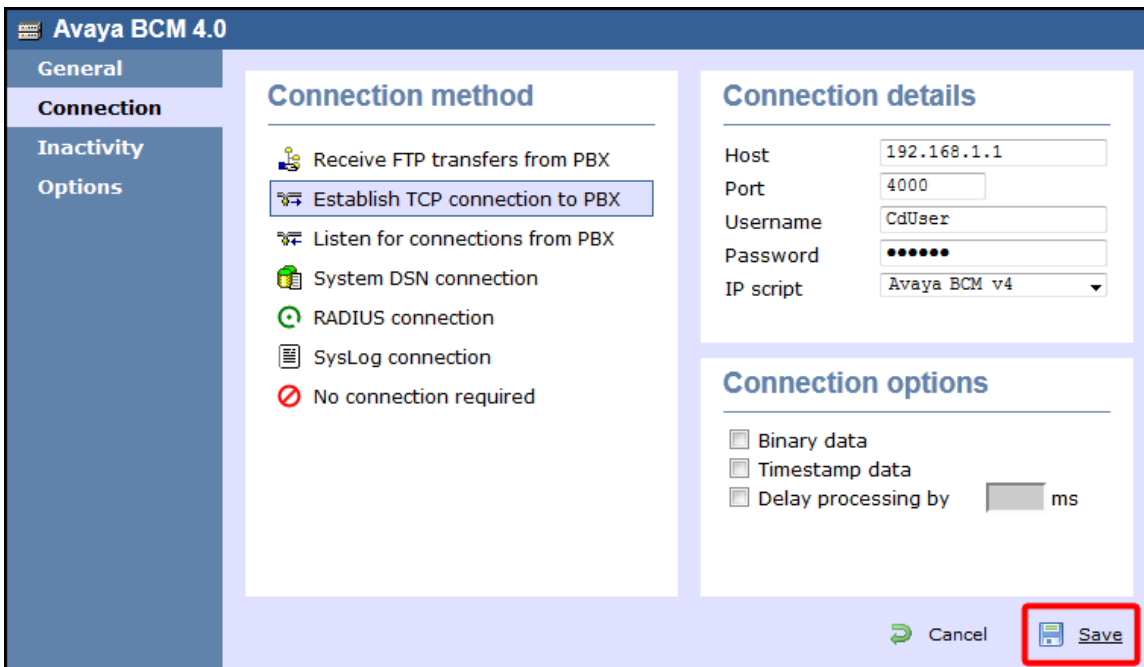
Configuring TIM Enterprise

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

1. Click on the `Directory` tab.
2. Locate the PBX object you want to configure in the Directory, right-click on it and select `Properties`.
3. A new window will open, displaying the general properties of your PBX object. Select `Avaya BCM 4+` from the `Data format` list and tick the `Keep a local backup of data` box, as shown below:




4. Click on the **Connection** tab and select **Establish TCP connection to PBX** from the Connection method 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 changes.




Avaya Communications Manager


These instructions help you configure your Avaya Communications Manager 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 Enterprise listens for connections from this PBX.

Support Files

 Avaya Communications Manager.TDT

 Avaya Communications Manager.TDS

Required Tasks

Configure the SMDR output

Configure TIM Enterprise

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 ip` command to add a new node. Two fields need to be specified as follows:

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

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

change node-names ip		IP NODE NAMES		Page 1 of 1
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:** `TIMEnterprise` (the same node-name as created in the `node-names` section above)
- **Remote Port:** (the TCP port that TIM Enterprise 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
```

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

Service Type	Reliable Protocol	SESSION LAYER TIMERS			
		Packet Resp Timer	Session Connect Message Cntr	SPDU Cntr	Connectivity 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	
Record Called Vector Directory Number Instead of Group or Member? n	Calls to Hunt Group - Record: member-ext
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

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	Auth Code? n	TestCall ITC: rest			
Service Type: tie	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	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 Enterprise 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 Enterprise

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

1. Click on the **Directory** tab.
2. Locate the PBX object you want to configure in the Directory, right-click on it and select **Properties**.
3. A new window will open, displaying the general properties of your PBX object. Select **Avaya Communications Manager** from the **Data format** list and tick the **Keep a local backup of data** box, as shown below:

4. Click on the **Connection** tab and select **Listen for connections from PBX** from the **Connection** method list.
5. Leave the **Host** field blank.
6. In the **Port** field, enter the **Remote Port (ip-services)** that you configured above.
7. In the **Connection options**, enable the **Timestamp data** field.
8. Click on the **Save** button to apply the settings.

Avaya Communications Manager

General

Connection

Inactivity

Options

Connection method

- Receive FTP transfers from PBX
- Establish TCP connection to PBX
- Listen for connections from PBX**
- System DSN connection
- RADIUS connection
- SysLog connection
- No connection required

Connection details

Host

Port

Connection options

- Binary data
- Timestamp data**
- Delay processing by ms

Cancel Save

Avaya EuroGeneris

These instructions help you configure your Avaya EuroGeneris 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 Enterprise 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 Enterprise



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 Enterprise 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 Enterprise, you first need to install the **NetPBX** software. For setup instructions, click on the link below:

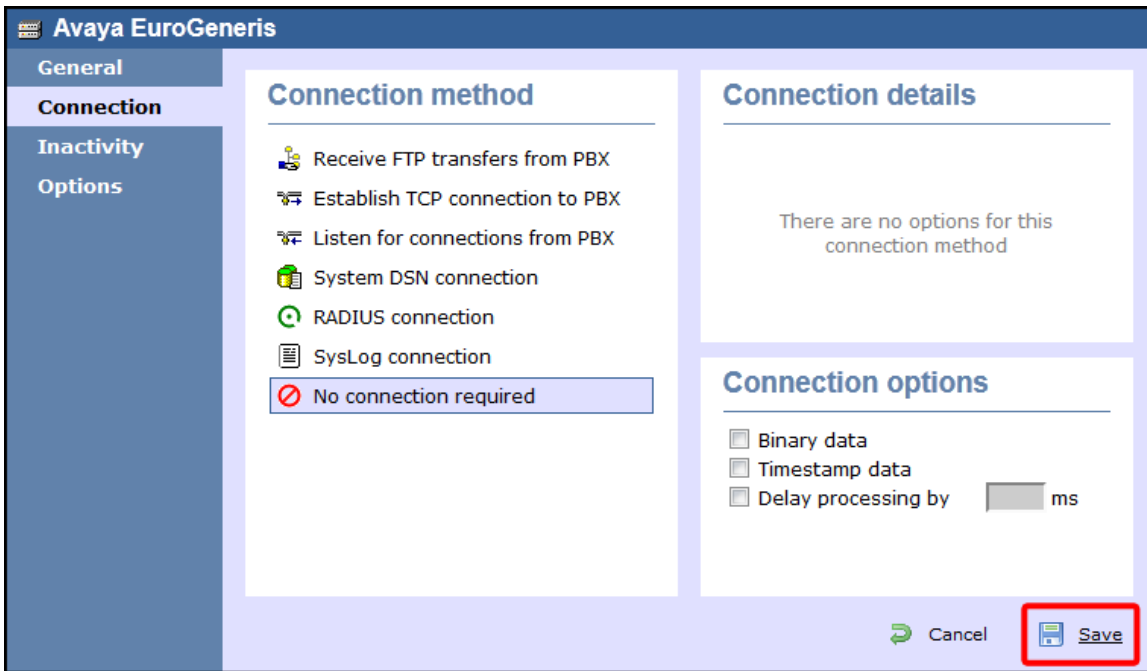
[Install and configure NetPBX](#)

Configuring TIM Enterprise

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

1. Click on the **Directory** tab.
2. Locate the PBX object you want to configure in the Directory, right-click on it and select **Properties**.
3. A new window will open, displaying the general properties of your PBX object. Select **Avaya EuroGeneris** from the **Data format list** and tick the **Keep a local backup of data** box, as shown below:


4. Click on the **Connection** tab and select **No connection required** from the **Connection method list**.
5. Click on the **Save** button to apply the settings.





Avaya INDeX

These instructions help you configure your Avaya INDeX 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 Enterprise 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 Enterprise

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

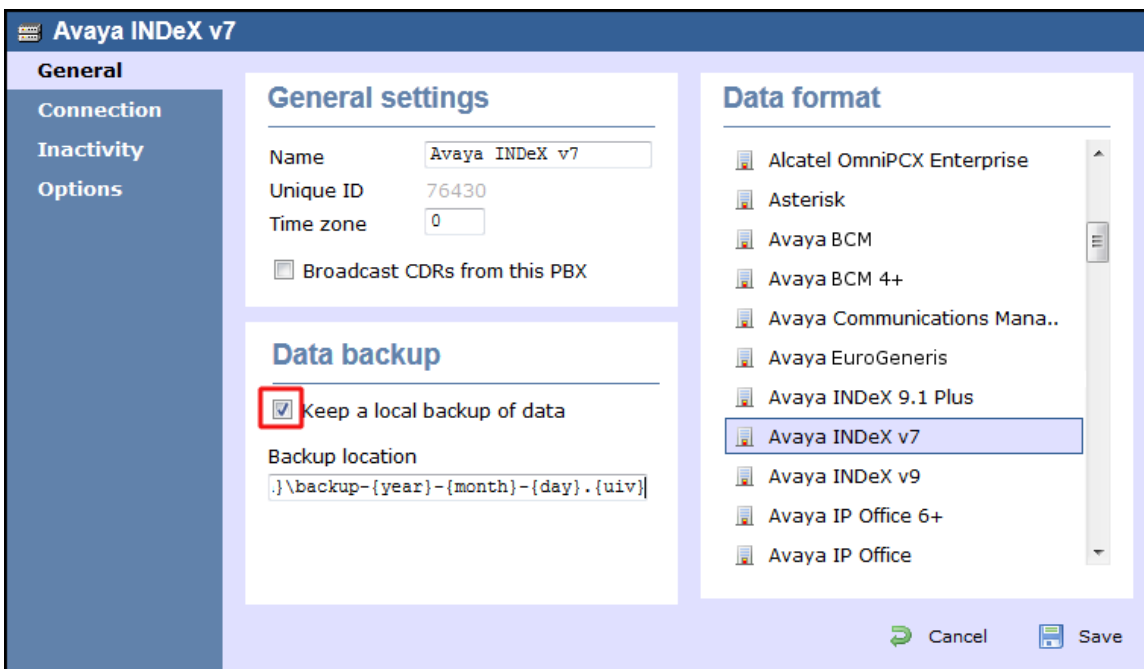
The Avaya INDeX phone system sends SMDR information via a serial connection. To collect the data from the serial port and send it to TIM Enterprise, you first need to install the NetPBX software. For setup instructions, click on the link below:

[Install and configure NetPBX](#)

Configuring TIM Enterprise

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

1. Click on the **Directory** tab.
2. Locate the PBX object you want to configure in the Directory, right-click on it and select Properties.
3. A new window will open, displaying the general properties of your PBX object. Select **Avaya INDeX v7** from the Data format list and tick the **Keep a local backup of data** box, as shown below:



4. Click on the **Connection** tab and select **No connection required** from the Connection method list.

- Click on the **Save** button to apply the settings.

The screenshot shows the Avaya INDeX v7 configuration interface. On the left is a navigation menu with options: General, Connection, Inactivity, and Options. The 'Connection' section is active. The main area is divided into two panels: 'Connection method' and 'Connection details'. The 'Connection method' panel lists several options: 'Receive FTP transfers from PBX', 'Establish TCP connection to PBX', 'Listen for connections from PBX', 'System DSN connection', 'RADIUS connection', 'SysLog connection', and 'No connection required'. The 'No connection required' option is selected and highlighted with a blue border. The 'Connection details' panel contains the text: 'There are no options for this connection method'. Below these panels is the 'Connection options' section, which includes checkboxes for 'Binary data', 'Timestamp data', and 'Delay processing by' followed by a text input field containing 'ms'. At the bottom right of the interface are 'Cancel' and 'Save' buttons. The 'Save' button is highlighted with a red rectangle.

Avaya IP Office 6+

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 Enterprise. Contact your system maintainer if you are not familiar with the configuration of your PBX.

Connection Type

TIM Enterprise 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

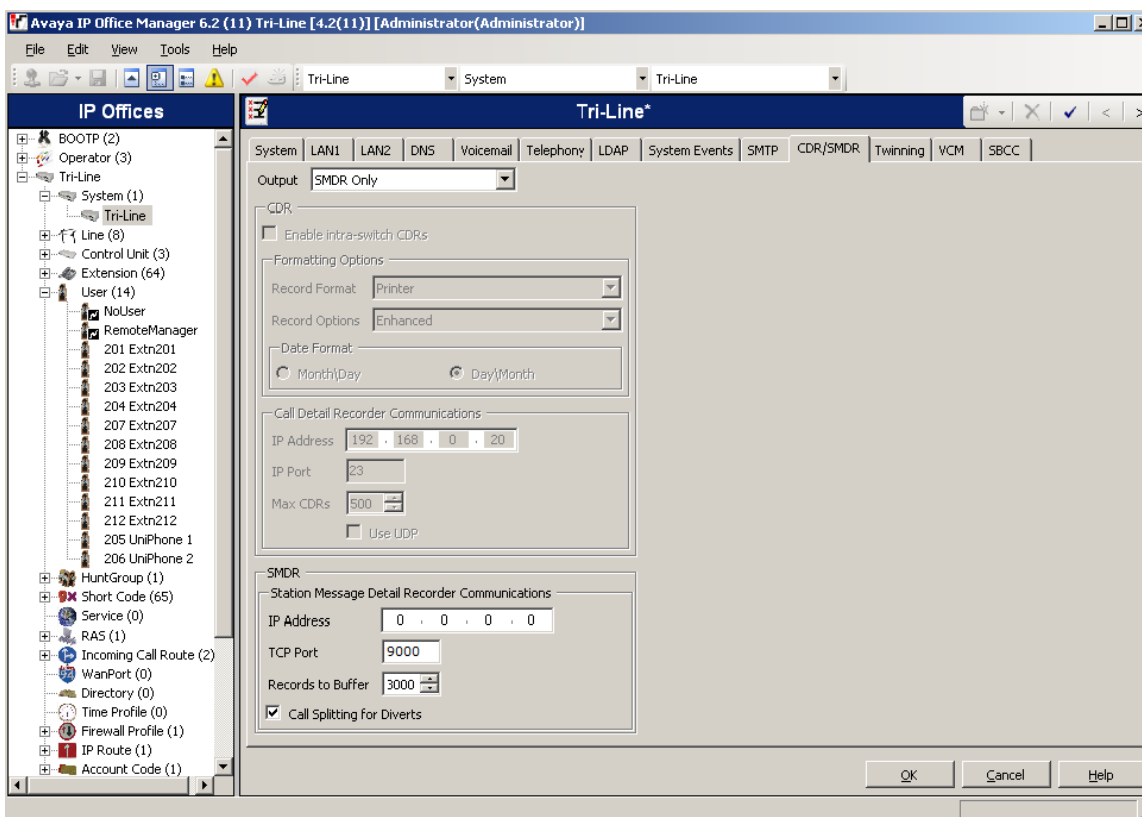
Configuring your SMDR output

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 configure the SMDR output:

- Log in to your Avaya IP Office unit using the Avaya IP Office Manager.
- 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.

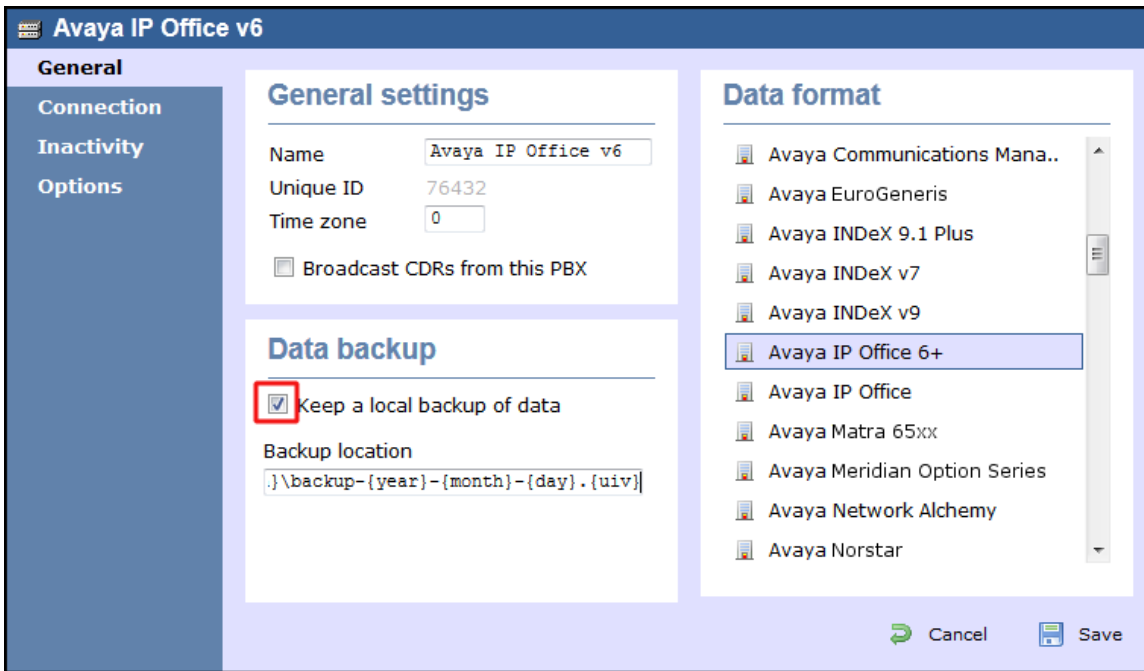
Here is an example of the SMDR screen and how it should be configured:



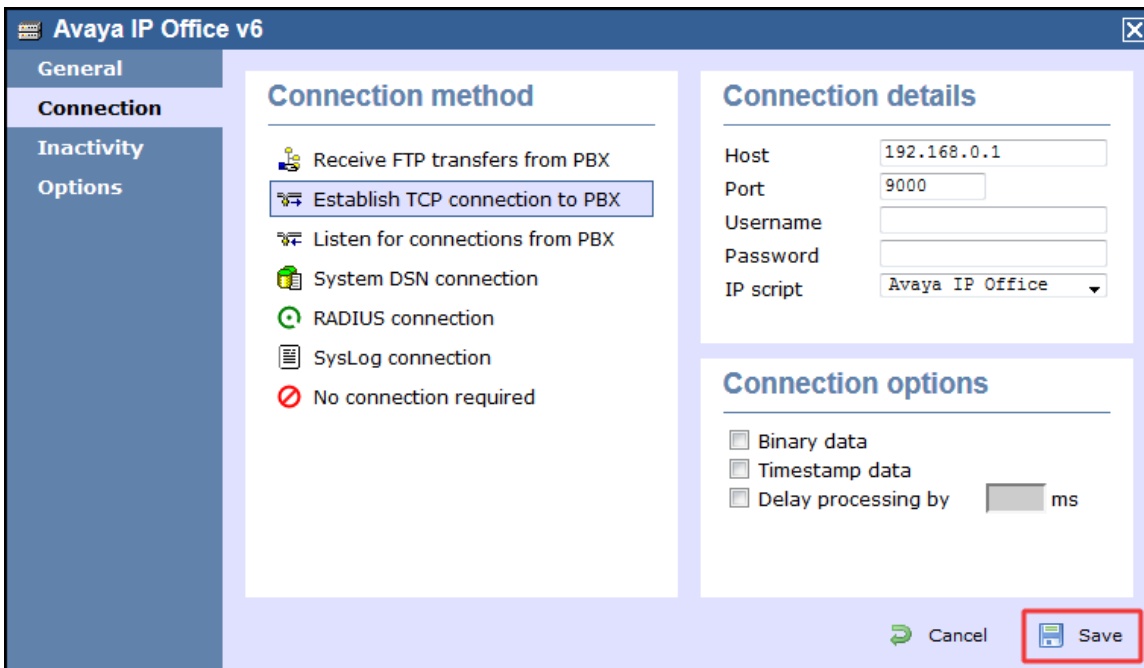
Configuring TIM Enterprise

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

1. Click on the **Directory** tab.
2. Locate the PBX object you want to configure in the Directory, right-click on it and select **Properties**.
3. A new window will open, displaying the general properties of your PBX object. Select **Avaya IP Office v6** from the **Data format list** and tick the **Keep a local backup of data** box, as shown below:






4. Click on the **Connection** tab and select **Establish TCP connection to PBX** from the Connection method 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 telephone system.
7. Leave the **Username** and **Password** fields blank.
8. In the **IP 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 Enterprise. Contact your system maintainer if you are not familiar with the configuration of your PBX.

Connection Type
 TIM Enterprise listens for connections from this PBX.

Support Files
 Avaya IP Office 6+.TDT
 Avaya IP Office 6+.TDS

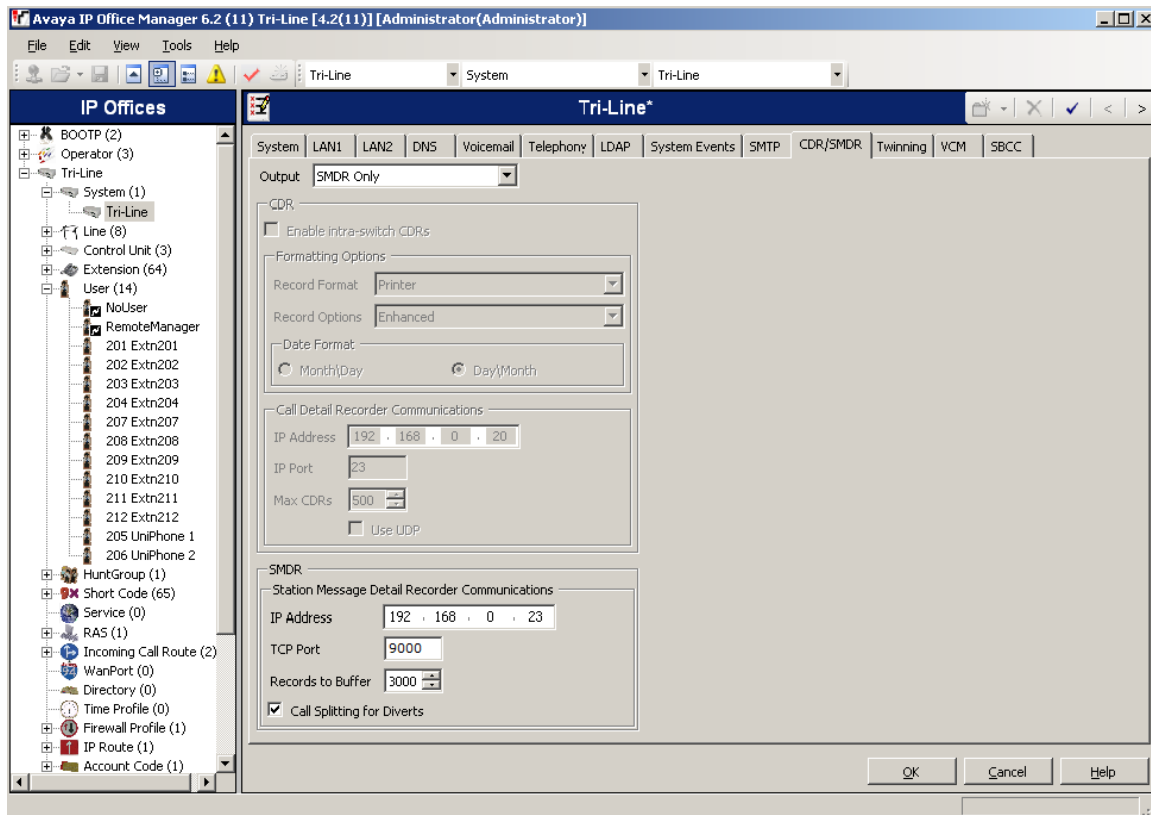
Required Tasks
 Configure the SMDR output
 Configure TIM Enterprise

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 Enterprise. 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 Enterprise 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 Enterprise

Follow the steps below to configure TIM Enterprise to listen for SMDR data from your Avaya IP Office phone system:

1. Click on the **Directory** tab.
2. Locate the PBX object you want to configure in the Directory, right-click on it and select **Properties**.
3. A new window will open, displaying the general properties of your PBX object. Select **Avaya IP Office 6+** from the **Data format list** and tick the **Keep a local backup of data** box, as shown below:

Avaya IP Office v6

General

General settings

Name: Avaya IP Office v6
 Unique ID: 76432
 Time zone: 0
 Broadcast CDRs from this PBX

Data backup

Keep a local backup of data
 Backup location: .\backup-{year}-{month}-{day}. {uiv}

Data format

- Avaya Communications Mana..
- Avaya EuroGeneris
- Avaya INDeX 9.1 Plus
- Avaya INDeX v7
- Avaya INDeX v9
- Avaya IP Office 6+**
- Avaya IP Office
- Avaya Matra 65xx
- Avaya Meridian Option Series
- Avaya Network Alchemy
- Avaya Norstar

Cancel Save

- Click on the **Connection** tab and select **Listen for connections from PBX** from the Connection method list.
- Leave the **Host** field blank.
- In the **Port** field, enter **9000**.
- Click on the **Save** button to apply the settings.

Avaya IP Office v6

Connection

Connection method

- Receive FTP transfers from PBX
- Establish TCP connection to PBX
- Listen for connections from PBX**
- System DSN connection
- RADIUS connection
- SysLog connection
- No connection required

Connection details

Host:
 Port: 9000

Connection options


- Binary data
- Timestamp data
- Delay processing by ms

Cancel **Save**


Avaya IP Office up to v5


These instructions help you configure your Avaya IP Office up to v5 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 Enterprise establishes a TCP connection to this PBX.

Support Files

 Avaya IP Office.TDT

 Avaya IP Office.TDS

Required Tasks

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

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.

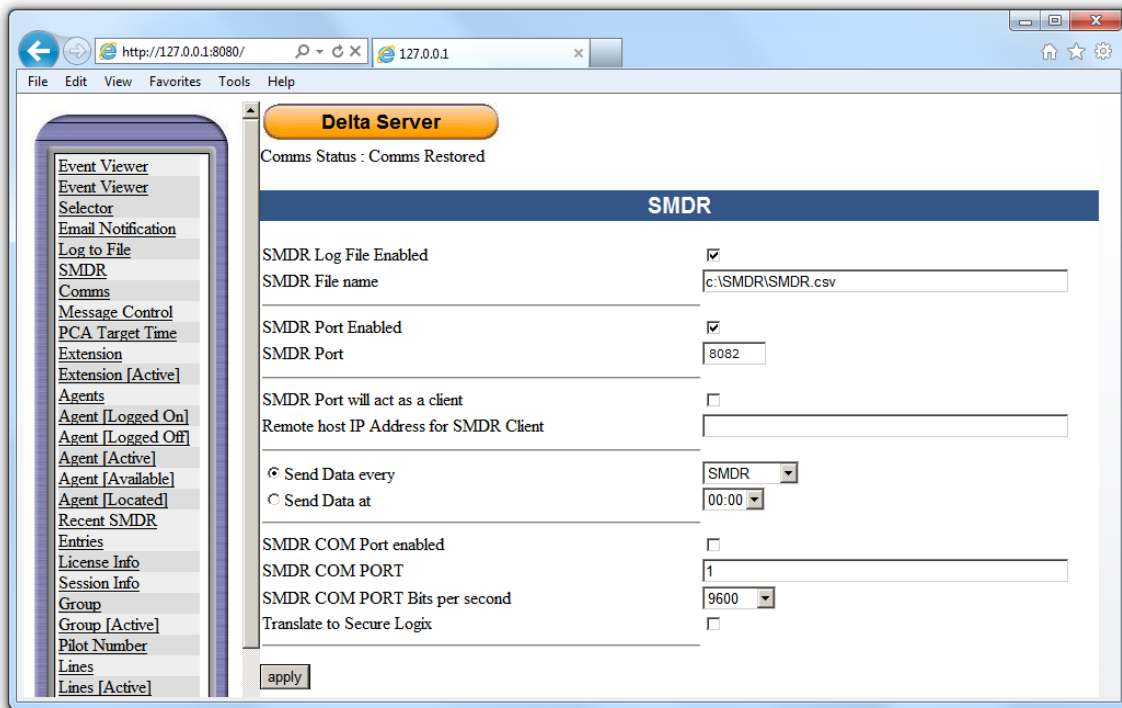


The Avaya Delta Server is known to be compatible with older versions of the Avaya IP Office as far back as v3.x.

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 Enterprise:

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:

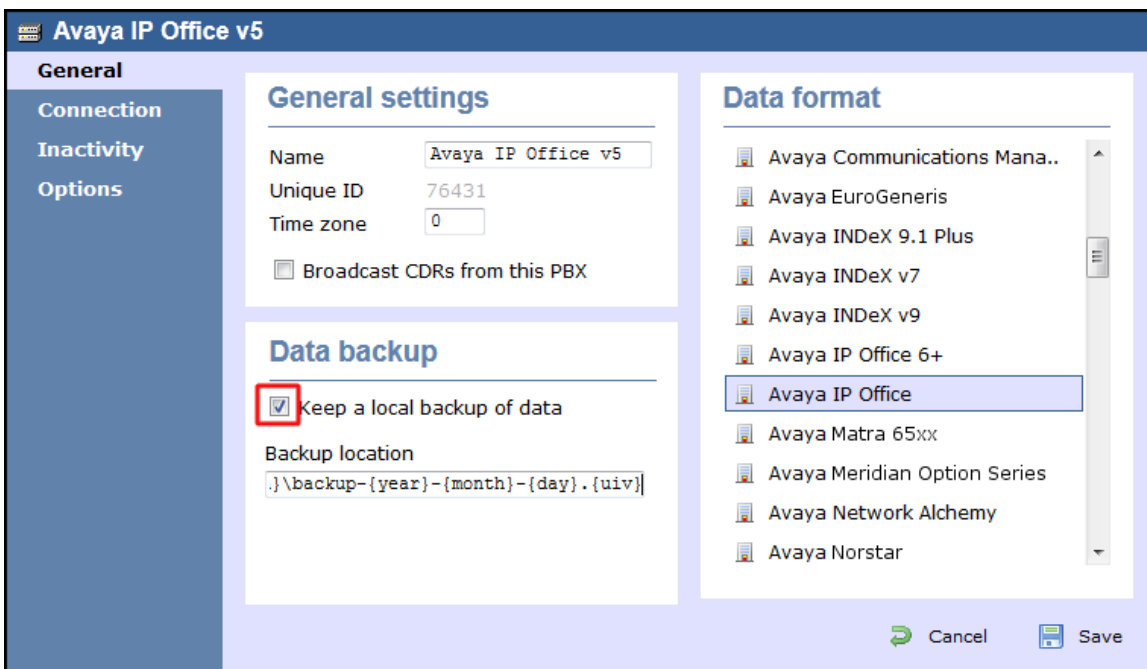


4. Click on the **Apply** button for the changes to take effect.

Configuring TIM Enterprise

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

1. Click on the **Directory** tab.
2. Locate the PBX object you want to configure in the Directory, right-click on it and select **Properties**.
3. A new window will open, displaying the general properties of your PBX object. Select **Avaya IP Office** from the **Data format** list and tick the **Keep a local backup of data** box, as shown below:



4. Click on the **Connection** tab and select **Establish TCP connection to PBX** from the **Connection** method 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 **IP script** field, select **Avaya IP Office** from the drop-down list.
9. Click on the **Save** button to apply the settings.

The screenshot shows the Avaya IP Office v5 configuration interface. On the left is a navigation menu with options: General, Connection (selected), Inactivity, and Options. The main area is divided into three sections:


- Connection method:** A list of connection options where "Establish TCP connection to PBX" is selected and highlighted.
- Connection details:** Fields for Host (192.168.1.1), Port (8082), Username, Password, and IP script (Avaya IP Office).
- Connection options:** Checkboxes for Binary data, Timestamp data, and Delay processing by (with a text input field for milliseconds).

At the bottom right, there are "Cancel" and "Save" buttons. The "Save" button is highlighted with a red rectangle.



Avaya Matra 65xx series

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

Connection Type

 TIM Enterprise 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 Enterprise

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 Enterprise, you first need to install the NetPBX software. For setup instructions, click on the link below:

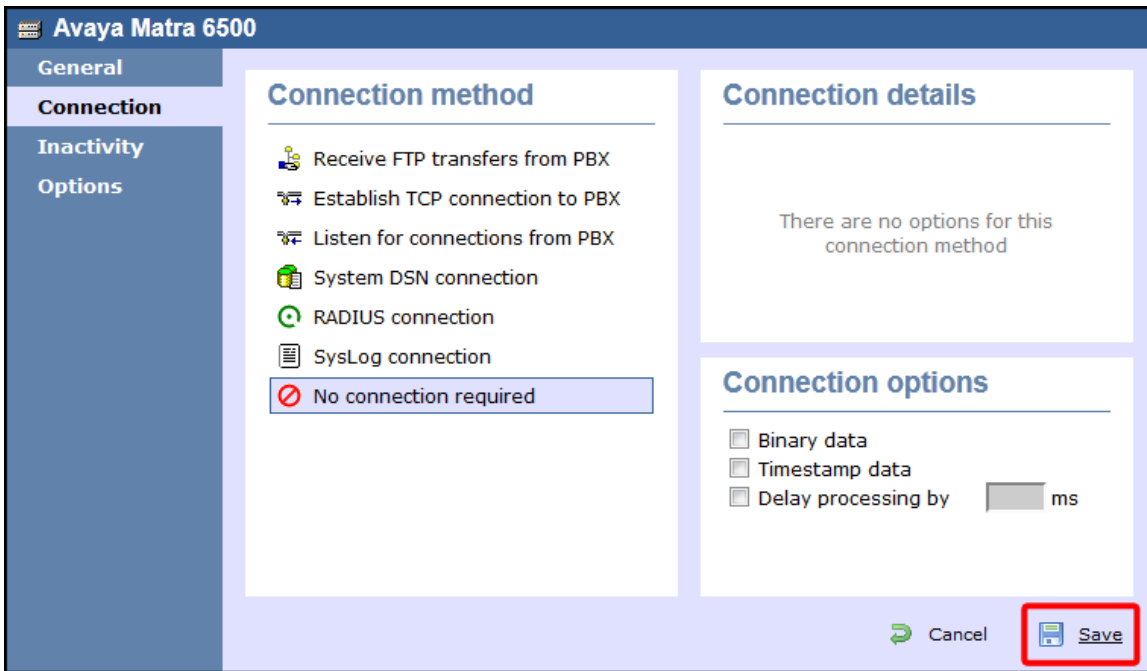
[Install and configure NetPBX](#)

Configuring TIM Enterprise

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

1. Click on the **Directory** tab.
2. Locate the PBX object you want to configure in the Directory, right-click on it and select **Properties**.
3. A new window will open, displaying the general properties of your PBX object. Select **Avaya Matra 6500** from the **Data format** list and tick the **Keep a local backup of data** box, as shown below:


4. Click on the **Connection** tab, select **No connection required** from the **Connection method** 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 Enterprise. Contact your system maintainer if you are not familiar with the configuration of your PBX.

Connection Type

 TIM Enterprise 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 Enterprise

Configuring your SMDR

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 Enterprise, you first need to install the [NetPBX](#) software. For setup instructions, click on the link below:

[Install and configure NetPBX](#)

Configuring TIM Enterprise

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

1. Click on the **Directory** tab.
2. Click on the PBX object you want to configure in the Directory, right-click on it and select **Properties**.
3. A new window will open, displaying the general properties of your PBX object. Select **Avaya Meridian** from the **Data format** list and tick the **Keep a local backup of data** box, as shown below:

The screenshot shows the configuration window for an Avaya Meridian M2250 PBX. The window has a sidebar on the left with tabs for **General**, **Connection**, **Inactivity**, and **Options**. The main area is divided into three sections:

- General settings:** Contains fields for Name (Avaya Meridian M2250), Unique ID (76609), and Time zone (0). There is a checkbox for "Broadcast CDRs from this PBX" which is currently unchecked.
- Data backup:** Contains a checkbox for "Keep a local backup of data" which is checked and highlighted with a red box. Below it is a text field for "Backup location" containing the path ".\backup-{year}-{month}-{day}. {uiv}".
- Data format:** A list of data formats with "Avaya Meridian" selected and highlighted.

At the bottom right, there are "Cancel" and "Save" buttons.

4. Click on the **Connection** tab and select **No connection required** from the **Connection method** list.
5. Click on the **Save** button to apply the settings.

The screenshot shows the configuration window for an Avaya Meridian M2250 PBX, now on the **Connection** tab. The sidebar on the left has the **Connection** tab selected. The main area is divided into three sections:


- Connection method:** A list of connection methods with "No connection required" selected and highlighted with a red box.
- Connection details:** A message stating "There are no options for this connection method".
- Connection options:** Contains checkboxes for "Binary data", "Timestamp data", and "Delay processing by" (with a text input field for "ms").

At the bottom right, there are "Cancel" and "Save" buttons, with the "Save" button highlighted with a red box.



Avaya Network Alchemy

These instructions help you configure your Avaya Network Alchemy to work with TIM Enterprise. 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 Enterprise

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 Enterprise. 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.



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 Enterprise\spool\data.{sitecode}** in the **Log Filename** field, replacing **{sitecode}** with the ID of the site you are logging. The site ID is displayed in the general properties of the site object, in the **Unique ID** field,

as shown below:

General settings

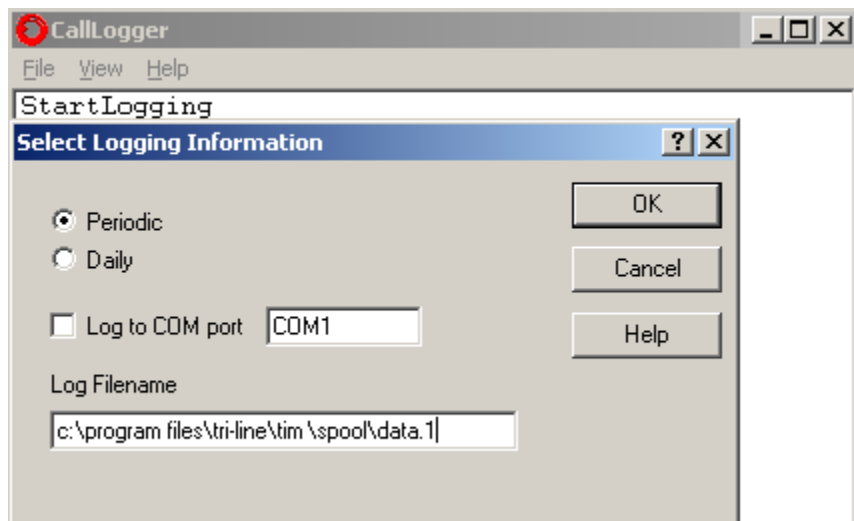
Name

Unique ID

Time zone

Broadcast CDRs from this PBX

- Click on the **OK** button to apply the settings.



Configuring TIM Enterprise

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

- Click on the **Directory** tab.
- Locate the PBX object you want to configure in the Directory, right-click on it and select **Properties**.
- A new window will open, displaying the general properties of your PBX object. Select **Avaya Network Alchemy** from the **Data format** list and tick the **Keep a local backup of data** box, as shown below:

Avaya Network Alchemy

General

General settings

Name: Avaya Network Alchemy
 Unique ID: 76433
 Time zone: 0

Broadcast CDRs from this PBX

Data backup

Keep a local backup of data

Backup location

Data format

- Avaya Communications Mana..
- Avaya EuroGeneris
- Avaya INDeX 9.1 Plus
- Avaya INDeX v7
- Avaya INDeX v9
- Avaya IP Office 6+
- Avaya IP Office
- Avaya Matra 65xx
- Avaya Meridian Option Series
- Avaya Network Alchemy**
- Avaya Norstar

Cancel Save

- Click on the **Connection** tab and select **No connection required** from the Connection method list.
- Click on the **Save** button to apply the settings.

Avaya Network Alchemy

Connection

Connection method

- Receive FTP transfers from PBX
- Establish TCP connection to PBX
- Listen for connections from PBX
- System DSN connection
- RADIUS connection
- SysLog connection
- No connection required**

Connection details

There are no options for this connection method

Connection options

- Binary data
- Timestamp data
- Delay processing by ms

Cancel **Save**

Avaya Norstar

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

Connection Type



TIM Enterprise 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 Enterprise



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 Enterprise. 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 Enterprise. 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 Enterprise

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

1. Click on the **Directory** tab.
2. Locate the PBX object you want to configure in the Directory, right-click on it and select **Properties**.
3. A new window will open, displaying the general properties of your PBX object. Select **Avaya BCM** from the **Data format** list and tick the **Keep a local backup of data** box, as shown below:

Avaya Norstar

General

General settings

Name: Avaya Norstar
 Unique ID: 76628
 Time zone: 0

Broadcast CDRs from this PBX

Data backup

Keep a local backup of data

Backup location

Data format

- Avaya Matra 65xx
- Avaya Meridian Option Series
- Avaya Network Alchemy
- Avaya BCM
- Avaya Tenovis i55
- AYCTelecom IPcts
- BT Inspiration
- BT Monarch
- BT Versatility
- Cisco UCM 5+
- Cisco UCM v4 DSN

Cancel Save

4. Click on the **Connection** tab and select **No connection required** from the Connection method list.
5. Click on the **Save** button to apply the settings.

Avaya Norstar

Connection

Connection method

- Receive FTP transfers from PBX
- Establish TCP connection to PBX
- Listen for connections from PBX
- System DSN connection
- RADIUS connection
- SysLog connection
- No connection required

Connection details

There are no options for this connection method

Connection options


- Binary data
- Timestamp data
- Delay processing by ms

Cancel **Save**


Avaya Tenovis

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

Connection Type

 TIM Enterprise establishes a serial connection with this PBX.

Support Files

 Avaya Tenovis i55.TDT

Required Tasks

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

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

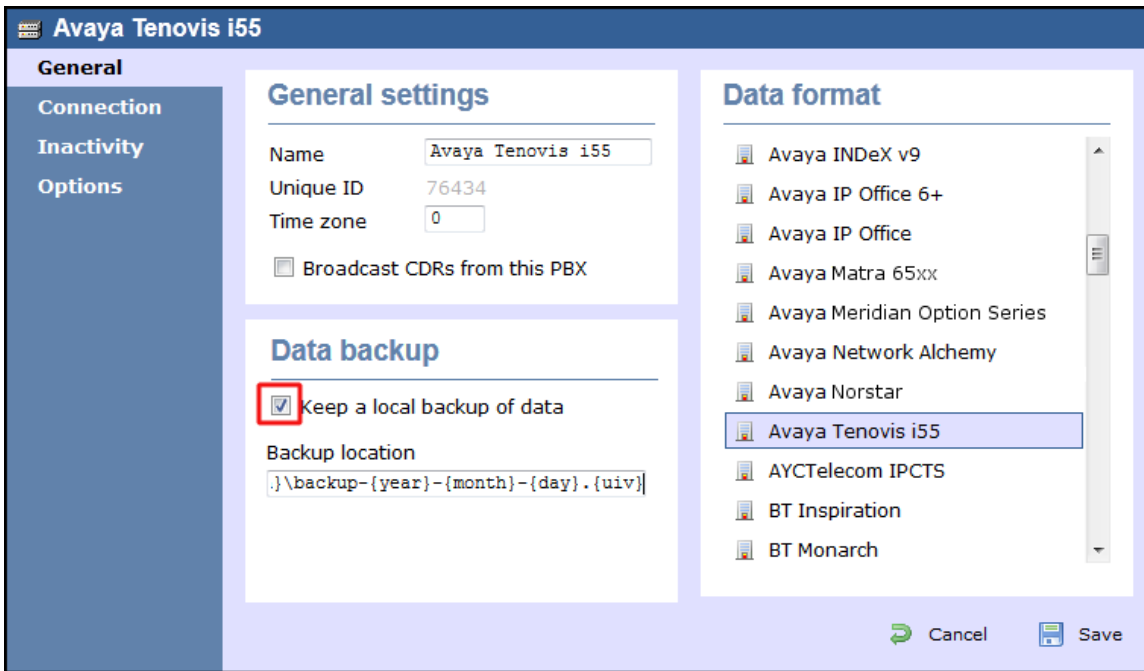
The Avaya Tenovis outputs its SMDR data via a serial connection. To collect the data from the serial port and send it to TIM Enterprise, you first need to install the [NetPBX](#) software. For setup instructions, click on the link below:

[Install and configure NetPBX](#)

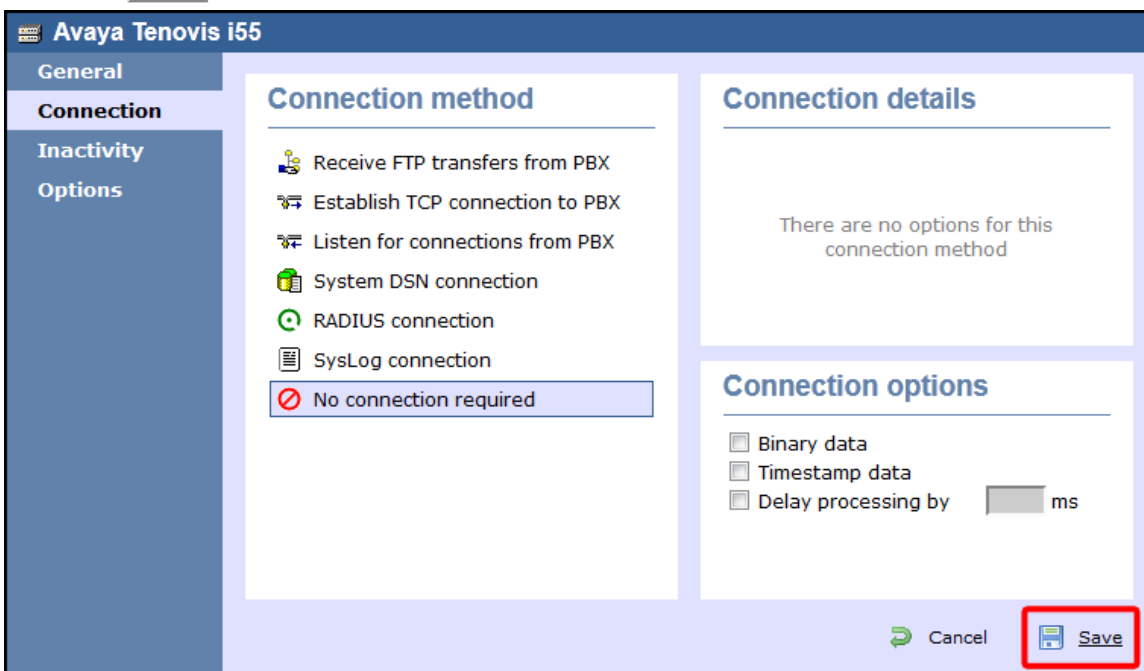
Configuring TIM Enterprise

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

1. Click on the **Directory** tab.
2. Locate the PBX object you want to configure in the Directory, right-click on it and select **Properties**.
3. A new window will open, displaying the general properties of your PBX object. Select **Avaya Tenovis i55** from the **Data format** list and tick the **Keep a local backup of data** box, as shown below:



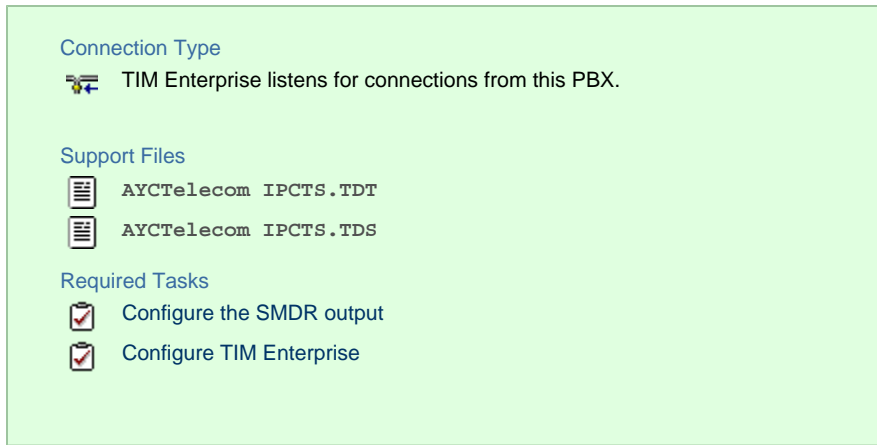
4. Click on the **Connection** tab and select **No connection required** from the Connection method list.
5. Click on the **Save** button to apply the settings.



AYCTelecom

AYCTelecom IPcts

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



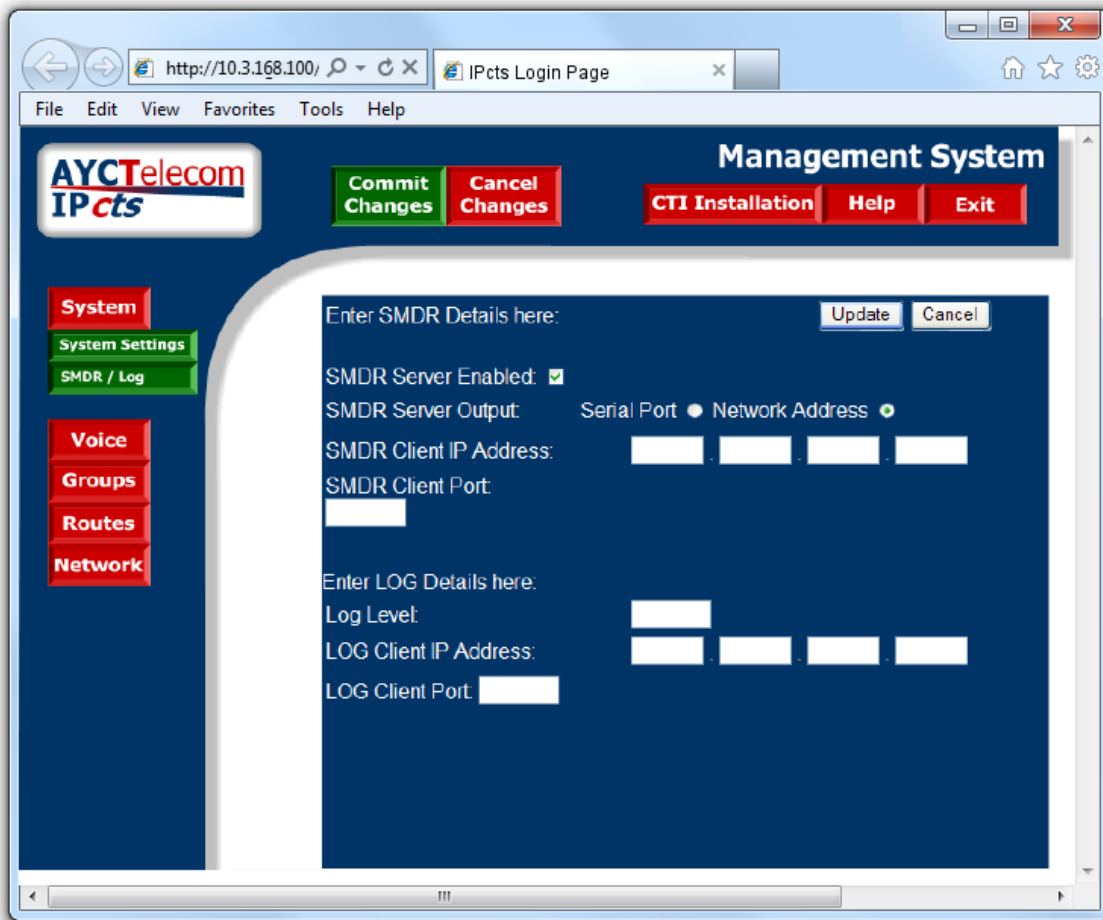
The screenshot shows a configuration page with a light green background. It is divided into three sections: 'Connection Type', 'Support Files', and 'Required Tasks'. Under 'Connection Type', there is a small icon and the text 'TIM Enterprise listens for connections from this PBX.'. Under 'Support Files', there are two file icons, each followed by the text 'AYCTelecom IPCTS.TDT' and 'AYCTelecom IPCTS.TDS' respectively. Under 'Required Tasks', there are two checkmarks, each followed by the text 'Configure the SMDR output' and 'Configure TIM Enterprise' respectively.

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 Enterprise.
 - **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 Enterprise

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

1. Click on the **Directory** tab.
2. Locate the PBX object you want to configure in the Directory, right-click on it and select **Properties**.
3. A new window will open, displaying the general properties of your PBX object. Select **AYCTelecom IPCTS** from the **Data format** list and tick the **Keep a local backup of data** box, as shown below:

AYCTelecom IPcts

General

General settings

Name:

Unique ID:

Time zone:

Broadcast CDRs from this PBX

Data backup

Keep a local backup of data

Backup location:

Data format

- Avaya Matra 65xx
- Avaya Meridian Option Series
- Avaya Network Alchemy
- Avaya Norstar
- Avaya Tenovis i55
- AYCTelecom IPcts**
- BT Inspiration
- BT Monarch
- BT Versatility
- Cisco UCM 5+
- Cisco UCM v4 DSN

Cancel Save

- Click on the **Connection** tab and select **Listen for connections from PBX** from the Connection method list.
- Leave the **Host** field blank.
- In the **Port** field, enter the TCP port that was configured on your AYCTelecom IPcts (e.g. **9000**).
- Click on the **Save** button to apply the settings.

AYCTelecom IPcts

Connection

Connection method

- Receive FTP transfers from PBX
- Establish TCP connection to PBX
- Listen for connections from PBX**
- System DSN connection
- RADIUS connection
- SysLog connection
- No connection required

Connection details

Host:

Port:

Connection options

- Binary data
- Timestamp data
- Delay processing by ms

Cancel **Save**


BT

BT Inspiration


These instructions help you configure your BT Inspiration 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 Enterprise establishes a serial connection with this PBX.

Support Files

 BT Inspiration.TDT

Required Tasks

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

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 Enterprise, you first need to install the NetPBX software. For setup instructions, click on the link below:

[Install and configure NetPBX](#)

Configuring TIM Enterprise

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

1. Click on the **Directory** tab.
2. Locate the PBX object you want to configure in the Directory, right-click on it and select **Properties**.
3. A new window will open, displaying the general properties of your PBX object. Select **BT Inspiration** from the **Data format** list and tick the **Keep a local backup of data** box, as shown below:

BT Inspiration

General

Connection
Inactivity
Options

General settings

Name:

Unique ID:

Time zone:

Broadcast CDRs from this PBX

Data backup

Keep a local backup of data

Backup location

Data format

- Avaya IP Office
- Avaya Tenovis i55
- AvayaNetworkAlchemy
- AYCTelecom IPCTS
- BT Inspiration
- BT Monarch
- BT Versatility
- Cisco UCM 5+
- Cisco UCM v4 DSN
- Cisco UCM v4 Transfer
- Cisco UCME - RADIUS

Cancel Save

4. Click on the **Connection** tab and select **No connection required** from the Connection method list.
5. Click on the **Save** button to apply the settings.

BT Inspiration

General
Connection
Inactivity
Options

Connection method

- Receive FTP transfers from PBX
- Establish TCP connection to PBX
- Listen for connections from PBX
- System DSN connection
- RADIUS connection
- SysLog connection
- No connection required

Connection details

There are no options for this connection method

Connection options

- Binary data
- Timestamp data
- Delay processing by ms

Cancel **Save**

BT Monarch

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

Connection Type
 TIM Enterprise establishes a serial connection with this PBX.

Support Files
 BT Monarch.TDT

Required Tasks

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

Configuring your SMDR output

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

Installing NetPBX

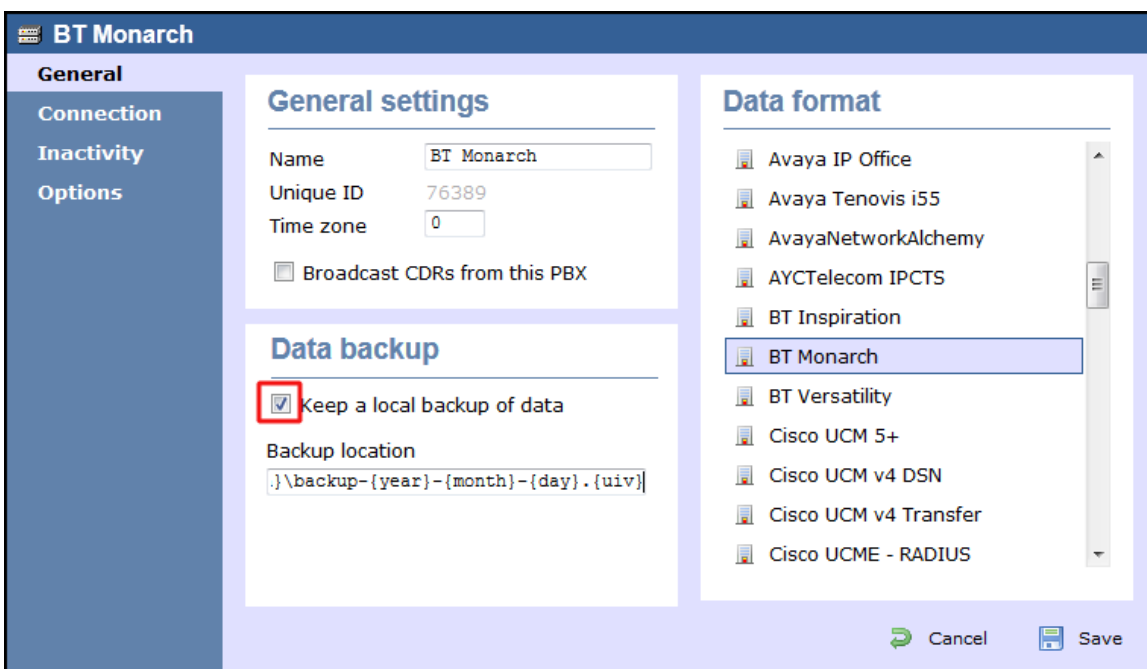
The BT Monarch phone system sends SMDR information via a serial connection. To collect the data from the serial port and send it to TIM Enterprise, you first need to install the [NetPBX](#) software. For setup instructions, click on the link below:

Install and configure NetPBX

Configuring TIM Enterprise

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

1. Click on the **Directory** tab.
2. Locate the PBX object you want to configure in the Directory, right-click on it and select **Properties**.
3. A new window will open, displaying the general properties of your PBX object. Select **BT Monarch** from the **Data format** list and tick the **Keep a local backup of data** box, as shown below:

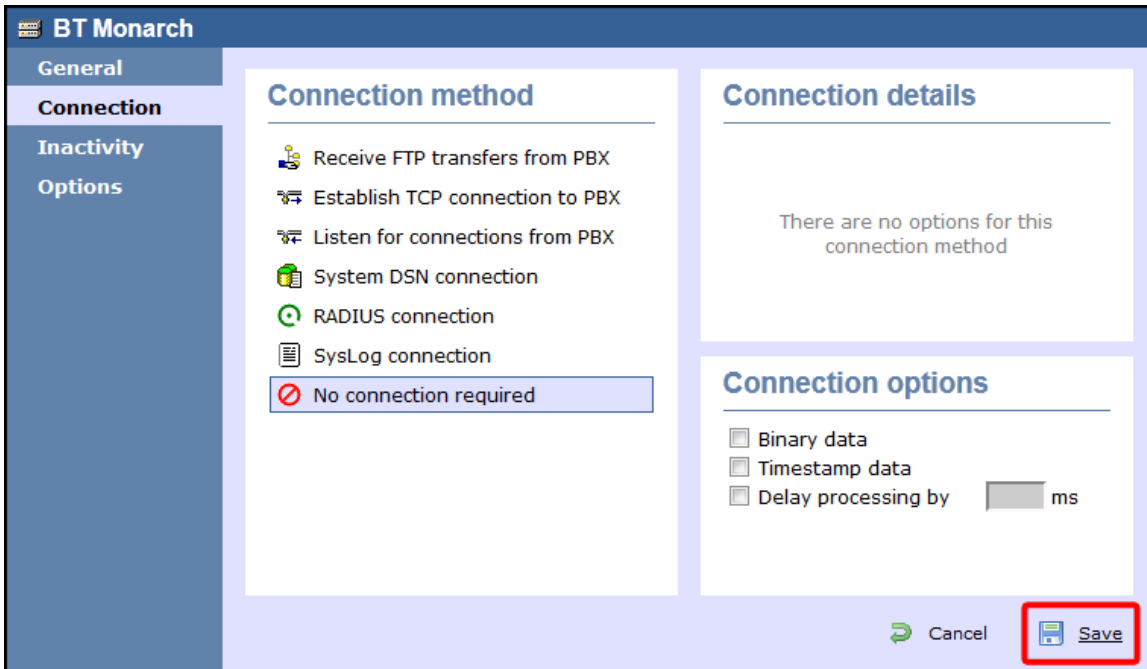


The screenshot shows the 'BT Monarch' configuration window. On the left is a navigation pane with 'General', 'Connection', 'Inactivity', and 'Options'. The main area is divided into three sections:

- General settings:** Name (BT Monarch), Unique ID (76389), Time zone (0), and a checkbox for 'Broadcast CDRs from this PBX'.
- Data backup:** A checkbox labeled 'Keep a local backup of data' is checked and highlighted with a red box. Below it is a text field for 'Backup location' containing the path: `.\backup-{year}-{month}-{day}. {uiv}`.
- Data format:** A list of PBX types with 'BT Monarch' selected and highlighted.

At the bottom right are 'Cancel' and 'Save' buttons.


- Click on the **Connection** tab and select **No connection required** from the **Connection method** list.
- Click on the **Save** button to apply the settings.





BT Pathway

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

Connection Type

 TIM Enterprise establishes a serial connection with this PBX.

Support Files

-  BT Pathway.TDT
-  BT Pathway.TDS

Required Tasks

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

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:

- From the programming position, press the phone setup key **P** and select **System programming**.
- Enter the PIN and select **System**.
- Select **Call logging** and choose **Call logging on**.

- 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 Enterprise, you first need to install the **NetPBX** software. For setup instructions, click on the link below:

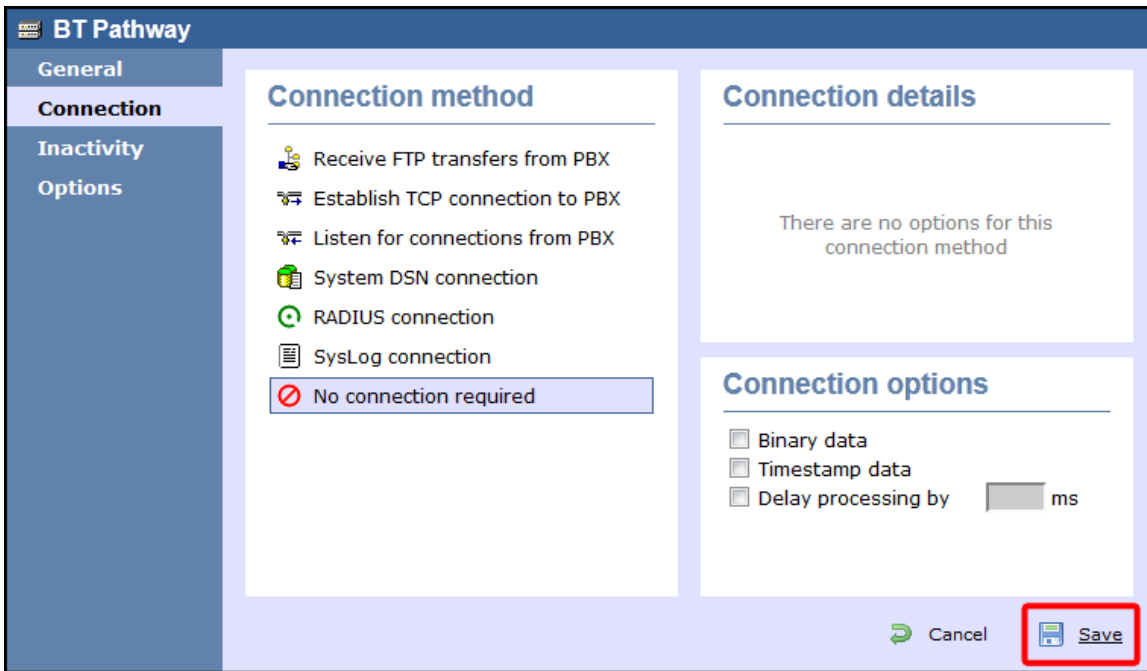
[Install and configure NetPBX](#)

Configuring TIM Enterprise

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

- Click on the **Directory** tab.
- Locate the PBX object you want to configure in the Directory, right-click on it and select **Properties**.
- A new window will open, displaying the general properties of your PBX object. Select **BT Pathway** from the **Data format** list and tick the **Keep a local backup of data** box, as shown below:

- Click on the **Connection** tab and select **No connection required** from the **Connection method** list.
- Click on the **Save** button to apply the settings.




BT Versatility

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

Connection Type

 TIM Enterprise establishes a serial connection with this PBX.

Support Files

 BT Versatility.TDT

Required Tasks

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

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 Enterprise:

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 Enterprise, you first need to install the NetPBX software. For setup instructions, click on the link below:

[Install and configure NetPBX](#)

Configuring TIM Enterprise

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

1. Click on the **Directory** tab.
2. Locate the PBX object you want to configure in the Director, right-click on it and select **Properties**.
3. A new window will open, displaying the general properties of your PBX object. Select **BT Versatility** from the **Data format** list and tick the **Keep a local backup of data** box, as shown below:

BT Versatility

General

General settings

Name:

Unique ID:

Time zone:

Broadcast CDRs from this PBX

Data backup

Keep a local backup of data

Backup location:

Data format

- AvayaNetworkAlchemy
- AYCTelecom IPCTS
- BT Inspiration
- BT Monarch
- BT Versatility
- Cisco UCM 5+
- Cisco UCM v4 DSN
- Cisco UCM v4 Transfer
- Cisco UCME - RADIUS
- Cisco UCME - SysLog
- Coral Flexicom 200

4. Click on the **Connection** tab and select **No connection required** from the Connection method list.
5. Click on the **Save** button to apply the settings.

BT Versatility

Connection

Connection method

- Receive FTP transfers from PBX
- Establish TCP connection to PBX
- Listen for connections from PBX
- System DSN connection
- RADIUS connection
- SysLog connection
- No connection required

Connection details

There are no options for this connection method


Connection options

- Binary data
- Timestamp data
- Delay processing by ms




Cisco

Cisco UCM (below v5)

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

Connection Type
 TIM Enterprise 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 Enterprise

Configuring the 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 enterprise 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 Enterprise 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 Enterprise

To enable TIM Enterprise 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:

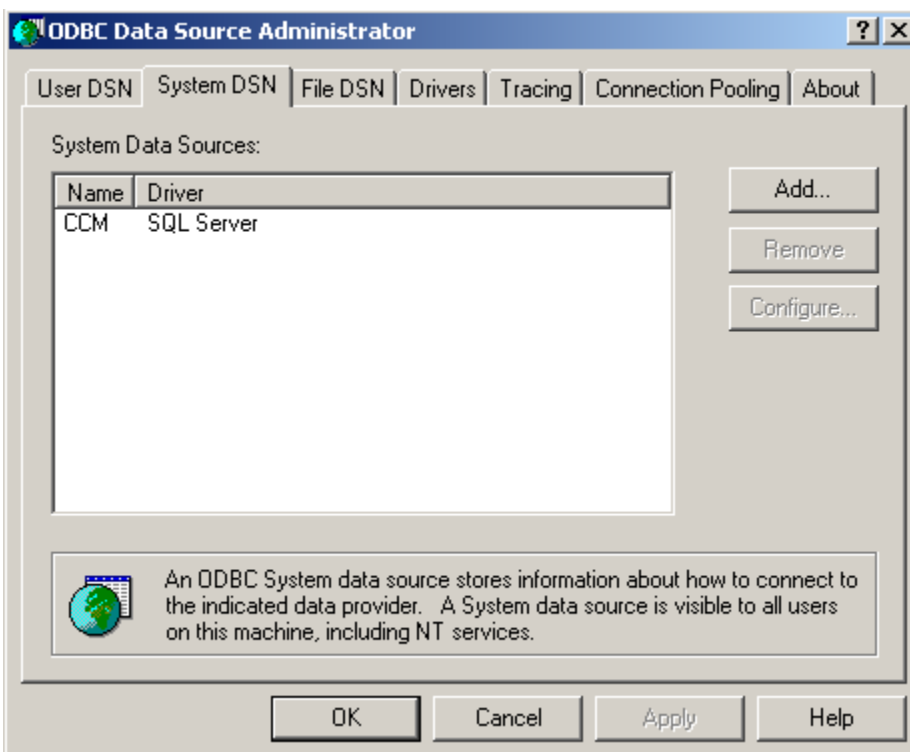
1. Open Windows Control Panel
2. Double click on the `Administrative tools` icon
3. Double click on the `Data Sources (ODBC)` icon to open the `ODBC Data Source Administrator` window



For a 64 bit system, access the ODBC Data Source Administrator from the following location `C:\Windows\System32\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 Enterprise 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

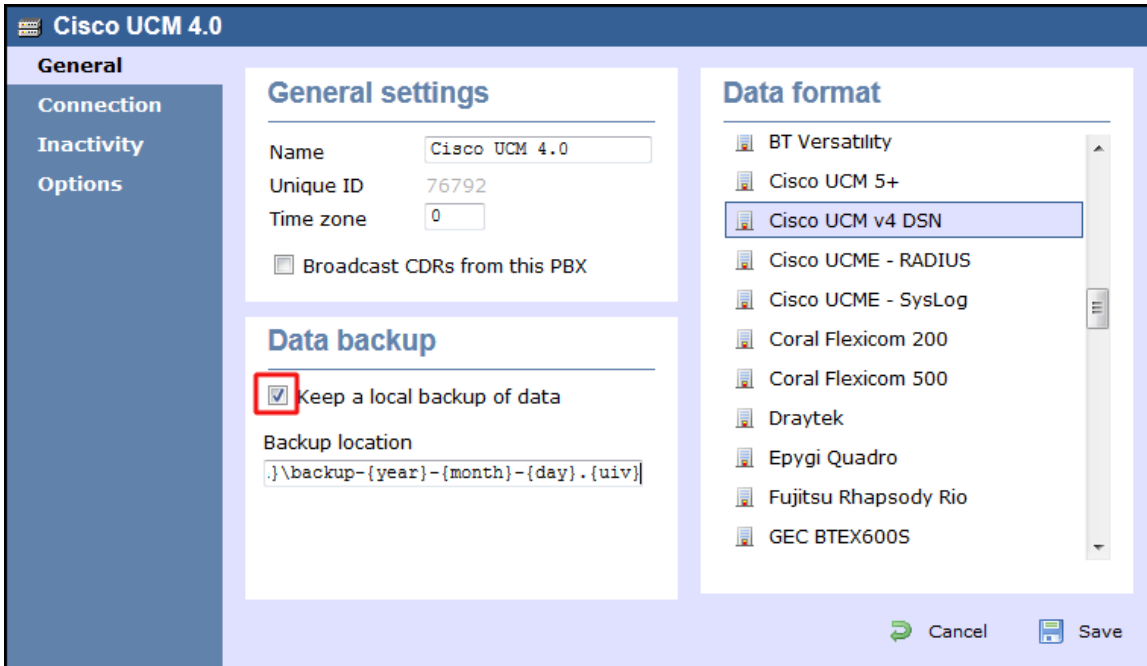
An example of an ODBC setup is shown below:



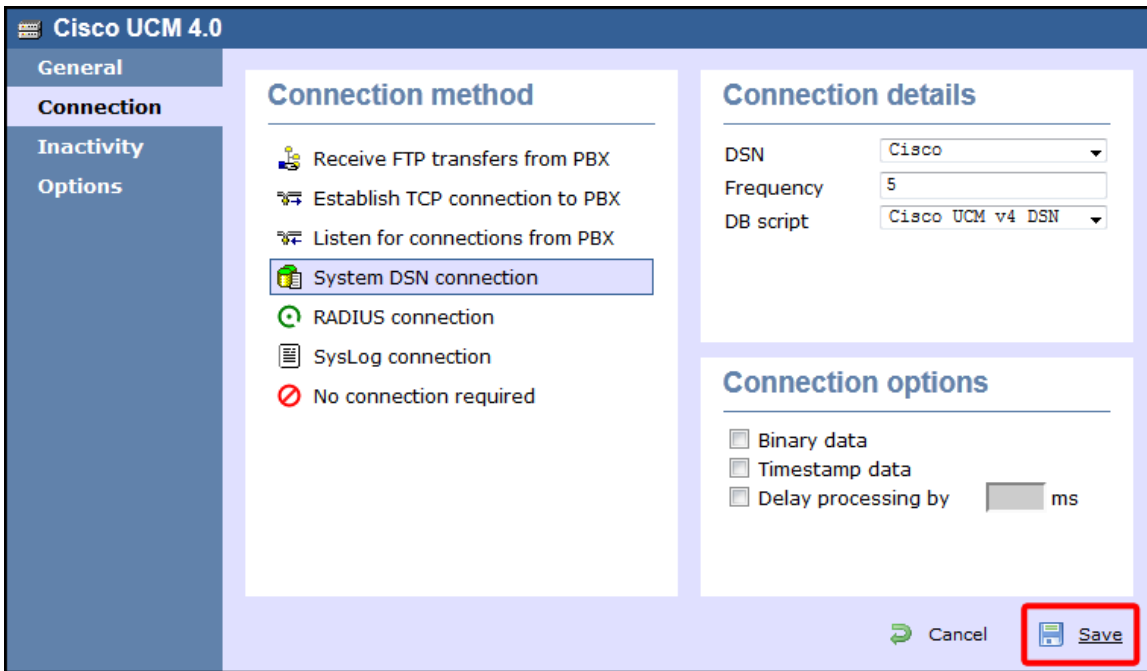
Configuring TIM Enterprise

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

1. Click on the **Directory** tab.
2. Locate the PBX object you want to configure in the Directory, right-click on it and select **Properties**.
3. A new window will open, displaying the general properties of your PBX object. Select **Cisco UCM v4 DSN** from the **Data format** list and tick the **Keep a local backup of data** box, as shown below:



4. Click on the **Connection** tab and select **Connect to a system DSN** from the **Connection** method list.
5. The DSN connection details should be picked up automatically.
6. Click on the **Save** button to apply the changes.



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 Enterprise. Contact your system maintainer if you are not familiar with the configuration of your PBX.

Connection Type

TIM Enterprise 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 Enterprise to receive data by FTP
- Set up FTP/SFTP in Cisco UCM

Create Cisco Application User for AXL sync

To enable TIM Enterprise 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. Click **Add New** to create a new user:

User ID: `TIM_AXL`

Password: `Clsc0`

Confirm Password: `Clsc0`

Application User Information

User ID*

Password

Confirm Password

Digest Credentials

Confirm Digest Credentials


Presence Group*

Accept Presence Subscription

Accept Out-of-dialog REFER



Accept Unsolicited Notification

Accept Replaces Header

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

3. Scroll down to the **Permissions Information** section and click **Add to User Group**.
4. 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.

User Group (1 - 1 of 1)

Find User Group where Name begins with **Find** **Clear Filter**  

<input type="checkbox"/>	
<input checked="" type="checkbox"/>	Standard TabSync User

Select All **Clear All** **Add Selected** **Close**

5. Click **Save** to apply the settings.

Configuring Cisco AXL sync

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

1. Click on the **Directory** tab.
2. Go to the Directory level where you want to synch the UCM files and add a new **Directory Sync** object. Enter a name for the object and click on the **Add** button, as shown below:

Add new object

Organisation unit

- Channel Group
- Cost Centre
- Division
- Group
- Reporting Collection
- Site

Other object

- Alarm
- Channel
- PBX
- Magic Box
- User
- Display Board
- Question
- Billing Charge
- Stats Collector
- LCR Plan
- Tariff Modifier
- Web User
- Directory Sync

Provides the ability to synchronise portions of the Directory with third-party systems

Enter a name for the object

Cancel
 Add

3. Left-click on the newly-created object and select **Properties** .
4. In the **Directory type** drop-down list, select **Cisco UCM**.
5. In the **Host name** field, enter the IP address of the UCM Publisher node.
6. In the **Host port** field, enter the port number of the UCM Publisher node.
7. In the **Username** field, enter the username of the Cisco Application User you configured in the previous section, e.g. **TIM_AXL**.

Cisco AXL

General

Options

General settings

Name

Directory type

Connection options

Enter the IP address and port of the secure web interface of your UCM

Host name

Host port

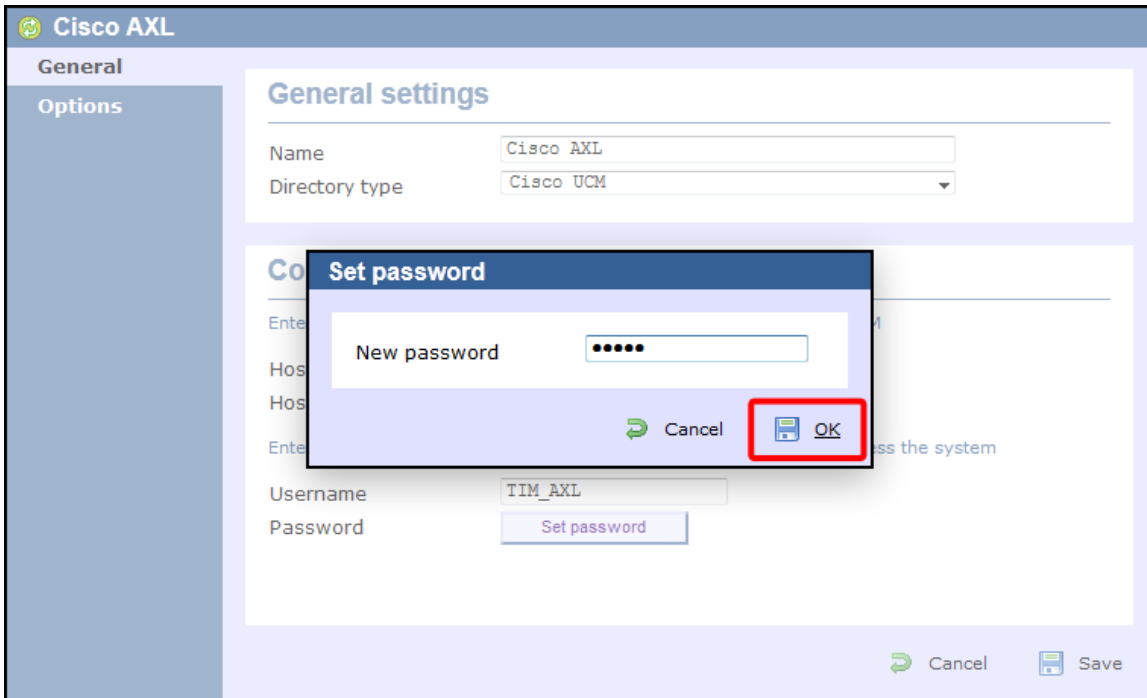
Enter the login details of an Application User that is authorised to access the system

Username

Password

Cancel
 Save

- Click **Set password** and enter the password configured in the previous section, e.g. `Cisco`.



- Click on the **Save** button to apply the changes.

Configuring TIM Enterprise to receive data by FTP

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

- Click on the **Directory** tab.
- Locate the PBX object you want to configure in the Directory, right-click on it and select **Properties**.
- A new window will open, displaying the general properties of your PBX object. Select **Cisco UCM 5+** from the **Data format** list and tick the **Keep a local backup of data** box, as shown below:

The screenshot shows the Cisco UCM Administration console. On the left is a navigation menu with 'General' selected. The main area is divided into two sections: 'General settings' and 'Data format'. In 'General settings', the 'Name' field contains 'Cisco UCM', 'Unique ID' is '76793', and 'Time zone' is '0'. There is a checkbox for 'Broadcast CDRs from this PBX' which is unchecked. In the 'Data format' section, a list of data formats is shown, with 'Cisco UCM 5+' selected. Below the list, there is a checkbox for 'Keep a local backup of data' which is checked. The 'Backup location' field contains the path '{app}\backup\Cisco UCME\{year}\{mor.'. At the bottom right, there are 'Cancel' and 'Save' buttons.

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

The screenshot shows the Cisco UCM Administration console with the 'Connection' tab selected. The 'Connection method' section lists several options, with 'Receive FTP transfers from PBX' selected. Other options include 'Establish TCP connection to PBX', 'Listen for connections from PBX', 'System DSN connection', 'RADIUS connection', 'SysLog connection', and 'No connection required'. The 'Connection details' section shows the 'Username' field with 'TIM' and the 'Password' field with masked characters. There is a checkbox for 'Use SFTP protocol' which is unchecked. The 'Connection options' section has checkboxes for 'Binary data' and 'Timestamp data', both unchecked, and a 'Delay processing by' field with a value of 'ms'. At the bottom right, there are 'Cancel' and 'Save' buttons, with the 'Save' button highlighted by a red box.

Set up FTP/SFTP in Cisco UCM

You will need to configure your Cisco UCM to send the CDR data to TIM Enterprise. 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**.

- Choose your UCM node from the `server` drop-down list.
- Select `Cisco Call Manager` from the `Service` drop-down list.
- 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.

System	
CDR Enabled Flag *	True
CDR Log Calls with Zero Duration Flag *	True
Digit Analysis Complexity *	StandardAnalysis

- 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.
- Click on the `Save` button.
- 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 Enterprise.

User Name: Enter the user name for FTP/SFTP transfers you set up in TIM Enterprise (e.g. `TIM`)

Password: Enter the password for the FTP account you set up in TIM Enterprise (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`.

Alarm Trace Tools Snmp Help

CDR Management

Billing Application Server Parameters

Host Name / IP Address*	192.168.0.22
User Name*	TIM
Password*	••••••
Protocol*	FTP
Directory Path*	/
Resend on Failure	<input type="checkbox"/>

- 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 Enterprise. Contact your system maintainer if you are not familiar with the configuration of your PBX.

Connection Type



TIM Enterprise 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 Enterprise to capture RADIUS packets

Configuring Cisco AXL sync

Follow the steps below to configure TIM Enterprise to synchronise with the directory of your your Cisco UCME:

1. Click on the **Directory** tab.
2. Go to the Directory level where you want to sync the UCME files and add a new **Directory Sync** object. Enter a name for the object and click on the **Add** button, as shown below:

Add new object

Organisation unit

- Channel Group
- Cost Centre
- Division
- Group
- Reporting Collection
- Site

Other object

- Alarm
- Channel
- PBX
- Magic Box
- User
- Display Board
- Question
- Billing Charge
- Stats Collector
- LCR Plan
- Tariff Modifier
- Web User
- Directory Sync

Provides the ability to synchronise portions of the Directory with third-party systems

Enter a name for the object

Cancel Add

3. Left-click on the newly-created object and select **Properties** .
4. In the **Directory type** drop-down list, select **Cisco UCME**.
5. In the **Host name** field, enter the IP address of your UCME.
6. In the **Host 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.

Cisco AXL

General

Options

General settings

Name

Directory type

Connection options

Enter the IP address and port of the IOS interface of your UCME

Host name

Host port

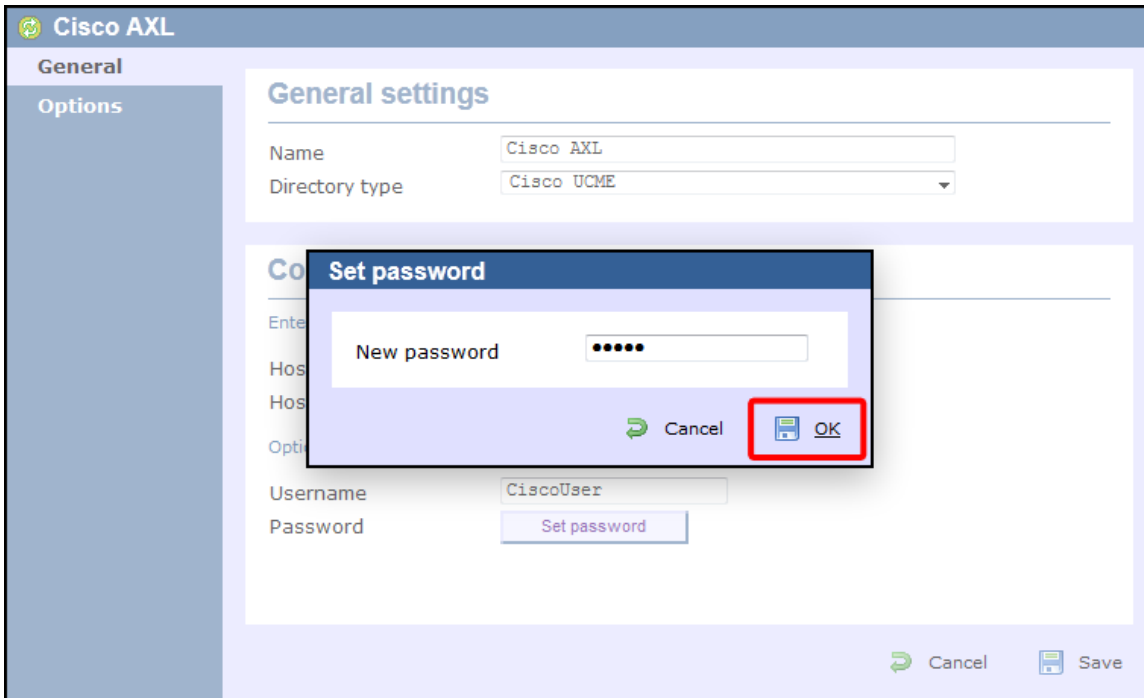
Optionally, enter a username and password to access IOS

Username

Password

Cancel Save

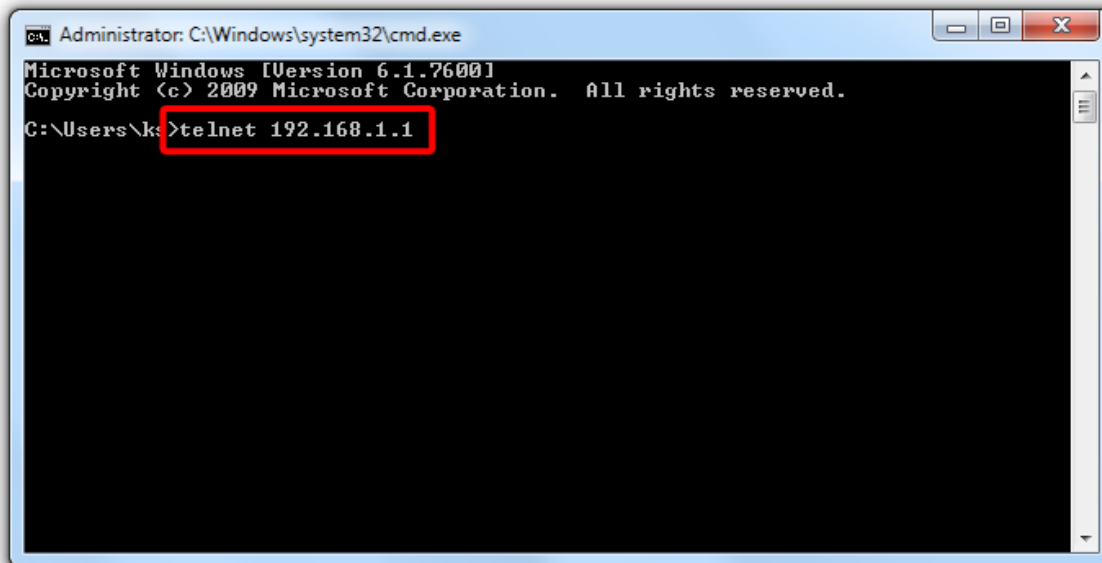
8. Click on **Set password** button and enter the password of the IOS login that can perform synchronisation.



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 Enterprise:

Step	IOS commands	Description
1	enable	Causes the UCME to enter EXEC mode. Type your EXEC password if requested

2	<code>conf t</code>	Enters the global configuration mode
3	<code>aaa new-model</code>	Enables aaa accounting mode
	<code>aaa accounting connection h323 start-stop group RADIUS</code>	
	<code>gw-accounting aaa</code>	
	<code>acct-template callhistory-detail</code>	
4	<code>RADIUS-server host 192.168.0.1 auth-port 0 acct-port 1612</code>	Specifies the IP address and port of TIM Enterprise's RADIUS, to which CDR data will be sent, e.g. <code>192.168.0.1:1612</code>
5	<code>RADIUS-server key C1sco</code>	Specifies a RADIUS authentication secret that will be used by TIM Enterprise (configured in the next section), e.g. <code>C1sco</code>
6	<code>RADIUS-server vsa send accounting</code>	Enables VSA events
7	<code>end</code>	Exits configuration mode
8	<code>wr</code>	Saves the changes




Multi-site configuration

If you need to send the data to more than one server, such as TIM Enterprise 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	<code>enable</code>	Causes the UCME to enter EXEC mode. Type your EXEC password if requested
2	<code>conf t</code>	Enters the global configuration mode
3	<code>aaa new-model</code>	Enables aaa accounting mode
4	<code>aaa accounting update newinfo</code>	
5	<code>radius-server vsa send accounting</code>	Enables VSA events
6	<code>gw-accounting aaa</code>	Enables aaa accounting
	<code>acct-template callhistory-detail</code>	

	<code>exit</code>	
7	<code>radius server SITE_NAME</code>	Configures the call accounting for each separate site
	<code>address ipv4 SITE_IP acct-port 1612</code>	Specifies the IP address and port of TIM Enterprise's RADIUS, to which CDR data will be sent, e.g. <code>192.168.0.1:1612</code>
	<code>key SITE_KEY</code>	Specifies a RADIUS authentication secret that will be used by TIM Enterprise (configured in the next section), e.g. <code>Clisco</code>
	<code>exit</code>	Exits current site configuration
<div style="background-color: #e1f5fe; padding: 10px; border: 1px solid #ccc;"> <p> Repeat step 7 for each individual site</p> </div>		
8	<code>aaa group server radius SITE_NAME</code>	Configures a specified aaa server group
	<code>server name SITE_NAME</code>	Specifies a RADIUS server to use for this aaa group
	<code>exit</code>	Exits current site configuration
<div style="background-color: #e1f5fe; padding: 10px; border: 1px solid #ccc;"> <p> Repeat step 8 for each individual site</p> </div>		
9	<code>aaa accounting connection h323</code>	Configures the aaa connection information
	<code>action-type start-stop</code>	Setting the action type will send RADIUS information when the call starts and stops
	<code>broadcast</code>	Enabling broadcast means that all the aaa groups will be sent RADIUS data
10	<code>group SITE_NAME</code>	Specifies the aaa group(s) that the accounting system will send RADIUS data to
<div style="background-color: #e1f5fe; padding: 10px; border: 1px solid #ccc;"> <p> Repeat step 10 for each system</p> </div>		
11	<code>end</code>	Exits configuration mode
12	<code>wr</code>	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

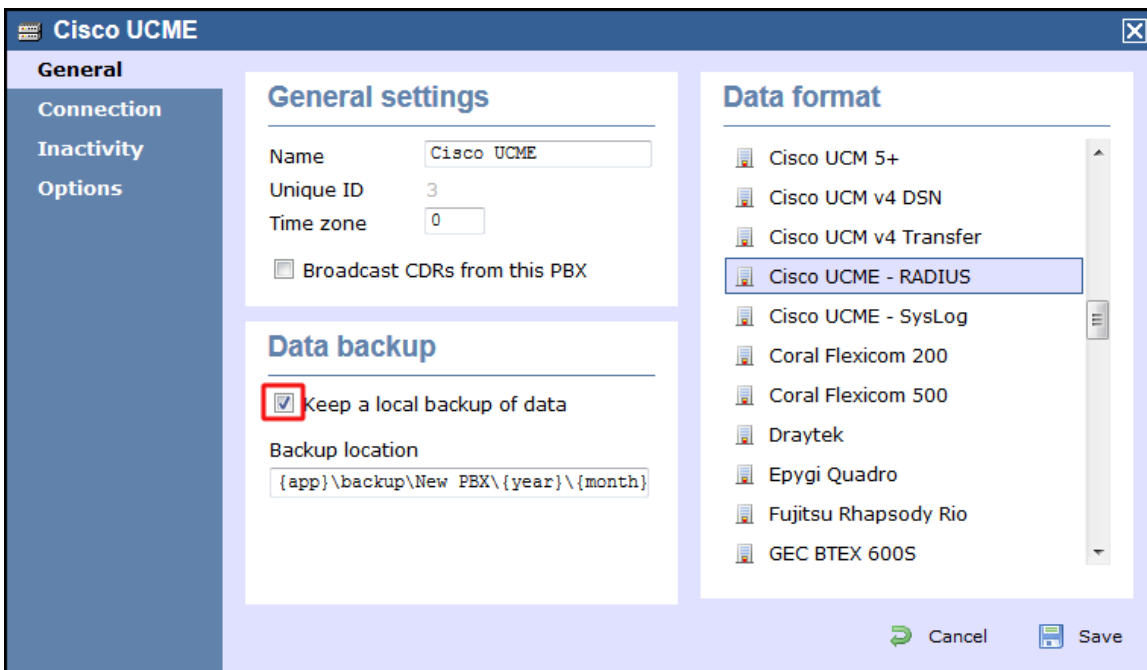
To force RADIUS to use the IP address of a specified interface for all outgoing RADIUS packets, use the `ip radius source-interface` command in global configuration mode. If you don't wish to use the IP address of a specified interface, use the `no` form of this command.

Step	IOS Command
1	<code>ip radius source-interface SUBINTERFACE_NAME</code>
2	<code>no ip radius source-interface</code>

Configuring TIM Enterprise to capture RADIUS packets

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

1. Click on the **Directory** tab.
2. Locate the PBX object you want to configure in the Directory, right-click on it and select **Properties**.
3. A new window will open, displaying the general properties of your PBX object. Select **Cisco UCME - RADIUS** from the **Data format** list and tick the **Keep a local backup of data** box, as shown below:



4. Click on the **Connection** tab and select **RADIUS connection** from the **Connection method** list.
5. In the **Client IP** field, enter the IP address of your UCME.
6. In the **Secret key** field, enter the RADIUS-server key you configured on your UCME in the section above, e.g. **C1sco**.

The screenshot shows the Cisco UCME configuration interface. On the left is a navigation menu with 'General', 'Connection', 'Inactivity', and 'Options'. The main area is divided into three sections: 'Connection method', 'Connection details', and 'Connection options'. In 'Connection method', 'RADIUS connection' is selected. In 'Connection details', 'Client IP' is '192.168.1.1' and 'Secret key' is masked. In 'Connection options', 'Binary data', 'Timestamp data', and 'Delay processing by' are all unchecked. At the bottom right, the 'Save' button is highlighted with a red box.

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 Enterprise. Contact your system maintainer if you are not familiar with the configuration of your PBX.

The screenshot shows a configuration window with a light green background. It is divided into three sections: 'Connection Type', 'Support Files', and 'Required Tasks'. Under 'Connection Type', there is a SysLog icon and the text 'TIM Enterprise captures SysLog packets from this PBX.'. Under 'Support Files', there are two entries: 'Cisco UCME - SysLog.TDT' and 'Cisco UCME - SysLog.TDS'. Under 'Required Tasks', there are three checked items: 'Configure Cisco AXL sync', 'Configure UCME to send SysLog events', and 'Configure TIM Enterprise to capture SysLog packets'.

Configuring Cisco AXL sync

Follow the steps below to configure TIM Enterprise to synchronise with the directory of your Cisco UCME:

1. Click on the **Directory** tab.
2. Go to the Directory level where you want to sync the UCME files and add a new **Directory Sync** object. Enter a name for the object and click on the **Add** button, as shown below:

Add new object

Organisation unit

- Channel Group
- Cost Centre
- Division
- Group
- Reporting Collection
- Site

Other object

- Alarm
- Channel
- PBX
- Magic Box
- User
- Display Board
- Question
- Billing Charge
- Stats Collector
- LCR Plan
- Tariff Modifier
- Web User
- Directory Sync

Provides the ability to synchronise portions of the Directory with third-party systems

Enter a name for the object

Cancel Add

3. Left-click on the newly-created object and select **Properties** .
4. In the **Directory type** drop-down list, select **Cisco UCME**.
5. In the **Host name** field, enter the IP address of your UCME.
6. In the **Host 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.

Cisco AXL

General

Options

General settings

Name

Directory type

Connection options

Enter the IP address and port of the IOS interface of your UCME

Host name

Host port

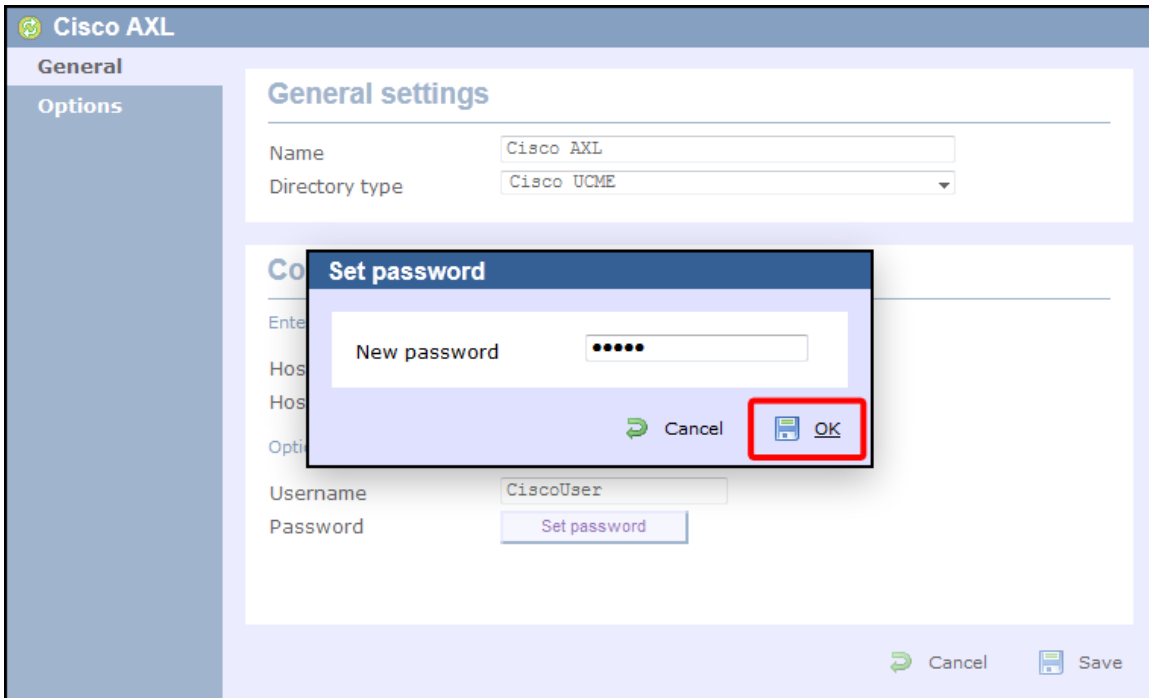
Optionally, enter a username and password to access IOS

Username

Password

Cancel Save

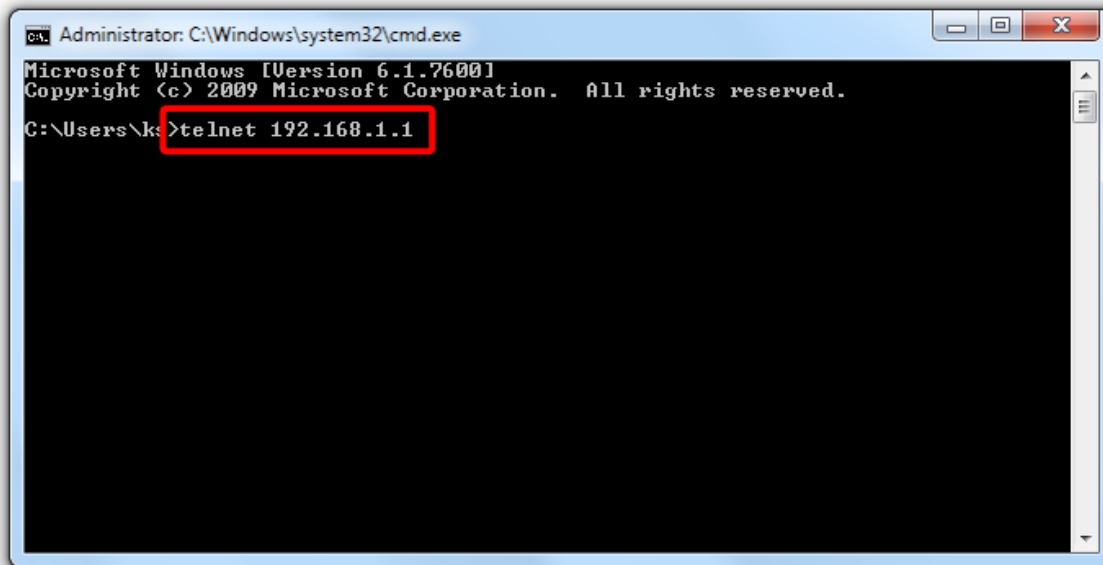
8. Click on **Set password** button and enter the password of the IOS login that can perform synchronisation.



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 Enterprise:

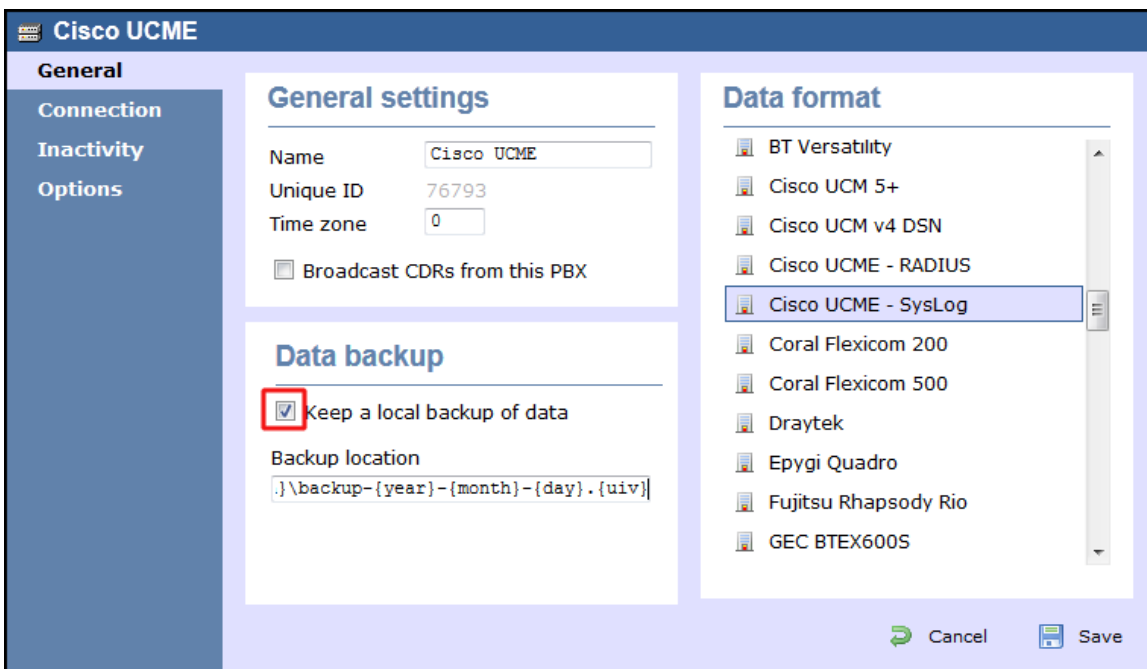
Step	IOS commands	Description
1	<code>enable</code>	Causes the UCME to enter EXEC mode. Type your EXEC password if requested
2	<code>conf t</code>	Enters the global configuration mode

3	<code>aaa new-model</code>	Enables aaa accounting mode
	<code>aaa accounting connection h323 start-stop group SysLog</code>	
	<code>gw-accounting syslog</code>	
	<code>acct-template callhistory-detail</code>	
4	<code>logging 192.168.0.1</code>	Specifies the IP address of TIM Enterprises's SysLog server, to which CDR data will be sent, e.g. <code>192.168.0.1</code>
5	<code>end</code>	Exits configuration mode
6	<code>wr</code>	Saves changes

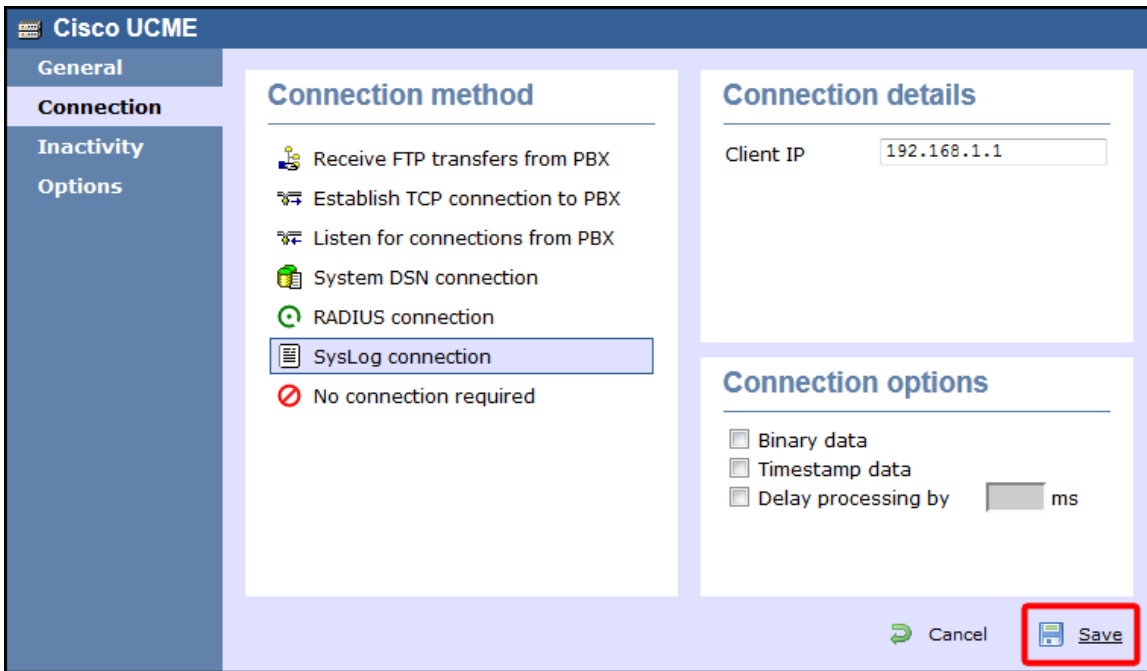
Configuring TIM Enterprise to capture SysLog packets

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

1. Click on the **Directory** tab.
2. Locate the PBX object you want to configure in the Directory, right-click on it and select **Properties**.
3. A new window will open, displaying the general properties of your PBX object. Select **Cisco UCME - SysLog** from the **Data format** list and tick the **Keep a local backup of data** box, as shown below:



4. Click on the **Connection** tab and select **SysLog connection** from the **Connection method** list.
5. In the **Client IP** field, enter the IP address of your 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 Enterprise. Contact your system maintainer if you are not familiar with the configuration of your PBX.

Connection Type

- TIM Enterprise captures SysLog packets from this PBX.

Support Files

- Draytek.TDT
- Draytek.TDS

Required Tasks

- Configure your router
- Configure TIM Enterprise

Configuring your router

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

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

System Maintenance >> SysLog / Mail Alert Setup

SysLog / Mail Alert Setup

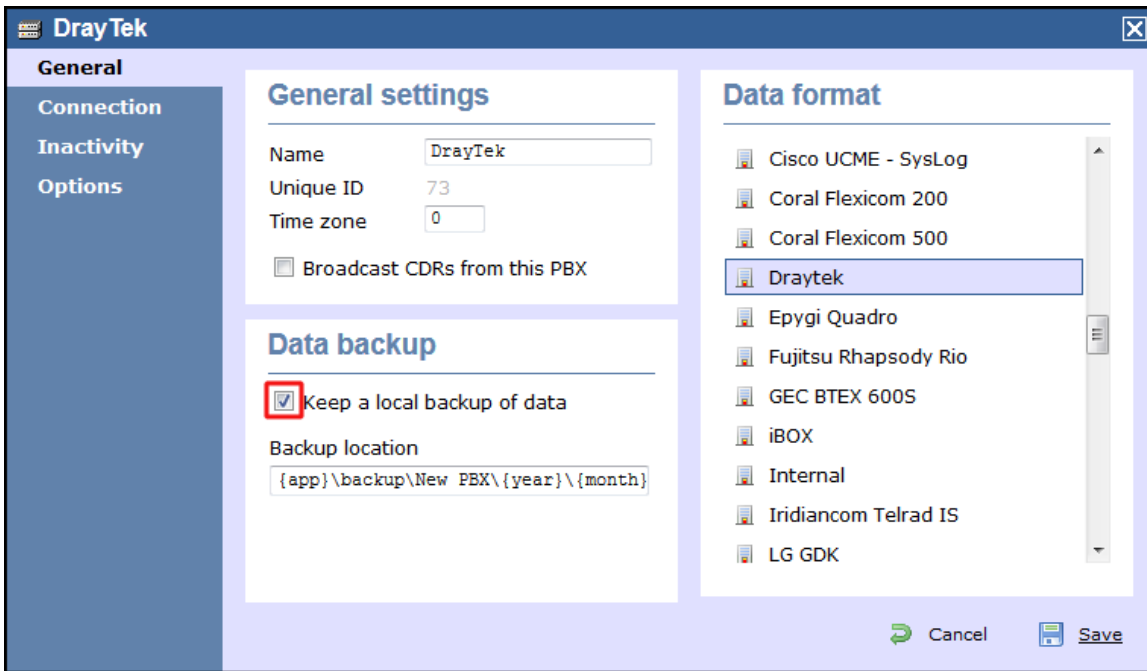
<p>SysLog Access Setup</p> <p><input checked="" type="checkbox"/> Enable</p> <p>Syslog Save to:</p> <p><input checked="" type="checkbox"/> Syslog Server</p> <p><input type="checkbox"/> USB Disk</p> <p>Router Name <input type="text"/></p> <p>Server IP Address <input type="text" value="192.168.1.10"/></p> <p>Destination Port <input type="text" value="514"/></p> <p>Enable syslog message:</p> <p><input type="checkbox"/> Firewall Log</p> <p><input type="checkbox"/> VPN Log</p> <p><input type="checkbox"/> User Access Log</p> <p><input checked="" type="checkbox"/> Call Log</p> <p><input type="checkbox"/> WAN Log</p> <p><input type="checkbox"/> Router/DSL information</p>	<p>Mail Alert Setup</p> <p><input type="checkbox"/> Enable <input type="button" value="Send a test e-mail"/></p> <p>SMTP Server <input type="text"/></p> <p>Mail To <input type="text"/></p> <p>Return-Path <input type="text"/></p> <p><input type="checkbox"/> Authentication</p> <p>User Name <input type="text"/></p> <p>Password <input type="text"/></p> <p>Enable E-Mail Alert:</p> <p><input checked="" type="checkbox"/> DoS Attack</p> <p><input checked="" type="checkbox"/> IM-P2P</p>
---	---

2. Check the **Enable** box to activate the SysLog function.
3. Check the **Syslog Server** box to save the logs directly to the server.
4. Enter the IP address of TIM Enterprise'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.

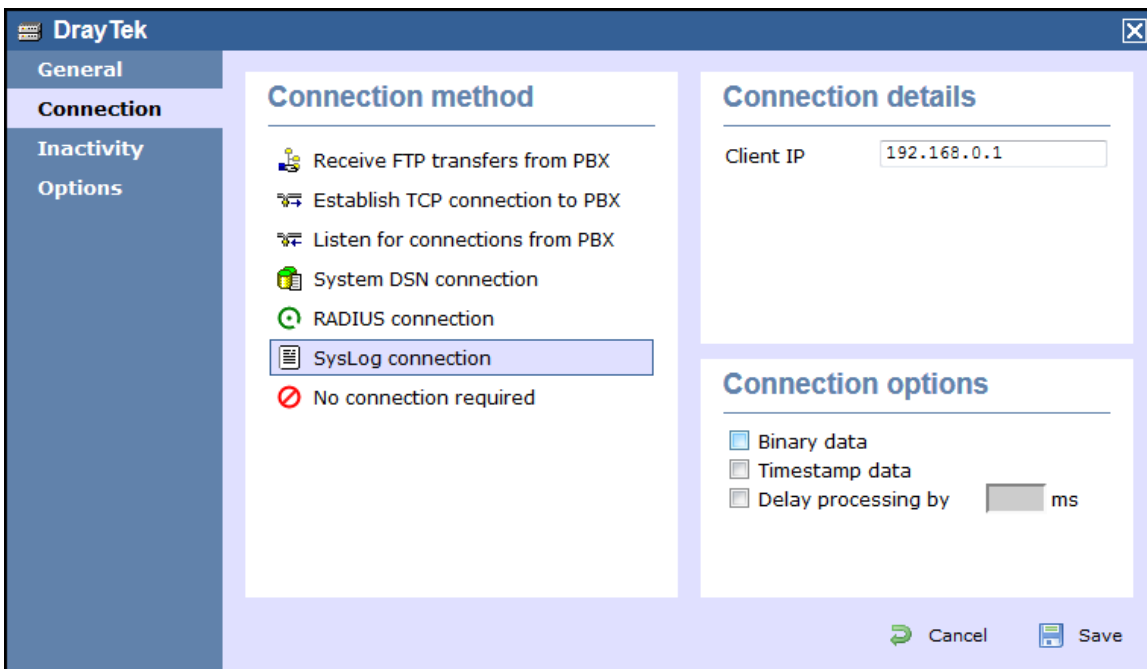
Configuring TIM Enterprise

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

1. Log in to TIM Enterprise and click on the **Directory** tab.
2. Locate the PBX object you want to configure in the Directory, right-click on it and select **Properties**.
3. A new window will open displaying the general properties of your PBX object. Select **Draytek** from the **Data format** list and tick the **Keep a local backup of data** box, as shown below:



- Click on the **Connection** tab and select **SysLog connection** from the Connection method list.
- In the **Client IP** field, enter the IP address of your DrayTek router.



- 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 Enterprise. Contact your system maintainer if you are not familiar with the configuration of your PBX.

Connection Type

 TIM Enterprise establishes a serial connection with this PBX.

Support Files

 Fujitsu Rhapsody Rio.TDT

Required Tasks

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

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 Enterprise, you first need to install the NetPBX software. For setup instructions, click on the link below:

[Install and configure NetPBX](#)

Configuring TIM Enterprise

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

1. Click on the **Directory** tab.
2. Locate the PBX object you want to configure in the Directory, right-click on it and select **Properties**.
3. A new window will open, displaying the general properties of your PBX object. Select **Fujitsu Rhapsody Rio** from the **Data format** list and tick the **Keep a local backup of data** box, as shown below:

Fujitsu Rhapsody Rio

General

General settings

Name: Fujitsu Rhapsody Rio
 Unique ID: 76406
 Time zone: 0
 Broadcast CDRs from this PBX

Data backup

Keep a local backup of data
 Backup location: .\backup-{year}-{month}-{day}.{uiv}

Data format

- Cisco UCME - SysLog
- Coral Flexicom 200
- Coral Flexicom 500
- Draytek
- Epygi Quadro
- Fujitsu Rhapsody Rio**
- GEC BTEX600S
- iBOX
- Internal
- Iridiancom Telrad IS
- LG IP LDK

Cancel Save

- Click on the **Connection** tab and select **No connection required** from the Connection method list.
- Click on the **Save** button to apply the settings.

Fujitsu Rhapsody Rio

Connection

Connection method

- Receive FTP transfers from PBX
- Establish TCP connection to PBX
- Listen for connections from PBX
- System DSN connection
- RADIUS connection
- SysLog connection
- No connection required**

Connection details

There are no options for this connection method

Connection options

- Binary data
- Timestamp data
- Delay processing by ms


Cancel **Save**

GEC


GEC BTEX

These instructions help you configure your GEC BTEX 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 Enterprise establishes a serial connection with this PBX.

Support Files

 GEC BTEX 600S.TDT

Required Tasks

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

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 Enterprise.

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

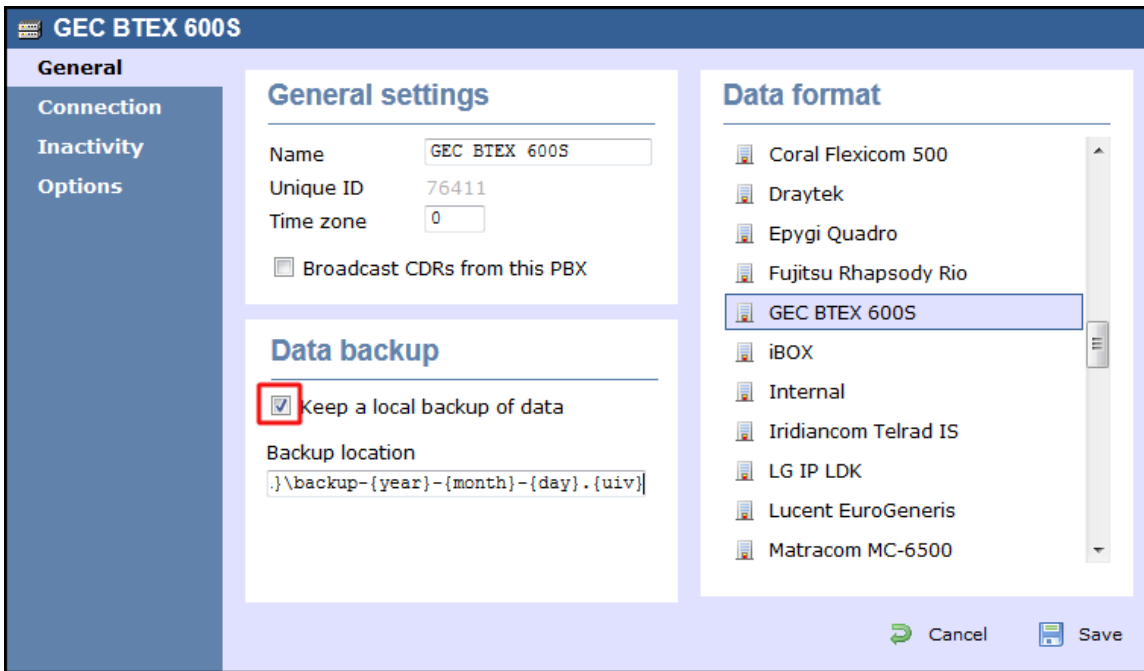
To collect the call logging data from the serial port and send it to TIM Enterprise, you first need to install the NetPBX software. For setup instructions, click on the link below:

[Install and configure NetPBX](#)

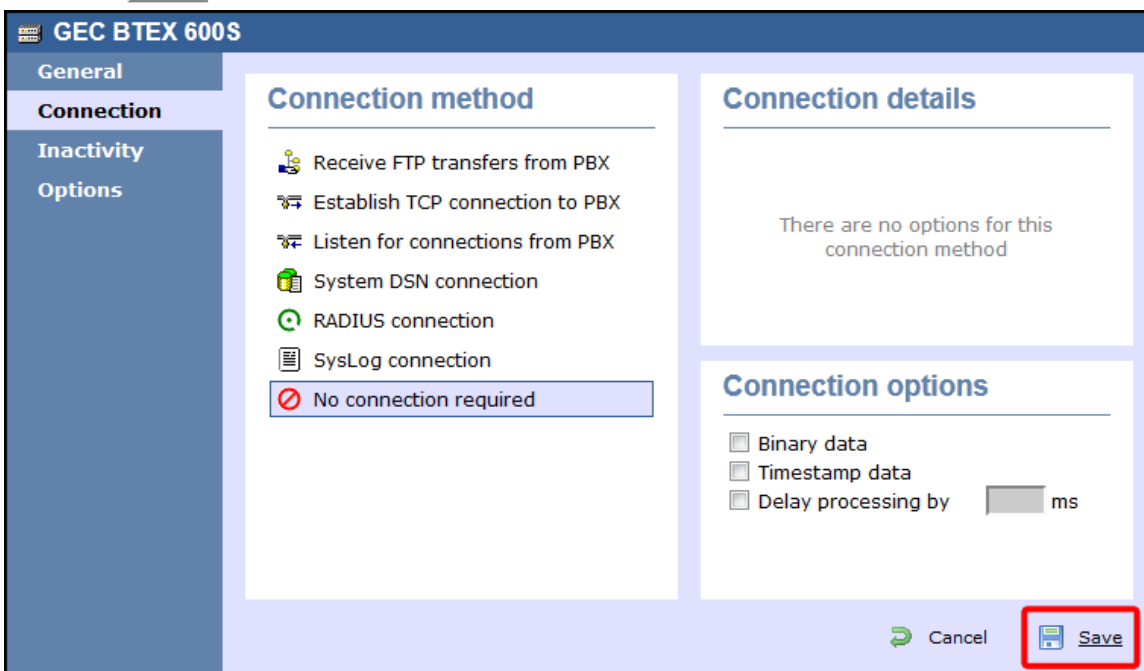
Configuring TIM Enterprise

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

1. Click on the **Directory** tab.
2. Locate the PBX object you want to configure in the Director, right-click on it and select **Properties**.
3. A new window will open, displaying the general properties of your PBX object. Select **GEC BTEX 600S** from the **Data format** list and tick the **Keep a local backup of data** box, as shown below:



4. Click on the **Connection** tab and select **No connection required** from the Connection method 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 Enterprise. Contact your system maintainer if you are not familiar with the configuration of your PBX.

Connection Type


 TIM Enterprise establishes a TCP connection to this PBX.


Support Files

 VoIPCortex.TDT

 VoIPCortex.TDS

Required Tasks

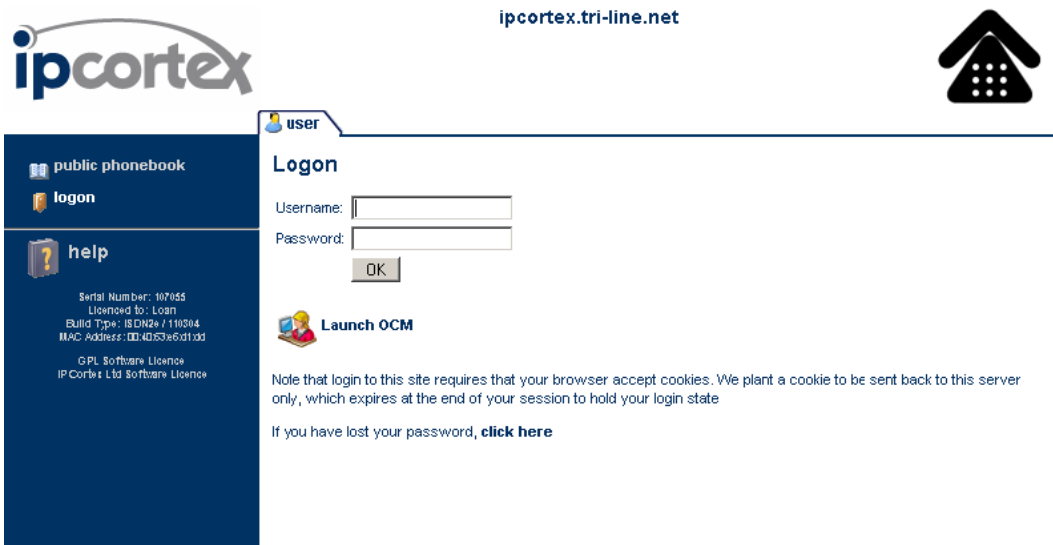
 Configure the SMDR output

 Configure TIM Enterprise

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 Enterprise, as shown below:

ipcortex.tri-line.net




user system pbx routing record call-log monitor

phone hardware

remote phonebooks

system backup

shutdown / reboot

global

network

telephony

email

passwords

general

dhcp server

handsets

advanced

advanced/network

advanced/groups

high availability

remote support

upgrades

logout

help

Serial Number: 107055
 Licensed to: Loan
 Build Type: ISDN2+ / 110204
 MAC Address: 00:40:85:3e:6d:13d
 GPL Software Licence
 IPCortex Ltd Software Licence

Manage Global Settings

NOTE: It is possible that the system will need to be rebooted (powered off and on) if settings marked * are altered. Settings marked ** require a further activation step before being used.

Default passwords

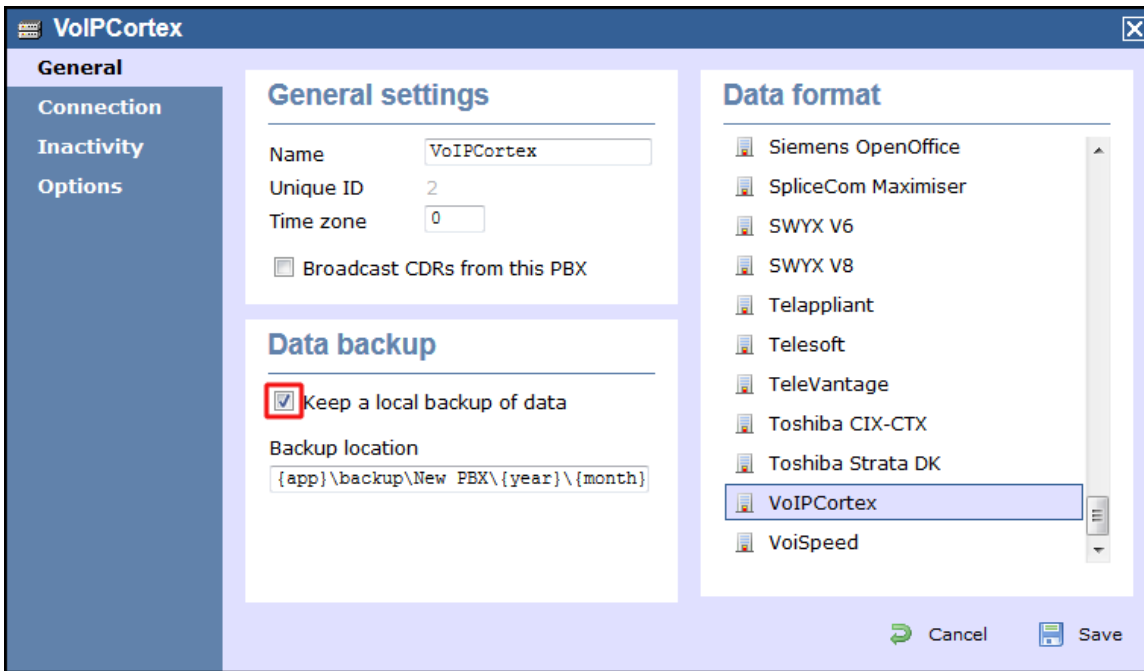
Description of Setting	Current	Change to
Admin PIN for phones	0000	<input type="text" value="0000"/>
Admin PIN for phone provisioning		<input type="text"/>
Default voicemail PIN	000	<input type="text" value="000"/>
Nightmode PIN	0000	<input type="text" value="0000"/>
IVR recording PIN	0000	<input type="text" value="0000"/>
User PIN overrides call barring	false / off	<input type="checkbox"/>
User PIN overrides phone rights	false / off	<input type="checkbox"/>
Password for Sugar CRM / Voice RD		<input type="text"/>
Password for xtelsio	trtnet1	<input type="text" value="trtnet1"/>
Password for Call Data Collection	trtnet	<input type="text" value="trtnet"/>

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

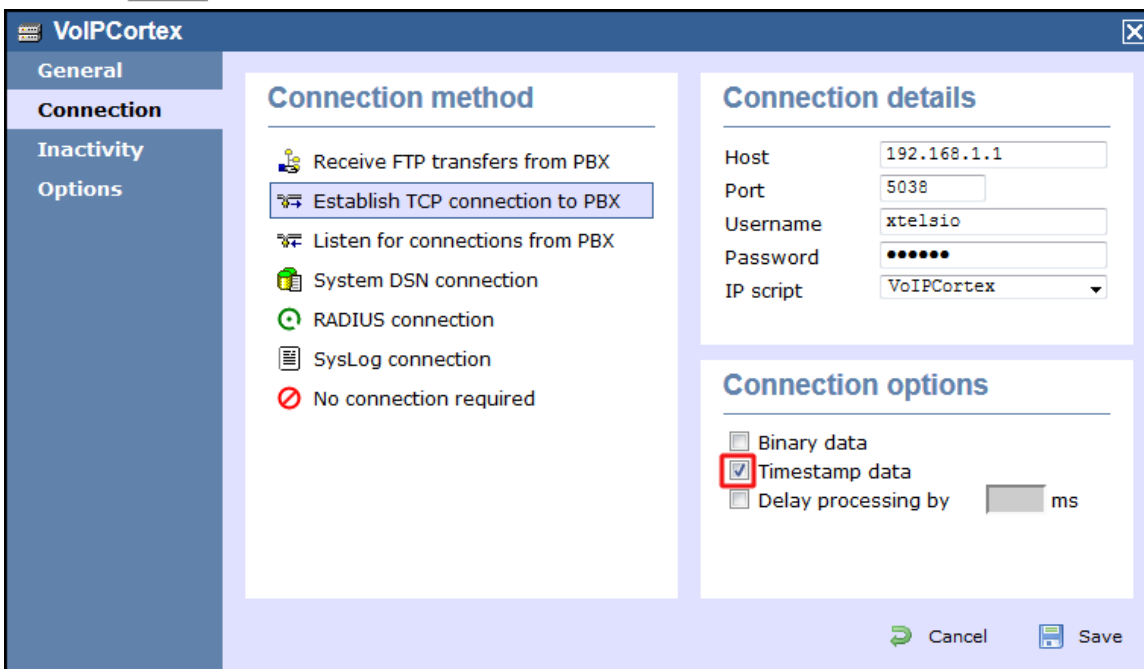
Configuring TIM Enterprise

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

- Click on the **Directory** tab.
- Locate the PBX object you want to configure in the Directory, right-click on it and select **Properties**.
- A new window will open, displaying the general properties of your PBX object. Select **VoIPCortex** from the **Data format** list and tick the **Keep a local backup of data** box, as shown below:



4. Click on the **Connection** tab and select **Establish TCP connection to PBX** from the Connection method 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 **IP script** field, select **VoIPCortex** from the drop-down list.
10. In the **Connection options**, enable the **Timestamp data** field.
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 Enterprise. Contact your system maintainer if you are not familiar with the configuration of your PBX.

Connection Type

 TIM Enterprise establishes a serial connection with this PBX.

Support Files

 Iridiacom Telrad IS.TDT

Required Tasks

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

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 Enterprise, you first need to install the NetPBX software. For setup instructions, click on the link below:

[Install and configure NetPBX](#)

Configuring TIM Enterprise

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

1. Click on the **Directory** tab.
2. Locate the PBX object you want to configure in the Directory and select **Properties**.
3. A new window will open, displaying the general properties of your PBX object. Select **Iridiacom Telrad IS** from the **Data format list** and tick the **Keep a local backup of data** box, as shown below:

Iridiacom Telrad IS

General

General settings

Name: Iridiacom Telrad IS
 Unique ID: 76435
 Time zone: 0

Broadcast CDRs from this PBX

Data backup

Keep a local backup of data

Backup location
 .\backup-{year}-{month}-{day}. {uiv}

Data format

- iBOX
- Internal
- Iridiacom Telrad IS**
- LG IP LDK
- Lucent EuroGeneris
- Matracom MC-6500
- Matracom MC-6501
- Meridian Dealer Board
- Mitel 3100
- Mitel 3300
- Mitel 5000-7000

Cancel Save

- Click on the **Connection** tab and select **No connection required** from the Connection method list.
- Click on the **Save** button to apply the settings.

Iridiacom Telrad IS

Connection

Connection method

- Receive FTP transfers from PBX
- Establish TCP connection to PBX
- Listen for connections from PBX
- System DSN connection
- RADIUS connection
- SysLog connection
- No connection required**

Connection details

There are no options for this connection method

Connection options

- Binary data
- Timestamp data
- Delay processing by ms

Cancel **Save**

LG

LG GDK

These instructions help you configure your LG GDK 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 Enterprise establishes a serial connection with this PBX.

Support Files

 LG GDK.TDT

 LG.TDS

Required Tasks

Configure the SMDR output

Install NetPBX

Configure TIM Enterprise

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 Enterprise, you first need to install the NetPBX software. For setup instructions, click on the link below:

[Install and configure NetPBX](#)

Configuring TIM Enterprise

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

1. Click on the **Directory** tab.
2. Locate the PBX object you want to configure in the Directory, right-click on it and select **Properties**.
3. A new window will open, displaying the general properties of your PBX object. Select **LG GDK** from the **Data format** list and tick the **Keep a local backup of data** box, as shown below:

LG GDK

General

Connection
Inactivity
Options

General settings

Name: LG GDK
Unique ID: 76689
Time zone: 0

Broadcast CDRs from this PBX

Data backup

Keep a local backup of data

Backup location

Data format

- iBOX
- Internal
- LG GDK**
- LG iPECS
- LG IPLDK
- Matracom MC-6500
- Matracom MC-6501
- Meridian Dealer Board
- Mitel 3100
- Mitel 3300
- Mitel 5000-7000

Cancel Save

- Click on the **Connection** tab and select **No connection required** from the Connection method list.
- Click on the **Save** button to apply the settings.

LG GDK

General
Connection
Inactivity
Options

Connection method

- Receive FTP transfers from PBX
- Establish TCP connection to PBX
- Listen for connections from PBX
- System DSN connection
- RADIUS connection
- SysLog connection
- No connection required**

Connection details

There are no options for this connection method

Connection options

- Binary data
- Timestamp data
- Delay processing by ms

Cancel **Save**


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 Enterprise. Contact your system maintainer if you are not familiar with the configuration of your PBX.

Connection Type


 TIM Enterprise establishes a serial connection with this PBX.


Support Files


 LG iPECS.TDT

 LG.TDS

Required Tasks

 Configure the SMDR output

 Install NetPBX

 Configure TIM Enterprise

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:

The screenshot shows the iPECS Administration interface. The left-hand navigation menu is expanded to show 'SMDR Attributes(177)'. The main area displays a table of SMDR attributes with columns for Attribute, Value, and Range. A 'Save' button is located in the top right corner of the configuration area.

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/CLUCPN Service-I	Ring	
SMDR Ring/CLUCPN 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

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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:

The screenshot shows the iPECS Administration interface. The top navigation bar includes 'Administration', 'S/V Upgrade', and 'System Management'. The left sidebar menu lists various system attributes and data tables. The main content area is titled '[ISDN Attributes]' and contains a table with the following data:

Attribute	Value	Range
CO ATD Code	0	MAX 2 Digits
CLI Print To Serial	ON	

A 'Save' button is located at the bottom right of the table.

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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 Enterprise. For setup instructions, click on the link below:

[Install and configure NetPBX](#)

Configuring TIM Enterprise

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

1. Click on the **Directory** tab.
2. Locate the PBX object you want to configure in the Directory, right-click on it and select **Properties**.
3. A new window will open, displaying the general properties of your PBX object. select **LG iPECS** from the **Data format** list and tick the **Keep a local backup of data** box, as shown below:

LG iPECS

General

General settings

Name: LG GDK
 Unique ID: 76689
 Time zone: 0

Broadcast CDRs from this PBX

Data backup

Keep a local backup of data

Backup location

Data format

- iBOX
- Internal
- LG GDK
- LG iPECS
- LG IPLDK
- Matracom MC-6500
- Matracom MC-6501
- Meridian Dealer Board
- Mitel 3100
- Mitel 3300
- Mitel 5000-7000

4. Click on the **Connection** tab and select **No connection required** from the Connection method list.
5. Click on the **Save** button to apply the settings.

LG iPECS

Connection

Connection method

- Receive FTP transfers from PBX
- Establish TCP connection to PBX
- Listen for connections from PBX
- System DSN connection
- RADIUS connection
- SysLog connection
- No connection required

Connection details


There are no options for this connection method



Connection options



- Binary data
- Timestamp data
- Delay processing by ms

LG iPECS - IP connection

These instructions help you configure your LG iPECS 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 Enterprise establishes a TCP connection to this PBX.

Support Files
 LG iPECS.TDT
 LG.TDS

Required Tasks
 Configure the SMDR output
 Configure TIM Enterprise

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:

iPECS Administration S/W Upgrade System Management

Board Based Data
CO Line Data
System Data
Attendant Assignment(164)
SMDR Attributes(177)
Station Group Data
ISDN Line Data

[SMDR Attributes]

Save

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/CLICPN Service-I	Ring	
SMDR Ring/CLICPN 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

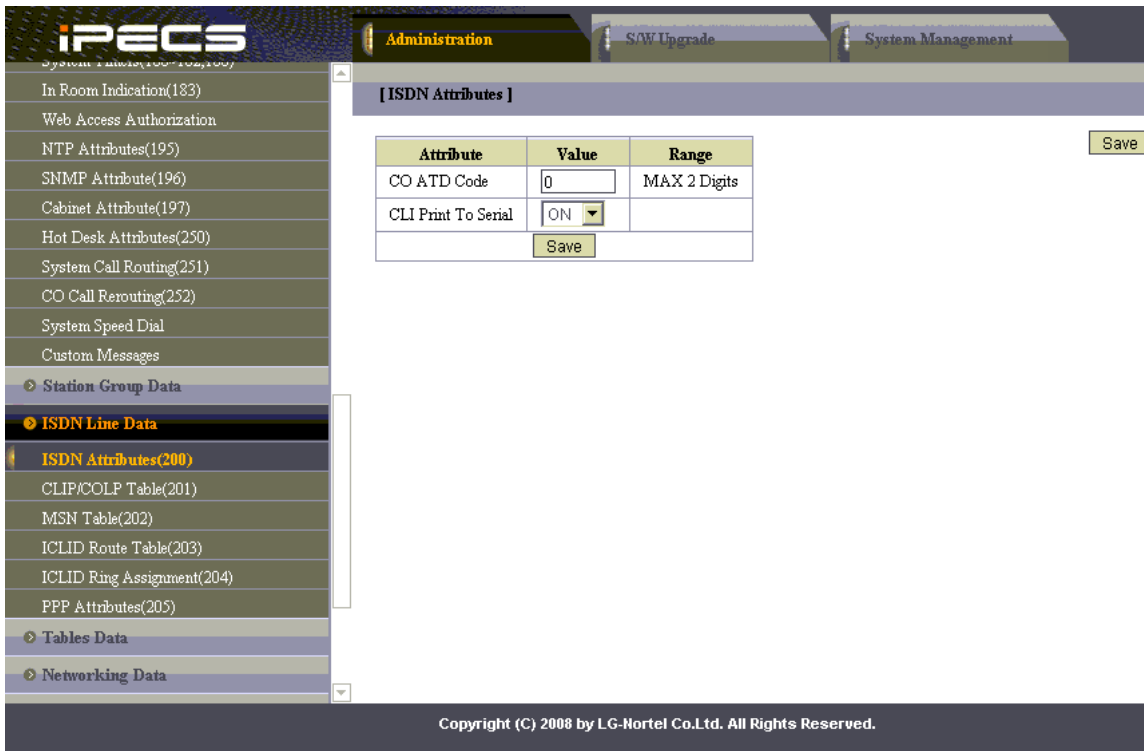
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Printer Port Selection (PGM 175)

In the Printer Port Selection (PGM 175) window, set Info/On-line SMDR to **Telnet 1** to send call logging data to TIM Enterprise 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:

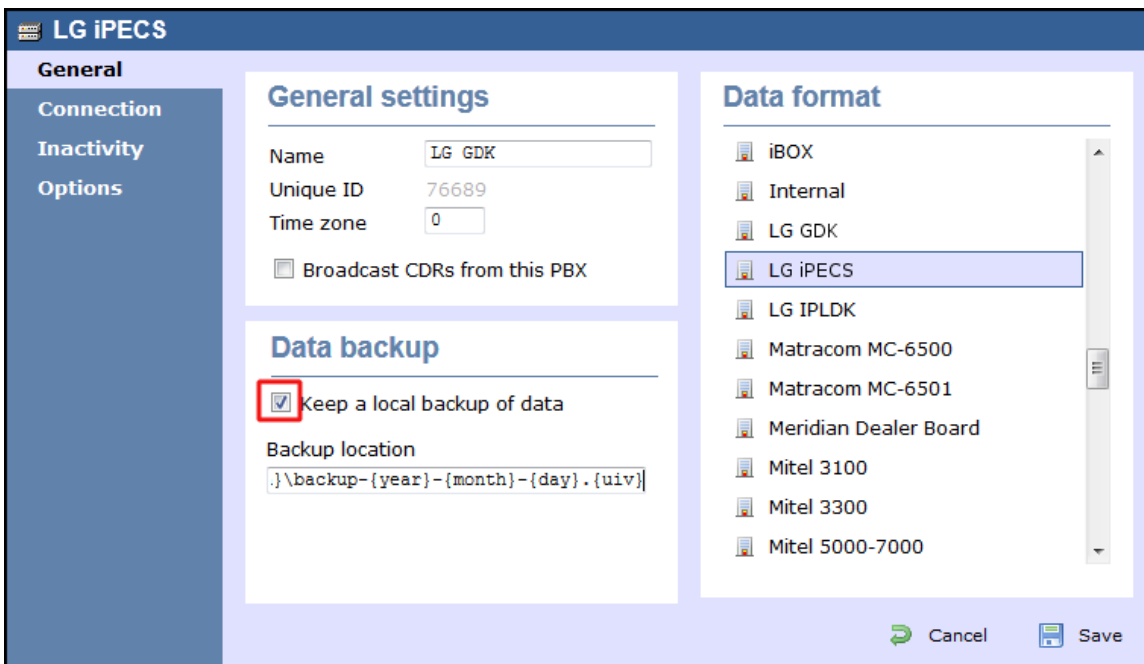


Configuring TIM Enterprise

Follow the steps below to configure TIM Enterprise to collect the SMDR data from your LG iPECS:

1. Click on the **Directory** tab.
2. Locate the PBX object you want to configure in the Directory, right-click on it and select **Properties**.
3. A new window will open, displaying the general properties of your PBX object. Select **LG iPECS** from the **Data format** list and tick the

Keep a local backup of data box, as shown below:



4. Click on the **Connection** tab and select **Establish TCP connection to PBX** from the **Connection method** 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 **IP script** field, select **Generic Simple** from the drop-down list.
9. Click on the **Save** button to apply the settings.


The screenshot shows the LG iPECS configuration interface. On the left is a navigation menu with 'General', 'Connection', 'Inactivity', and 'Options'. The 'Connection' tab is active. The main area is divided into three sections: 'Connection method', 'Connection details', and 'Connection options'. In the 'Connection method' section, 'Establish TCP connection to PBX' is selected. The 'Connection details' section contains fields for Host (192.168.1.1), Port (23), Username, Password, and IP script (Generic Simple). The 'Connection options' section has checkboxes for Binary data, Timestamp data, and Delay processing by (ms). At the bottom right, there are 'Cancel' and 'Save' buttons, with the 'Save' button highlighted by a red box.



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 Enterprise. Contact your system maintainer if you are not familiar with the configuration of your PBX.

Connection Type
 TIM Enterprise establishes a serial connection with this PBX.

Support Files
 LG IPLDK.TDT
 LG.TDS

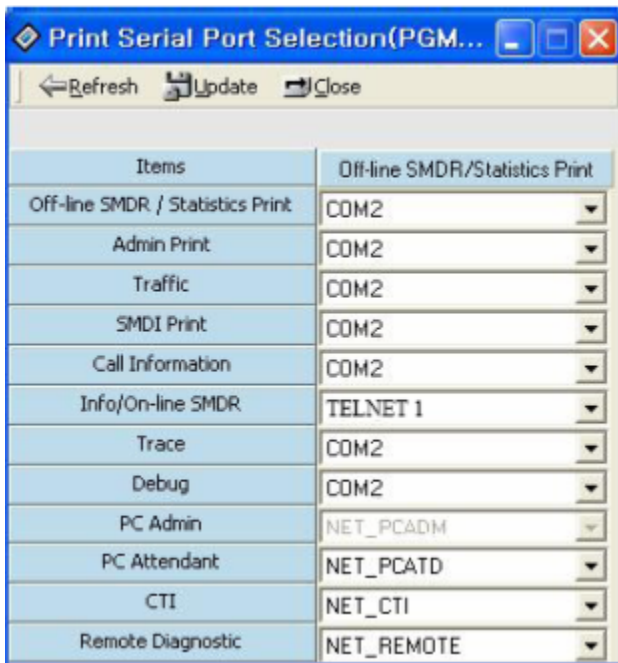
Required Tasks
 Configure the SMDR output
 Install NetPBX
 Configure TIM Enterprise

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

SMDR Attributes(PGM177)

← Refresh Update Close

Save Enable

Print Enable

SMDR Record Call Type All Call

Records In Detail

Print Incoming Call

Print Lost Call

SMDR Dial Digit Hidden 0 (0 - 9)

SMDR Currency Unit (Max 3 characters)

SMDR Cost Per Metering Pulse 000000 (Must 6 digit)

SMDR Fraction 0 (0 - 5)

SMDR Start Timer 0 * 1 sec (000 - 250)

SMDR Hidden Digit RIGHT

Long Distance Call Digit Counter 7 (7 - 15)

Long Distance Code (Max 2 Digits)

1: 0 2: 3: 4: 5:

MSN Print On SMDR

Print Caller Number

ISDN Attributes (PGM 200)

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

ISDN Attributes (PGM200)

← Refresh Update Close

Advice Of Charge Do not Service AOC

CO ATD Code Max 2 Digits

CLI Print To Serial

Int'l Access Code Max 4 Digits

My Area Code Max 6 Digits

My Area Prefix Code 0 Max 4 Digits

Maintain DID Name

PC Application Station 1000

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 Enterprise. For setup instructions, click on the link below:

Install and configure NetPBX

Configuring TIM Enterprise

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

1. Click on the **Directory** tab.
2. Locate the PBX object you want to configure in the Directory, right-click on it and select **Properties**.
3. A new window will open, displaying the general properties of your PBX object. Select **LG IPLDK** from the **Data format** list and tick the **Keep a local backup of data** box, as shown below:

The screenshot shows the configuration window for the LG IPLDK PBX object. The 'Data backup' section is highlighted, with the checkbox 'Keep a local backup of data' checked. The 'Data format' list on the right shows 'LG IPLDK' selected. The 'General settings' section shows the Name as 'LG IPLDK', Unique ID as '76790', and Time zone as '0'. The 'Backup location' field contains the path: .}\backup-{year}-{month}-{day}. {uiv}. The 'Cancel' and 'Save' buttons are visible at the bottom right.

4. Click on the **Connection** tab and select **No connection required** from the **Connection method** list.
5. Click on the **Save** button to apply the settings.

The screenshot shows the 'LG IPLDK' configuration window. On the left is a navigation menu with 'General', 'Connection', 'Inactivity', and 'Options'. The 'Connection' section is active, displaying 'Connection method' and 'Connection details' panels. The 'Connection method' panel lists several options: 'Receive FTP transfers from PBX', 'Establish TCP connection to PBX', 'Listen for connections from PBX', 'System DSN connection', 'RADIUS connection', 'SysLog connection', and 'No connection required' (which is selected and highlighted). The 'Connection details' panel contains the text 'There are no options for this connection method'. Below these panels is a 'Connection options' section with checkboxes for 'Binary data', 'Timestamp data', and 'Delay processing by' (with a text input field and 'ms' label). At the bottom right, there are 'Cancel' and 'Save' buttons, with the 'Save' button highlighted by a red rectangle.

LG IPLDK - IP connection

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

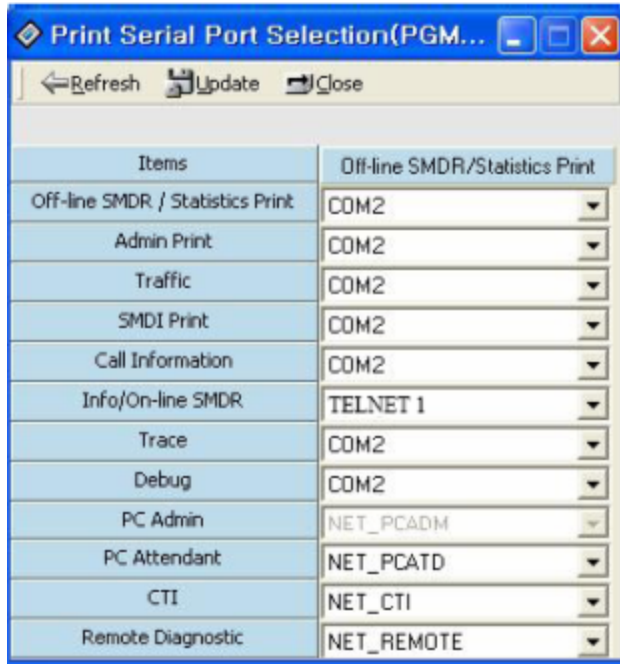
The screenshot shows a configuration window with a light green background. It is divided into three sections: 'Connection Type', 'Support Files', and 'Required Tasks'. The 'Connection Type' section shows a TCP connection icon and the text 'TIM Enterprise establishes a TCP connection to this PBX.'. The 'Support Files' section lists two files: 'LG IPLDK.TDT' and 'LG.TDS'. The 'Required Tasks' section lists two tasks: 'Configure the SMDR output' and 'Configure TIM Enterprise', both with checkmarks indicating they are completed.

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 Enterprise over TCP to port 23.



SMDR Attributes (PGM 177)

Set the SMDR Attributes as shown below:

SMDR Attributes(PGM177)

← Refresh Update Close

Save Enable

Print Enable

SMDR Record Call Type All Call

Records In Detail

Print Incoming Call

Print Lost Call

SMDR Dial Digit Hidden 0 (0 - 9)

SMDR Currency Unit (Max 3 characters)

SMDR Cost Per Metering Pulse 000000 (Must 6 digit)

SMDR Fraction 0 (0 - 5)

SMDR Start Timer 0 * 1 sec (000 - 250)

SMDR Hidden Digit RIGHT

Long Distance Call Digit Counter 7 (7 - 15)

Long Distance Code (Max 2 Digits)

1: 0 2: 3: 4: 5:

MSN Print On SMDR

Print Caller Number

ISDN Attributes (PGM 200)

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

ISDN Attributes (PGM200)

← Refresh Update Close

Advice Of Charge Do not Service AOC

CO ATD Code Max 2 Digits

CLI Print To Serial

Int'l Access Code Max 4 Digits

My Area Code Max 6 Digits

My Area Prefix Code 0 Max 4 Digits

Maintain DID Name

PC Application Station 1000

Configuring TIM Enterprise

Follow the steps below to configure TIM Enterprise to collect the SMDR data from your LG IPLDK:

1. Click on the **Directory** tab.
2. Locate the PBX object you want to configure in the Directory, right-click on it and select **Properties**.
3. A new window will open, displaying the general properties of your PBX object. Select **LG IPLDK** from the **Data format** list and tick the **Keep a local backup of data** box, as shown below:

The screenshot shows the 'LG iPECS' configuration window. On the left is a navigation pane with 'General' selected. The main area is divided into two columns. The left column contains 'General settings' and 'Data backup'. The right column contains a 'Data format' list. At the bottom are 'Cancel' and 'Save' buttons.

General settings

Name: LG GDK
 Unique ID: 76689
 Time zone: 0
 Broadcast CDRs from this PBX

Data backup

Keep a local backup of data
 Backup location: .\backup-{year}-{month}-{day}. {uiv}

Data format

- iBOX
- Internal
- LG GDK
- LG iPECS**
- LG IPLDK
- Matracom MC-6500
- Matracom MC-6501
- Meridian Dealer Board
- Mitel 3100
- Mitel 3300
- Mitel 5000-7000

4. Click on the **Connection** tab and select **Establish TCP connection to PBX** from the **Connection method** 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 **IP script** field, select **Generic Simple** from the drop-down list.
9. Click on the **Save** button to apply the settings.

The screenshot shows the configuration interface for LG IPLDK. On the left is a navigation menu with options: General, Connection, Inactivity, and Options. The main area is divided into three sections:

- Connection method:** A list of options with icons:
 - Receive FTP transfers from PBX
 - Establish TCP connection to PBX (highlighted with a blue border)
 - Listen for connections from PBX
 - System DSN connection
 - RADIUS connection
 - SysLog connection
 - No connection required (with a red prohibition sign)
- Connection details:** Fields for Host (192.168.1.1), Port (23), Username, Password, and IP script (Generic Simple).
- Connection options:** Checkboxes for Binary data, Timestamp data, and Delay processing by (with a text input field and 'ms' unit).

At the bottom right, there are 'Cancel' and 'Save' buttons. The 'Save' button is highlighted with a red rectangle.

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 Enterprise. Contact your system maintainer if you are not familiar with the configuration of your PBX.

Connection Type
 TIM Enterprise 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 Enterprise

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

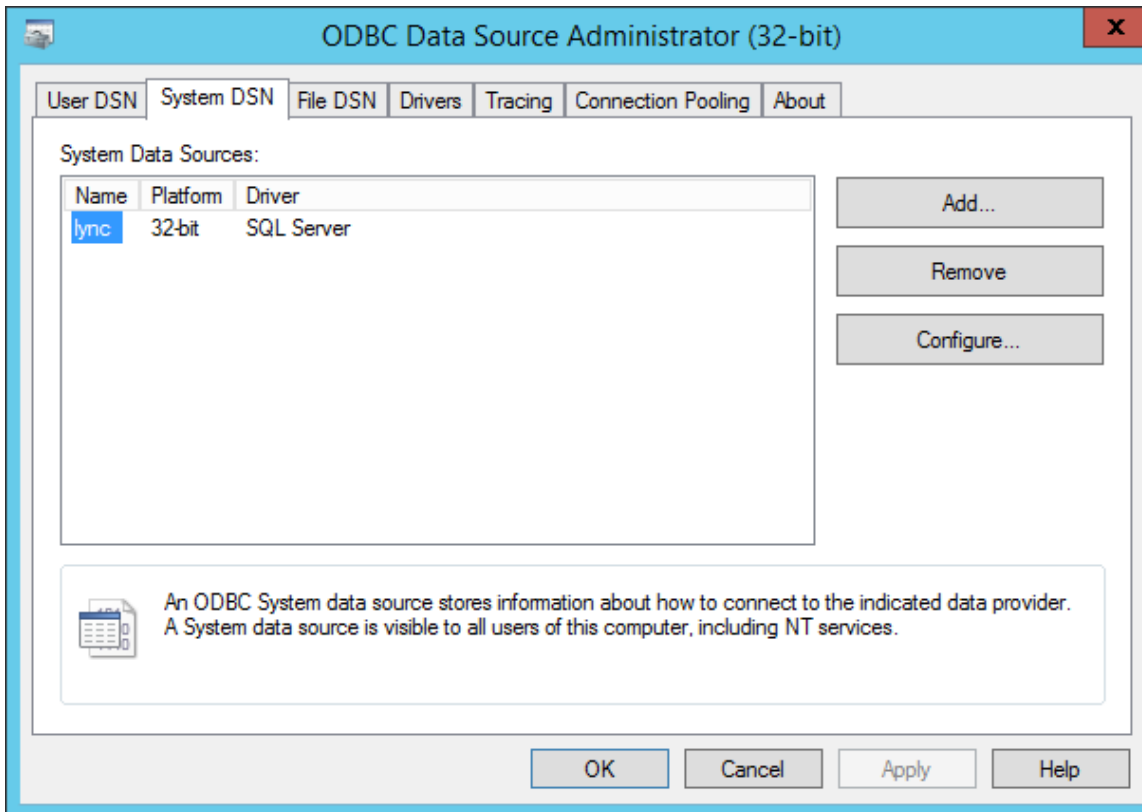
1. Open Windows Control Panel and select the `Administrative Tools` icon
2. Double-click on the `Data Sources (ODBC)` icon to open the `ODBC Data Source Administrator` window

 For a 64 bit system, access the `ODBC Data Source Administrator` from the following location `C:\Windows\System32\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 Enterprise 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.

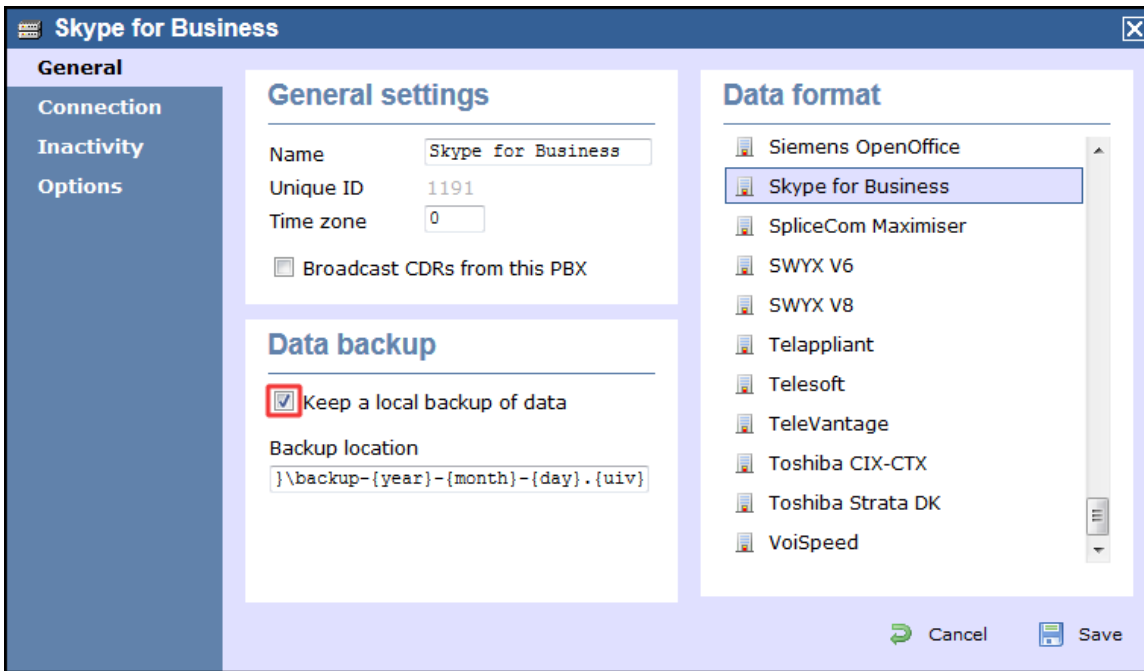
An example of an ODBC entry is shown below:



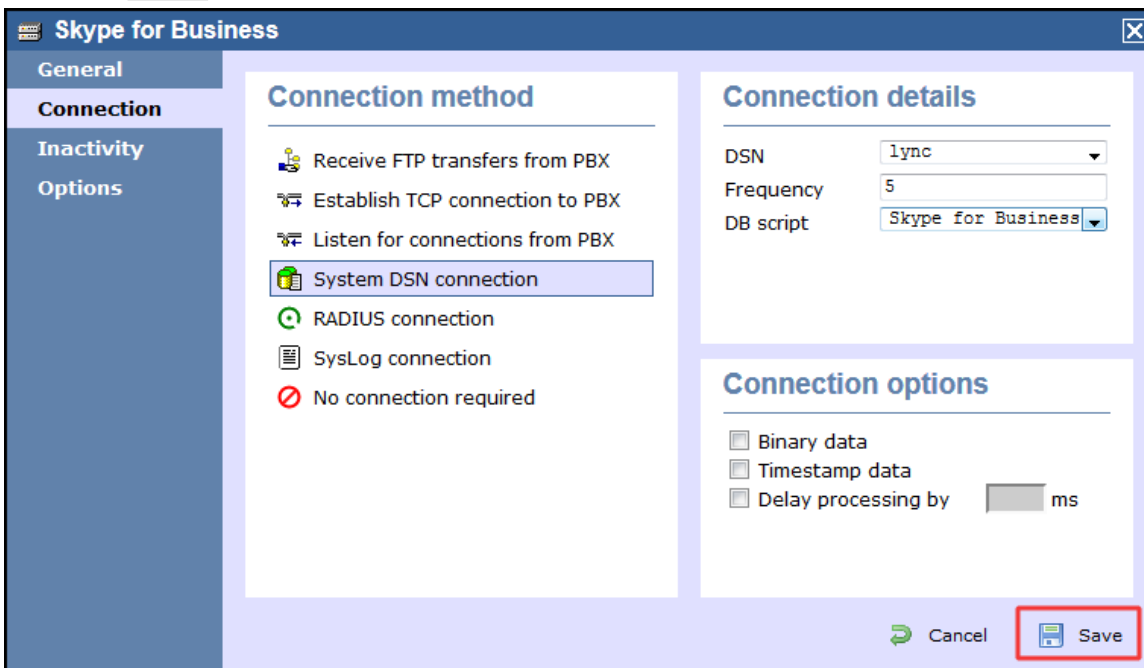
Configuring TIM Enterprise

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

1. Click on the `Directory` tab.
2. Locate the PBX object you want to configure in the Directory, right-click on it and select `Properties`.
3. A new window will open, displaying the general properties of your PBX object. Select `Skype for Business` from the `Data format list` and tick the `Keep a local backup of data` box, as shown below:



4. Click on the **Connection** tab and select **System DSN connection** from the Connection method list.
5. In the **DSN** field, select **lync** 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 **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 Enterprise. Contact your system maintainer if you are not familiar with the configuration of your PBX.

Connection Type

 TIM Enterprise establishes a serial connection with this PBX.

Support Files

 Mitel_3100.TDT

Required Tasks

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

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 Enterprise 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 Enterprise, you first need to install the [NetPBX](#) software. For setup instructions, click on the link below:

[Install and configure NetPBX](#)

Configuring TIM Enterprise

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

1. Click on the **Directory** tab.

2. Locate the PBX object you want to configure in the Directory, right-click on it and select **Properties**.
3. A new window will open, displaying the general properties of your PBX object. Select **Mitel 3100** from the **Data format** list and tick the **Keep a local backup of data** box, as shown below:

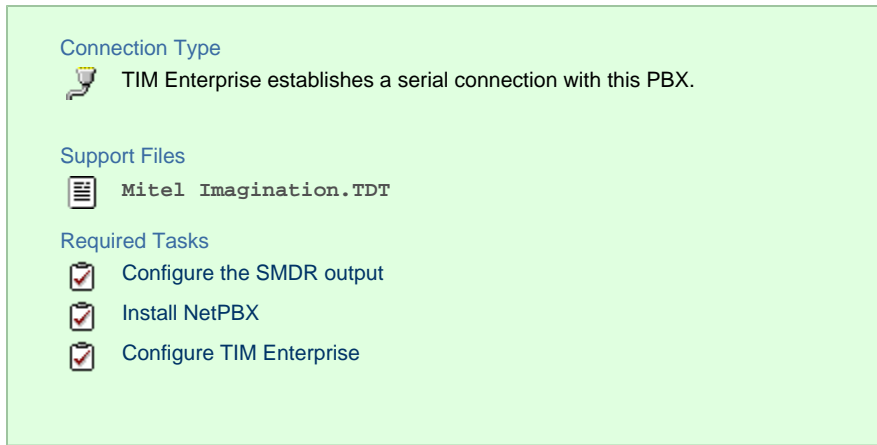
The screenshot shows the 'Mitel 3100' configuration window. On the left is a navigation pane with 'General', 'Connection', 'Inactivity', and 'Options'. The main area is divided into three sections: 'General settings', 'Data backup', and 'Data format'. In the 'Data backup' section, the checkbox 'Keep a local backup of data' is checked and highlighted with a red box. Below it, the 'Backup location' is set to '.\backup-{year}-{month}-{day}. {uiv}'. The 'Data format' section on the right shows a list of PBX models, with 'Mitel 3100' selected and highlighted. At the bottom right, there are 'Cancel' and 'Save' buttons.


4. Click on the **Connection** tab and select **No connection required** from the **Connection method** list.
5. Click on the **Save** button to apply the settings.


The screenshot shows the 'Mitel 3100' configuration window with the 'Connection' tab selected in the left navigation pane. The main area is divided into 'Connection method' and 'Connection details'. In the 'Connection method' section, 'No connection required' is selected and highlighted with a blue border. The 'Connection details' section contains the text 'There are no options for this connection method'. Below it, the 'Connection options' section has three unchecked checkboxes: 'Binary data', 'Timestamp data', and 'Delay processing by' (with a text box and 'ms' label). At the bottom right, the 'Save' button is highlighted with a red box.

Mitel Imagination

These instructions help you configure your Mitel Imagination 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 Enterprise establishes a serial connection with this PBX.

Support Files
 `Mitel Imagination.TDT`

Required Tasks

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

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 Enterprise, you first need to install the NetPBX software. For setup instructions, click on the link below:

[Install and configure NetPBX](#)

Configuring TIM Enterprise

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

1. Click on the **Directory** tab.
2. Locate the PBX object you want to configure in the Directory, right-click on it and select **Properties**.
3. A new window will open, displaying the general properties of your PBX object. Select **Mitel Imagination** from the **Data format** list and tick the **Keep a local backup of data** box, as shown below:

Mitel Imagination

General

General settings

Name:

Unique ID:

Time zone:

Broadcast CDRs from this PBX

Data backup

Keep a local backup of data

Backup location:

Data format

- Meridian Dealer Board
- Mitel 3100
- Mitel 3300
- Mitel 5000-7000
- Mitel Imagination
- Mitel SX50
- Mitel SX2000
- NEC Aspire
- NEC DXE
- NEC NEAX
- Nortel BCM

- Click on the **Connection** tab and select **No connection required** from the Connection method list.
- Click on the **Save** button to apply the settings.

Mitel Imagination

Connection

Connection method

- Receive FTP transfers from PBX
- Establish TCP connection to PBX
- Listen for connections from PBX
- System DSN connection
- RADIUS connection
- SysLog connection
- No connection required

Connection details

There are no options for this connection method


Connection options

- Binary data
- Timestamp data
- Delay processing by ms


Mitel MiVoice Business (Mitel 3300)


These instructions help you configure your Mitel 3300 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 Enterprise establishes a TCP connection to this PBX.


Support Files

 Mitel 3300.TDT

 Mitel 3300.TDS

Required Tasks

 Configure the SMDR output

 Configure TIM Enterprise

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**

The screenshot shows the Mitel3300 configuration interface. At the top, there is a header with the Mitel logo, the text "Node 'Mitel3300' Alarm Status: Major 201", and a red warning icon. Below the header, there is a navigation menu on the left and a main content area on the right.

Navigation Menu (Left):

- Licenses
- LAN/WAN Configuration
- Voice Network
- System Properties
 - System Settings
 - System Feature Settings
 - System Options
 - Class of Service Options
 - SIP Device Capabilities
 - Class of Restriction Groups
 - System Access Points
 - Feature Access Codes
 - Independent Account Codes
 - Default Account Codes
 - System Account Codes
 - System Speed Calls
 - Tenants
 - SMDR Options**
 - Traffic Report Options
 - Inward Dialing Modification

Main Content Area (Right):

The main content area is titled "SMDR Options on Mitel3300". It features a "Change" button and a "SMDR Options" header. Below the header, there is a list of SMDR options:

- DASS II - Call Charge In
- Extended Digit Length
- MCD - Report Transfer:
- Network Format
- Report Account Codes
- Report Incoming Calls
- Report Internal Calls
- Report Meter Pulses
- Report Outgoing Calls
- SMDR Meter Unit Per S
- SMDR Record Transfer
- System Identification
- Time Change Reporting
- Twenty-four Hour Time
- ANI/DNIS/ISDN/CLASS 1
- SMDR Real Time Report
- OLI Node ID Format for
- Extended Time To Answer
- SMDR File Transfer
- Standardized Network
- Standardized Call ID Fo
- Suite Services Reporti
- Report Internal Unansv

Set the SMDR options as shown below:

SMDR Options

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

i 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.

SIP Peer Profile						
Network Element	SIP Peer Profile Label	Outbound Proxy Server	CPN Restriction	Trunk Service	Session Timer	Zone
Gamma_SIP	Gamma_SIP	MBG	No	3	0	1
SIP_PMN	PMN		No	4	0	1

Save Cancel

SIP Peer Profile

Basic | Call Routing | Calling Line ID | SDP Options | Signaling and Header Manipulation | Timers | Key Press Event

Profile Information

IP Address: 192.168.1.2

Administration Options

Interconnect Restriction	1
Maximum Simultaneous Calls	4
Outbound Proxy Server	MBG
SMDR Tag	0
Trunk Service	3
Zone	1

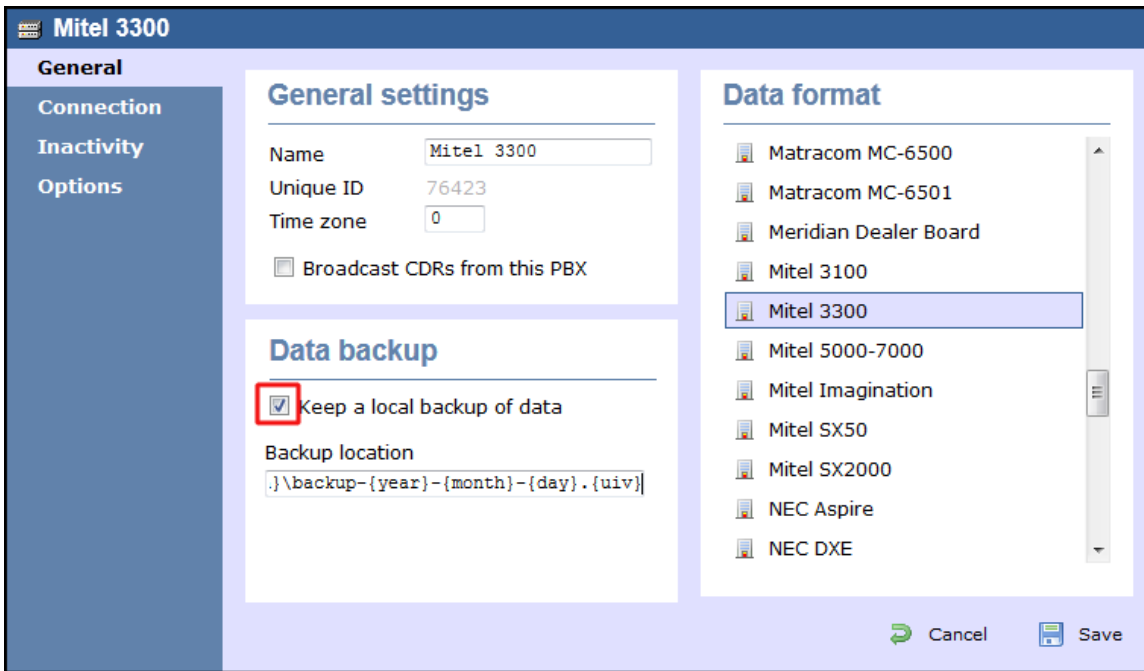


In addition to these settings, ensure the `Class of Service` options have been configured to output SMDR.

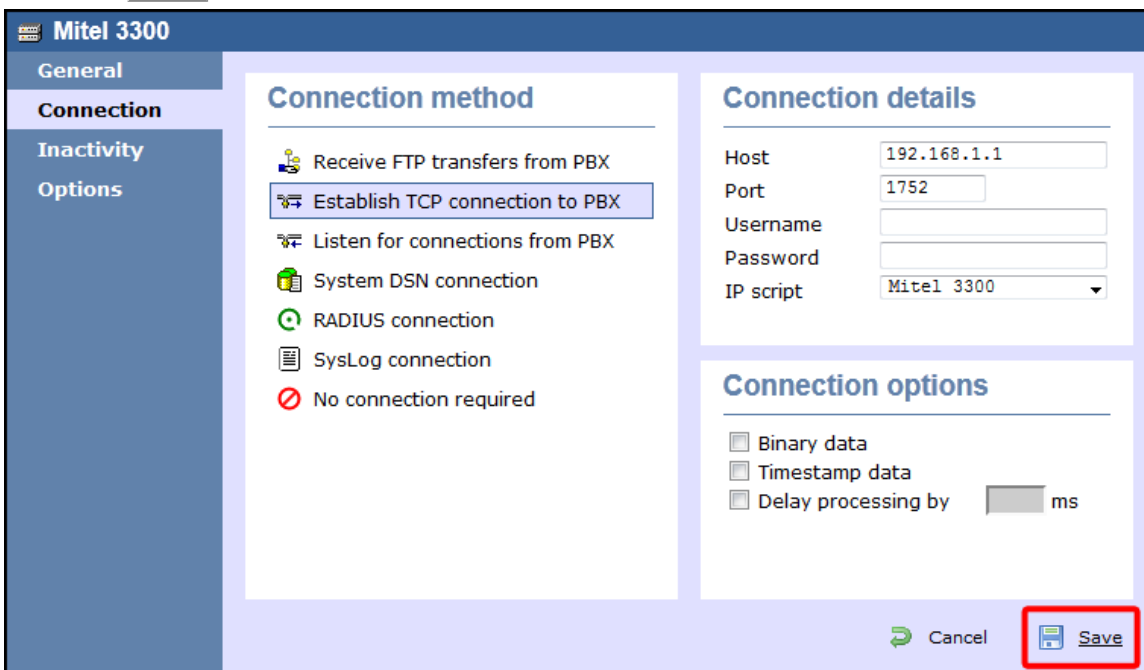
Configuring TIM Enterprise

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

1. Click on the **Directory** tab.
2. Locate the PBX object you want to configure in the Directory, right-click on it and select **Properties**.
3. A new window will open, displaying the general properties of your PBX object. Select **Mitel 3300** from the **Data format** list and tick the **Keep a local backup of data** box, as shown below:




4. Click on the **Connection** tab and select **Establish TCP connection to PBX** from the Connection method 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 **IP 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 Enterprise. Contact your system maintainer if you are not familiar with the configuration of your PBX.

Connection Type

 TIM Enterprise establishes a TCP connection to this PBX.

Support Files

 Mitel 5000-7000.TDT

 Mitel 5000-7000.TDS

Required Tasks

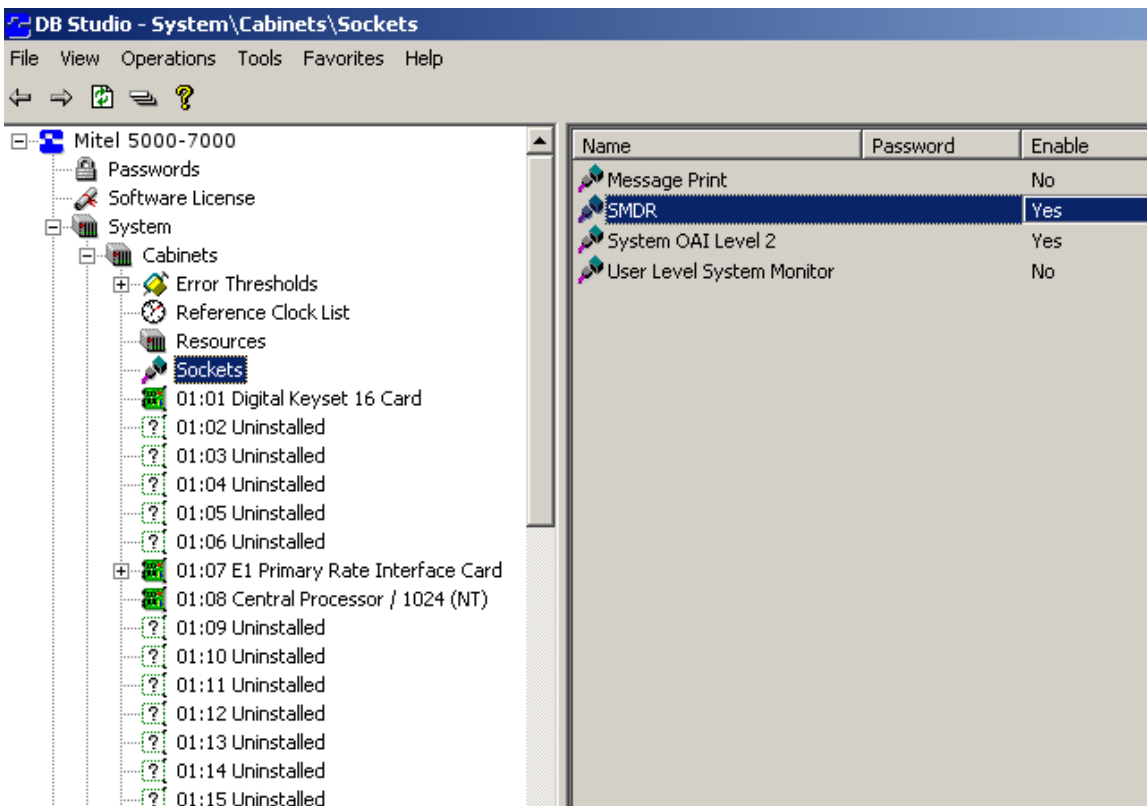
Configure the SMDR output

Configure TIM Enterprise

Configuring the 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**.



The screenshot shows the Mitel DB Studio interface. The left pane displays a tree view of the system configuration, with the following structure expanded:

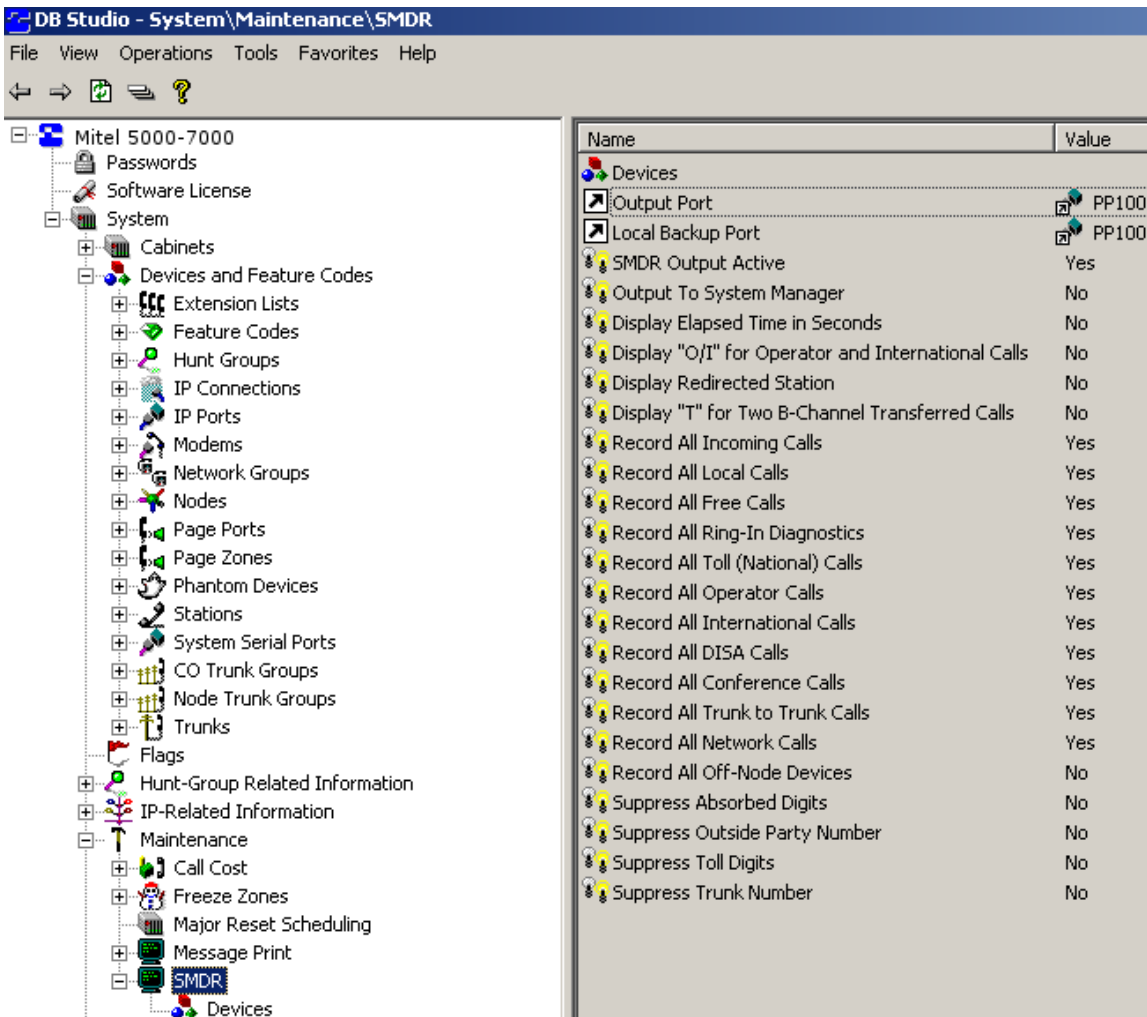
- Mitel 5000-7000
 - System
 - Cabinets
 - Sockets (selected)

The right pane shows a table of parameters for the selected 'Sockets' node:

Name	Password	Enable
Message Print		No
SMDR		Yes
System OAI Level 2		Yes
User Level System Monitor		No

6. Click and expand the **System** icon.

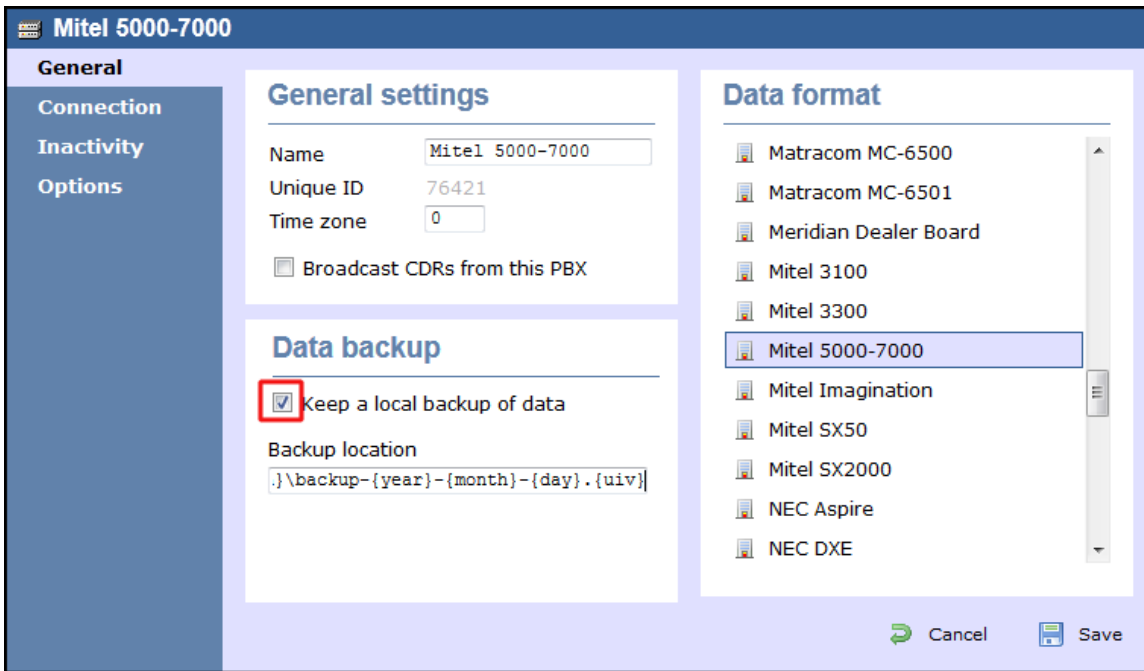
7. Click and expand the **Maintenance** icon.
8. Click on the **SMDR** icon.
9. On the right-hand side you will have the SMDR fields that need to be configured, as shown below:



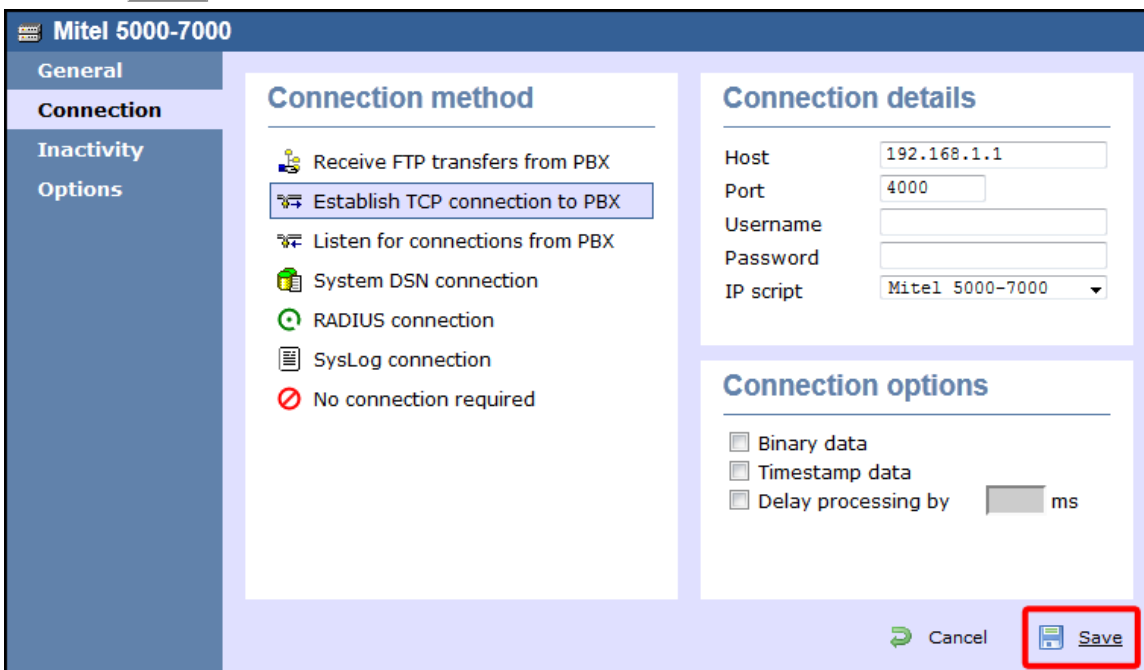
Configuring TIM Enterprise

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

1. Click on the **Directory** tab.
2. Locate the PBX object you want to configure in the Directory, right-click on it and select **Properties**.
3. A new window will open, displaying the general properties of your PBX object. Select **Mitel 5000-7000** from the **Data format list** and tick the **Keep a local backup of data** box, as shown below:




4. Click on the **Connection** tab and select **Establish TCP connection to PBX** from the Connection method 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 **IP 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 Enterprise. Contact your system maintainer if you are not familiar with the configuration of your PBX.

Connection Type

 TIM Enterprise 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 Enterprise

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 Enterprise, you first need to install the **NetPBX** software. For setup instructions, click on the link below:

[Install and configure NetPBX](#)

Configuring TIM Enterprise

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

1. Click on the **Directory** tab.
2. Locate the PBX object you want to configure in the Directory, right-click on it and select **Properties**.
3. A new window will open, displaying the general properties of your PBX object. Select **Mitel SX50** from the **Data format** list and tick the **Keep a local backup of data** box, as shown below:

Mitel SX50

General

General settings

Name:

Unique ID:

Time zone:

Broadcast CDRs from this PBX

Data backup

Keep a local backup of data

Backup location:

Data format

- Mitel 3300
- Mitel 5000-7000
- Mitel Imagination
- Mitel SX50**
- Mitel SX2000
- NEC Aspire
- NEC DXE
- NEC NEAX
- Nortel BCM
- Nortel Meridian Option
- Panasonic DRS Series

Cancel Save

- Click on the **Connection** tab and select **No connection required** from the Connection method list.
- Click on the **Save** button to apply the settings.

Mitel SX50

Connection

Connection method

- Receive FTP transfers from PBX
- Establish TCP connection to PBX
- Listen for connections from PBX
- System DSN connection
- RADIUS connection
- SysLog connection
- No connection required**

Connection details

There are no options for this connection method

Connection options


- Binary data
- Timestamp data
- Delay processing by ms

Cancel **Save**



Mitel SX2000

These instructions help you configure your Mitel SX2000 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 Enterprise 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 Enterprise

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 Enterprise, you first need to install the NetPBX software. For setup instructions, click on the link below:

[Install and configure NetPBX](#)

Configuring TIM Enterprise

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

1. Click on the **Directory** tab.
2. Locate the PBX object you want to configure in the Directory, right-click on it and select **Properties**.
3. A new window will open, displaying the general properties of your PBX object. Select **Mitel SX2000** from the **Data format** list and tick the **Keep a local backup of data** box, as shown below:

Mitel SX2000

General

Connection
Inactivity
Options

General settings

Name:

Unique ID:

Time zone:

Broadcast CDRs from this PBX

Data backup

Keep a local backup of data

Backup location

Data format

- Mitel 3100
- Mitel 3300
- Mitel 5000-7000
- Mitel Imagination
- Mitel SX50
- Mitel SX2000
- NEC Aspire
- NEC DXE
- NEC NEAX
- Nortel BCM
- Nortel Meridian Option

4. Click on the **Connection** tab and select **No connection required** from the Connection method list.
5. Click on the **Save** button to apply the settings.

Mitel SX2000

General
Connection
Inactivity
Options

Connection method

- Receive FTP transfers from PBX
- Establish TCP connection to PBX
- Listen for connections from PBX
- System DSN connection
- RADIUS connection
- SysLog connection
- No connection required

Connection details

There are no options for this connection method

Connection options

- Binary data
- Timestamp data
- Delay processing by ms

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 Enterprise. Contact your system maintainer if you are not familiar with the configuration of your PBX.

Connection Type

 TIM Enterprise 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 Enterprise

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 adaptor:

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 Dialed 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

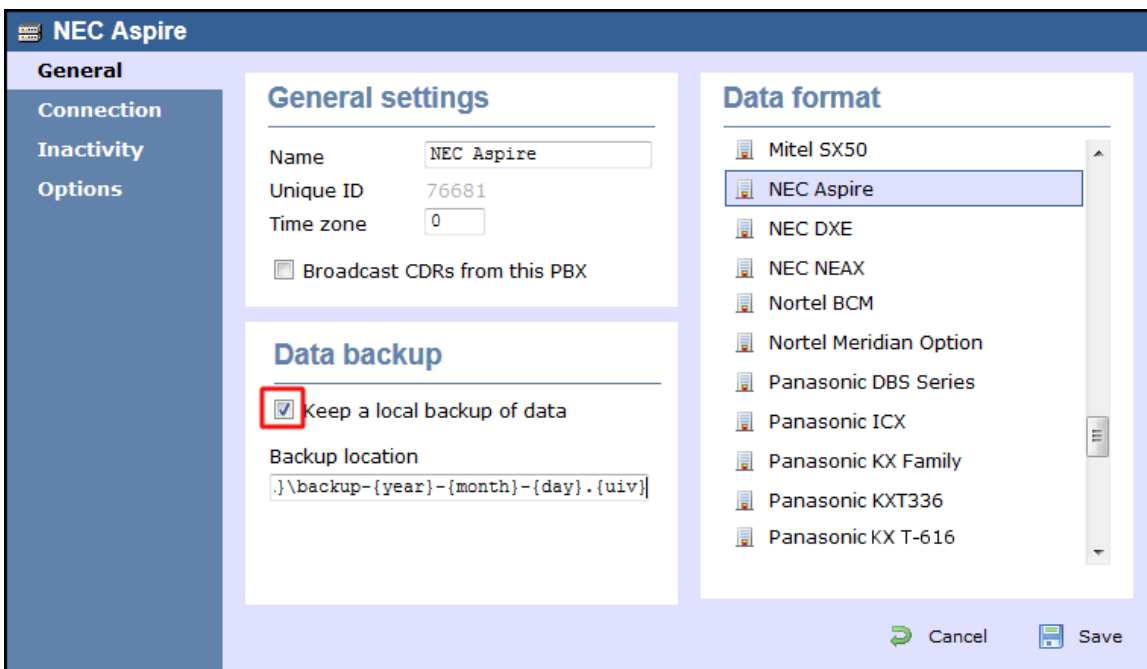
To capture SMDR data from your NEC Aspire using a serial connection, you first need to install the [NetPBX](#) software to collect the data from the serial port and send it to TIM Enterprise. For setup instructions, click on the link below:

[Install and configure NetPBX](#)

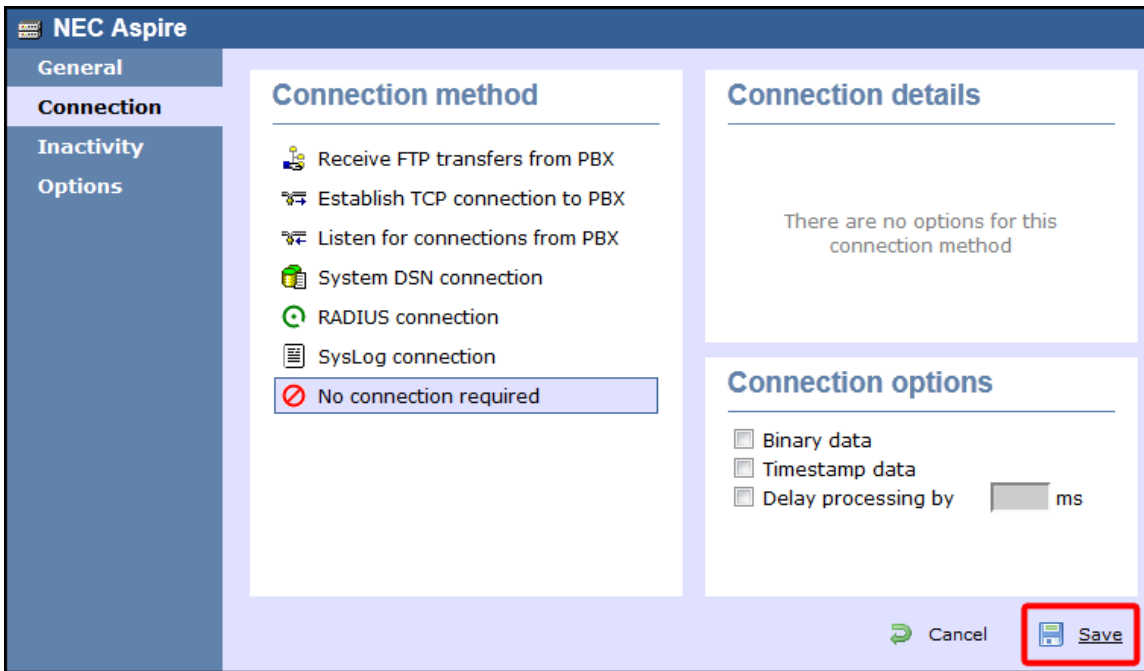
Configuring TIM Enterprise

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

1. Click on the **Directory** tab.
2. Locate the PBX object you want to configure in the Directory, right-click on it and select **Properties**.
3. A new window will open, displaying the general properties of your PBX object. Select **NEC Aspire** from the **Data format** list and tick the **Keep a local backup of data** box, as shown below:



4. Click on the **Connection** tab and select **No connection required** from the **Connection method** 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 Enterprise. Contact your system maintainer if you are not familiar with the configuration of your PBX.

Connection Type

TIM Enterprise establishes a TCP connection to this PBX.

Support Files

- NEC Aspire.TDT
- NEC Aspire.TDS

Required Tasks

- Configure the SMDR output
- Configure TIM Enterprise

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 Enterprise will connect to.	NTUCPU Network Setup - IP Address.
	10-20-01	TCP port that TIM Enterprise 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:

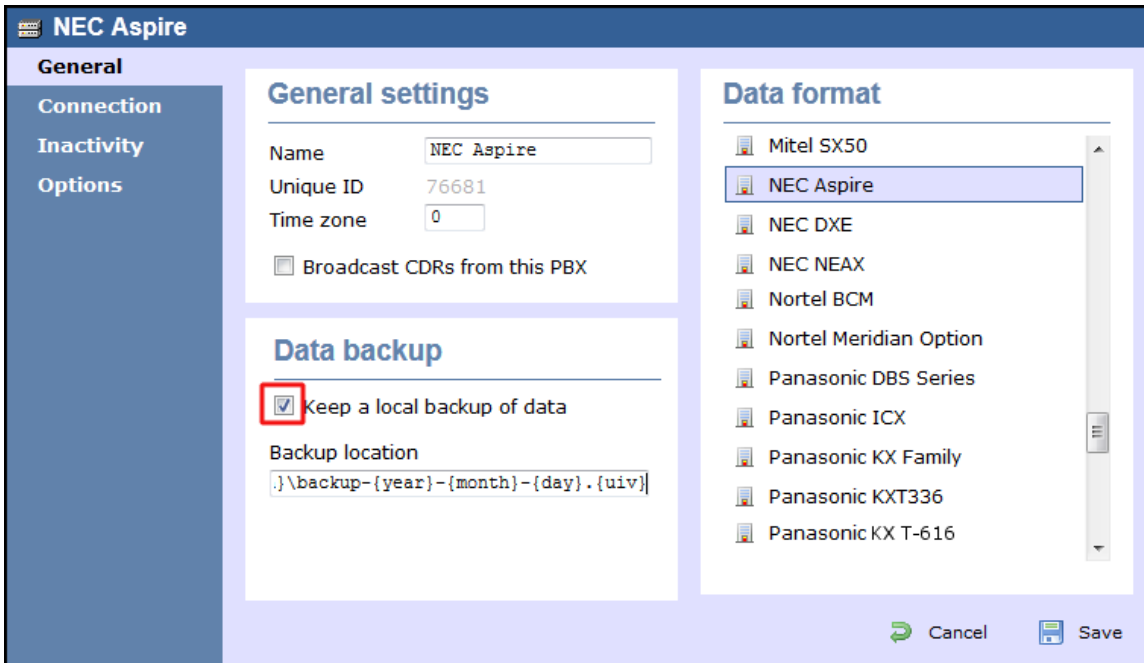
Programming code	Value	Description
14-01-06	1	Basic Trunk Data Setup - SMDR Print.
15-01-03	1	Basic Extension Data Setup - SMDR Print.
35-01-03	0	SMDR Options - Header Language.
35-01-04	0	SMDR Options - Omit (Mask) Digits.
35-01-05	0	SMDR Options - Minimum Number of SMDR Digits.
35-01-06	0	SMDR Options - 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 Dialed 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 Enterprise

Follow the steps below to configure TIM Enterprise to collect the SMDR data from your NEC Aspire:

1. Click on the **Directory** tab.
2. Locate the PBX object you want to configure in the Directory, right-click on it and select **Properties**.
3. A new window will open, displaying the general properties of your PBX object. Select **NEC Aspire** from the **Data format** list and tick the **Keep a local backup of data** box, as shown below:




4. Click on the **Connection** tab and select **Establish TCP connection to PBX** from the **Connection method** 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 **IP script** field, select **Generic Simple** from the drop-down list.
9. Click on the **Save** button to apply the settings.

The screenshot shows the NEC Aspire configuration interface. On the left is a navigation menu with options: General, Connection (selected), Inactivity, and Options. The main content area is divided into two columns. The left column, titled 'Connection method', lists several options: 'Receive FTP transfers from PBX', 'Establish TCP connection to PBX' (highlighted with a blue border), 'Listen for connections from PBX', 'System DSN connection', 'RADIUS connection', 'SysLog connection', and 'No connection required'. The right column, titled 'Connection details', contains input fields for 'Host' (192.168.1.1), 'Port' (9000), 'Username', 'Password', and a dropdown for 'IP script' (Generic Simple). Below this is a 'Connection options' section with checkboxes for 'Binary data', 'Timestamp data', and 'Delay processing by' (with a text input field and 'ms' label). At the bottom right, there are 'Cancel' and 'Save' buttons, with the 'Save' button highlighted by a red rectangle.



NEC DXE

These instructions help you configure your NEC DXE 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 Enterprise 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 Enterprise

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 Enterprise, you first need to install the NetPBX software. For setup instructions, click on the link below:

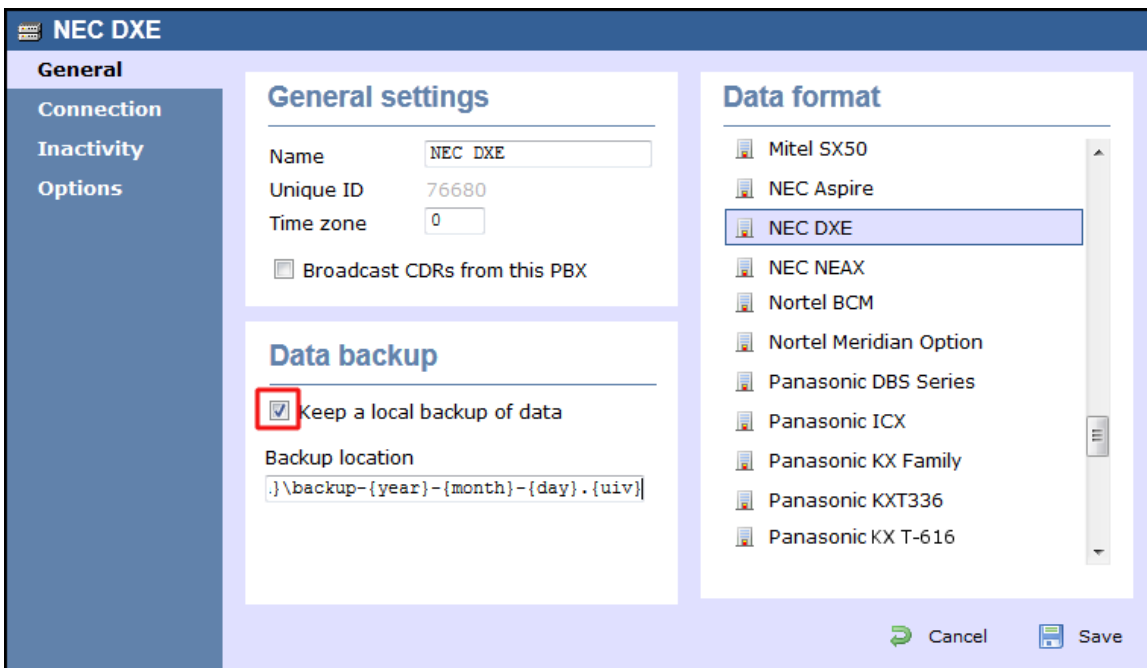
[Install and configure NetPBX](#)

Configuring TIM Enterprise

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

1. Click on the **Directory** tab.
2. Locate the PBX object you want to configure in the Director, right-click on it and select **Properties**.
3. A new window will open, displaying the general properties of your PBX object. Select **NEC DXE** from the **Data format** list and tick the

Keep a local backup of data box, as shown below:



4. Click on the **Connection** tab and select **No connection required** from the **Connection method** list.
5. Click on the **Save** button to apply the settings.


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 Enterprise. Contact your system maintainer if you are not familiar with the configuration of your PBX.

Connection Type

 TIM Enterprise 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 Enterprise

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	<p>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 <code>ANI/Caller ID</code> for incoming calls.</p> <div style="background-color: #e0ffe0; padding: 10px; margin: 10px 0;"> <p><input checked="" type="checkbox"/> NOTE 1: The <code>ANI/Caller ID</code> is required to provide SMDR data for incoming calls, even if this feature is enabled by CM13+05 and CM35+49.</p> <p>NOTE 2: Use CDR formats #501 (2400 IMS), #505 (2000 IPS), #506 (2000 IVS).</p> </div>

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 Enterprise. For setup instructions, click on the link below:

[Install and configure NetPBX](#)

Configuring TIM Enterprise

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

1. Click on the **Directory** tab.
2. Locate the PBX object you want to configure in the Directory, right-click on it and select `Properties`.
3. A new window will open, displaying the general properties of your PBX object. Select **NEC NEAX** from the `Data format` list and tick the **Keep a local backup of data** box, as shown below:


The screenshot shows the 'Data backup' section of the NEC NEAX configuration interface. The 'Keep a local backup of data' checkbox is checked and highlighted with a red box. The backup location is set to `.\backup-{year}-{month}-{day}.{uiv}`. The 'Data format' list on the right includes various models, with 'NEC NEAX' selected. The 'General settings' section shows 'Name' as 'NEC NEAX', 'Unique ID' as '76654', and 'Time zone' as '0'. A 'Broadcast CDRs from this PBX' checkbox is also present. At the bottom right, there are 'Cancel' and 'Save' buttons.



- Click on the **Connection** tab and select **No connection required** from the Connection method list.
- Click on the **Save** button to apply the settings.

The screenshot shows the 'Connection method' section of the NEC NEAX configuration interface. The 'No connection required' option is selected and highlighted with a red box. The 'Connection details' section is empty, displaying the message 'There are no options for this connection method'. The 'Connection options' section includes checkboxes for 'Binary data', 'Timestamp data', and 'Delay processing by' (with a text input field and 'ms' label). At the bottom right, there are 'Cancel' and 'Save' buttons, with the 'Save' button highlighted by a red box.

NEC NEAX - IP connection

These instructions help you configure your NEC NEAX 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 Enterprise establishes a TCP connection to this PBX.

Support Files
 NEC NEAX.TDT
 NEC NEAX.TDS

Required Tasks
 Configure the SMDR output
 Configure TIM Enterprise

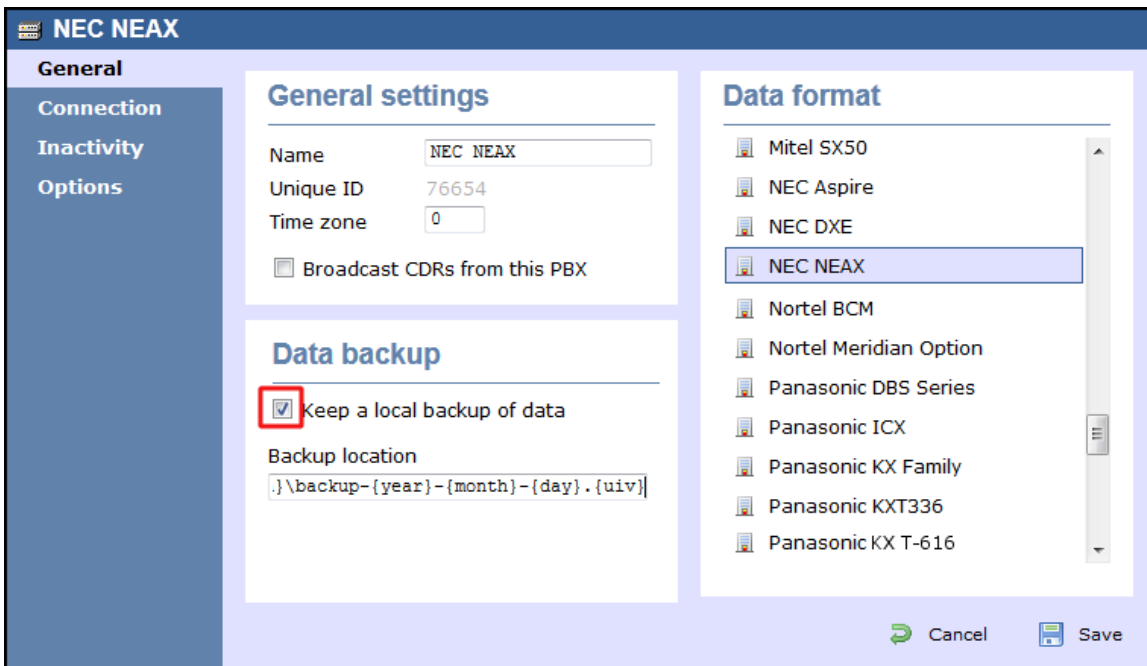
Configure the SMDR output

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 Enterprise

Follow the steps below to configure TIM Enterprise to collect the SMDR data from your NEC NEAX:

1. Click on the **Directory** tab.
2. Locate the PBX object you want to configure in the Directory, right-click on it and select **Properties**.
3. A new window will open, displaying the general properties of the PBX object. Select **NEC NEAX** from the **Data format** list and tick the **Keep a local backup of data** box, as shown below:



The screenshot shows the 'NEC NEAX' Properties dialog box. On the left is a navigation pane with 'General' selected. The main area is divided into three sections: 'General settings', 'Data backup', and 'Data format'.
 - **General settings:** Name: NEC NEAX, Unique ID: 76654, Time zone: 0. There is an unchecked checkbox for 'Broadcast CDRs from this PBX'.
 - **Data backup:** A checkbox labeled 'Keep a local backup of data' is checked and highlighted with a red box. Below it is a text field for 'Backup location' containing the path: .)\backup-{year}-{month}-{day}.{uiv}.
 - **Data format:** A list of PBX models is shown, with 'NEC NEAX' selected and highlighted. Other models include Mitel SX50, NEC Aspire, NEC DXE, Nortel BCM, Nortel Meridian Option, Panasonic DBS Series, Panasonic ICX, Panasonic KX Family, Panasonic KXT336, and Panasonic KX T-616.
 At the bottom right are 'Cancel' and 'Save' buttons.

4. Click on the **Connection** tab and select **Establish TCP connection to PBX** from the **Connection method** 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 **IP script** field, select **Generic Simple** from the drop-down list.
9. Click on the **Save** button to apply the settings.

The screenshot shows the NEC NEAX configuration interface. On the left is a navigation menu with 'General', 'Connection', 'Inactivity', and 'Options'. The 'Connection' section is active. The main area is divided into three panels:

- Connection method:** A list of options including 'Receive FTP transfers from PBX', 'Establish TCP connection to PBX' (highlighted), 'Listen for connections from PBX', 'System DSN connection', 'RADIUS connection', 'SysLog connection', and 'No connection required'.
- Connection details:** Fields for 'Host' (192.168.1.1), 'Port' (2599), 'Username', 'Password', and 'IP script' (Generic Simple).
- Connection options:** Checkboxes for 'Binary data', 'Timestamp data', and 'Delay processing by' (with a text input field and 'ms' unit).

At the bottom right, there are 'Cancel' and 'Save' buttons. The 'Save' button is highlighted with a red box.


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 Enterprise. Contact your system maintainer if you are not familiar with the configuration of your PBX.

Connection Type

 TIM Enterprise 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 Enterprise

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 Dialed 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 Enterprise. For setup instructions, click on the link below:

[Install and configure NetPBX](#)

Configuring TIM Enterprise

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

1. Click on the **Directory** tab.
2. Locate the PBX object you want to configure the PBX object in the Directory, right-click on it and select **Properties**.
3. A new window will open, displaying the general properties of your PBX object. Select **NEC DXE** from the **Data format** list and tick the **Keep a local backup of data** box, as shown below:

NEC XN120

General

Connection
Inactivity
Options

General settings

Name: NEC XN120
Unique ID: 76682
Time zone: 0
 Broadcast CDRs from this PBX

Data backup

Keep a local backup of data
Backup location: .\backup-{year}-{month}-{day}. {uiv}

Data format

- Mitel SX50
- NEC Aspire
- NEC DXE**
- NEC NEAX
- Nortel BCM
- Nortel Meridian Option
- Panasonic DBS Series
- Panasonic ICX
- Panasonic KX Family
- Panasonic KXT336
- Panasonic KX T-616

Cancel Save

- Click on the **Connection** tab and select **No connection required** from the Connection method list.
- Click on the **Save** button to apply the settings.

NEC XN120

General

Connection
Inactivity
Options

Connection method

- Receive FTP transfers from PBX
- Establish TCP connection to PBX
- Listen for connections from PBX
- System DSN connection
- RADIUS connection
- SysLog connection
- No connection required**

Connection details

There are no options for this connection method

Connection options

- Binary data
- Timestamp data
- Delay processing by ms

Cancel **Save**

NEC XN120 - IP connection

These instructions help you configure your NEC XN120 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 Enterprise establishes a TCP connection to this PBX.

Support Files

NEC DXE.TDT



NEC DXE.TDS

Required Tasks

Configure the SMDR output



Configure TIM Enterprise

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 Enterprise will connect to.	NTUCPU Network Setup - IP Address.
	10-20-01	TCP port that TIM Enterprise 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.

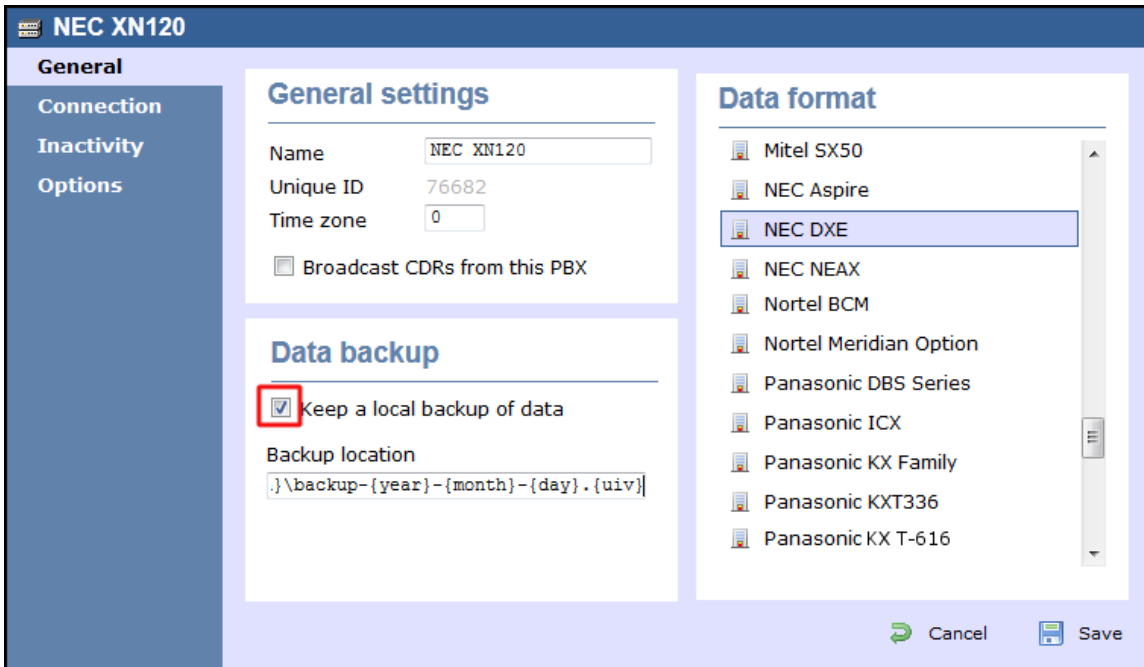
35-01-07	0	SMDR Options - Minimum Ringing Time.
35-01-08	Default	SMDR Options - SMDR Format.
35-02-01	0	SMDR Output Options - Toll Restricted Call.
35-02-02	1	SMDR Output Options - PBX Calls.
35-02-03	1	SMDR Output Options - Display Trunk Name or Numbers.
35-02-04	0	SMDR Output Options - Daily Summary.
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 Dialed 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 Enterprise

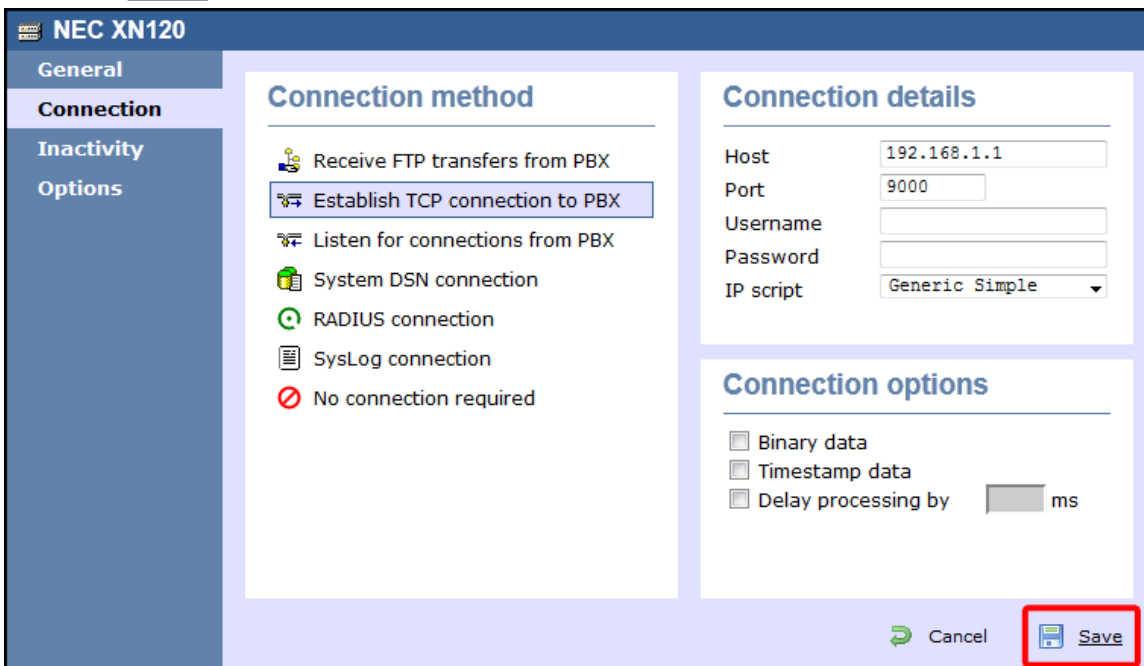
Follow the steps below to configure TIM Enterprise to collect the SMDR data from your NEC XN120:

1. Click on the **Directory** tab.

2. Locate the PBX object you want to configure in the Directory, right-click on it and select **Properties**.
3. A new window will open, displaying the general properties of your PBX object. Select **NEC DXE** from the **Data format** list and tick the **Keep a local backup of data** box, as shown below:




4. Click on the **Connection** tab and select **Establish TCP connection to PBX** from the **Connection method** 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** (above).
7. Leave the **Username** and **Password** fields blank.
8. In the **IP 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 Enterprise. Contact your system maintainer if you are not familiar with the configuration of your PBX.

Connection Type

 TIM Enterprise establishes a TCP connection to this PBX.

Support Files

 NEC DXE.TDT

 NEC DXE.TDS

Required Tasks

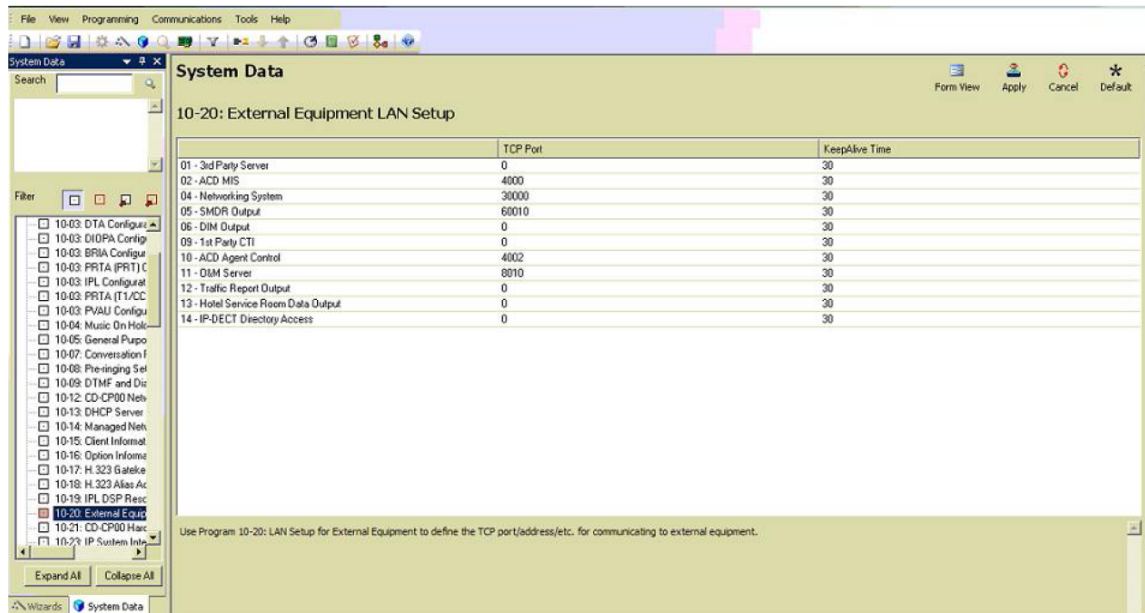
Configure the SMDR output

Configure TIM Enterprise

Configuring the SMDR output

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

External equipment LAN setup

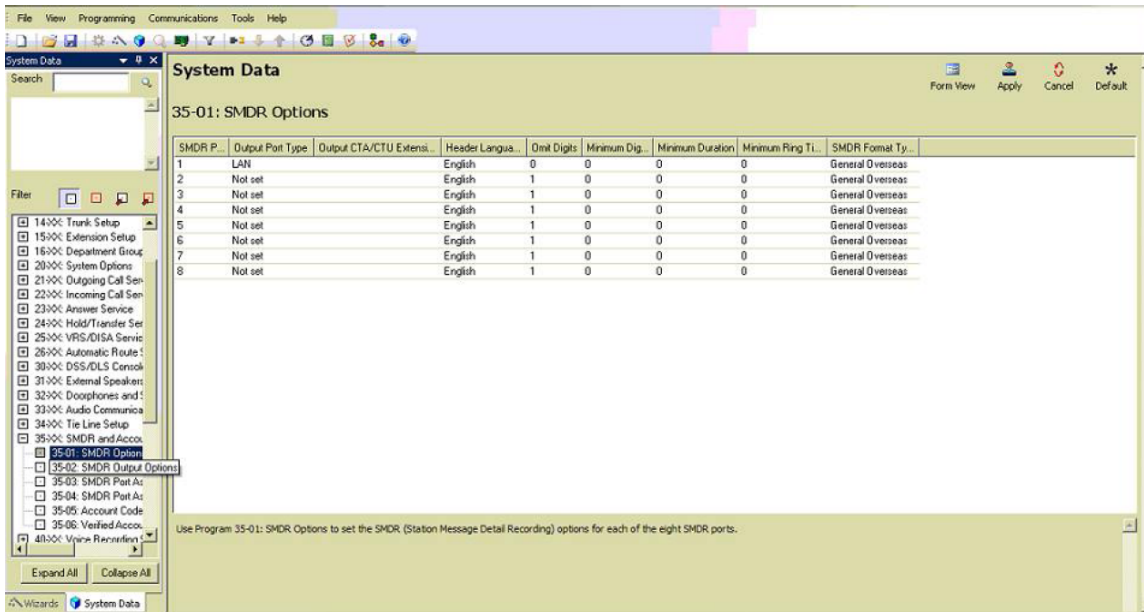


The screenshot shows the 'System Data' configuration window with the '10-20: External Equipment LAN Setup' section expanded. The table below lists the configuration for various external equipment.

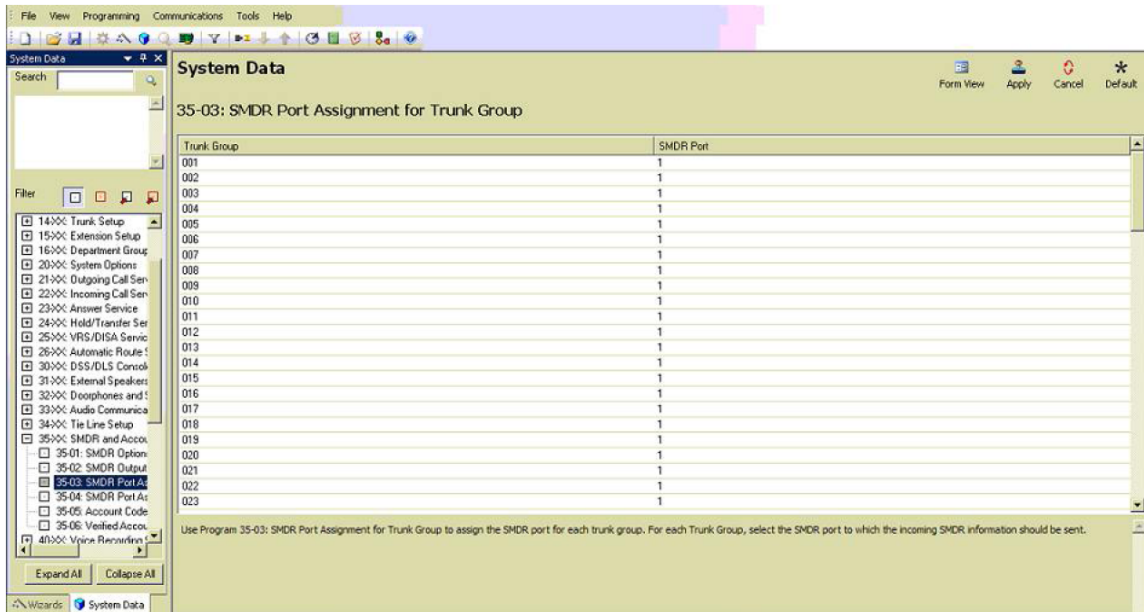
	TCP Port	KeepAlive Time
01 - 3rd Party Server	0	30
02 - ACD MIS	4000	30
04 - Networking System	30000	30
05 - SMDR Output	60010	30
06 - DIM Output	0	30
09 - 1st Party CTI	0	30
10 - ACD Agent Control	4002	30
11 - DIM Server	8010	30
12 - Traffic Report Output	0	30
13 - Hotel Service Room Data Output	0	30
14 - IP-DECT Directory Access	0	30

Use Program 10-20: LAN Setup for External Equipment to define the TCP port/address/etc. for communicating to external equipment.

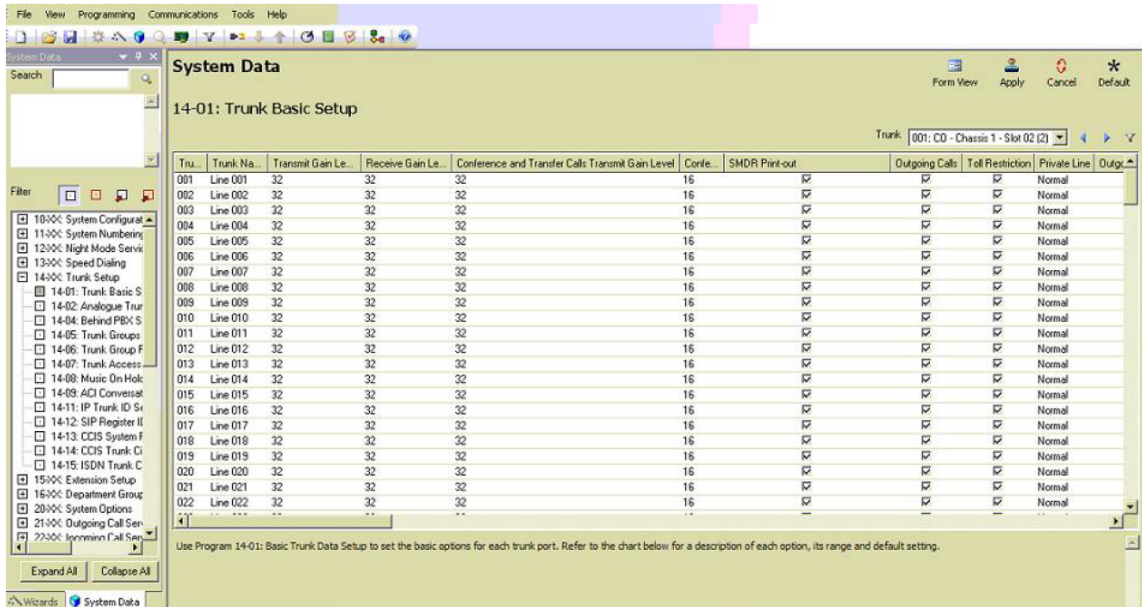
SMDR options



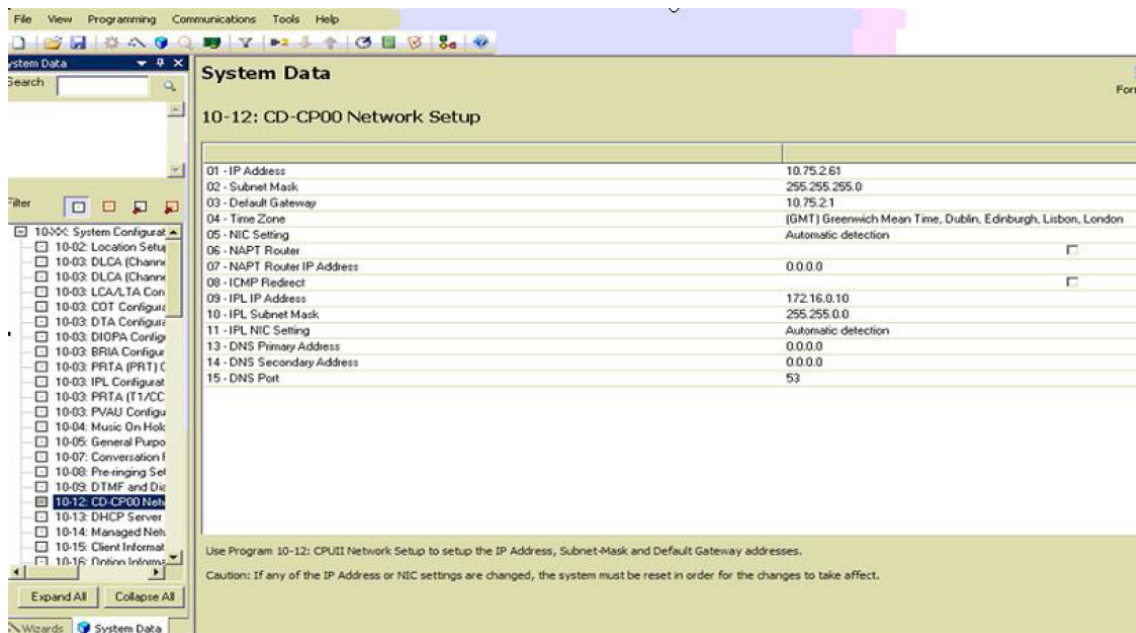
SMDR port assignment for trunk groups



Trunk Basic setup



CD DP00 Network setup

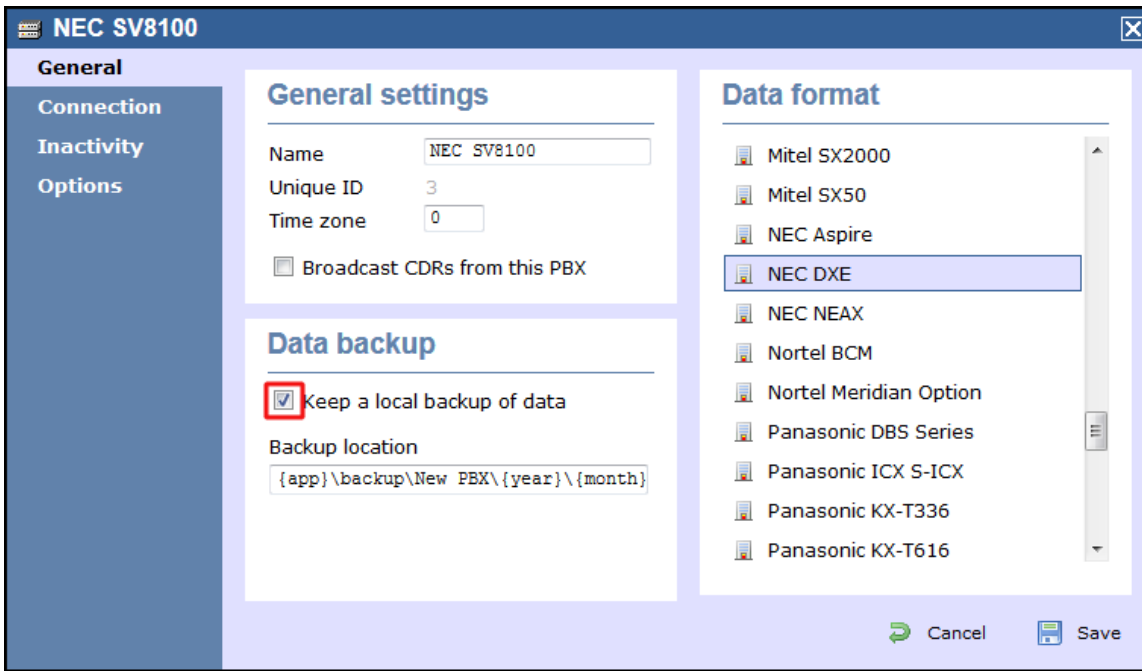


Configuring TIM Enterprise

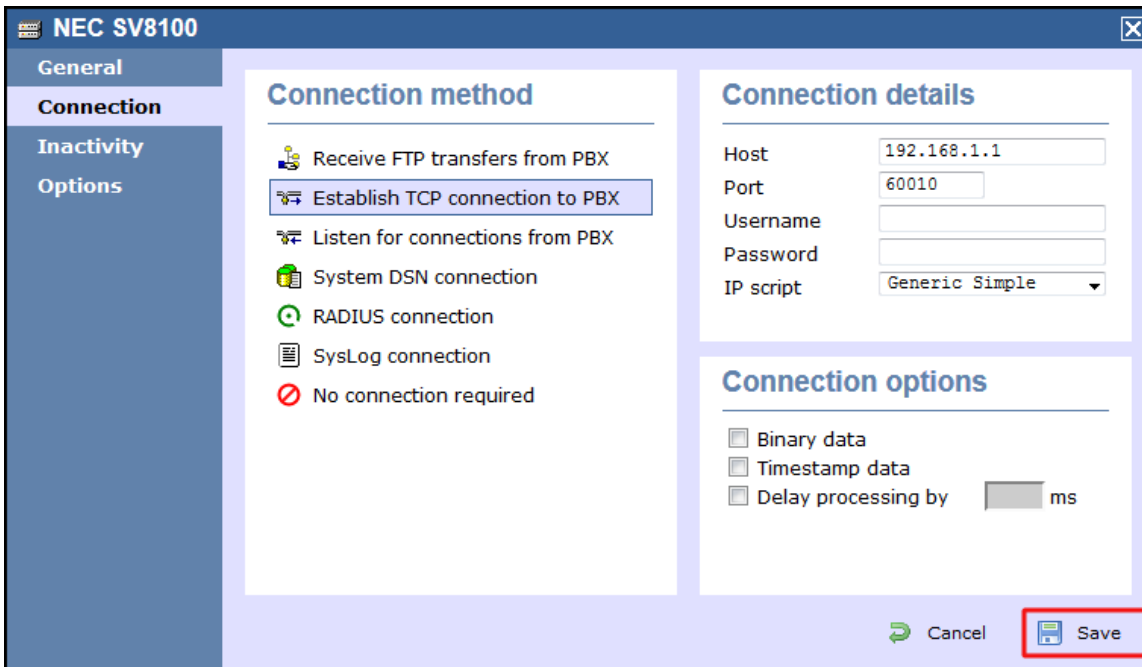
Follow the steps below to configure TIM Enterprise to collect the SMDR data from your NEC SV8100:

1. Click on the **Directory** tab.
2. Locate the PBX object you want to configure in the Directory, right-click on it and select **Properties**.
3. A new window will open, displaying the general properties of your PBX object. Select **NEC DXE** from the **Data format** list and tick the

Keep a local backup of data box, as shown below:



4. Click on the **Connection** tab and select **Establish TCP connection to PBX** from the Connection method 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 **IP script** field, select **Generic Simple** from the drop-down list.
9. Click on the **Save** button to apply the changes.



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 Enterprise. Contact your system maintainer if you are not familiar with the configuration of your PBX.

Connection Type

 TIM Enterprise establishes a serial connection with this PBX.

Support Files

 Panasonic DBS Series.TDT

Required Tasks

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

Configuring your SMDR output

Follow the steps below to configure your Panasonic DBS Series to output SMDR data to TIM Enterprise. 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

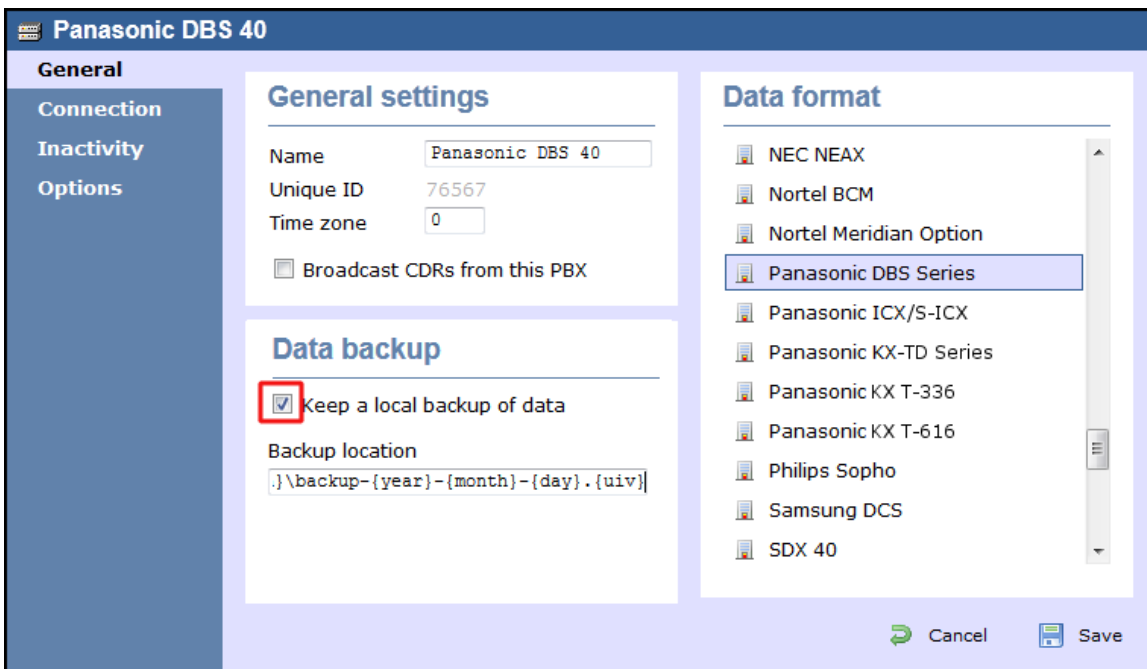
The Panasonic DBS Series phone system sends SMDR information via a serial connection. To collect the call logging data from the serial port and send it to TIM Enterprise, you first need to install the **NetPBX** software. For setup instructions, click on the link below:

Install and configure NetPBX

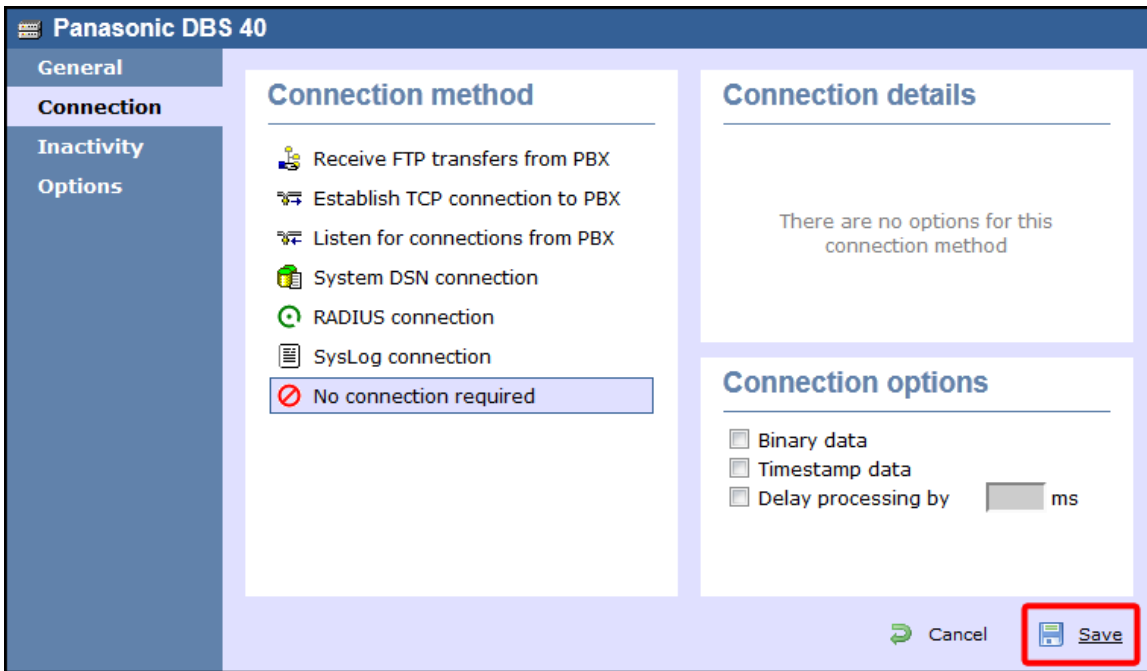
Configuring TIM Enterprise

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

1. Click on the **Directory** tab.
2. Locate the PBX object you want to configure in the Directory, right-click on it and select **Properties**.
3. A new window will open, displaying the general properties of your PBX object. Select **Panasonic DBS Series** from the **Data format** list and tick the **Keep a local backup of data** box, as shown below:




4. Click on the **Connection** tab and select **No connection required** from the **Connection** method 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 Enterprise. Contact your system maintainer if you are not familiar with the configuration of your PBX.

Connection Type

 TIM Enterprise establishes a serial connection with this PBX.

Support Files

 Panasonic ICX S-ICX.TDT

Required Tasks

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

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

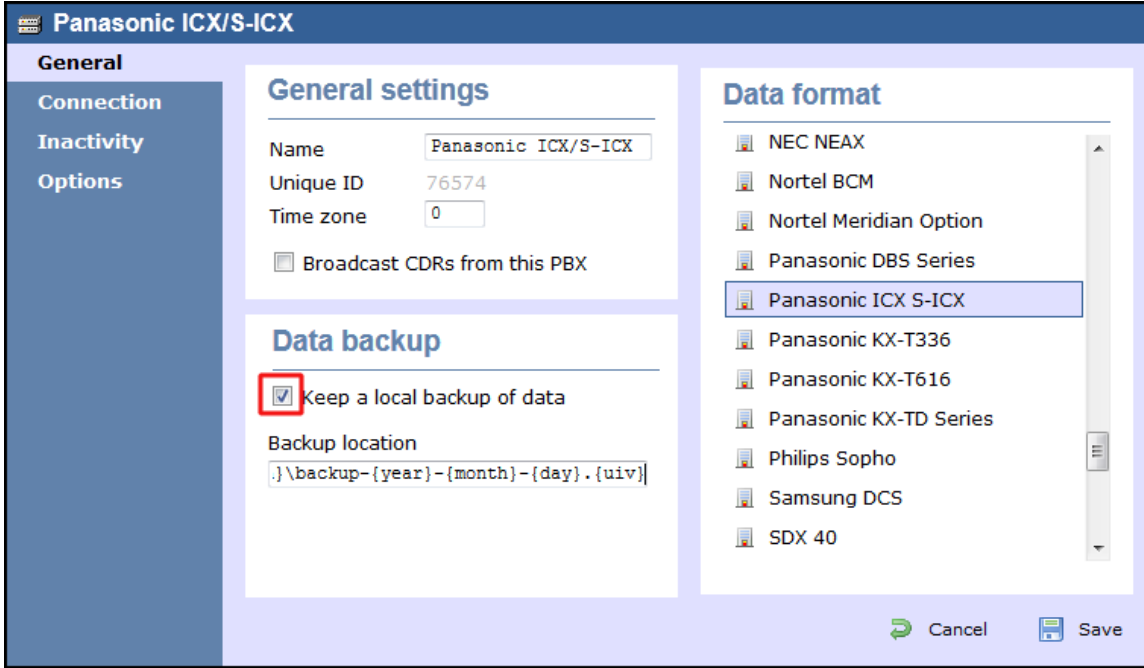
The Panasonic ICX/S-ICX phone system sends SMDR information via a serial connection. To collect the call logging data from the serial port and send it to TIM Enterprise, you first need to install the NetPBX software. For setup instructions, click on the link below:

[Install and configure NetPBX](#)

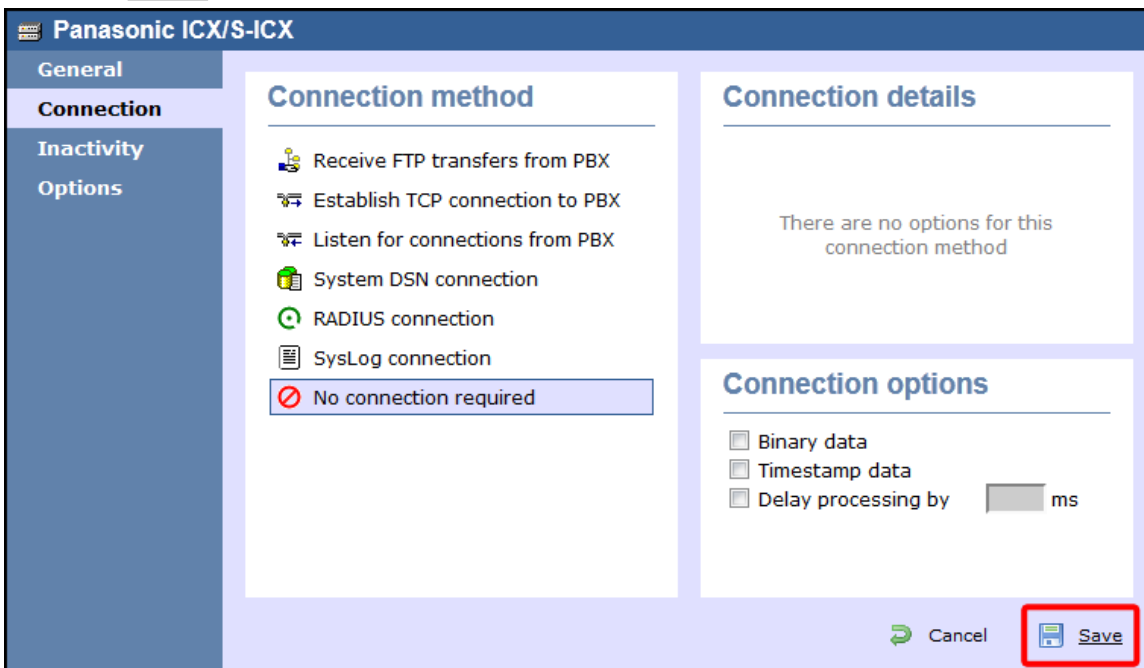
Configuring TIM Enterprise

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

1. Click on the **Directory** tab.
2. Locate the PBX object you want to configure in the Directory, right-click on it and select **Properties**.
3. A new window will open, displaying the general properties of your PBX object. Select **Panasonic ICX S-ICX** from the **Data format list** and tick the **Keep a local backup of data** box, as shown below:




4. Click on the **Connection** tab and select **No connection required** from the **Connection method list**.
5. Click on the **Save** button to apply the settings.




Panasonic KX-TA/E


These instructions help you configure your Panasonic KX-TA/TE 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 Enterprise 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 Enterprise

Configuring the SMDR output

Follow the steps below to configure your Panasonic KX-TA/TE to output SMDR data to TIM Enterprise. 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 Enterprise, you first need to install the [NetPBX](#) software. For setup instructions, click on the link below:

[Install and configure NetPBX](#)

Configuring TIM Enterprise

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

1. Click on the **Directory** tab.
2. Locate the PBX object you want to configure in the Directory, right-click on it and select **Properties**.
3. A new window will open, displaying the general properties of your PBX object. Select **Panasonic KX-TD Series** from the **Data format** list and tick the **Keep a local backup of data** box, as shown below:

Panasonic KX-TA/E

General

General settings

Name:

Unique ID:

Time zone:

Broadcast CDRs from this PBX

Data backup

Keep a local backup of data

Backup location:

Data format

- Nortel Meridian Option
- Panasonic DBS Series
- Panasonic ICX/S-ICX
- Panasonic KX-TD Series
- Panasonic KX T-336
- Panasonic KX T-616
- Philips Sopho
- Samsung DCS
- SDX 40
- ShoreTel
- Siemens HiCom-HiPath

Cancel Save

- Click on the **Connection** tab and select **No connection required** from the Connection method list.
- Click on the **Save** button to apply the settings.

Panasonic KX-TA/E

General

Connection

Connection method

- Receive FTP transfers from PBX
- Establish TCP connection to PBX
- Listen for connections from PBX
- System DSN connection
- RADIUS connection
- SysLog connection
- No connection required

Connection details

There are no options for this connection method

Connection options


- Binary data
- Timestamp data
- Delay processing by ms

Cancel Save


Panasonic KX-TD Series


These instructions help you configure your Panasonic KX-TD Series 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 Enterprise 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 Enterprise

Configuring your SMDR output

Follow the instructions below to configure your Panasonic KX-TD phone system to output SMDR data to TIM Enterprise. 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 Enterprise, you first need to install the [NetPBX](#) software. For setup instructions, click on the link below:

[Install and configure NetPBX](#)

Configuring TIM Enterprise

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

1. Click on the **Directory** tab.
2. Locate the PBX object you want to configure in the Directory, right-click on it and select **Properties**.
3. A new window will open, displaying the general properties of your PBX object. Select **Panasonic KX-TD Series** from the **Data format** list and tick the **Keep a local backup of data** box, as shown below:

Panasonic KX-TD 1232

General

Connection
Inactivity
Options

General settings

Name: Panasonic KX-TD 1232
Unique ID: 76575
Time zone: 0
 Broadcast CDRs from this PBX

Data backup

Keep a local backup of data
Backup location: .\backup-{year}-{month}-{day}. {uiv}

Data format

- Nortel Meridian Option
- Panasonic DBS Series
- Panasonic ICX/S-ICX
- Panasonic KX-TD Series**
- Panasonic KX T-336
- Panasonic KX T-616
- Philips Sopho
- Samsung DCS
- SDX 40
- ShoreTel
- Siemens HiCom-HiPath

Cancel Save

- Click on the **Connection** tab and select **No connection required** from the Connection method list.
- Click on the **Save** button to apply the settings.

Panasonic KX-TD 1232

General
Connection
Inactivity
Options

Connection method

- Receive FTP transfers from PBX
- Establish TCP connection to PBX
- Listen for connections from PBX
- System DSN connection
- RADIUS connection
- SysLog connection
- No connection required**

Connection details

There are no options for this connection method

Connection options

- Binary data
- Timestamp data
- Delay processing by ms


Cancel **Save**

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 Enterprise. Contact your system maintainer if you are not familiar with the configuration of your PBX.

Connection Type
 TIM Enterprise establishes a serial connection with this PBX.

Support Files

-  Panasonic KX-TD Series.TDT
-  Panasonic KX-TD Series.TDS

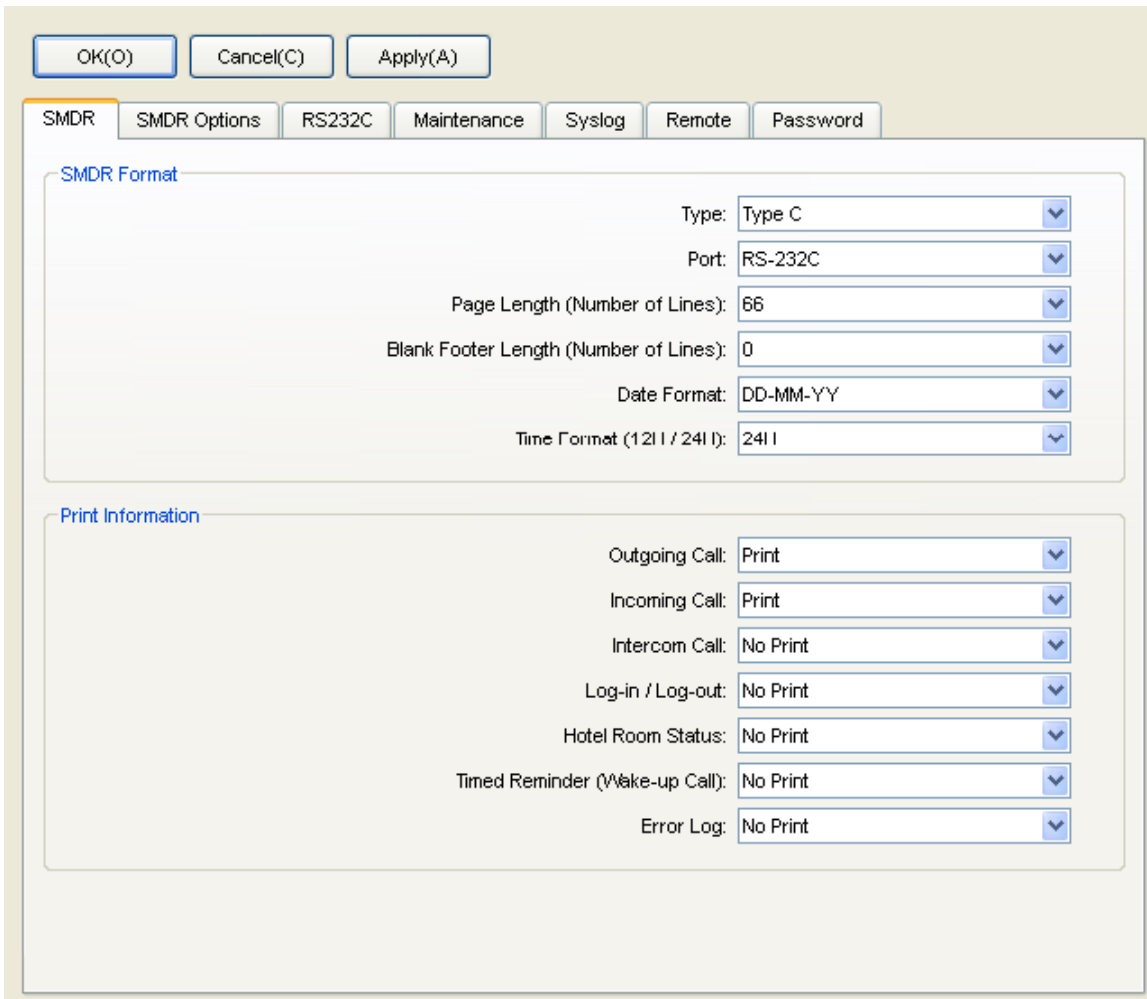
Required Tasks

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

Configuring the SMDR output

Follow the steps below to configure your Panasonic phone system to output SMDR to TIM Enterprise.

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:



The screenshot shows the SMDR configuration window with the following settings:

Section	Parameter	Value
SMDR Format	Type:	Type C
	Port:	RS-232C
	Page Length (Number of Lines):	66
	Blank Footer Length (Number of Lines):	0
	Date Format:	DD-MM-YY
	Time Format (1211 / 2411):	2411
Print Information	Outgoing Call:	Print
	Incoming Call:	Print
	Intercom Call:	No Print
	Log-in / Log-out:	No Print
	Hotel Room Status:	No Print
	Timed Reminder (Wake-up Call):	No Print
	Error Log:	No Print

4. Click on the **SMDR Options** tab and configure the options as shown below:

OK(O) Cancel(C) Apply(A)

SMDR SMDR Options RS232C Maintenance Syslog Remote Password

Option

ARS Dial: Dial after ARS Modification

Caller ID Number & Name: Number

DDI / DID Number & Name: Number

Secret Dial: Print "..." (Secret)

Privacy Mode: Print Dialed Number

Condition Code "RC": Print

Condition Code "AN": Print

Caller ID Modification: After Modification

LAN

SMDR Port Number: 2300

SMDR Password: PCCSMDR

New-Line Code for Telnet: CR + LF

*) Perform System Reset for changes to take effect

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 Enterprise, you first need to install the NetPBX software. For setup instructions, click on the link below:

[Install and configure NetPBX](#)

Configuring TIM Enterprise

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

1. Click on the **Directory** tab.
2. Locate the PBX object you want to configure in the Directory, right-click on it and select **Properties**.
3. A new window will open, displaying the general properties of your PBX object. Select **Panasonic KX-TD Series** from the **Data format** list and tick the **Keep a local backup of data** box, as shown below:

Panasonic KX-TDA/E

General settings

Name:

Unique ID:

Time zone:

Broadcast CDRs from this PBX

Data backup

Keep a local backup of data

Backup location:

Data format

- Nortel Meridian Option
- Panasonic DBS Series
- Panasonic ICX/S-ICX
- Panasonic KX-TD Series
- Panasonic KX T-336
- Panasonic KX T-616
- Philips Sopho
- Samsung DCS
- SDX 40
- ShoreTel
- Siemens HiCom-HiPath

Cancel Save

- Click on the **Connection** tab and select **No connection required** from the Connection method list.
- Click on the **Save** button to apply the settings.

Panasonic KX-TDA/E

Connection method

- Receive FTP transfers from PBX
- Establish TCP connection to PBX
- Listen for connections from PBX
- System DSN connection
- RADIUS connection
- SysLog connection
- No connection required

Connection details

There are no options for this connection method


Connection options

- Binary data
- Timestamp data
- Delay processing by ms



Cancel **Save**

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 Enterprise. Contact your system maintainer if you are not familiar with the configuration of your PBX.

Connection Type
 TIM Enterprise establishes a TCP connection to this PBX.

Support Files

-  Panasonic KX-TD Series.TDT
-  Panasonic KX-TD Series.TDS

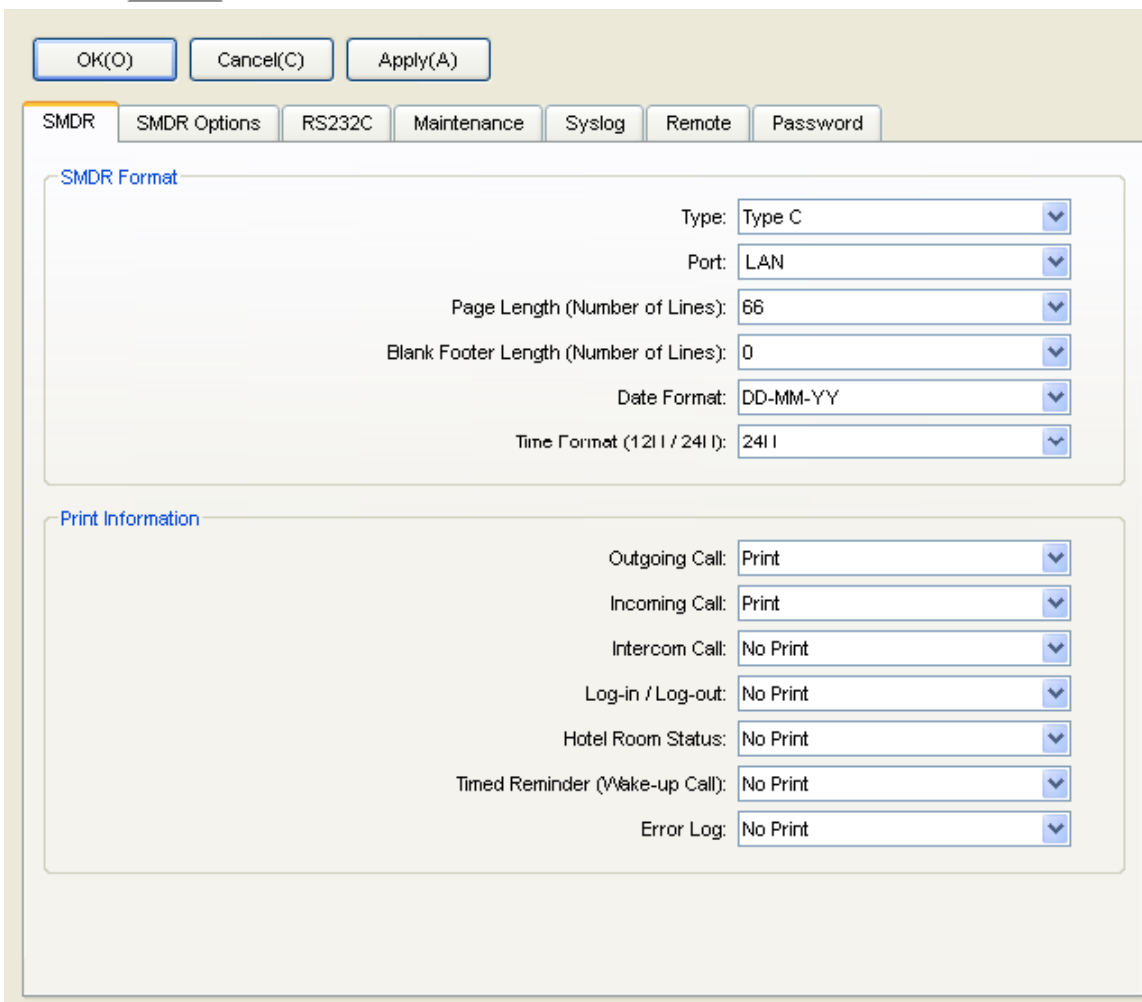
Required Tasks

- Configure the SMDR output
- Configure TIM Enterprise

Configuring the SMDR output

Follow the steps below to configure your Panasonic phone system to output SMDR to TIM Enterprise.

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:



OK(O) Cancel(C) Apply(A)

SMDR SMDR Options RS232C Maintenance Syslog Remote Password

SMDR Format

Type: Type C

Port: LAN

Page Length (Number of Lines): 66

Blank Footer Length (Number of Lines): 0

Date Format: DD-MM-YY

Time Format (1211 / 2411): 2411

Print Information

Outgoing Call: Print

Incoming Call: Print

Intercom Call: No Print

Log-in / Log-out: No Print

Hotel Room Status: No Print

Timed Reminder (Wake-up Call): No Print

Error Log: No Print

4. Click on the **SMDR Options** tab and configure the options as shown below:

OK(O) Cancel(C) Apply(A)

SMDR SMDR Options RS232C Maintenance Syslog Remote Password

Option

ARS Dial: Dial after ARS Modification

Caller ID Number & Name: Number

DDI / DID Number & Name: Number

Secret Dial: Print "..." (Secret)

Privacy Mode: Print Dialed Number

Condition Code "RC": Print

Condition Code "AN": Print

Caller ID Modification: After Modification

LAN

SMDR Port Number: 2300

SMDR Password: PCCSMDR

New-Line Code for Telnet: CR + LF

*) Perform System Reset for changes to take effect

5. Click on the **Apply** button to save the changes.

Configuring TIM Enterprise

Follow the steps below to configure TIM Enterprise to collect the SMDR data from your Panasonic phone system:

1. Click on the **Directory** tab.
2. Locate the PBX object you want to configure in the Directory, right-click on it and select **Properties**.
3. A new window will open. In the **General** tab, select **Panasonic KX-TD Series** from the **Data format** list and tick the **Keep a local backup of data** box, as shown below:

Panasonic KX-TDA/E

General settings

Name:

Unique ID:

Time zone:

Broadcast CDRs from this PBX

Data backup

Keep a local backup of data

Backup location:

Data format

- Nortel Meridian Option
- Panasonic DBS Series
- Panasonic ICX/S-ICX
- Panasonic KX-TD Series
- Panasonic KX T-336
- Panasonic KX T-616
- Philips Sopho
- Samsung DCS
- SDX 40
- ShoreTel
- Siemens HiCom-HiPath

Cancel Save

- Click on the **Connection** tab and select **Establish TCP connection to PBX** from the Connection method list.
- In the **Host** field, enter the IP address of your phone system.
- In the **Port** field, enter **2300**.
- Leave the **Username** field blank.
- In the **Password** field, enter the password required to connect to your phone system, by default **PCCSMRDR**.
- In the **IP script** field, select **Panasonic** from the drop-down list.
- Click on the **Save** button to apply the settings.

Panasonic KX-TDA/E

Connection method

- Receive FTP transfers from PBX
- Establish TCP connection to PBX
- Listen for connections from PBX
- System DSN connection
- RADIUS connection
- SysLog connection
- No connection required

Connection details

Host:

Port:

Username:

Password:

IP script:

Connection options

- Binary data
- Timestamp data
- Delay processing by ms


Cancel Save

Samsung


Samsung DCS


These instructions help you configure your Samsung DCS 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 Enterprise 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 Enterprise

Configuring your SMDR output

Follow the instructions below to configure your Samsung DCS to output SMDR data to TIM Enterprise. 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

- Next, press the **SPKR** key and select 804.
- Dial 0 and use the arrow keys to select **SMDR**.
- 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 Enterprise, you first need to install the NetPBX software. For setup instructions, click on the link below:

[Install and configure NetPBX](#)

Configuring TIM Enterprise

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

- Click on the **Directory** tab.
- Locate the PBX object you want to configure in the Directory, right-click on it and select **Properties**.
- A new window will open, displaying the general properties of your PBX object. Select **Samsung DCS** from the **Data format** list and tick the **Keep a local backup of data** box, as shown below:

Samsung DCS

General

Connection
Inactivity
Options

General settings

Name: Samsung DCS
Unique ID: 76456
Time zone: 0
 Broadcast CDRs from this PBX

Data backup

Keep a local backup of data
Backup location: .\backup-{year}-{month}-{day}.{uiv}

Data format

- Panasonic KX-T336
- Panasonic KX-T616
- Panasonic KX-TD Series
- Philips Sopho
- Samsung DCS**
- SDX 40
- ShoreTel
- Siemens - HiPath DX
- Siemens HiCom-HiPath
- Siemens OpenOffice
- SpliceCom Maximiser

Cancel Save

- Click on the **Connection** tab and select **No connection required** from the Connection method list.
- Click on the **Save** button to apply the settings.

Samsung DCS

General
Connection
Inactivity
Options

Connection method

- Receive FTP transfers from PBX
- Establish TCP connection to PBX
- Listen for connections from PBX
- System DSN connection
- RADIUS connection
- SysLog connection
- No connection required**

Connection details

There are no options for this connection method

Connection options

- Binary data
- Timestamp data
- Delay processing by ms

Cancel **Save**


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 Enterprise. Contact your system maintainer if you are not familiar with the configuration of your PBX.

Connection Type

 TIM Enterprise establishes a serial connection with this PBX.

Support Files

-  Samsung DCS . TDT
-  Samsung DCS . TDS

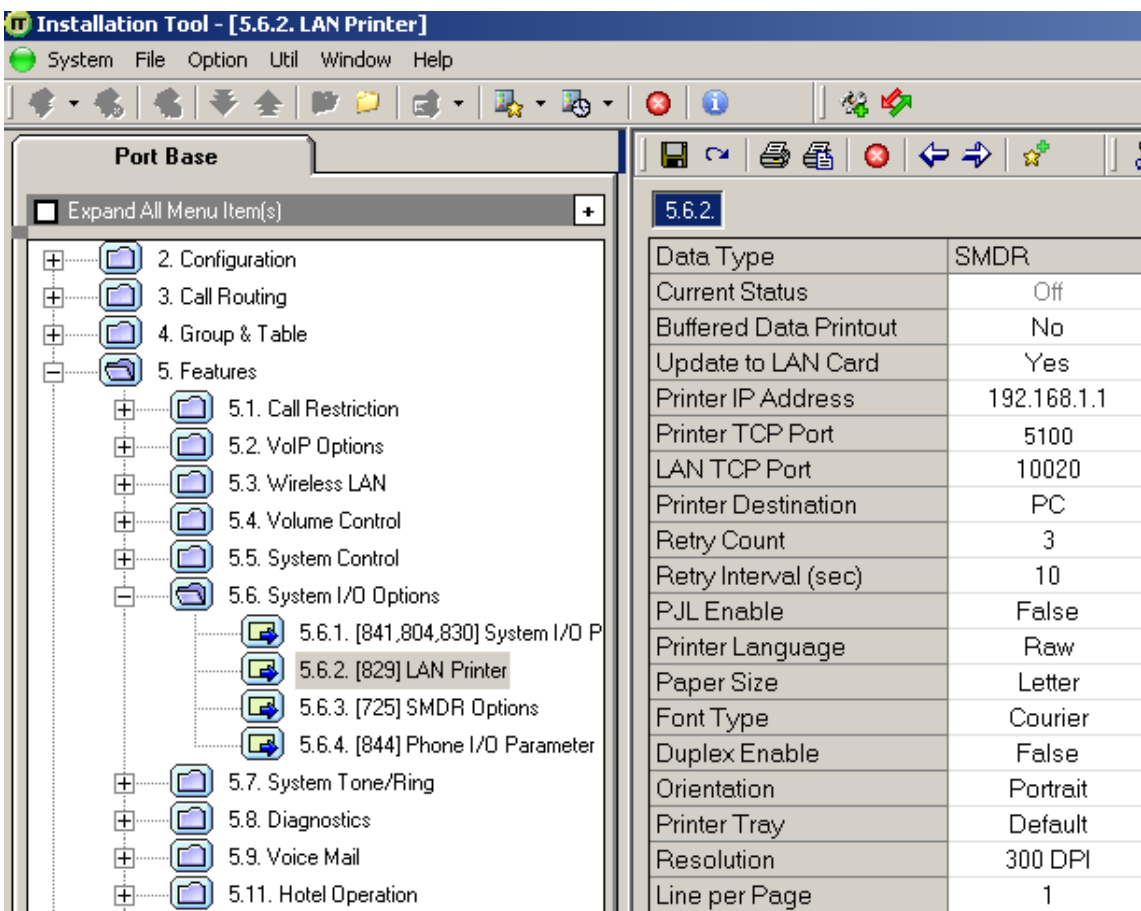
Required Tasks

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

Configuring your SMDR output

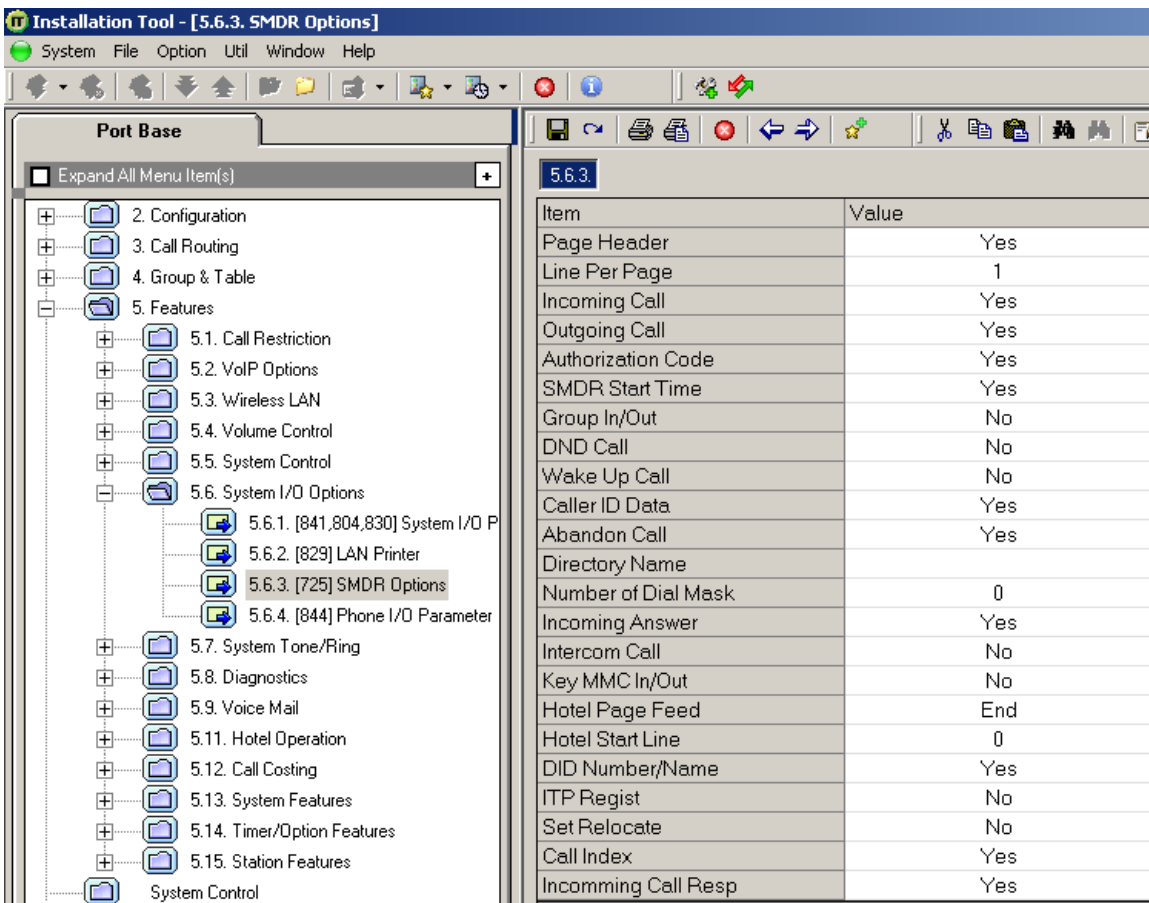
Follow the instructions below to configure your Samsung iDCS to output SMDR data to TIM Enterprise.

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:



Data Type	SMDR
Current Status	Off
Buffered Data Printout	No
Update to LAN Card	Yes
Printer IP Address	192.168.1.1
Printer TCP Port	5100
LAN TCP Port	10020
Printer Destination	PC
Retry Count	3
Retry Interval (sec)	10
PJL Enable	False
Printer Language	Raw
Paper Size	Letter
Font Type	Courier
Duplex Enable	False
Orientation	Portrait
Printer Tray	Default
Resolution	300 DPI
Line per Page	1

- Click on the **Save** icon to save the settings.
- Click on the **5.6.3. SMDR Options** tab and configure the following settings:



Item	Value
Page Header	Yes
Line Per Page	1
Incoming Call	Yes
Outgoing Call	Yes
Authorization Code	Yes
SMDR Start Time	Yes
Group In/Out	No
DND Call	No
Wake Up Call	No
Caller ID Data	Yes
Abandon Call	Yes
Directory Name	
Number of Dial Mask	0
Incoming Answer	Yes
Intercom Call	No
Key MMC In/Out	No
Hotel Page Feed	End
Hotel Start Line	0
DID Number/Name	Yes
ITP Regist	No
Set Relocate	No
Call Index	Yes
Incomming Call Resp	Yes

- 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 Enterprise, you first need to install the [NetPBX](#) software. For setup instructions, click on the link below:

[Install and configure NetPBX](#)

Configuring TIM Enterprise

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

- Click on the **Directory** tab.
- Locate the PBX object you want to configure in the Directory, right-click on it and select **Properties**.
- A new window will open, displaying the general properties of your PBX object. Select **Samsung DCS** from the **Data format** list and tick the **Keep a local backup of data** box, as shown below:

Samsung iDCS

General

Connection
Inactivity
Options

General settings

Name: Samsung iDCS
Unique ID: 76566
Time zone: 0
 Broadcast CDRs from this PBX

Data backup

Keep a local backup of data

Backup location: .\backup-{year}-{month}-{day}.{uiv}

Data format

- Panasonic KX-T336
- Panasonic KX-T616
- Panasonic KX-TD Series
- Philips Sopho
- Samsung DCS**
- SDX 40
- ShoreTel
- Siemens - HiPath DX
- Siemens HiCom-HiPath
- Siemens OpenOffice
- SpliceCom Maximiser

Cancel Save

- Click on the **Connection** tab and select **No connection required** from the Connection method list.
- Click on the **Save** button to apply the settings.

Samsung iDCS

General
Connection
Inactivity
Options

Connection method

- Receive FTP transfers from PBX
- Establish TCP connection to PBX
- Listen for connections from PBX
- System DSN connection
- RADIUS connection
- SysLog connection
- No connection required**

Connection details

There are no options for this connection method


Connection options

- Binary data
- Timestamp data
- Delay processing by ms



Cancel **Save**

Samsung iDCS - IP connection

These instructions help you configure your Samsung iDCS 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 Enterprise establishes a TCP connection to this PBX.

Support Files

-  Samsung DCS . TDT
-  Samsung DCS . TDS

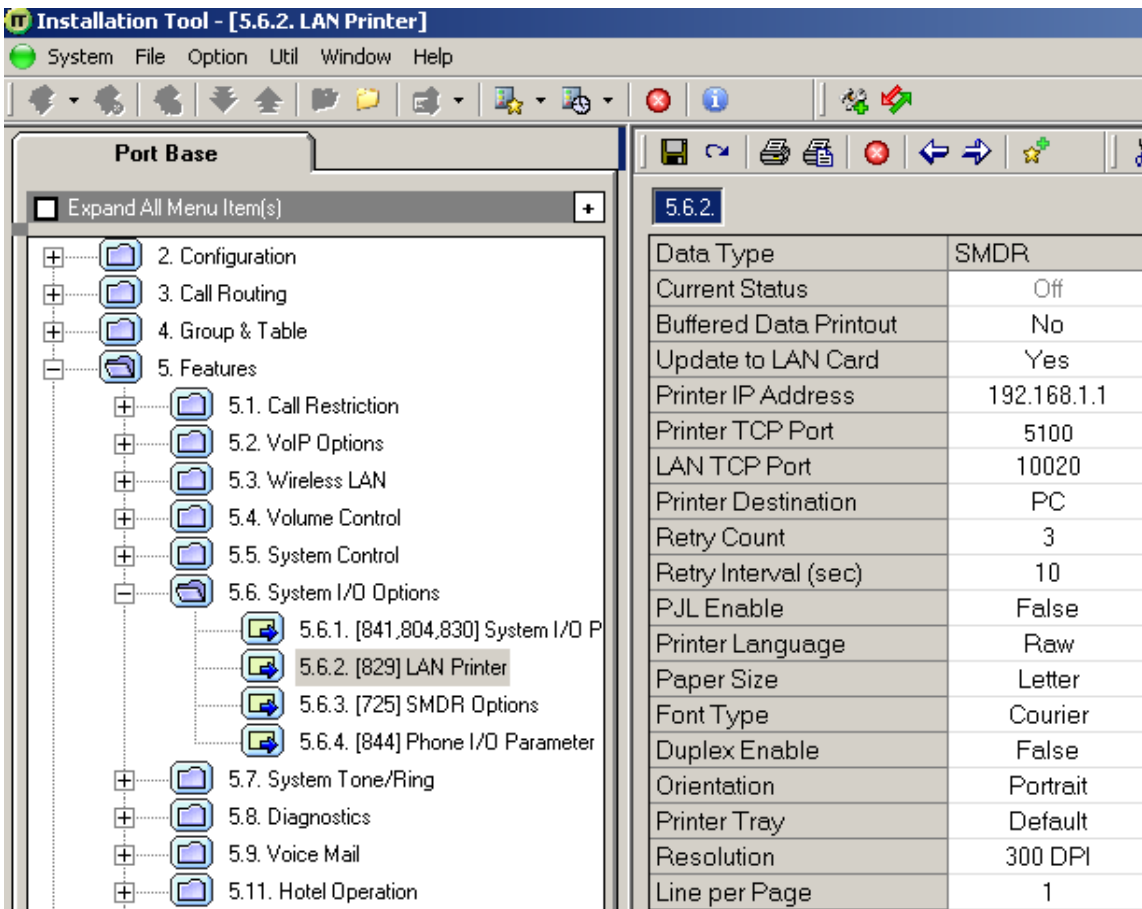
Required Tasks

- Configure the SMDR output
- Configure TIM Enterprise

Configuring your SMDR output

Follow the instructions below to configure your Samsung iDCS phone system to output SMDR data to TIM Enterprise.

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:



Installation Tool - [5.6.2. LAN Printer]

System File Option Util Window Help

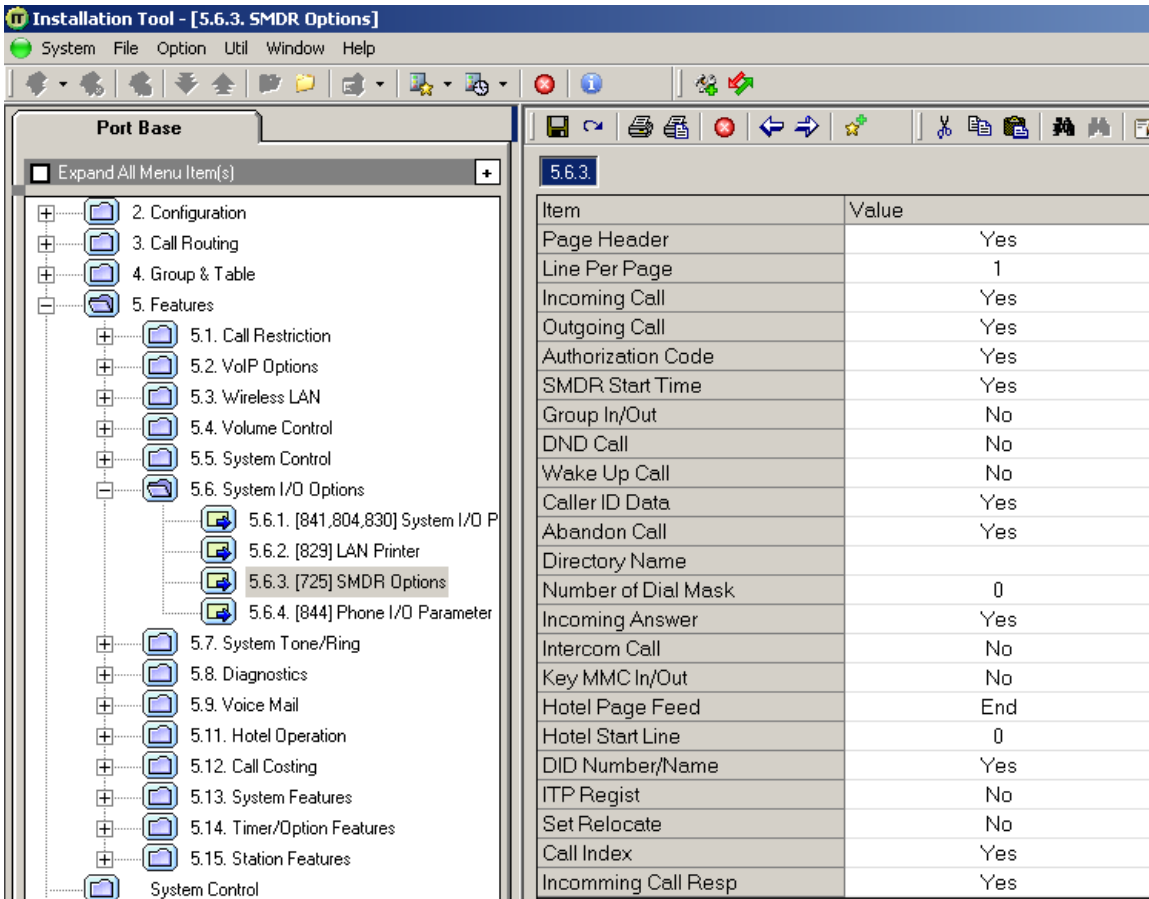
Port Base

Expand All Menu Item(s)

- 2. Configuration
- 3. Call Routing
- 4. Group & Table
- 5. Features
 - 5.1. Call Restriction
 - 5.2. VoIP Options
 - 5.3. Wireless LAN
 - 5.4. Volume Control
 - 5.5. System Control
 - 5.6. System I/O Options
 - 5.6.1. [841,804,830] System I/O P
 - 5.6.2. [829] LAN Printer**
 - 5.6.3. [725] SMDR Options
 - 5.6.4. [844] Phone I/O Parameter
 - 5.7. System Tone/Ring
 - 5.8. Diagnostics
 - 5.9. Voice Mail
 - 5.11. Hotel Operation

Data Type	SMDR
Current Status	Off
Buffered Data Printout	No
Update to LAN Card	Yes
Printer IP Address	192.168.1.1
Printer TCP Port	5100
LAN TCP Port	10020
Printer Destination	PC
Retry Count	3
Retry Interval (sec)	10
PJL Enable	False
Printer Language	Raw
Paper Size	Letter
Font Type	Courier
Duplex Enable	False
Orientation	Portrait
Printer Tray	Default
Resolution	300 DPI
Line per Page	1

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:

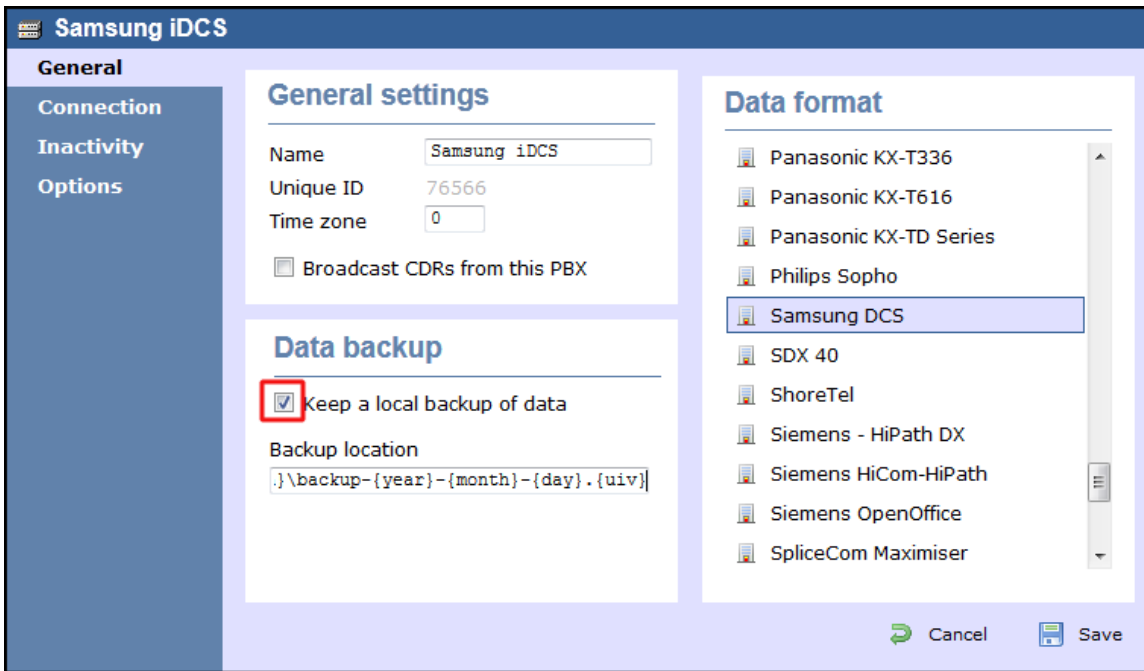


7. Click on the **Save** icon at the top to save the settings.

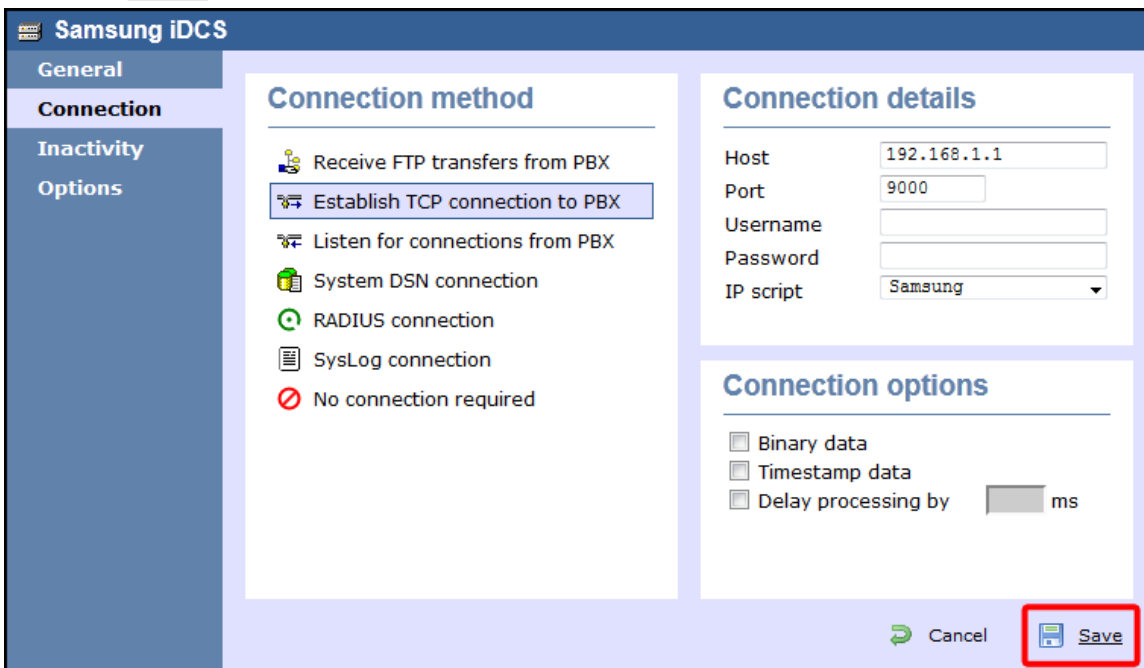
Configuring TIM Enterprise

Follow the steps below to configure TIM Enterprise to collect the SMDR data from your Samsung phone system:

1. Click on the **Directory** tab.
2. Locate the PBX object you want to configure in the Directory, right-click on it and select **Properties**.
3. A new window will open, displaying the general properties of your PBX object. Select **Samsung DCS** from the **Data format** list and tick the **Keep a local backup of data** box, as shown below:




4. Click on the **Connection** tab and select **Establish TCP connection to PBX** from the Connection method 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 **IP 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 Enterprise. Contact your system maintainer if you are not familiar with the configuration of your PBX.

Connection Type

 TIM Enterprise establishes a TCP connection to this PBX.

Support Files

-  Samsung DCS . TDT
-  Samsung DCS . TDS

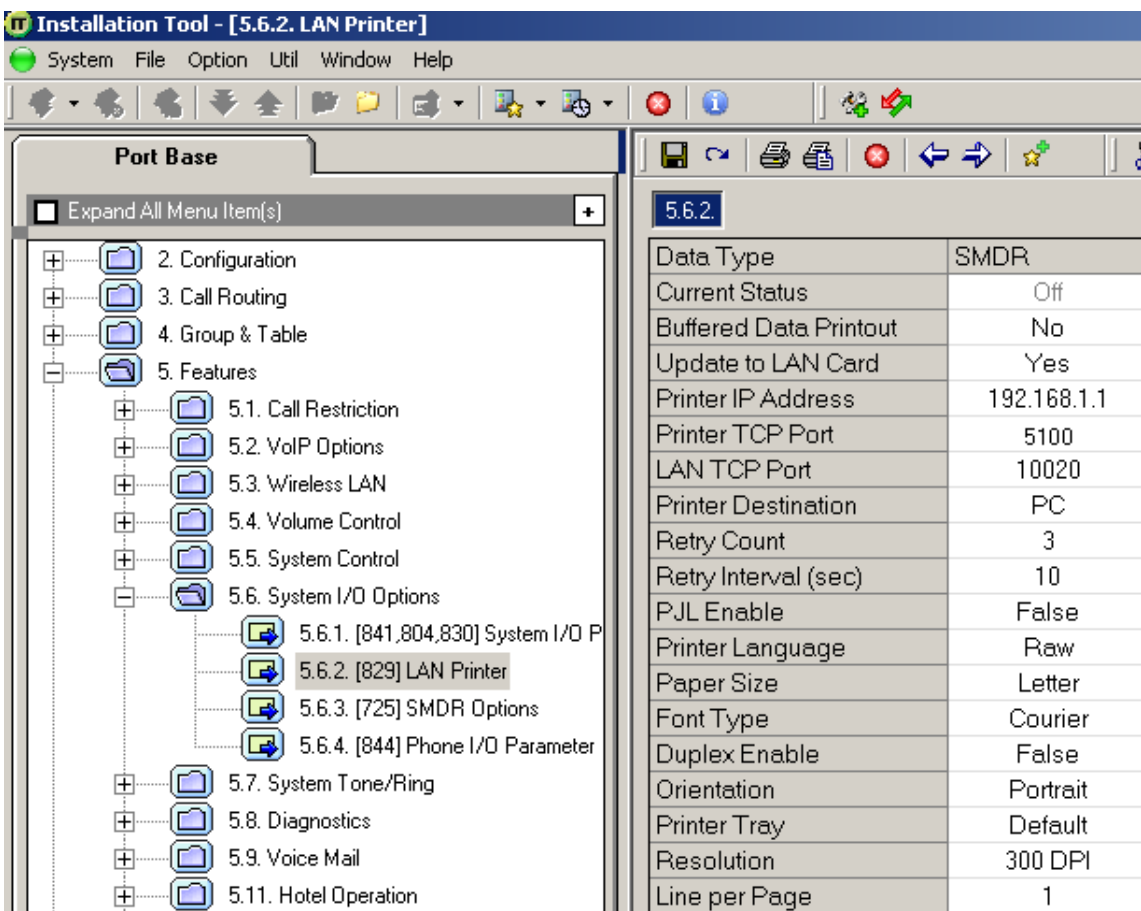
Required Tasks

- Configure the SMDR output
- Configure TIM Enterprise

Configuring your SMDR output

Follow the instructions below to configure your Samsung OfficeServ phone system to output SMDR data to TIM Enterprise.

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 Enterprise.



Installation Tool - [5.6.2. LAN Printer]

System File Option Util Window Help

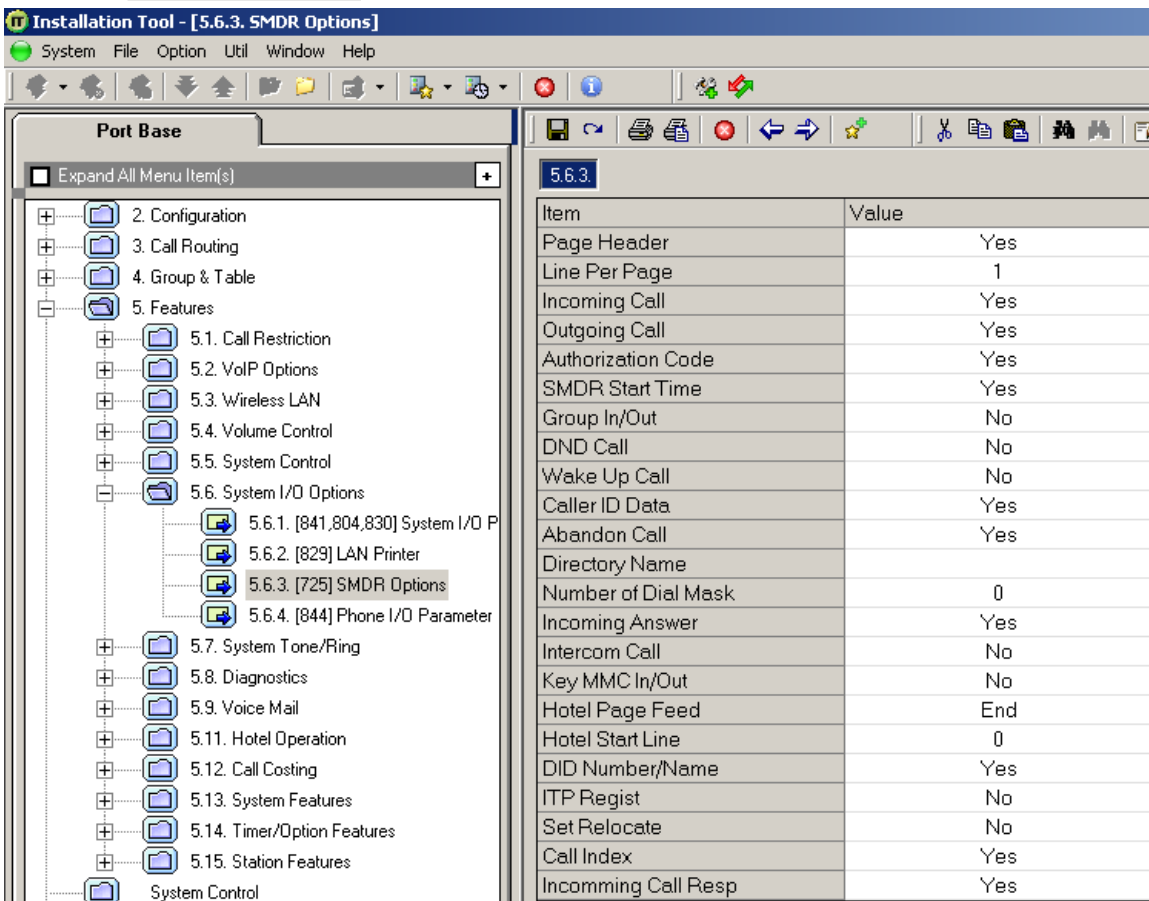
Port Base

Expand All Menu Item(s)

- + 2. Configuration
- + 3. Call Routing
- + 4. Group & Table
- 5. Features
 - + 5.1. Call Restriction
 - + 5.2. VoIP Options
 - + 5.3. Wireless LAN
 - + 5.4. Volume Control
 - + 5.5. System Control
 - 5.6. System I/O Options
 - + 5.6.1. [841,804,830] System I/O P
 - + 5.6.2. [829] LAN Printer
 - + 5.6.3. [725] SMDR Options
 - + 5.6.4. [844] Phone I/O Parameter
 - + 5.7. System Tone/Ring
 - + 5.8. Diagnostics
 - + 5.9. Voice Mail
 - + 5.11. Hotel Operation

Data Type	SMDR
Current Status	Off
Buffered Data Printout	No
Update to LAN Card	Yes
Printer IP Address	192.168.1.1
Printer TCP Port	5100
LAN TCP Port	10020
Printer Destination	PC
Retry Count	3
Retry Interval (sec)	10
PJL Enable	False
Printer Language	Raw
Paper Size	Letter
Font Type	Courier
Duplex Enable	False
Orientation	Portrait
Printer Tray	Default
Resolution	300 DPI
Line per Page	1

- Click on the **Save** icon to save the settings.
- Click on the **5.6.3. SMDR Options** tab and configure the following settings:



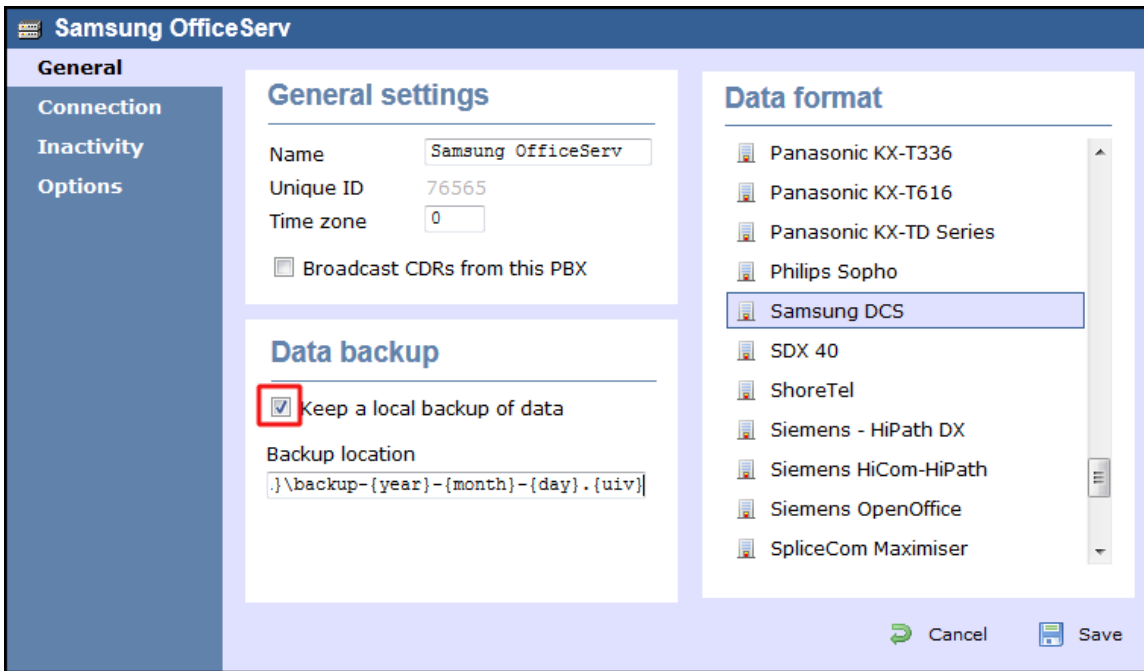
Item	Value
Page Header	Yes
Line Per Page	1
Incoming Call	Yes
Outgoing Call	Yes
Authorization Code	Yes
SMDR Start Time	Yes
Group In/Out	No
DND Call	No
Wake Up Call	No
Caller ID Data	Yes
Abandon Call	Yes
Directory Name	
Number of Dial Mask	0
Incoming Answer	Yes
Intercom Call	No
Key MMC In/Out	No
Hotel Page Feed	End
Hotel Start Line	0
DID Number/Name	Yes
ITP Regist	No
Set Relocate	No
Call Index	Yes
Incomming Call Resp	Yes

- Click on the **Save** icon at the top to save the settings.

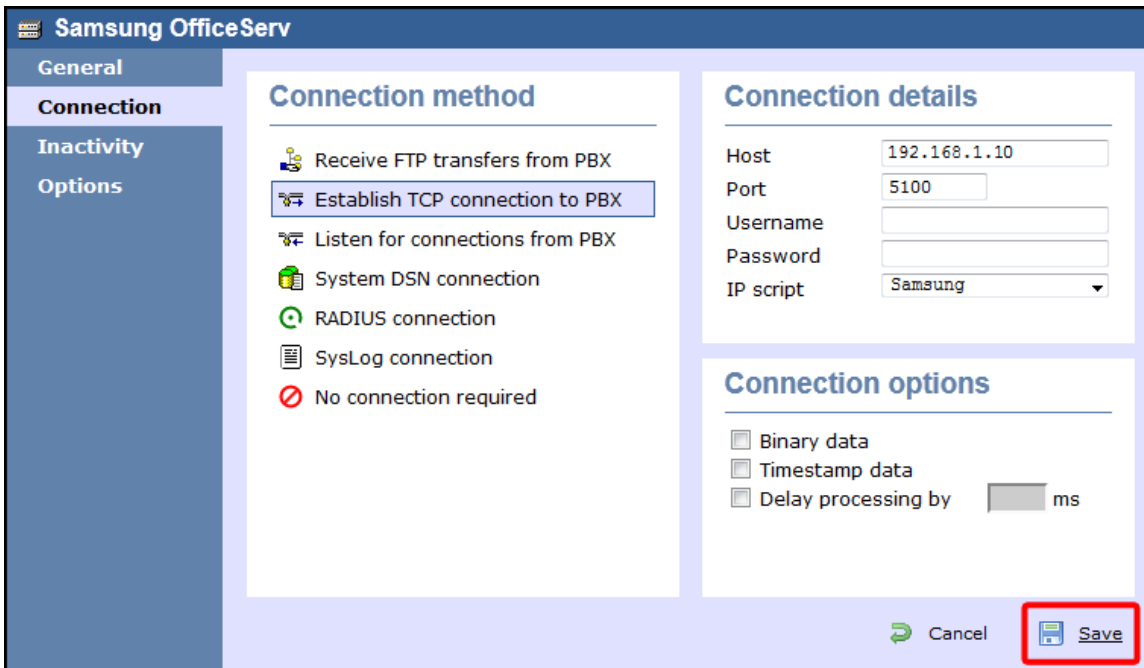
Configuring TIM Enterprise

Follow the steps below to configure TIM Enterprise to collect the SMDR data from your Samsung phone system:

- Click on the **Directory** tab.
- Locate the PBX object you want to configure in the Directory, right-click on it and select **Properties**.
- A new window will open, displaying the general properties of your PBX object. Select **Samsung DCS** from the **Data format** list and tick the **Keep a local backup of data** box, as shown below:



4. Click on the **Connection** tab and select **Establish TCP connection to PBX** from the Connection method 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 **IP 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 Enterprise. Contact your system maintainer if you are not familiar with the configuration of your PBX.

Connection Type

 TIM Enterprise 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 Enterprise

Configuring your SMDR output

By default, the ShoreTel phone system writes its CDR data to a MySQL database called `ShoreWareCDR`. 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 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 Enterprise 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 Enterprise to work with your ShoreTel phone system, you first need to set up a DSN connection by following the steps below:

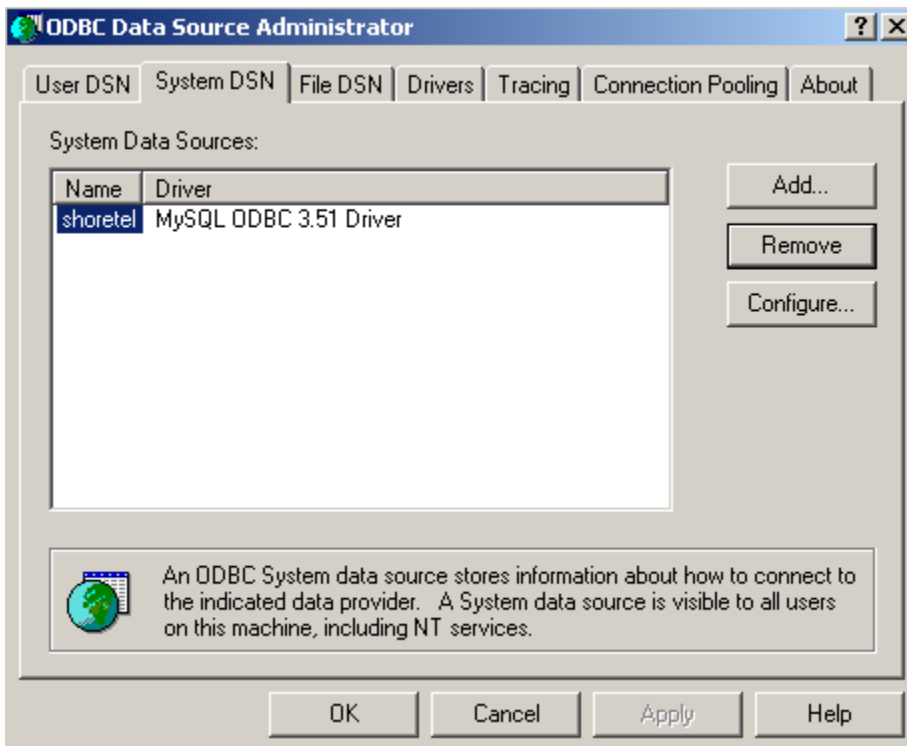
1. Open Windows Control Panel and select the **Administrative Tools** icon.
2. Double-click on the **Data Sources (ODBC)** icon to open the ODBC `Data Source Administrator` window



For a 64 bit system, access the ODBC Data Source Administrator from the following location `C:\Windows\System32\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 Enterprise 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 Enterprise

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

1. Click on the **Directory** tab.
2. Locate the PBX object you want to configure in the Directory, right-click on it and select **Properties**.
3. A new window will open. In the **General** tab, select **ShoreTel** from the **Data format** list and tick the **Keep a local backup of data** box, as shown below:

The screenshot shows the 'Shoretel' configuration window with the 'General' tab selected. The window is divided into three main sections: 'General settings', 'Data backup', and 'Data format'. In the 'Data backup' section, the checkbox 'Keep a local backup of data' is checked and highlighted with a red box. The 'Data format' list on the right includes 'ShoreTel' as the selected option. At the bottom right, there are 'Cancel' and 'Save' buttons.

Section	Field/Option	Value
General settings	Name	Shoretel
	Unique ID	76195
	Time zone	0
	Broadcast CDRs from this PBX	<input type="checkbox"/>
Data backup	Keep a local backup of data	<input checked="" type="checkbox"/>
	Backup location	.\backup-{year}-{month}-{day}.{uiv}
Data format	SDX 40	<input type="checkbox"/>
	ShoreTel	<input checked="" type="checkbox"/>
	Siemens HiCom-HiPath	<input type="checkbox"/>
	Siemens OpenOffice	<input type="checkbox"/>
	Siemens Realitis	<input type="checkbox"/>
	SpliceCom Maximiser	<input type="checkbox"/>
	SWYX V6	<input type="checkbox"/>
	SWYX V8	<input type="checkbox"/>
	Telappliant	<input type="checkbox"/>
	Telesoft	<input type="checkbox"/>
TeleVantage	<input type="checkbox"/>	

4. Click on the **Connection** tab and select **System DSN connection** from the **Connection method** list.
5. In the **DSN** field, select **ShoreTel** 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 **ShoreTel** from the drop-down list.
8. Click on the **Save** button to apply the settings.

The screenshot shows the Shoretel configuration interface. On the left is a navigation menu with options: General, Connection, Inactivity, and Options. The main area is divided into three sections:

- Connection method:** A list of connection options:
 - Receive FTP transfers from PBX
 - Establish TCP connection to PBX
 - Listen for connections from PBX
 - System DSN connection** (highlighted)
 - RADIUS connection
 - SysLog connection
 - No connection required
- Connection details:** Fields for DSN (ShorTel), Frequency (5), and DB script (ShorTel).
- Connection options:** Checkboxes for Binary data, Timestamp data, and Delay processing by (with a text input field for ms).

At the bottom right, there are 'Cancel' and 'Save' buttons. The 'Save' button is highlighted with a red rectangle.

SnomONE

SnomONE PBX

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

The screenshot shows the SnomONE PBX configuration page with the following sections:

- Connection Type:** TIM Enterprise listens for connections from this PBX.
- Support Files:**
 - SnomONE.TDS
 - SnomONE.TDT
- Required Tasks:**
 - Configure the SMDR output
 - Configure TIM Enterprise

Configure 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 and port number of the PC running TIM Enterprise in the `CDR URL` settings of the phone system, as shown below:

CDR URL:

The CDR string must be configured in the `Long` format, using the variables presented in the table below:

Short	Long	Description	Value
SS	SS	A dollar sign	\$
Si	S(call_id)	Caller-ID of call, as seen in the SIP packet	
Sv	S(call_type)	Type of call. Default is attendant*	attendant
Sm	S(domain)	Domain name of the call	domain.com
Sl	S(lang)	Language of the call	en
Sf	S(sip_from)	The From header, as seen in SIP packet	
St	S(sip_to)	The To header, as seen in the SIP packet	
SF	S(calling)	Extension number of the caller	123
ST	S(called)	Extension number of the called party	123
Sx	S(orig_trunk)	Name of originating trunk, if present	Trunk 1
Sy	S(dest_trunk)	Name of destination trunk, if present	Trunk 1
SR	S(account)	Account that is charged for redirected call	
Sr	S(redirect_dest)	Destination for a redirected call (used only if call is redirected)	
SS	S(start_time)	Start time in seconds	
SC	S(talk_duration)	Connected duration of the call	
SA	S(ring_duration)	Answered duration of call (useful if the call is ringing/answered through queue)	
SE	S(hold_duration)	Hold duration for the call	
SW	S(wait_duration)	IVR duration for the call	
Sw	S(start_date_time)	Start time (YYYYMMDDHHMMSS)	20071023123224
Sb	S(date)	Date (YYYYMMDD) (version 2.1.9)	20071023
SB	S(time)	Time (HHMMSS) (version 2.1.9)	
Se	S(extension)	Extension number of call (originating or receiving)	
So	S(direction)	Direction of call (i for inbound; o for out)	i or o
Sc	S(remote_call_id)	Caller-ID of remote party	
Sd	S(duration)	Duration of call in seconds (inc. hold time)	
Ss	S(extn_duration)	Speaking duration (does not inc. hold time)	
SM	S(cmc)	Client matter code (CMC)	781299
S(record_location)		The location of recorded files	

An example of a CDR string configured in the `LONG` format is presented below:

```

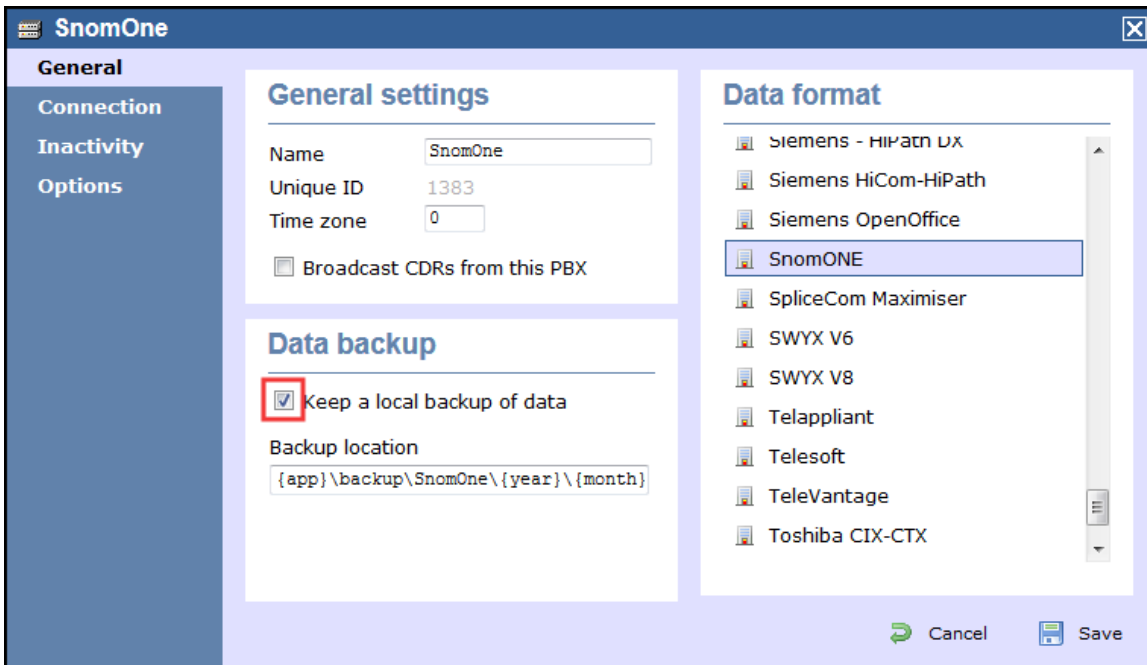
$$ (start_date_time);$(wait_duration);$(ring_duration);$(duration);$(direction);$(orig_trunk);$(calling);$(extension);$(called);$(dest_trunk);$(redirect_dest);$(account);$(lang);$(domain);$(call_id);$(primary_call_id);$(remote_call_id)

```

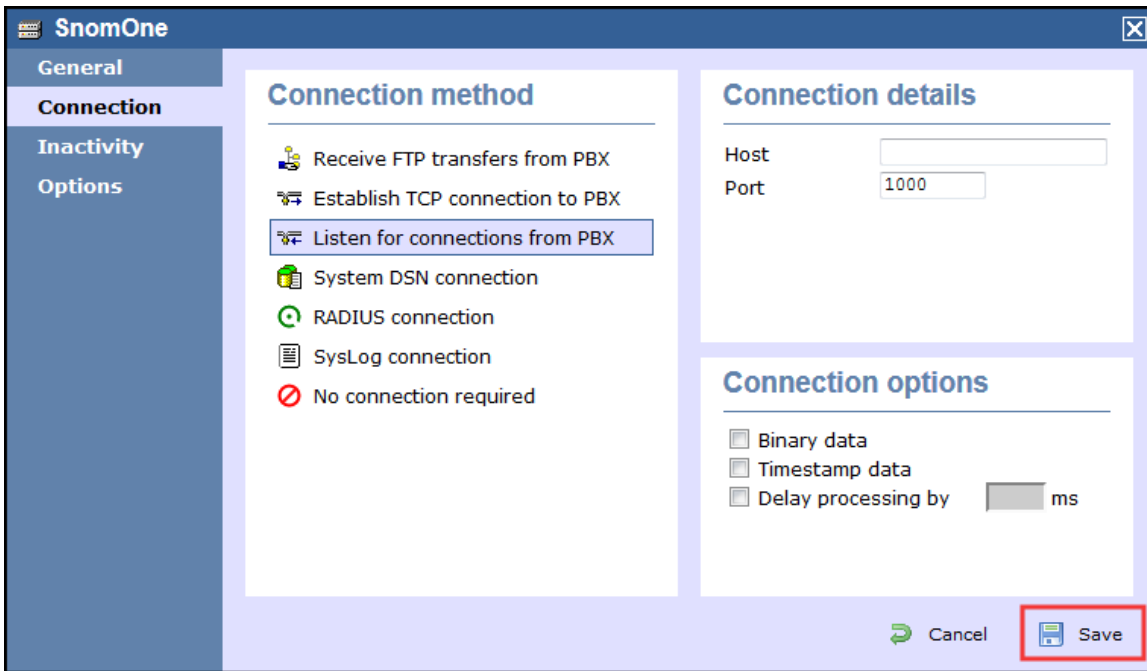
Configuring TIM Enterprise

Follow the steps below to configure TIM Enterprise to listen for SMDR data from your telephone system:

1. Click on the **Directory** tab.
2. Locate the PBX object you want to configure in the Directory, right-click on it and select **Properties**.
3. A new window will open, displaying the general properties of your PBX object. Select **SnomONE** from the **Data format** list and tick the **Keep a local backup of data** box, as shown below:



4. Click on the **Connection** tab and select **Listen for connections from PBX** from the **Connection** method 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 Enterprise. Contact your system maintainer if you are not familiar with the configuration of your PBX.

Connection Type

 TIM Enterprise establishes a TCP connection to this PBX.

Support Files

-  SpliceCom Maximiser.TDT
-  SpliceCom Maximiser.TDS

Required Tasks

- Configure the SMDR output
- Configure TIM Enterprise

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 Enterprise (below).



Your system maintainer may have already set a call logging password for you.

Configuring TIM Enterprise

Follow the steps below to configure TIM Enterprise to collect the SMDR data from your SpliceCom Maximiser:

1. Click on the **Directory** tab.
2. Locate the PBX object you want to configure in the Directory, right-click on it and select **Properties**.
3. A new window will open, displaying the general properties of your PBX object. Select **SpliceCom Maximiser** from the **Data format** list and tick the **Keep a local backup of data** box, as shown below:

4. Click on the **Connection** tab and select **Establish TCP connection to PBX** from the **Connection** method 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 **IP script** field, select **SpliceCom Maximiser** from the drop-down list.
10. Click on the **Save** button to apply the settings.

SpliceCom Maximiser

General

Connection

Inactivity

Options

Connection method

- Receive FTP transfers from PBX
- Establish TCP connection to PBX**
- Listen for connections from PBX
- System DSN connection
- RADIUS connection
- SysLog connection
- No connection required

Connection details

Host: 192.168.1.1

Port: 4001

Username:

Password:

IP script: Splicecom Maximise

Connection options

- Binary data
- Timestamp data
- Delay processing by [] ms

Cancel Save

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 Enterprise. 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 Enterprise

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 Enterprise\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. The site ID is displayed in the general properties of the site object, in the **Unique ID** field, as shown below:

General settings

Name	Avaya Network Alchemy
Unique ID	2
Time zone	0

Broadcast CDRs from this PBX

7. Click on the **OK** button and close the SwyxWare Administration Tool.

Here is an example of the SwyxWare Administration properties window:

SwyxServer TNTTEST2 Properties

Search SwyxPhones	Login Device	Standby SwyxServer
Trunk Recording	Voicemail	Mail Server
Files	Connected SwyxWare Sites	
General	Client Preferences	Music on Hold
Call Detail Records	Internal Numbers	Licenses
SwyxPhone Firmware Update	Charges	

No Call Detail Records
 Call Detail Records into Text File
 Save to Folder:

 File Name:

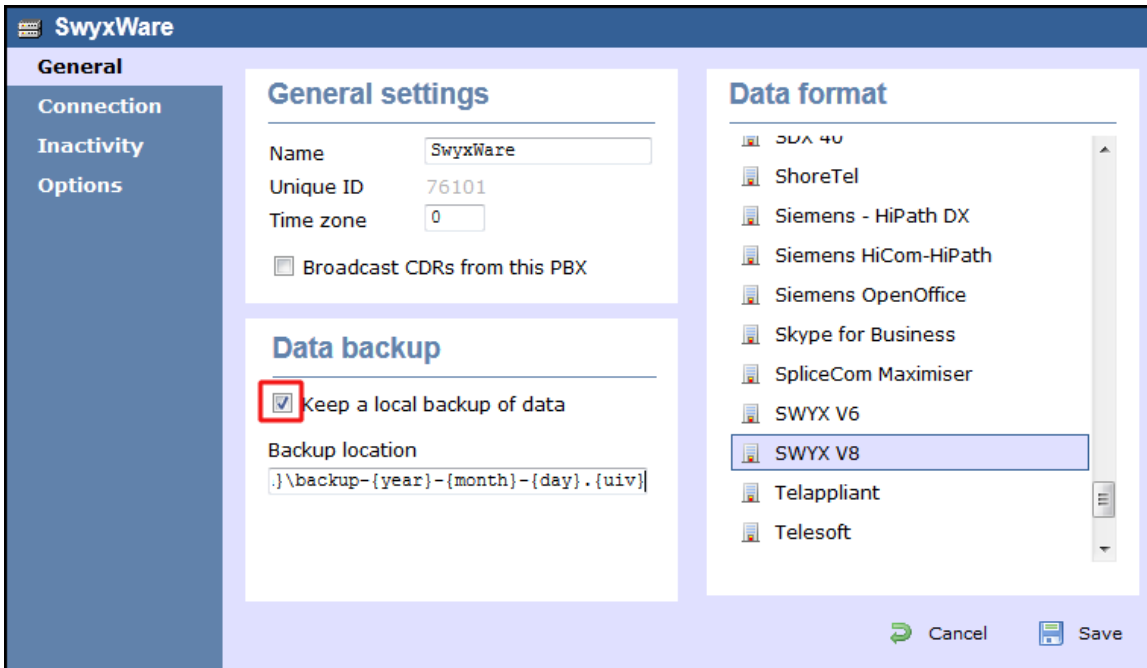
 Limit File Size to: Kilobytes
 Call Detail Records into Database
 Database Connection String:

External Numbers
 Store complete Number
 Hide Digits
 Number of Digits replaced by 'x':
 Replace Number with "xxx"

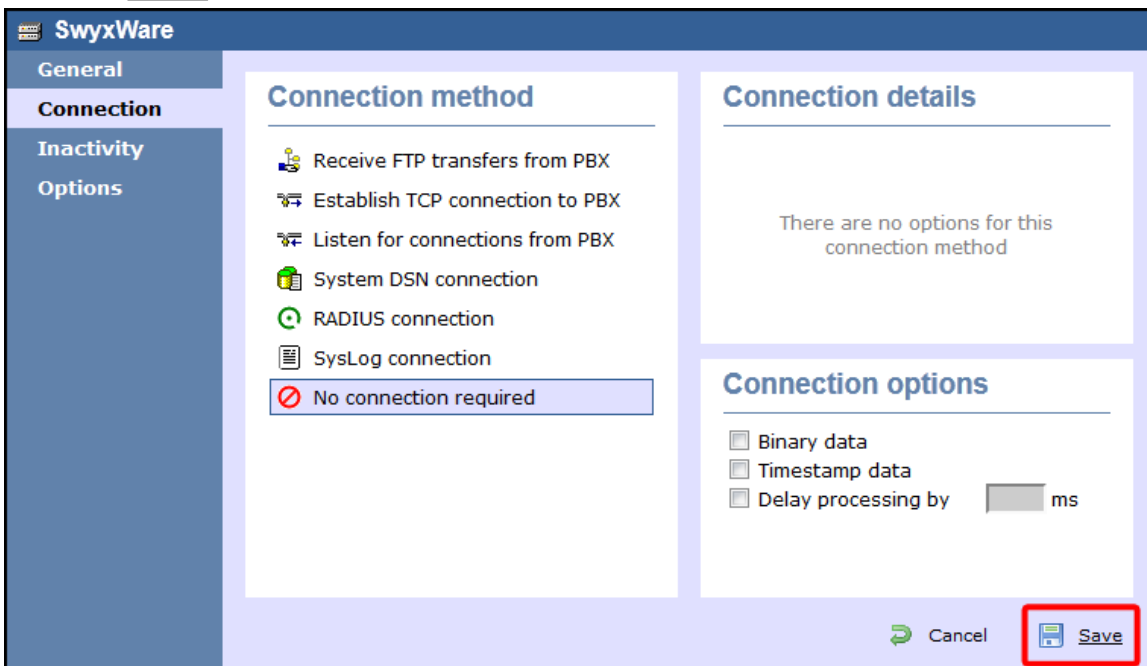
Configuring TIM Enterprise

Follow the steps below to configure TIM Enterprise to receive SMDR data from your SwyxWare:

1. Click on the **Directory** tab.
2. Locate the PBX object you want to configure in the Directory, right-click on it and select **Properties**.
3. A new window will open, displaying the general properties of your PBX object. Select **SWYX V8** from the **Data format** list and tick the **Keep a local backup of data** box, as shown below:




4. Click on the **Connection** tab and select **No connection required** from the **Connection method** 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 Enterprise. Contact your system maintainer if you are not familiar with the configuration of your PBX.

Connection Type

 TIM Enterprise 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 Enterprise


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

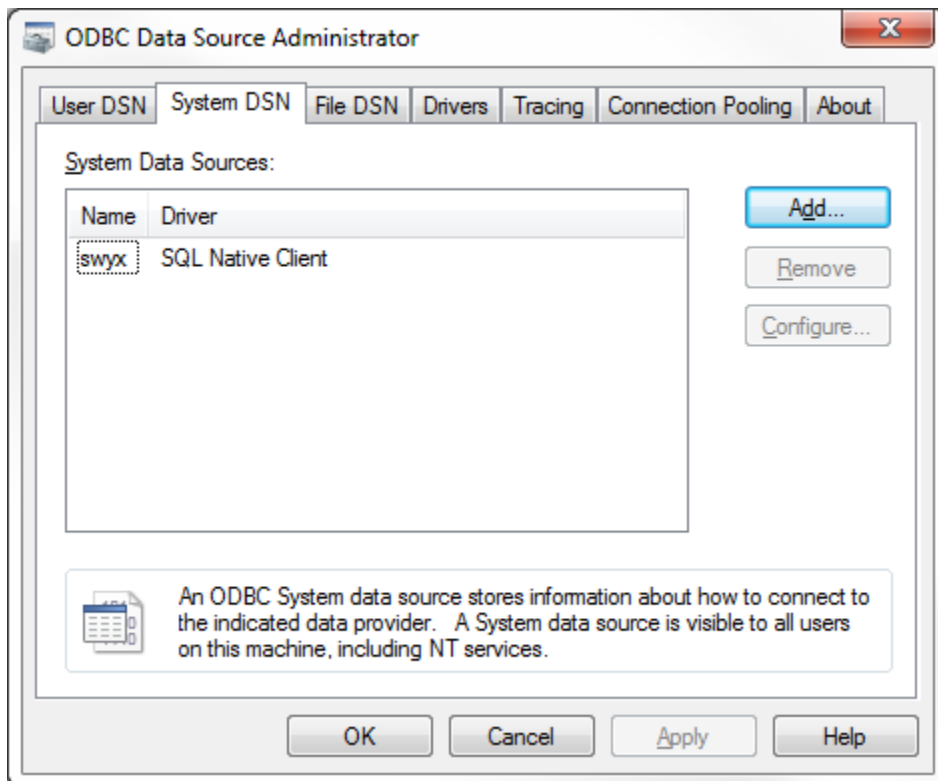
Setting up a DSN connection

To enable TIM Enterprise 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\System32\odbcad32.exe`

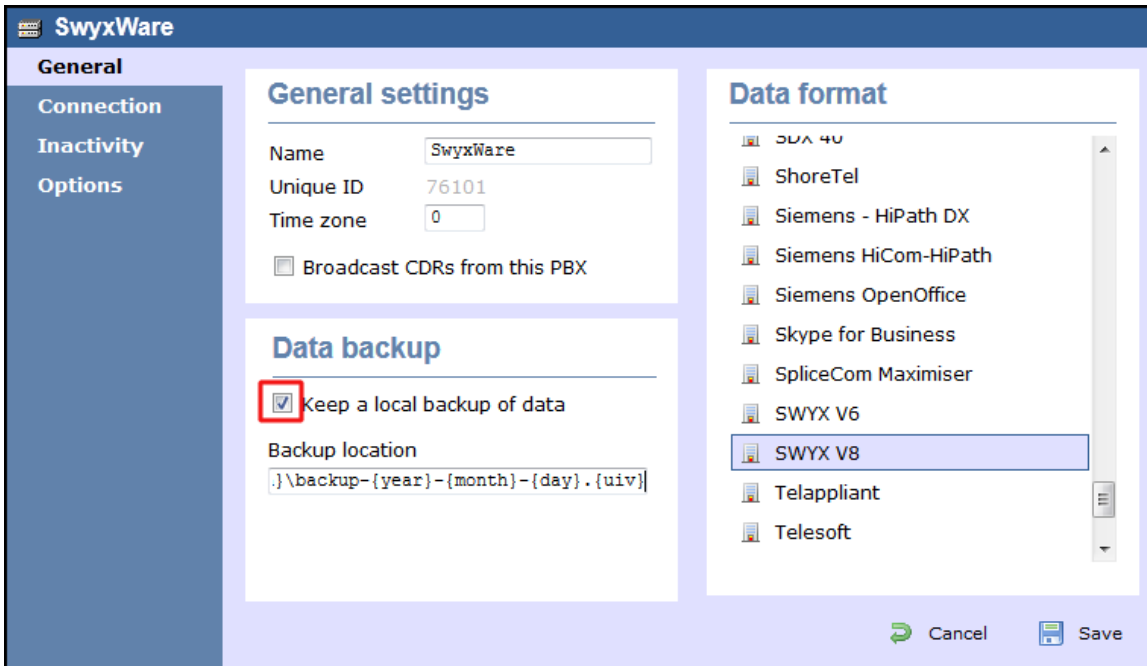
3. Click on the **System DSN** tab.
4. Click on the **Add** button.
5. Select **SQL Native Client** from the driver list and click **Finish**.
6. In the **Name** field, enter **swyx**.
7. In the **Description** field, enter **TIM Enterprise link to swyx**.
8. In the **Server** field, enter the IP address 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.



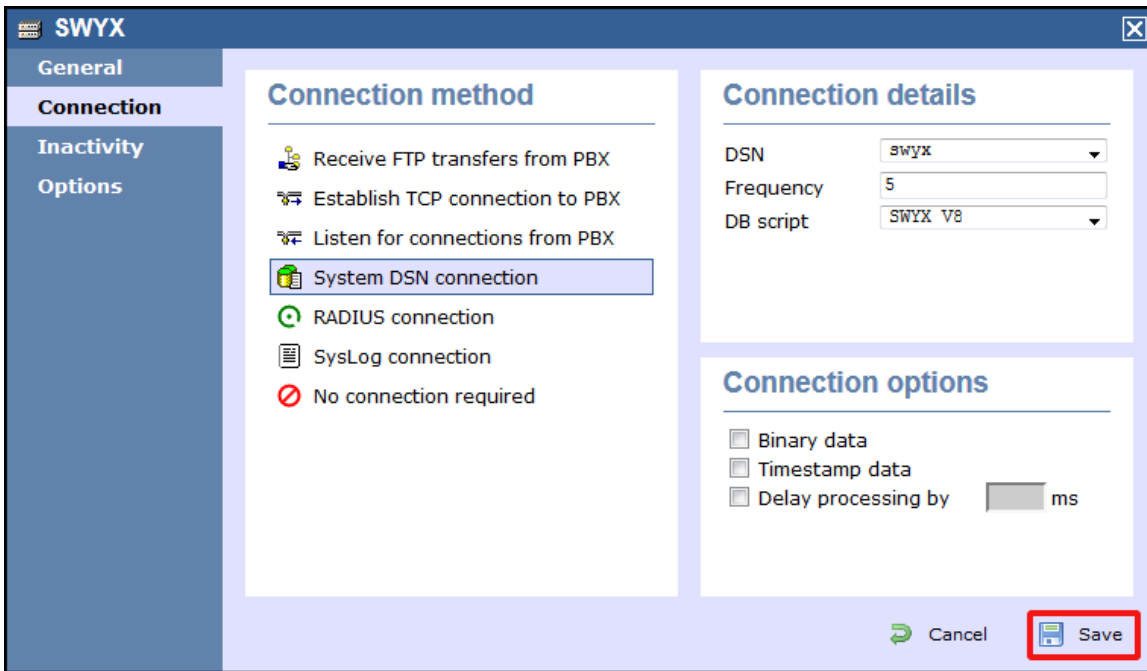
Configuring TIM Enterprise

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

1. Click on the **Directory** tab.
2. Locate the PBX object you want to configure in the Directory, right-click on it and select **Properties**.
3. A new window will open. In the **General** tab, select **SWYX V8** from the **Data format** list and tick the **Keep a local backup of data** box, as shown below:



4. Click on the **Connection** tab and select **System DSN connection** from the **Connection method** list.
5. In the **DSN** field, select **swyx** 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 **SWYX V8** from the drop-down list.
8. Click on the **Save** button to apply the settings.




Tadiran


Coral

These instructions help you configure your Coral Flexicom 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 Enterprise establishes a serial connection with this PBX.

Support Files

 Coral Flexicom 200.TDT

Required Tasks

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

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

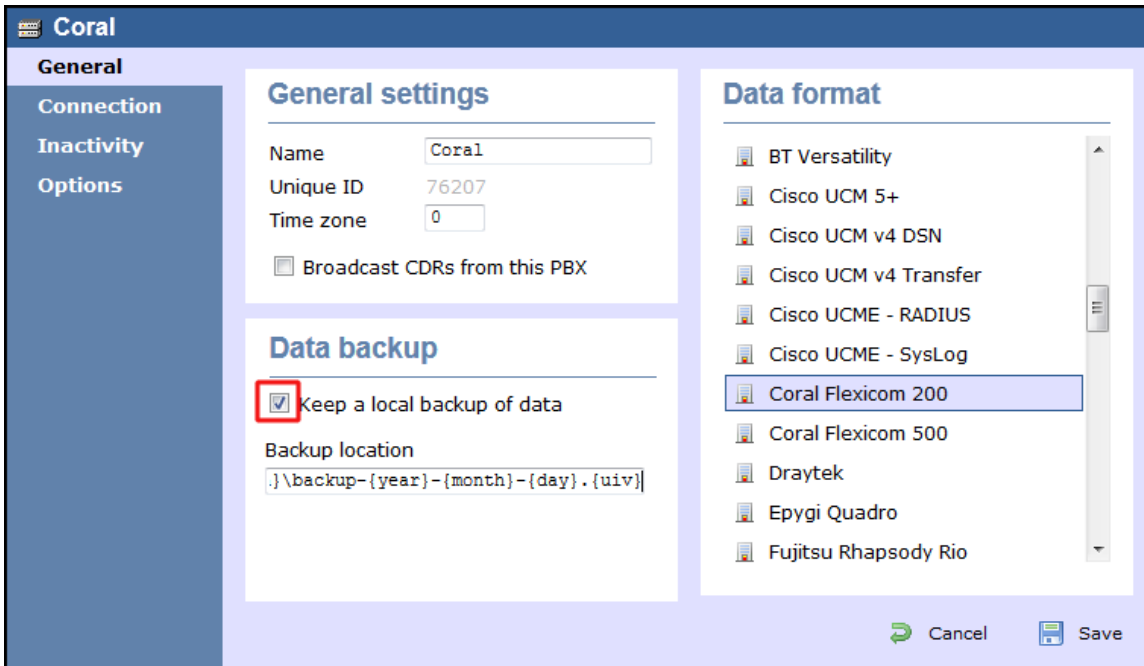
To collect call logging data from the serial port and send it to TIM Enterprise, you need to install the NetPBX software. For setup instructions, click on the link below:

[Install and configure NetPBX](#)

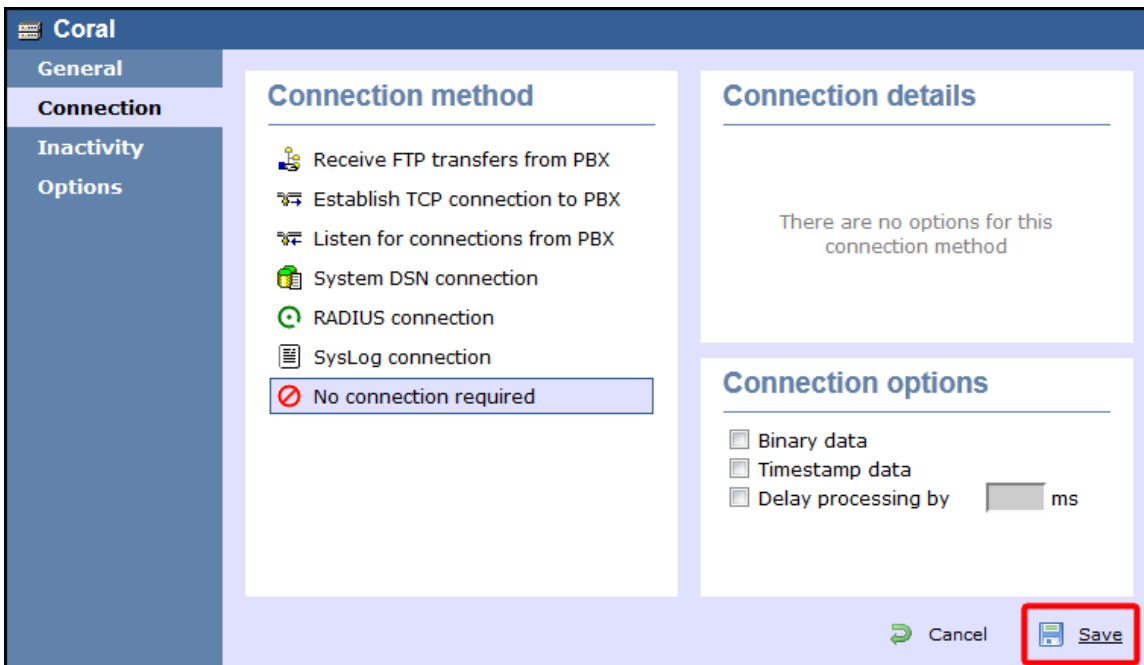
Configuring TIM Enterprise

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

1. Click on the **Directory** tab.
2. Locate the PBX object you want to configure in the Directory, right-click on it and select **Properties**.
3. A new window will open, displaying the general properties of your PBX object. Select **Coral Flexicom 200** from the **Data format** list and tick the **Keep a local backup of data** box, as shown below:



4. In the **Connection** tab, select **No connection required** from the **Connection method** 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 Enterprise. Contact your system maintainer if you are not familiar with the configuration of your PBX.

Connection Type

 TIM Enterprise 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 Enterprise

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 Enterprise, you first need to install the NetPBX software. For setup instructions, click on the link below:

[Install and configure NetPBX](#)

Configuring TIM Enterprise

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

1. Click on the **Directory** tab.
2. Locate the PBX object you want to configure in the Directory, right-click on it and select **Properties**.
3. A new window will open, displaying the general properties of your PBX object. Select **Toshiba CIX-CTX** from the **Data format** list and tick the **Keep a local backup of data** box, as shown below:

Toshiba CIX/CTX

General

General settings

Name: Toshiba CIX/CTX
 Unique ID: 76112
 Time zone: 0

Broadcast CDRs from this PBX

Data backup

Keep a local backup of data

Backup location
 .\backup-{year}-{month}-{day}.{uiv}

Data format

- Siemens OpenOffice
- Siemens Realitis
- SpliceCom Maximiser
- SWYX V6
- SWYX V8
- Telappliant
- Telesoft
- TeleVantage
- Toshiba CIX-CTX**
- Toshiba Strata DK
- VoiSpeed

Cancel Save

- Click on the **Connection** tab and select **No connection required** from the Connection method list.
- Click on the **Save** button to apply the settings.

Toshiba CIX/CTX

Connection

Connection method

- Receive FTP transfers from PBX
- Establish TCP connection to PBX
- Listen for connections from PBX
- System DSN connection
- RADIUS connection
- SysLog connection
- No connection required**

Connection details

There are no options for this connection method


Connection options

- Binary data
- Timestamp data
- Delay processing by ms



Cancel **Save**

Toshiba CIX/CTX - IP connection

These instructions help you configure your Toshiba CIX/CTX 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 Enterprise listens for connections from this PBX.

Support Files

-  Toshiba CIX-CTX.TDT
-  Toshiba CIX-CTX.TDS

Required Tasks

- Configure the SMDR output
- Configure TIM Enterprise

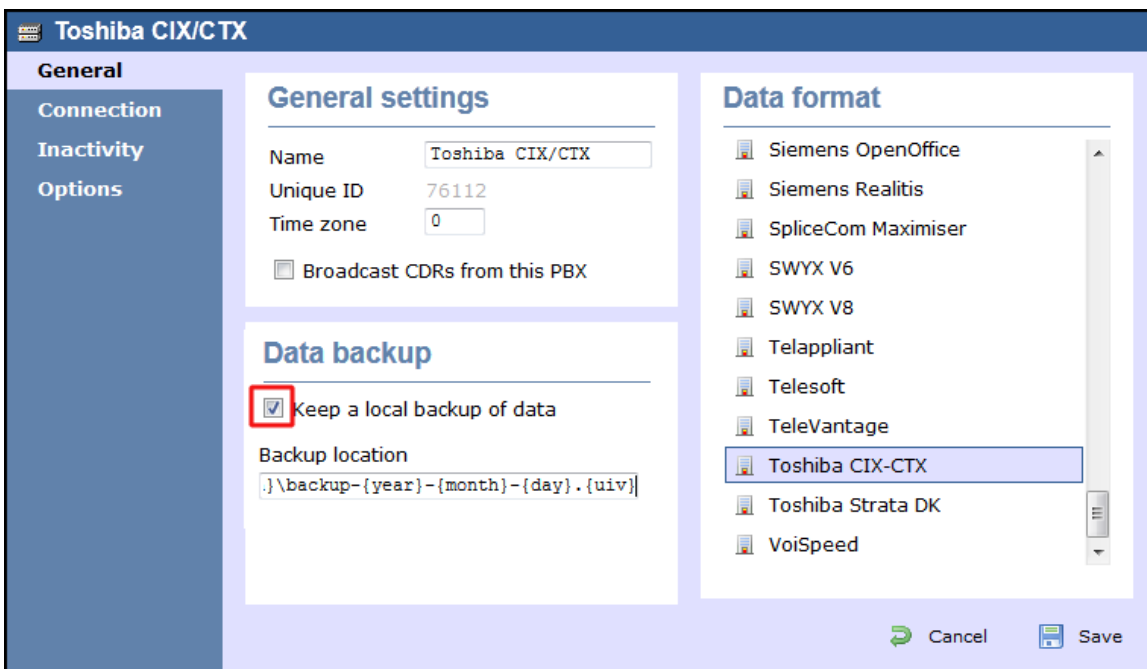
Configuring your SMDR output

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 Enterprise

Follow the steps below to configure TIM Enterprise to listen for SMDR data from your Toshiba CIX/CTX:

1. Click on the **Directory** tab.
2. Locate the PBX object you want to configure in the Directory, right-click on it and select **Properties**.
3. A new window will open, displaying the general properties of your PBX object. Select **Toshiba CIX-CTX** from the **Data format** list and tick the **Keep a local backup of data** box, as shown below:



Toshiba CIX/CTX

General

Connection

Inactivity

Options

General settings

Name: Toshiba CIX/CTX

Unique ID: 76112

Time zone: 0

Broadcast CDRs from this PBX

Data backup

Keep a local backup of data

Backup location: .}\backup-{year}-{month}-{day}. {uiv}

Data format

- Siemens OpenOffice
- Siemens Realitis
- SpliceCom Maximiser
- SWYX V6
- SWYX V8
- Telappliant
- Telesoft
- TeleVantage
- Toshiba CIX-CTX**
- Toshiba Strata DK
- VoiSpeed

Cancel Save

4. Click on the **Connection** tab and select **Listen for connections from PBX** from the **Connection** method 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 CIX/CTX

General

Connection

Inactivity

Options

Connection method

- Receive FTP transfers from PBX
- Establish TCP connection to PBX
- Listen for connections from PBX**
- System DSN connection
- RADIUS connection
- SysLog connection
- No connection required

Connection details

Host

Port

Connection options

- Binary data
- Timestamp data
- Delay processing by ms

Cancel **Save**

Toshiba Strata DK

These instructions help you configure your Toshiba Strata DK 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 Enterprise 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 Enterprise

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 Enterprise, you first need to install the NetPBX software. For setup instructions, click on the link below:

Install and configure NetPBX

Configuring TIM Enterprise

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

1. Click on the **Directory** tab.
2. Locate the PBX object you want to configure in the Directory, right-click on it and select **Properties**.
3. A new window will open, displaying the general properties of your PBX object. Select **Toshiba Strata DK** from the **Data format** list and tick the **Keep a local backup of data** box, as shown below:

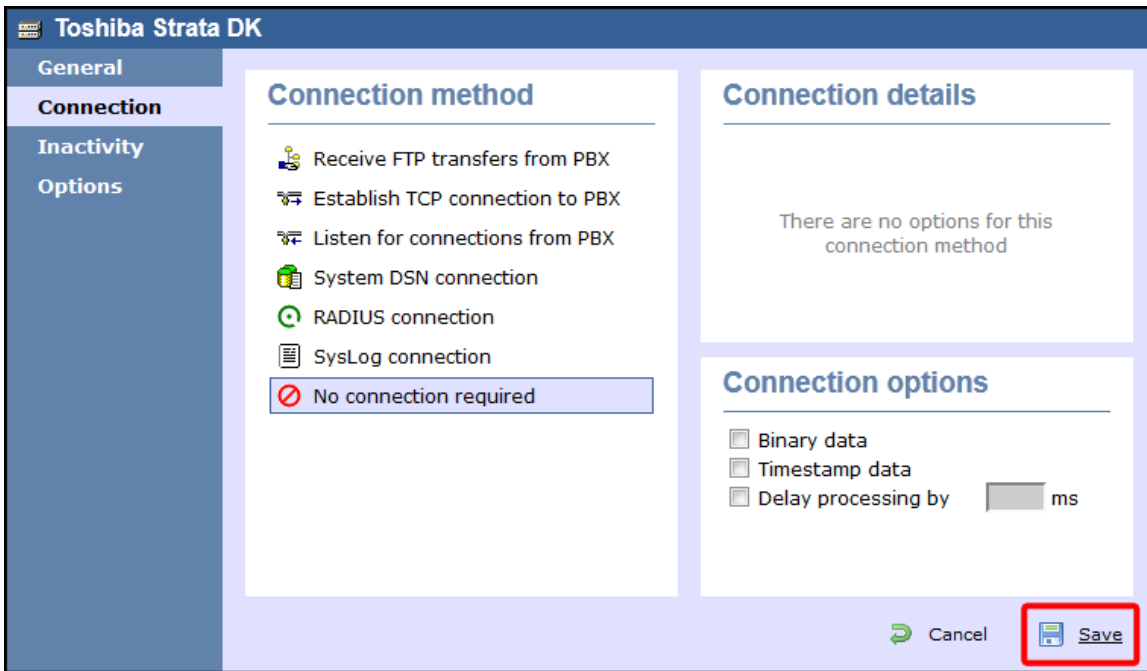
The screenshot shows the configuration window for 'Toshiba Strata DK'. The 'Data backup' section contains the following information:

Section	Field	Value
General settings	Name	Toshiba Strata DK
	Unique ID	76113
	Time zone	0
	Broadcast CDRs from this PBX	<input type="checkbox"/>
Data backup	Keep a local backup of data	<input checked="" type="checkbox"/>
	Backup location	.)\backup-{year}-{month}-{day}. {uiv}

The 'Data format' list on the right includes the following items:

- Siemens OpenOffice
- Siemens Realitis
- SpliceCom Maximiser
- SWYX V6
- SWYX V8
- Telappliant
- Telesoft
- TeleVantage
- Toshiba CIX-CTX
- Toshiba Strata DK** (selected)
- VoiSpeed

4. Click on the **Connection** tab and select **No connection required** from the **Connection method** 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 Enterprise. Contact your system maintainer if you are not familiar with the configuration of your PBX.

Connection Type

 TIM Enterprise 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 Enterprise

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

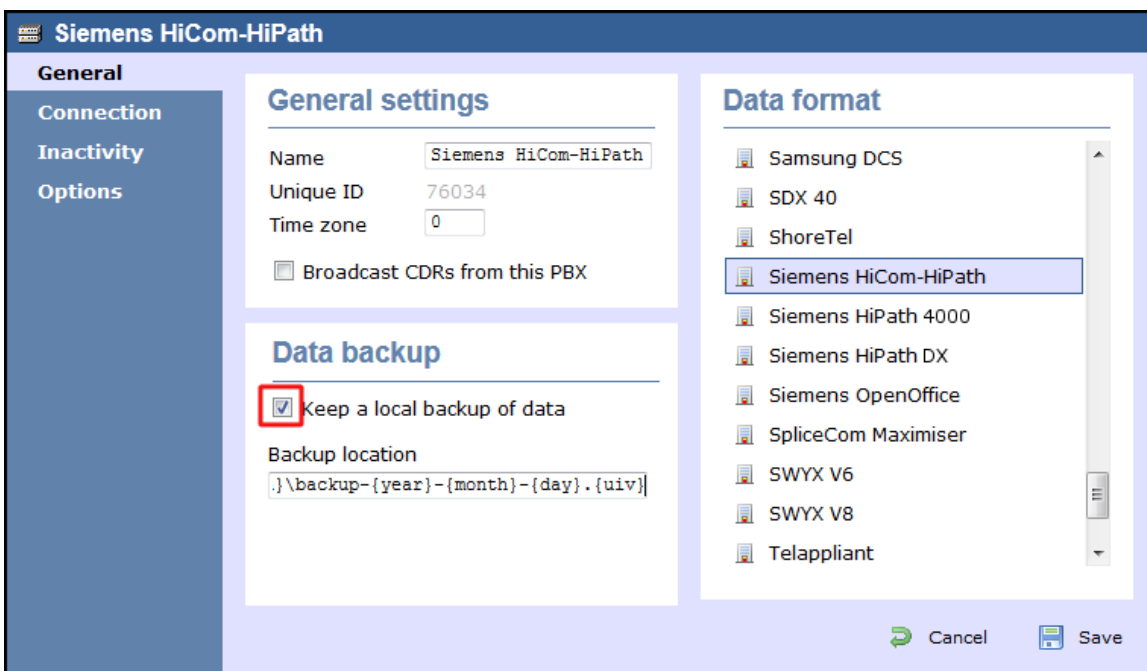
To collect call logging data from the serial port and send it to TIM Enterprise, you first need to install the NetPBX software. For setup instructions, click on the link below:

[Install and configure NetPBX](#)

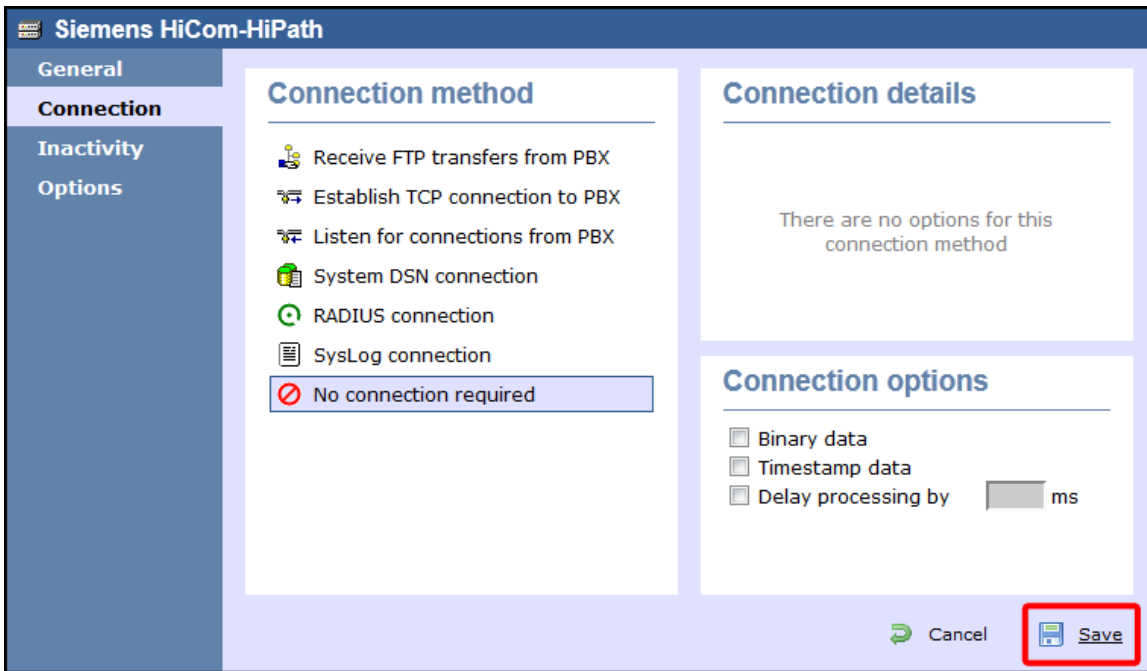
Configuring TIM Enterprise

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

1. Click on the **Directory** tab.
2. Locate the PBX object you want to configure in the Directory, right-click on it and select **Properties**.
3. A new window will open, displaying the general properties of your PBX object. Select **Siemens HiCom-HiPath** from the **Data format** list and tick the **Keep a local backup of data** box, as shown below:



4. Click on the **Connection** tab, select **No connection required** from the **Connection method** 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 Enterprise. Contact your system maintainer if you are not familiar with the configuration of your PBX.

Connection Type

TIM Enterprise listens for connections from this PBX.

Support Files

- Siemens HiCom-HiPath.TDT
- Siemens.TDS

Required Tasks

- Configure the SMDR output
- Configure TIM Enterprise

Configuring your SMDR output

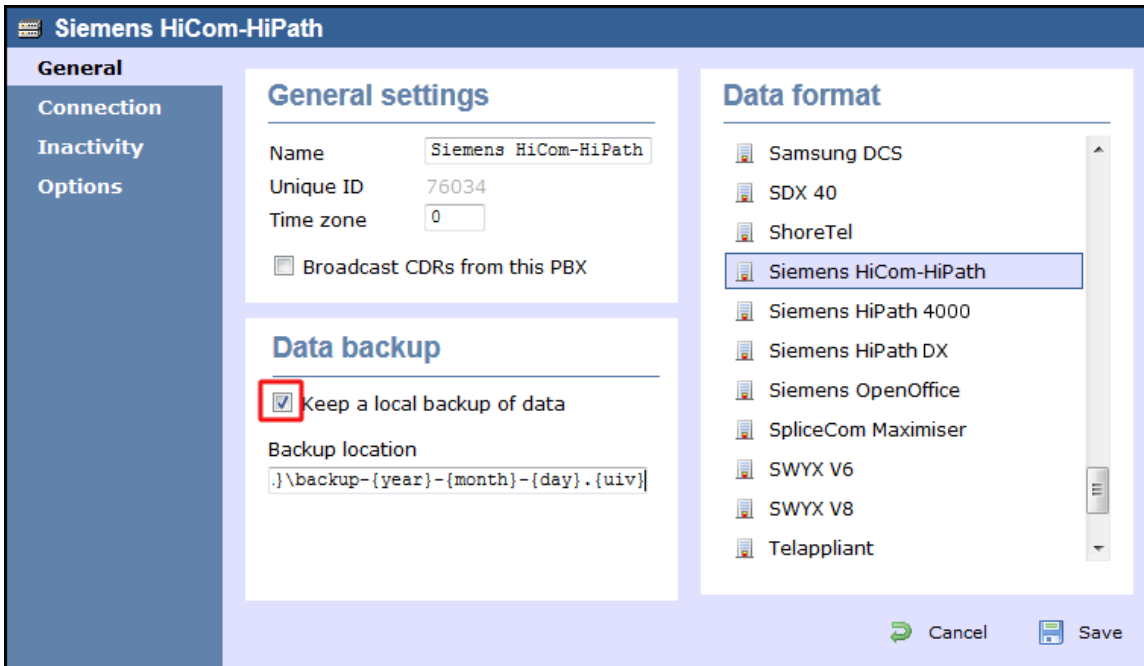
By default, the SMDR output of a Siemens HiCom/HiPath phone system is not enabled. Contact your system maintainer for information about how to configure the SMDR output for incoming, outgoing and internal calls.

Configuring TIM Enterprise

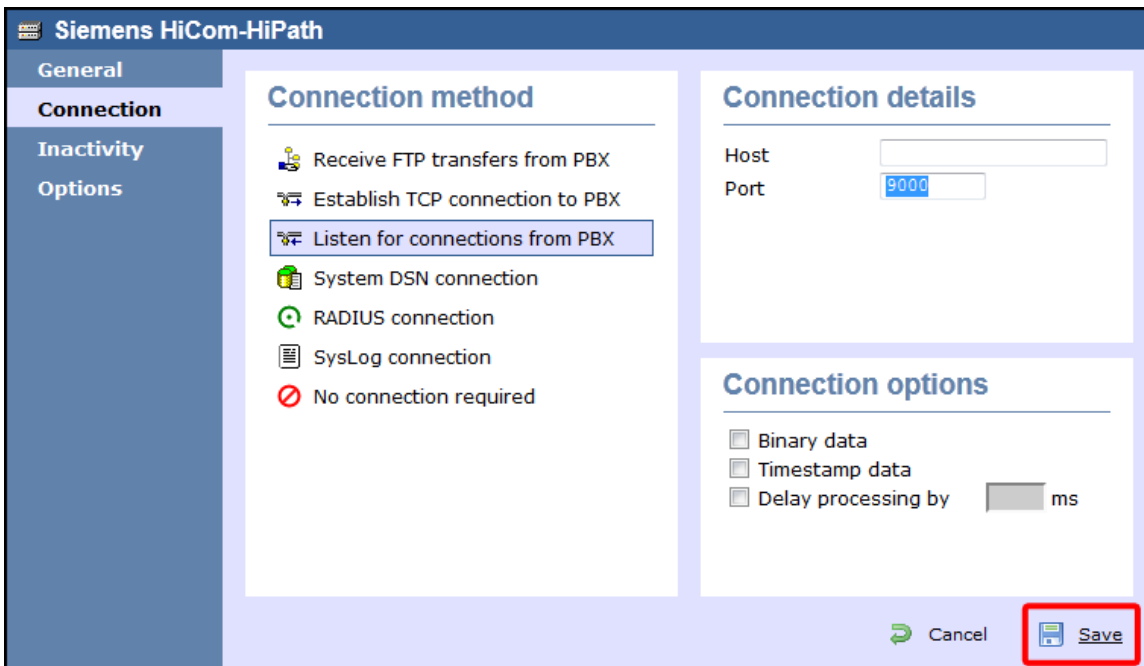
Follow the steps below to configure TIM Enterprise to listen for SMDR data from your Siemens HiCom/HiPath:

1. Click on the **Directory** tab.
2. Locate the PBX object you want to configure in the Directory, right-click on it and select **Properties**.
3. A new window will open, displaying the general properties of your PBX object. Select **Siemens HiCom-HiPath** from the **Data format**

list and tick the **Keep a local backup of data** box, as shown below:




4. Click on the **Connection** tab and select **Listen for connections from PBX** from the Connection method 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 Enterprise. Contact your system maintainer if you are not familiar with the configuration of your PBX.

Connection Type
 TIM Enterprise 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 Enterprise

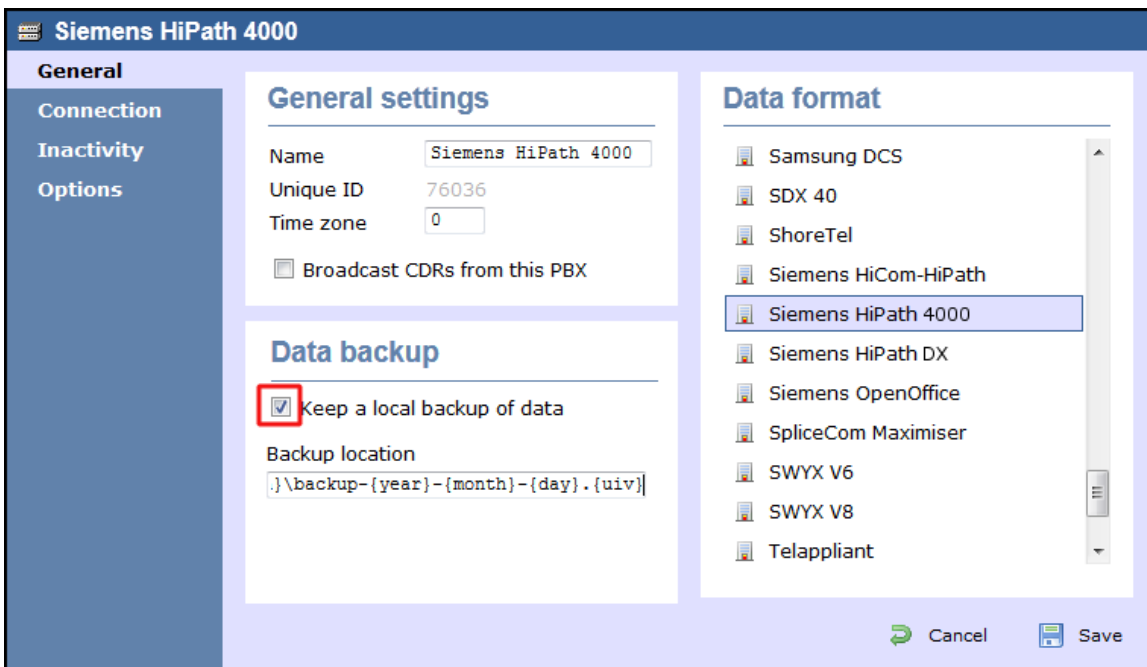
Configuring your SMDR output

By default, the SMDR output of a Siemens HiPath 4000 phone system is not enabled. For information about how to configure the output for incoming, outgoing and internal calls, contact your system maintainer.

Configuring TIM Enterprise

Follow the steps below to configure TIM Enterprise to collect the SMDR data from your Siemens HiPath 4000:

1. Click on the **Directory** tab.
2. Locate the PBX object you want to configure in the Directory, right-click on it and select **Properties**.
3. A new window will open, displaying the general properties of your PBX object. Select **Siemens HiPath 4000** from the **Data format** list and tick the **Keep a local backup of data** box, as shown below:



Siemens HiPath 4000

General

Connection

Inactivity

Options

General settings

Name: Siemens HiPath 4000

Unique ID: 76036

Time zone: 0












Broadcast CDRs from this PBX

Data backup

Keep a local backup of data

Backup location: .\backup-{year}-{month}-{day}.{uiv}

Data format

-  Samsung DCS
-  SDX 40
-  ShoreTel
-  Siemens HiCom-HiPath
-  **Siemens HiPath 4000**
-  Siemens HiPath DX
-  Siemens OpenOffice
-  SpliceCom Maximiser
-  SWYX V6
-  SWYX V8
-  Telappliant

Cancel Save

4. Click on the **Connection** tab and select **Establish TCP connection to PBX** from the **Connection** method 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 IP script field, select **Generic Simple** from the drop-down list.
9. Click on the **Save** button to apply the settings.

The screenshot shows the configuration interface for a Siemens HiPath 4000 system. The interface is divided into several sections:

- General**: A sidebar menu with options for General, Connection, Inactivity, and Options.
- Connection method**: A list of connection options:
 - Receive FTP transfers from PBX
 - Establish TCP connection to PBX** (highlighted)
 - Listen for connections from PBX
 - System DSN connection
 - RADIUS connection
 - SysLog connection
 - No connection required
- Connection details**: Fields for Host (192.168.1.1), Port (9000), Username, Password, and IP script (Generic Simple).
- Connection options**: Checkboxes for Binary data, Timestamp data, and Delay processing by (ms).
- Buttons**: Cancel and Save buttons at the bottom right, with the Save button highlighted in a red box.

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 Enterprise. Contact your system maintainer if you are not familiar with the configuration of your PBX.

Connection Type

 TIM Enterprise 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 Enterprise


Configuring your SMDR output

By default, the SMDR output of a Siemens OpenOffice phone system is not enabled. For information about how to configure the output for incoming, outgoing and internal calls, contact your system maintainer.

Setting up a DSN connection

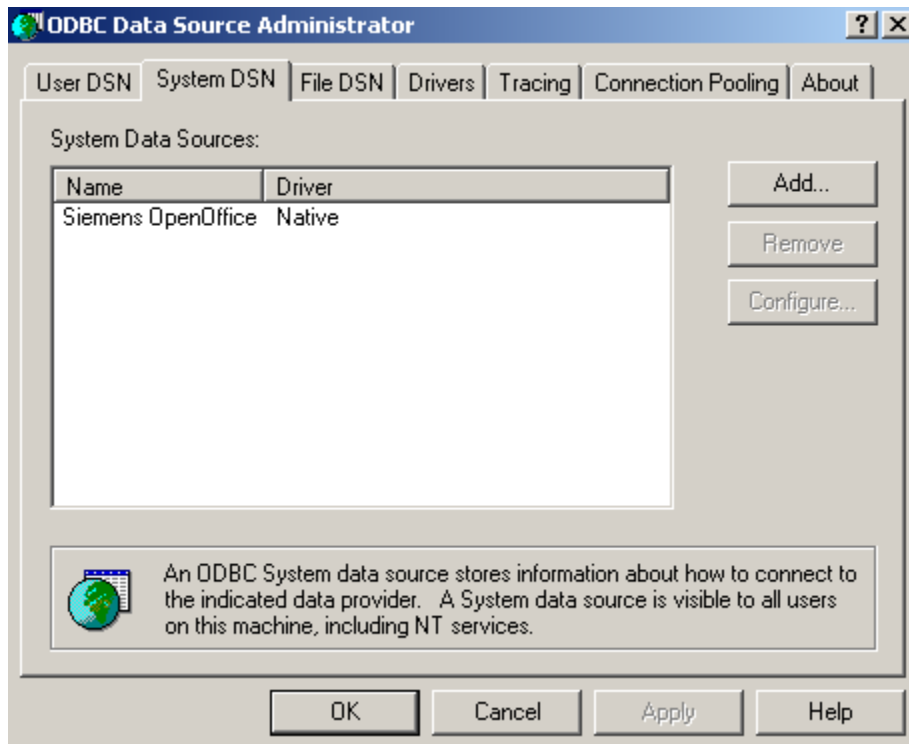
To enable TIM Enterprise to work with the Siemens OpenOffice, you first need to set up a DSN connection, by following the steps below:

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\System32\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 Enterprise\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
' default 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
' default value is none
AccessCodes = 9

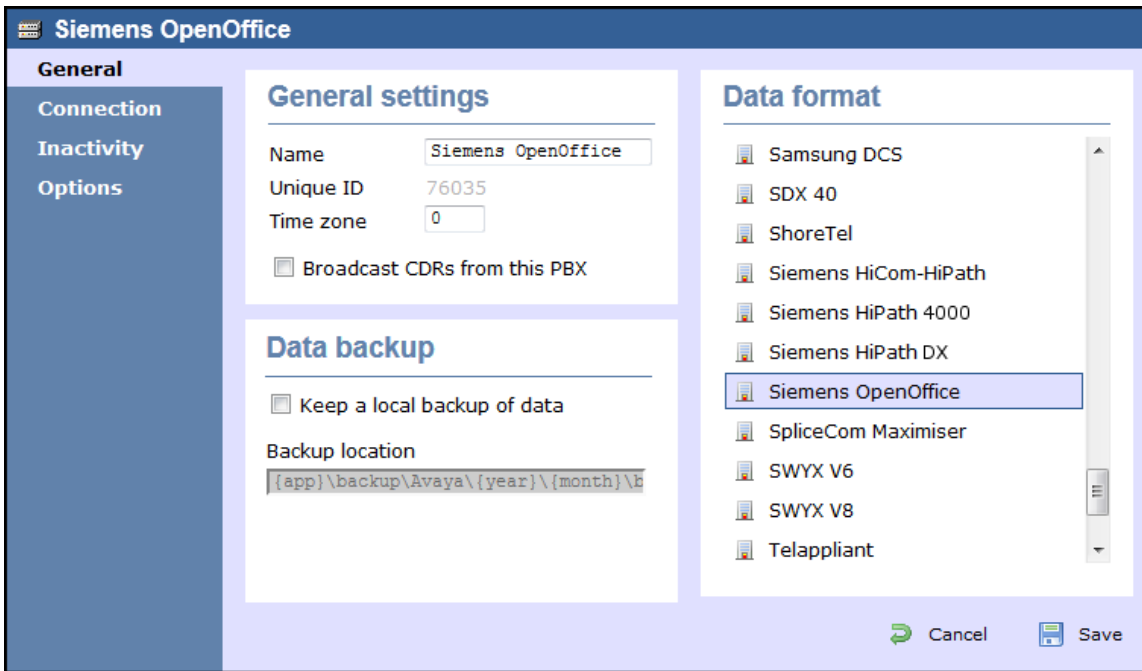
'SplitTandem = True

```

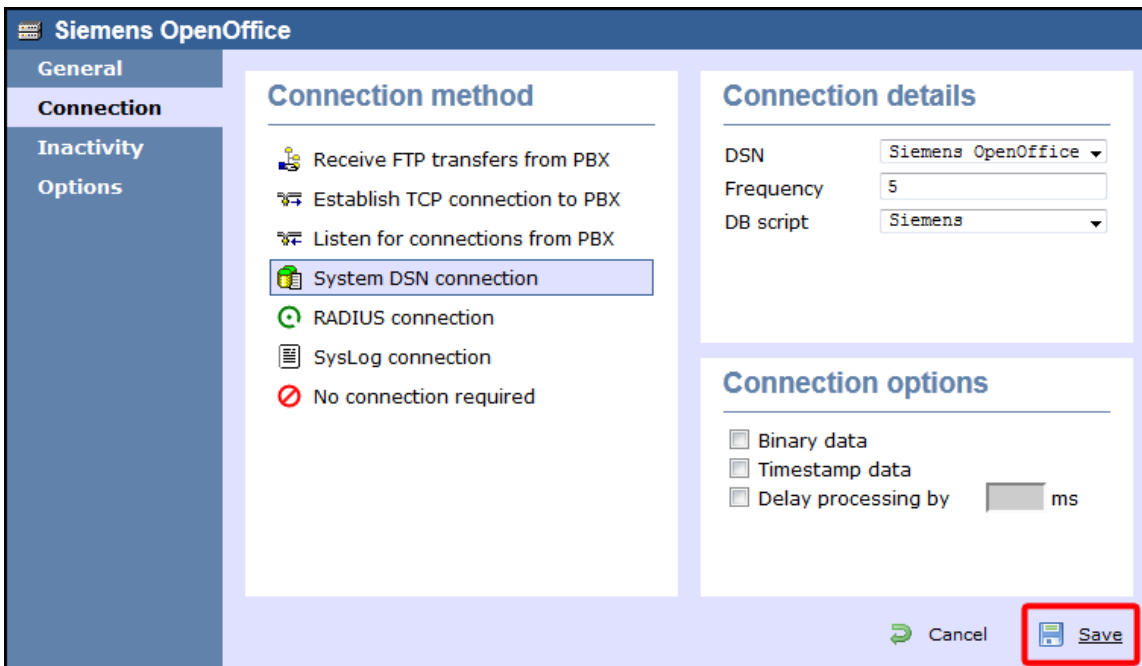
Configuring TIM Enterprise

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

1. Click on the **Directory** tab.
2. Locate the PBX object you want to configure in the Directory, right-click on it and select **Properties**.
3. A new window will open displaying the general properties of your PBX object. Select **Siemens OpenOffice** from the **Data format** list from the right-hand side, as shown below:




4. Click on the **Connection** tab and select **System DSN connection** from the Connection method list.
5. In the **DSN** field, select **Siemens OpenOffice** 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 **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 Enterprise. Contact your system maintainer if you are not familiar with the configuration of your PBX.

Connection Type

 TIM Enterprise establishes a TCP connection to this PBX.

Support Files

 Siemens OpenOffice.TDT

 Siemens OpenOffice.TDS

Required Tasks

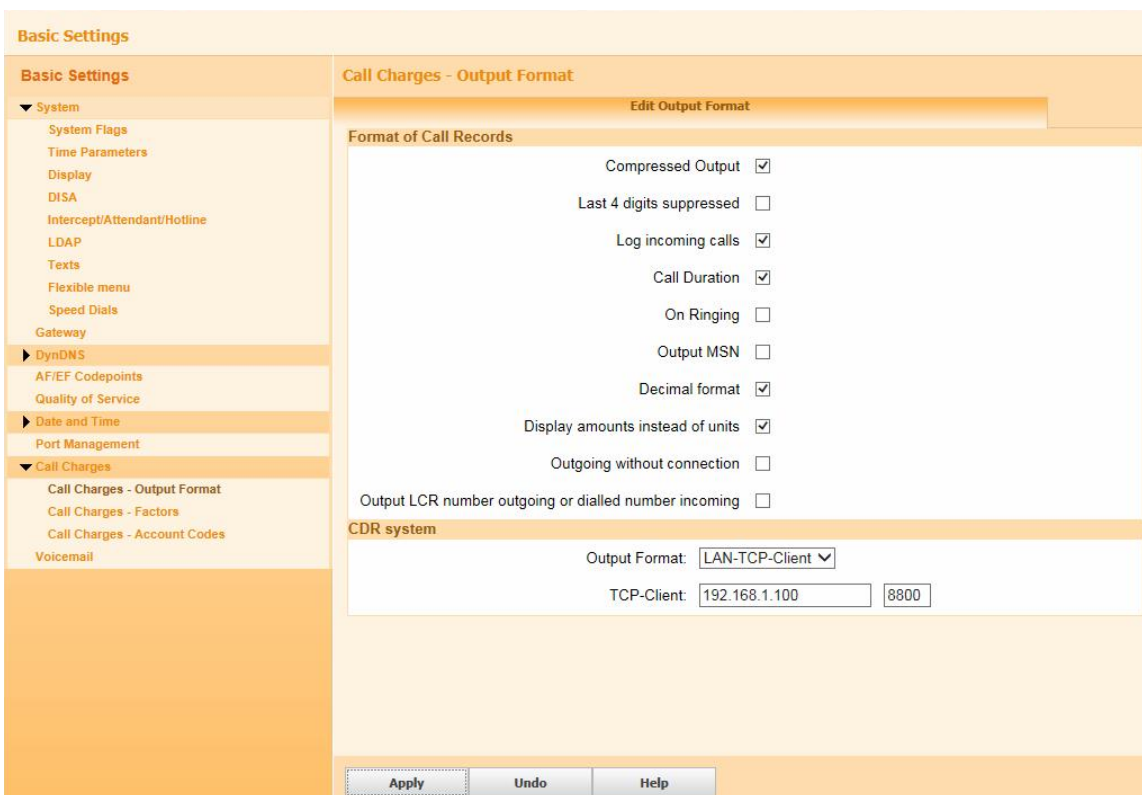
Configure the SMDR output

Configure TIM Enterprise

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:



The screenshot shows the 'Basic Settings' page in the Siemens OpenOffice web portal. The left sidebar contains a navigation menu with 'Call Charges - Output Format' selected. The main content area is titled 'Call Charges - Output Format' and contains the following configuration options:

- Format of Call Records**
 - Compressed Output
 - Last 4 digits suppressed
 - Log incoming calls
 - Call Duration
 - On Ringing
 - Output MSN
 - Decimal format
 - Display amounts instead of units
 - Outgoing without connection
 - Output LCR number outgoing or dialled number incoming
- CDR system**
 - Output Format: LAN-TCP-Client (dropdown menu)
 - TCP-Client: 192.168.1.100 (text input) 8800 (text input)

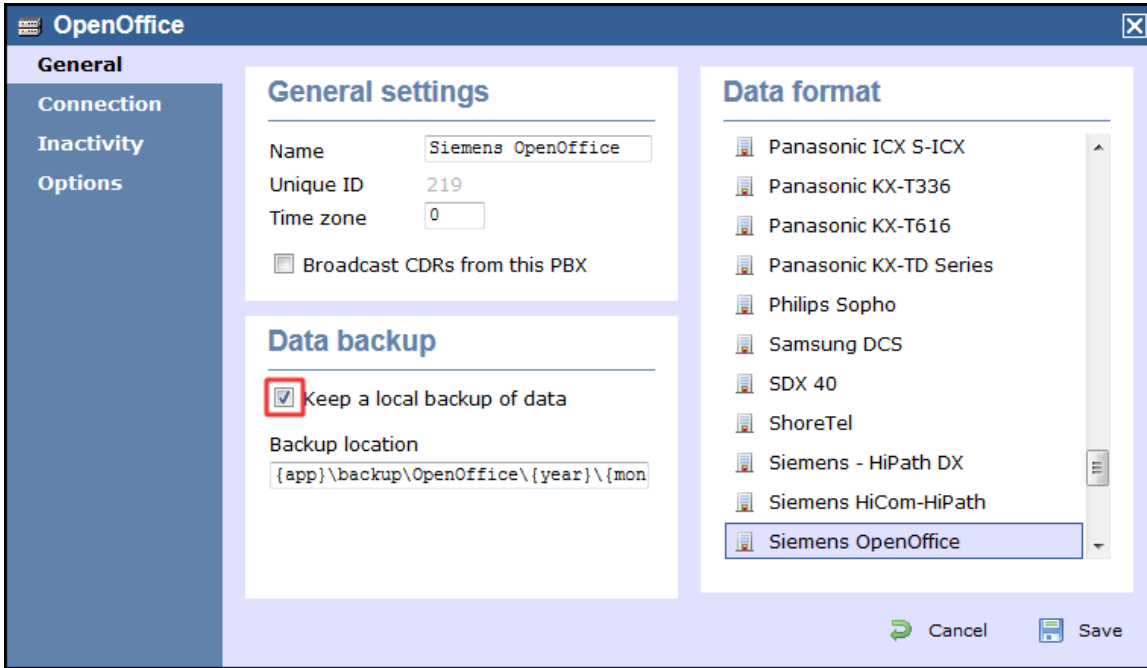
At the bottom of the page, there are three buttons: **Apply**, **Undo**, and **Help**.

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 Enterprise and the port number that you want your SMDR data to be sent to.
6. Click on the **Apply** tab to save the changes.

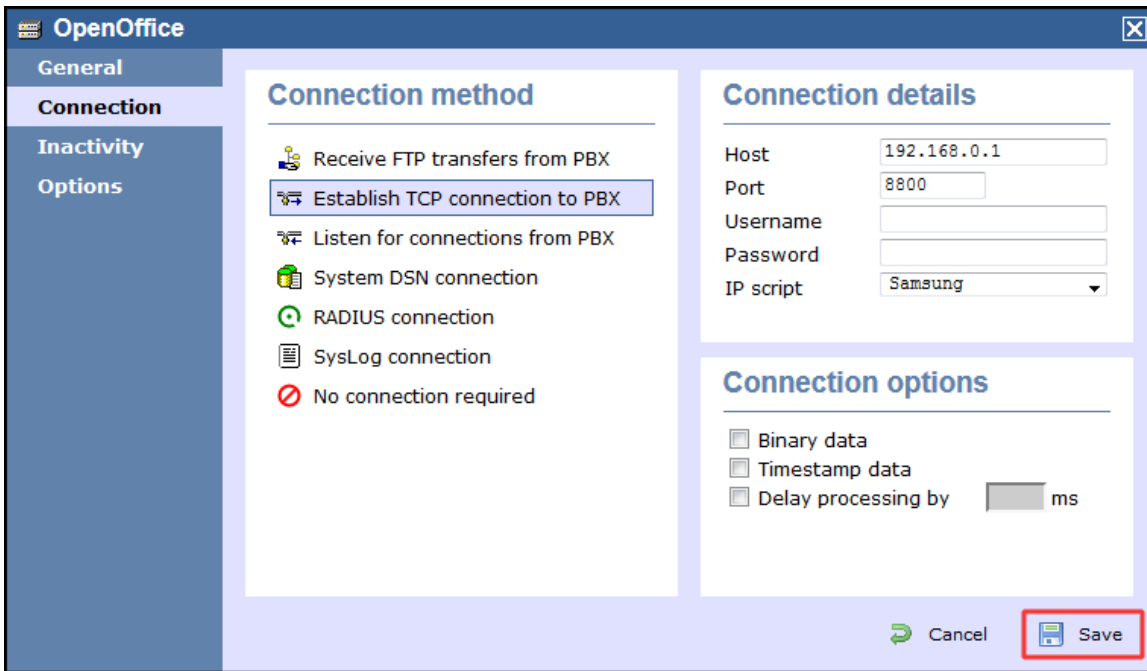
Configure TIM Enterprise

Follow the steps below to configure TIM Enterprise to collect the SMDR data from your telephone system:

1. Click on the **Directory** tab.
2. Locate the PBX object you want to configure in the Directory, right-click on it and select **Properties**.
3. A new window will open, displaying the general properties of your PBX object. Select **Siemens OpenOffice** from the **Data format** list and tick the **Keep a local backup of data** box, as shown below:



4. Click on the **Connection** tab and select **Establish TCP connection to PBX** from the **Connection** method list.
5. In the **Host** field, enter the IP address of your telephone system.
6. In the **Port** field, enter the port number you have configured in the telephone system.
7. Leave the **Username** and **Password** fields blank.
8. In the **IP 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 Business 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 Enterprise establishes a DSN connection with this PBX.

Support Files

-  Unify OpenScape Business.TDT
-  Unify OpenScape Business.TDS
-  Unify OpenScape Business.DBS

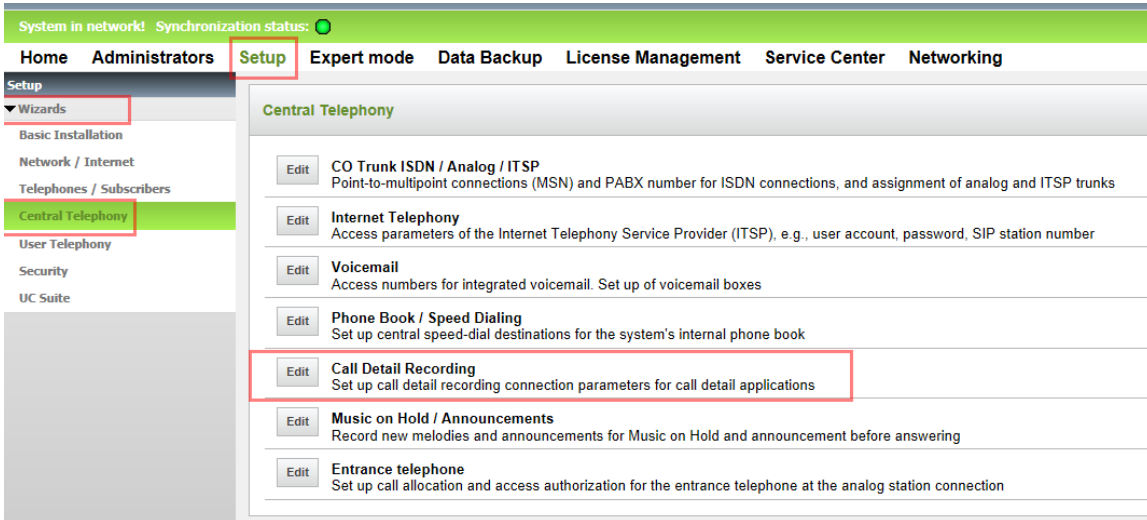
Required Tasks

- Configure the SMDR output
- Set up a DSN connection
- Configure the interface file
- Configure TIM Enterprise

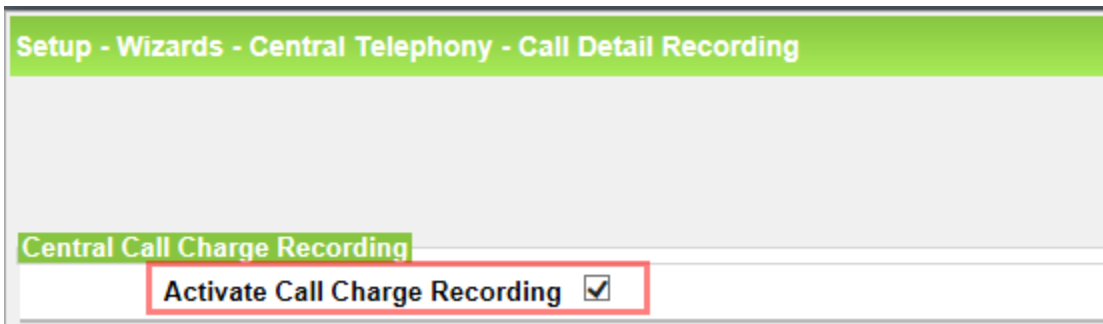
Configuring the SMDR output

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 Enterprise to work with Unify OpenScape Business, you first need to set up a DSN connection, by following the steps below:

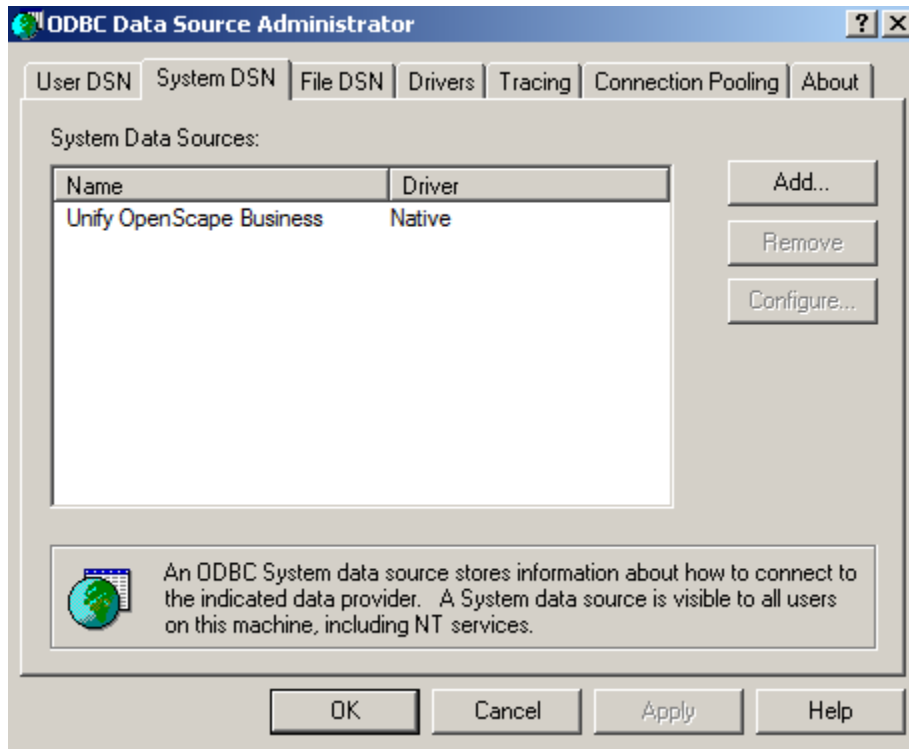
1. Open Windows Control Panel
2. Double-click on the **Administrative tools** icon
3. Double-click on the **Data Sources (ODBC)** icon to open the **ODBC Data Source Administrator** window

i For a 64 bit system, access the **ODBC Data Source Administrator** from the following location `C:\Windows\System32\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 Enterprise\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 OpenScope 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 OpenScope 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
' default 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 OpenScope 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 OpenScope 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
' default value is none
AccessCodes = 9

' SplitTandem = True

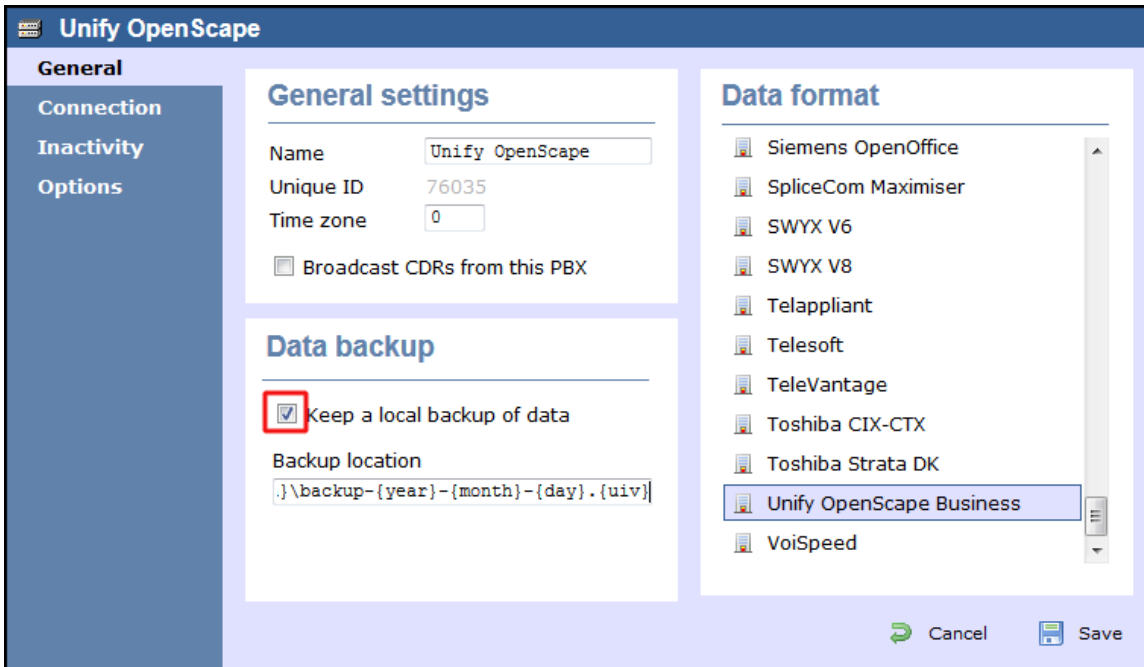
```

Configuring TIM Enterprise

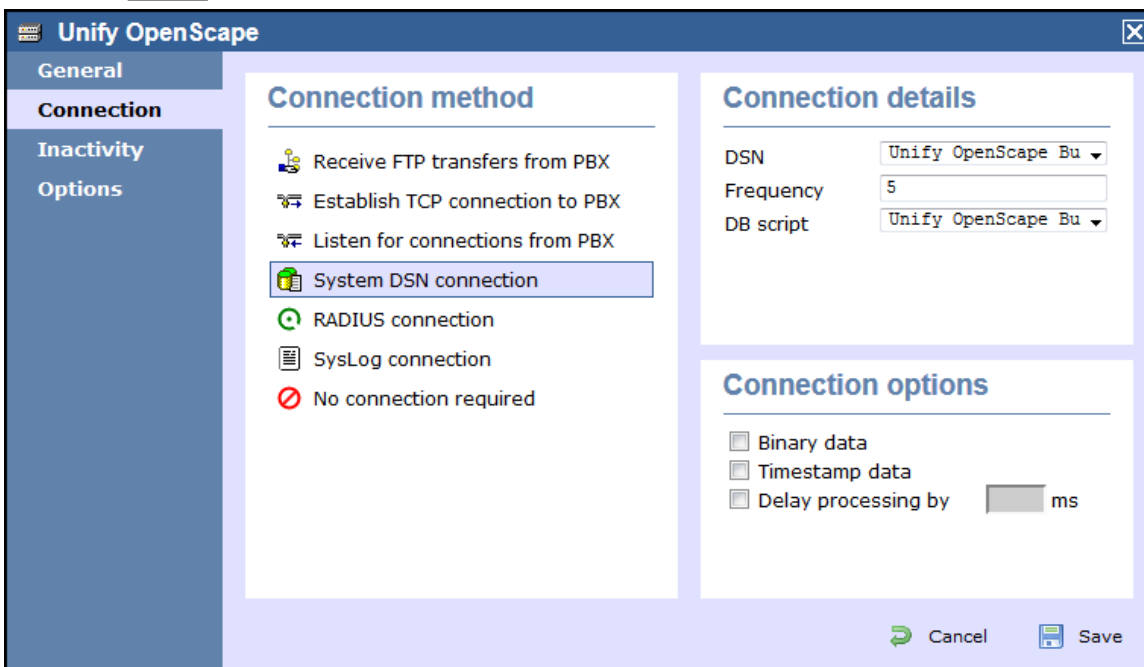
Once the DSN connection has been set up, log in to TIM Enterprise and perform the following steps:

1. Click on the **Directory** tab.

2. Locate the PBX object you want to configure in the Directory, right-click on it and select **Properties**.
3. A new window will open displaying the general properties of your PBX object. Select **Unify OpenScope Business** from the **Data format** on the right-hand side, as shown below:



4. Click on the **Connection** tab and select **System DSN connection** from the **Connection method** list.
5. In the **DSN** field, select **Unify OpenScope Business** 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 **Unify OpenScope 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 Business 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 Enterprise establishes a TCP connection to this PBX.

Support Files

 Unify OpenScape Business.TDS

 Unify OpenScape Business.TDT

Required Tasks

Configure the SMDR output

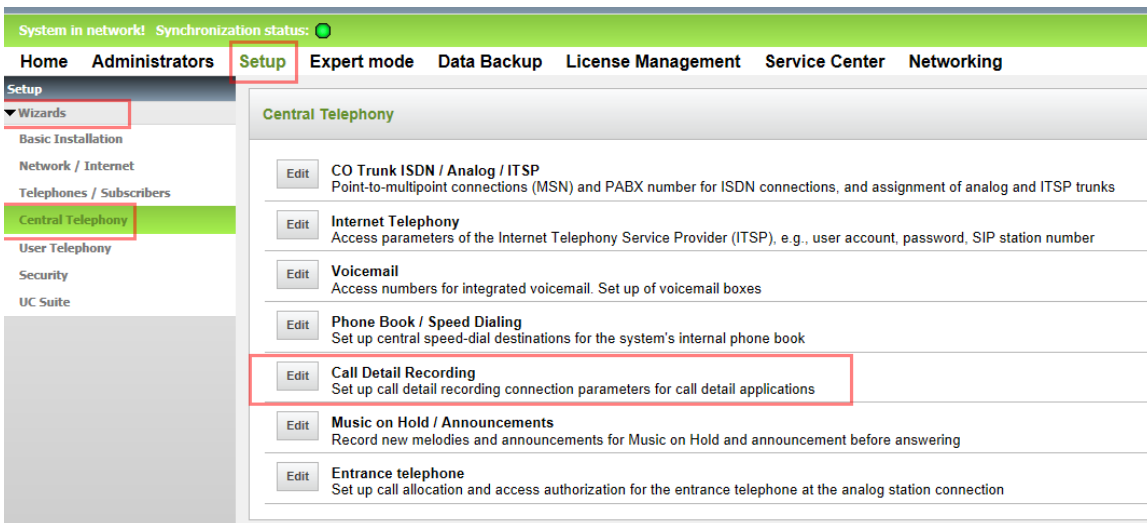
Configure TIM Enterprise

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:

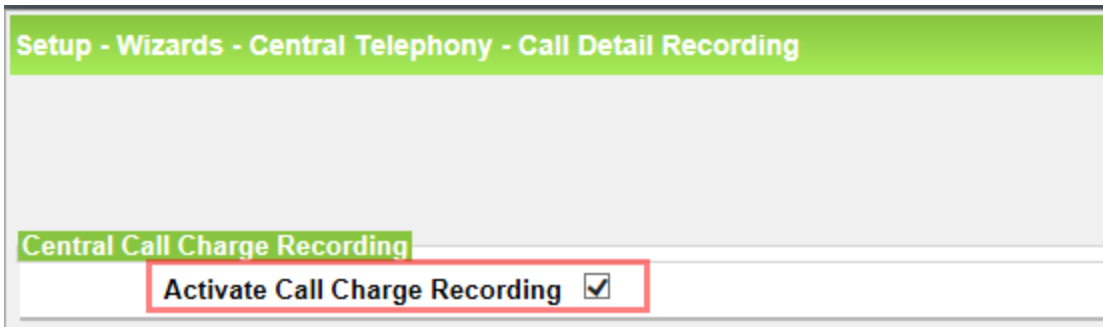
1. Log on to OpenScape Business Assistant and click on **Setup** -> **Wizards** -> **Central Telephony** , as shown below:



The screenshot shows the OpenScape Business Assistant web interface. The top navigation bar includes 'Home', 'Administrators', 'Setup', 'Expert mode', 'Data Backup', 'License Management', 'Service Center', and 'Networking'. The 'Setup' menu is expanded, showing 'Wizards' and 'Central Telephony' (highlighted). The 'Central Telephony' configuration page is displayed, showing various settings with 'Call Detail Recording' highlighted by a red box.

Setting	Description
CO Trunk ISDN / Analog / ITSP	Point-to-multipoint connections (MSN) and PABX number for ISDN connections, and assignment of analog and ITSP trunks
Internet Telephony	Access parameters of the Internet Telephony Service Provider (ITSP), e.g., user account, password, SIP station number
Voicemail	Access numbers for integrated voicemail. Set up of voicemail boxes
Phone Book / Speed Dialing	Set up central speed-dial destinations for the system's internal phone book
Call Detail Recording	Set up call detail recording connection parameters for call detail applications
Music on Hold / Announcements	Record new melodies and announcements for Music on Hold and announcement before answering
Entrance telephone	Set up call allocation and access authorization for the entrance telephone at the analog station connection

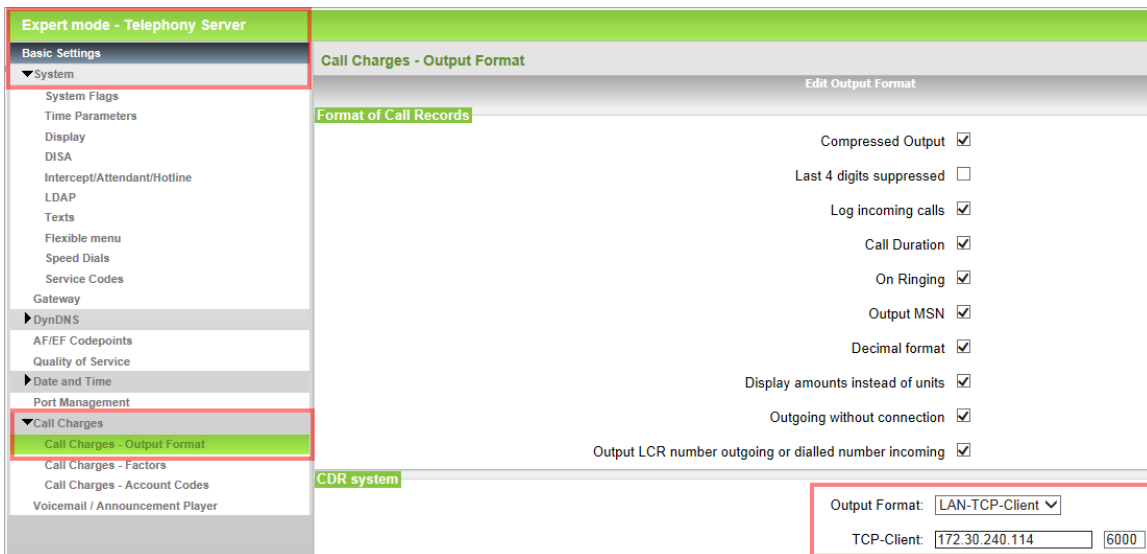
2. Click **Edit** to start the Call Detail Recording wizard.
3. In the new window that opens, tick the **Activate Call Charge Recording** to enable the CDR output, as shown below:



Sending the SMDR via TCP/IP

By default, the Unify OpenScope 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 OpenScope Business Assistant 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 Enterprise and the port number you want to use for the SMDR output, as shown in the screenshot below:

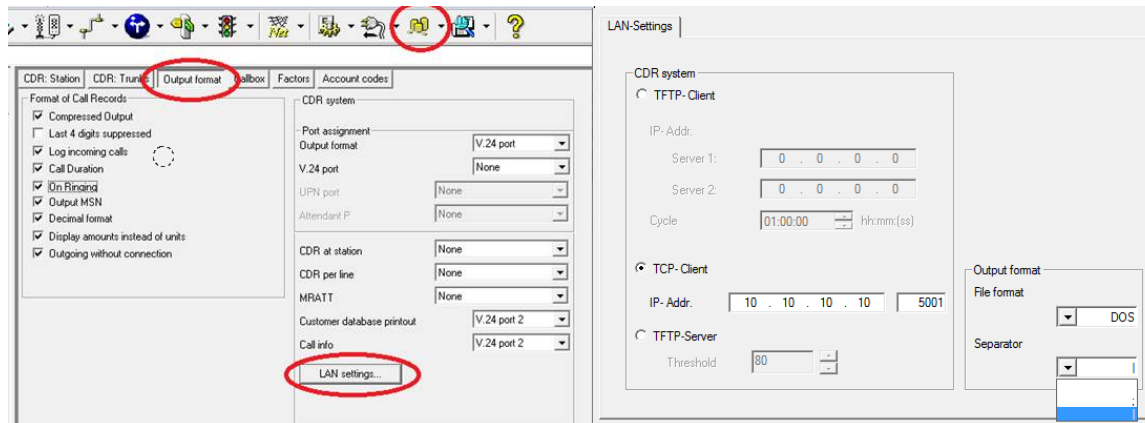


Please note the following:

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 | as 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 ; as 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.

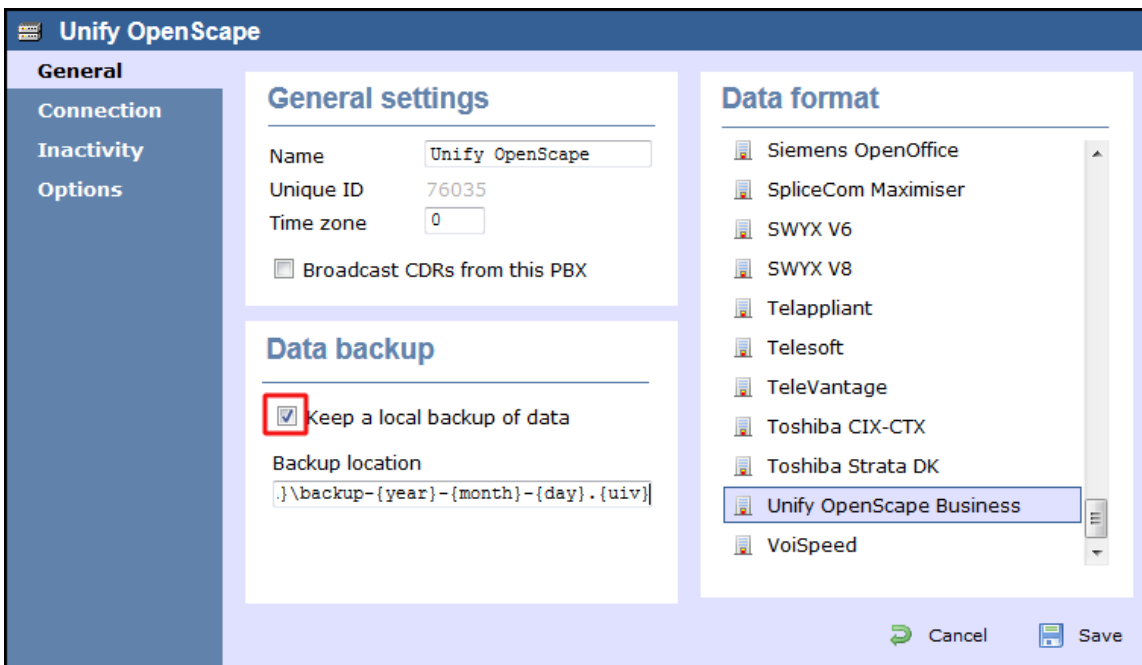
However, the | separator cannot be set in the new WBM tool, and can only be configured using the Manager E, as shown below:



Configuring TIM Enterprise

Follow the steps below to configure TIM Enterprise to listen for SMDR data sent from your telephone system:

1. Click on the **Directory** tab.
2. Locate the PBX object you want to configure in the Directory, right-click on it and select **Properties**.
3. A new window will open displaying the general properties of your PBX object. Select **Unify OpenScope Business** from the **Data format** list and tick the **Keep a local backup of data** box, as shown below:



4. Click on the **Connection** tab, select **Listen for connections from PBX** from the **Connection** method 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.

The screenshot shows the 'Unify OpenScope' configuration window. On the left is a navigation menu with 'General', 'Connection', 'Inactivity', and 'Options'. The 'Connection' section is active, showing a list of connection methods: 'Receive FTP transfers from PBX', 'Establish TCP connection to PBX', 'Listen for connections from PBX' (highlighted), 'System DSN connection', 'RADIUS connection', 'SysLog connection', and 'No connection required'. To the right, the 'Connection details' section has input fields for 'Host' and 'Port' (set to 6000). Below that, the 'Connection options' section includes checkboxes for 'Binary data', 'Timestamp data', and 'Delay processing by' (with a text input field and 'ms' label). At the bottom right, there are 'Cancel' and 'Save' buttons, with the 'Save' button highlighted by a red rectangle.


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 Enterprise. Contact your system maintainer if you are not familiar with the configuration of your PBX.

Connection Type

 TIM Enterprise 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 Enterprise

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

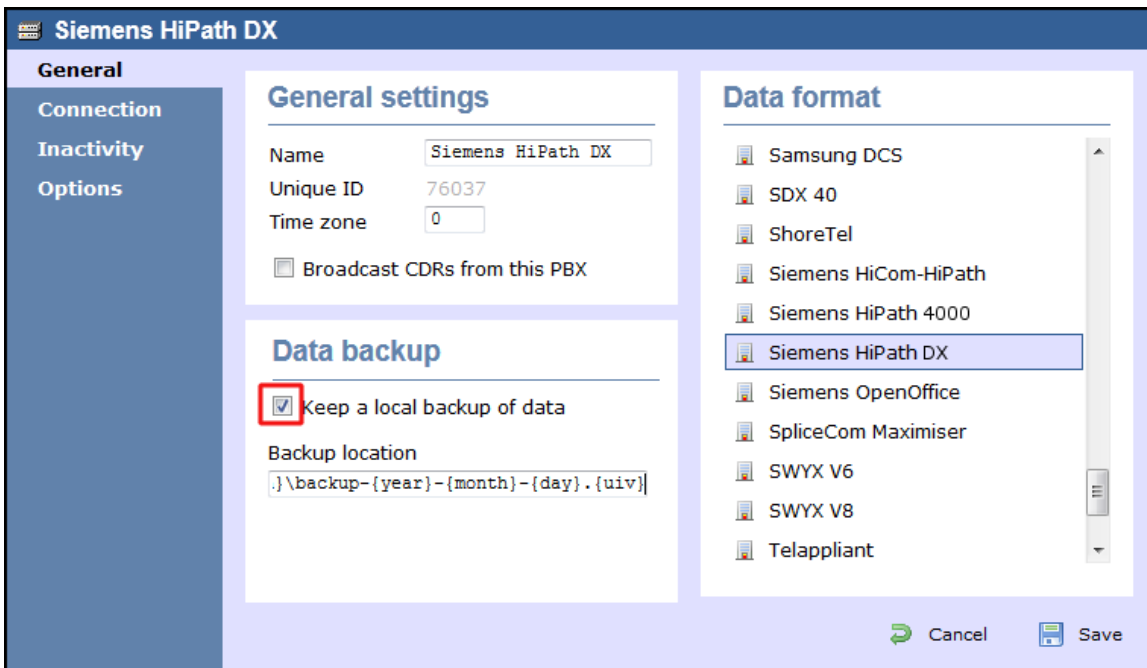
To collect call logging data from the serial port of your phone system and send it to TIM Enterprise, you first need to install the NetPBX software. For setup instructions, click on the link below:

[Install and configure NetPBX](#)

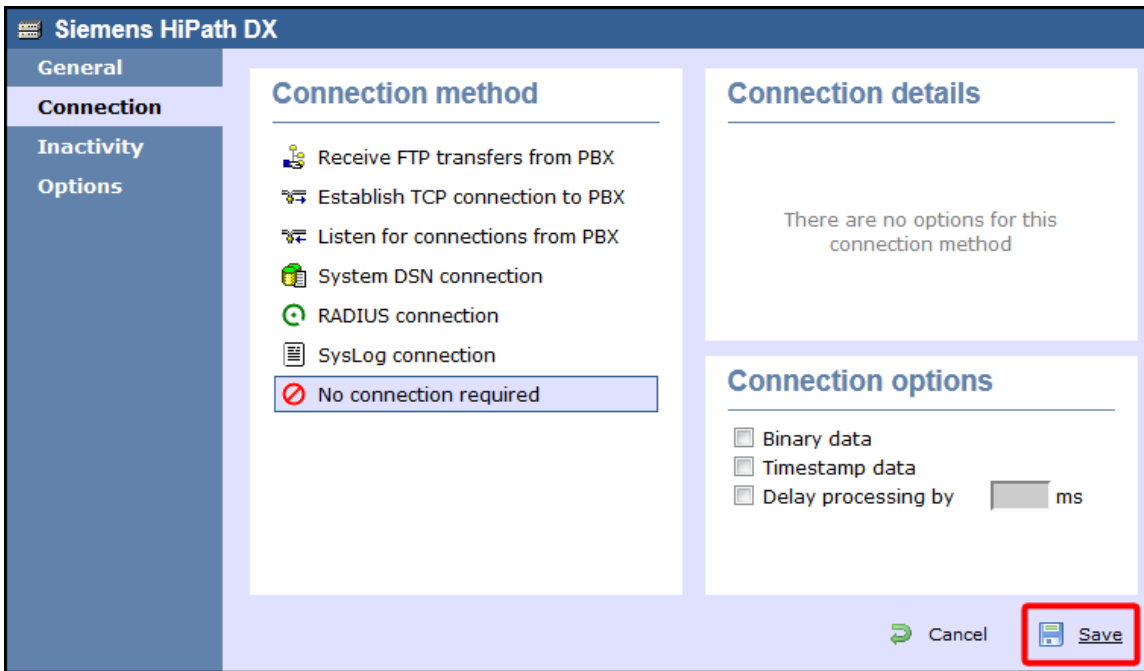
Configuring TIM Enterprise

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

1. Click on the **Directory** tab.
2. Locate the PBX object you want to configure in the Director, right-click on it and select **Properties**.
3. A new window will open, displaying the general properties of your PBX object. Select **Siemens HiPath DX** from the **Data format** list and tick the **Keep a local backup of data** box, as shown below:




4. Click on the **Connection** tab and select **No connection required** from the **Connection method** list.
5. Click on the **Save** button to apply 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 Enterprise. Contact your system maintainer if you are not familiar with the configuration of your PBX.



Connection Type

 TIM Enterprise 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 Enterprise

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 Enterprise establishes a TCP connection to the IP address of the System/UPI card of your Siemens phone system.

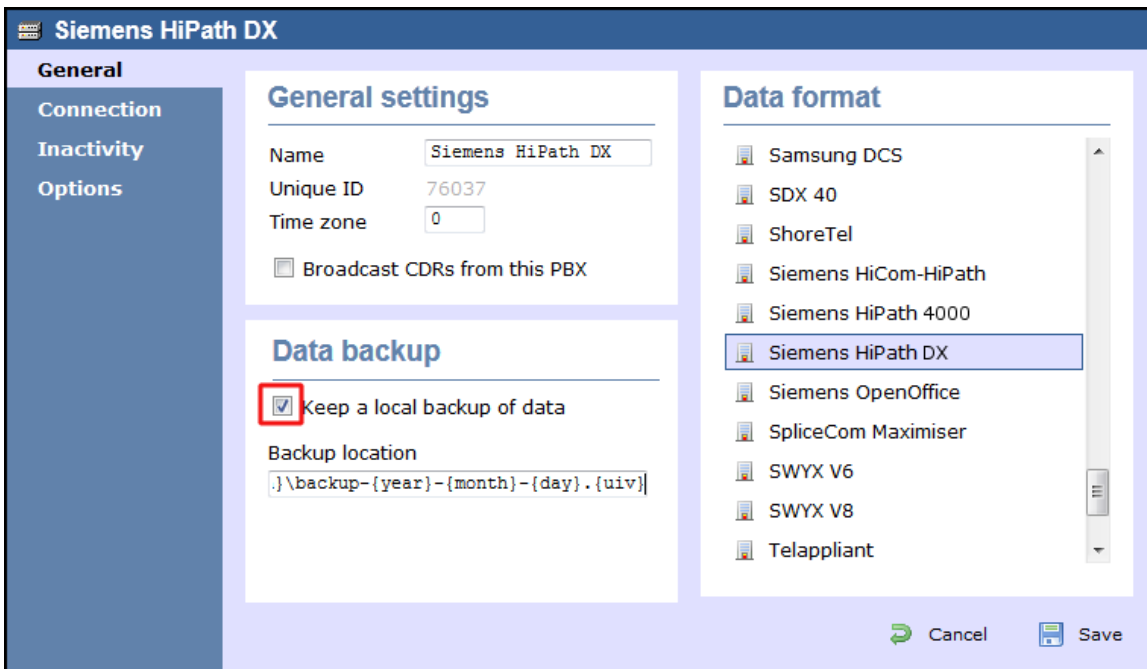
You can choose the IP address of the System/UPI card by setting the variable `IPACT` in the permanent database. Your local maintenance engineer should be able to program this address for you.

The default listening port is 17257.

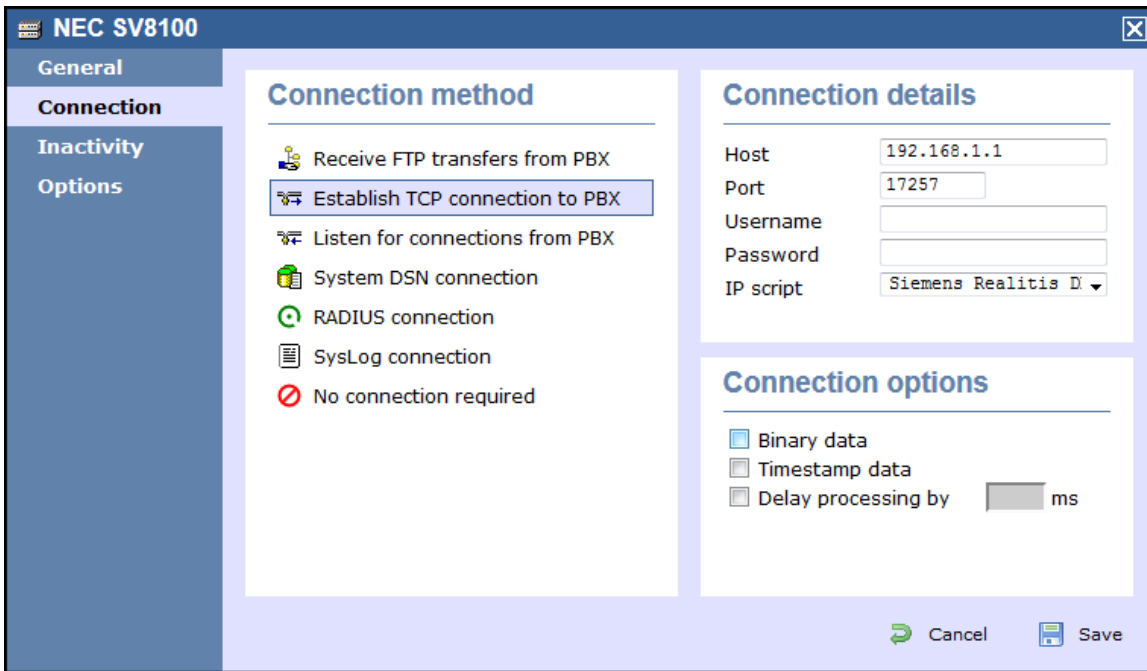
Configuring TIM Enterprise

Follow the steps below to configure TIM Enterprise to collect the SMDR data from your Siemens phone system:

1. Click on the **Directory** tab.
2. Locate the PBX object you want to configure in the Directory, right-click on it and select **Properties**.
3. A new window will open, displaying the general properties of your PBX object. Select **Siemens HiPath DX** from the **Data format** list and tick the **Keep a local backup of data** box, as shown below:



4. Click on the **Connection** tab and select **Establish TCP connection to PBX** from the **Connection** method 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 **IP 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 Enterprise. 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 CDR output
- Install NetPBX
- Configure TIM Enterprise

Configuring your CDR output

The VoiSpeed phone system outputs its CDR data to a file. To configure the output, contact your system maintainer.

TIM Enterprise 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

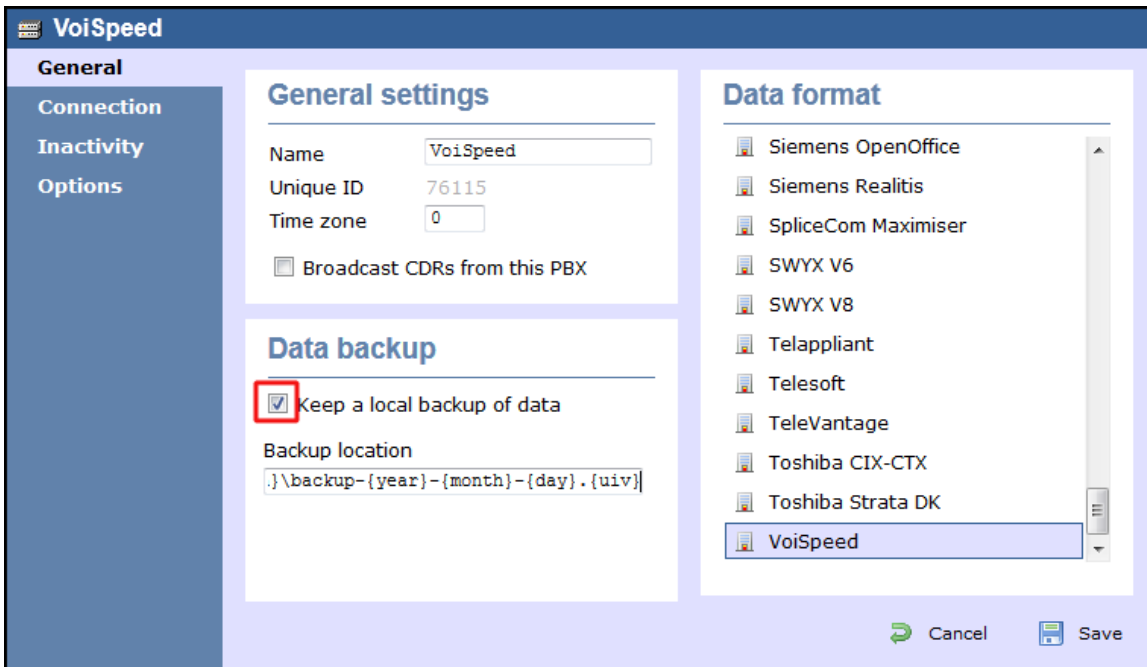
Since your VoiSpeed phone system outputs its call logging data to a file, you first need to install the [NetPBX](#) software in order to collect the contents of the call logging file and forward it to TIM Enterprise. For setup instructions, click on the link below:

Install and configure NetPBX

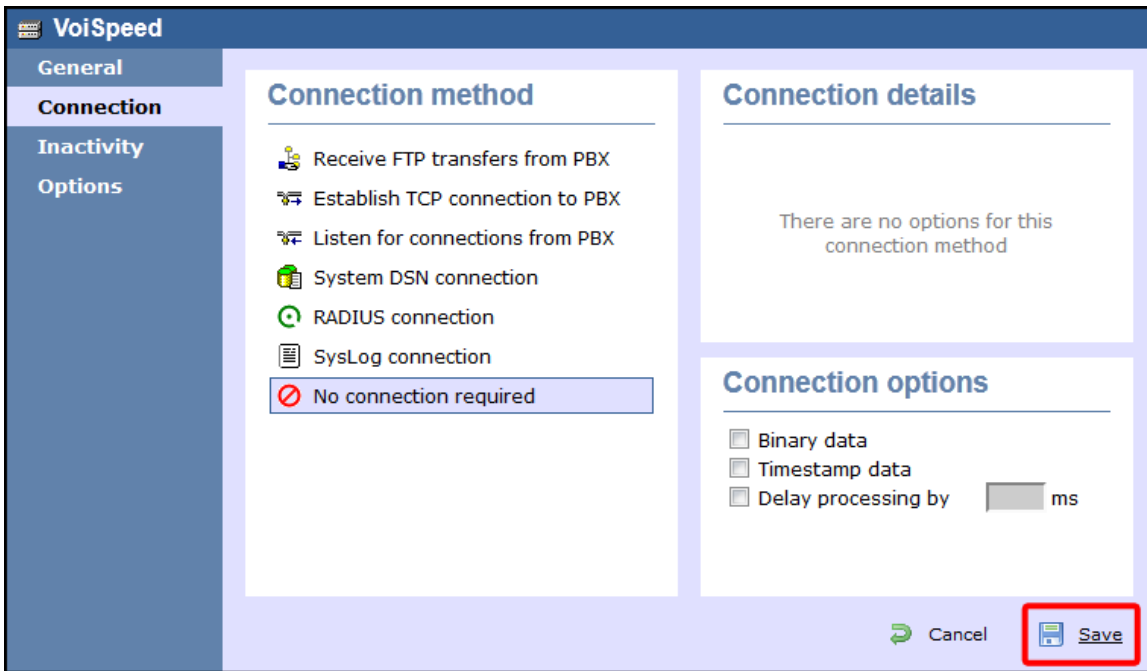
Configuring TIM Enterprise

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

1. Click on the **Directory** tab.
2. Locate the PBX object you want to configure in the Directory, right-click on it and select **Properties**.
3. A new window will open, displaying the general properties of your PBX object. Select **VoiSpeed** from the **Data format** list and tick the **Keep a local backup of data** box, as shown below:



4. Click on the **Connection** tab and select **No connection required** from the **Connection method** list.
5. Click on the **Save** button to apply the settings.



Accessing the system

TIM Enterprise 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 Enterprise, open a web browser, go to the IP address or host name of the computer running TIM Enterprise and log in using your username and password.



After successfully logging in, the following "dashboard" screen will be displayed.

timenterprise

[Reports](#) | [Directory](#) | [Call View](#) | [Tariff Editor](#) | [Alerts](#)

Call volumes by call type

Call volumes by half hour

Call volumes by charge band

Quick call search

[Headers](#) | [Save](#)

Call type:

Period:

Dialled number:

CLI:

Entity:

Limit results to: calls

Most recent calls

Time	Source	Route	Destination	Duration	
14:44:13	124001	UNAVAILABLE	Neil Down	00:00:58	<input type="button" value="🗨️"/> <input type="button" value="★"/> <input type="button" value="📄"/>
14:43:56	Orange	07854398144	Olive Yew	00:00:18	<input type="button" value="🗨️"/> <input type="button" value="★"/> <input type="button" value="📄"/>
14:43:23	Carrie Oakey	2068	Crystal Ball	00:01:09	<input type="button" value="🗨️"/> <input type="button" value="★"/> <input type="button" value="📄"/>
14:42:56	Dan D. Lyons	07881803345	Vodafone	00:00:11	<input type="button" value="🗨️"/> <input type="button" value="★"/> <input type="button" value="📄"/>
14:42:36	Edna May	07776252417	Vodafone	00:01:45	<input type="button" value="🗨️"/> <input type="button" value="★"/> <input type="button" value="📄"/>
14:42:11	London	02079499040	Jo King	00:04:11	<input type="button" value="🗨️"/> <input type="button" value="★"/> <input type="button" value="📄"/>
14:41:58	O2	07889395807	Justin Case	00:00:32	<input type="button" value="🗨️"/> <input type="button" value="★"/> <input type="button" value="📄"/>
14:41:33	120014	UNAVAILABLE	Tanya Hyde	00:08:50	<input type="button" value="🗨️"/> <input type="button" value="★"/> <input type="button" value="📄"/>
14:41:28	120012	UNAVAILABLE	Barry Cade	00:01:10	<input type="button" value="🗨️"/> <input type="button" value="★"/> <input type="button" value="📄"/>
14:40:58	120008	UNAVAILABLE	Neil Down	00:00:27	<input type="button" value="🗨️"/> <input type="button" value="★"/> <input type="button" value="📄"/>
14:40:48	120001	UNAVAILABLE	Anita Bath	00:00:39	<input type="button" value="🗨️"/> <input type="button" value="★"/> <input type="button" value="📄"/>

28/03/2012 14:46:30 Logged in as 'Joe Bloggs'

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.

Root account

Root account overview

The root account in TIM Enterprise allows you to access and configure the general settings of the system, such as its database, the license details or the backup and restore function. The root user is also able to access two additional tabs, [Engineering](#) and [SQL](#), which are not available to admin or standard web users.

When logging in to TIM Enterprise with the root credentials, the [System settings](#) screen will be displayed:

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timenterprise
Engineering Directory Call View SQL Tariff Editor Alerts

System settings

 Refresh settings cache
 Save settings

Database

Create tables
 Test settings...

Enter connection information of database storage engine

Database provider: Native Database
Microsoft SQL Server
MySQL Server

Host : Port: 127.0.0.1 1433

Username: tim

Password: ••••••

Database: timenterprise

Alerts

Enter logging options for each type of alert

Type	Log	Email address
Error	<input checked="" type="checkbox"/>	<input style="width: 80%;" type="text" value="example@tri-line.com"/>
Warning	<input checked="" type="checkbox"/>	<input style="width: 80%;" type="text"/>
Info	<input checked="" type="checkbox"/>	<input style="width: 80%;" type="text"/>
Critical	<input type="checkbox"/>	
Success	<input type="checkbox"/>	

Current log location:
C:\Program Files (x86)\Tri-Line\TIM Enterprise\logs\

Email

Test settings...

Enter email server details for system alerts

SMTP host : Port: mail.tri-line.net 25

HELO name:

Reply-to:

SMTP authentication: None

Username:

Password:

Web server

Test settings...

Enter IP address & port of the built-in web server

Local host: 192.168.0.115
localhost
127.0.0.1

Port: 80

Bind to this address & port

System settings

System settings

- Database
- Alerts
- Email
- Web server
- Remote access & diagnostics

Database

The **Database** section allows you to enter the connection information of your database storage engine.

timenterprise
Engineering Directory Call View SQL Tariff Editor Alerts

System settings
Refresh settings cache Save settings

Database

Enter connection information of database storage engine

Database provider: Native Database
Microsoft SQL Server
MySQL Server

Host : Port: 127.0.0.1 1433

Username: tim

Password: ••••••

Database: timenterprise

Alerts

Enter logging options for each type of alert

Type	Log	Email address
✘	<input checked="" type="checkbox"/>	<input style="width: 90%;" type="text" value="example@tri-line.com"/>
⚠	<input checked="" type="checkbox"/>	<input style="width: 90%;" type="text"/>
🔔	<input checked="" type="checkbox"/>	<input style="width: 90%;" type="text"/>
🔧	<input type="checkbox"/>	<input style="width: 90%;" type="text"/>
📄	<input type="checkbox"/>	<input style="width: 90%;" type="text"/>

Current log location:
C:\Program Files (x86)\Tri-Line\TIM Enterprise\logs\

Email

Enter email server details for system alerts

SMTP host : Port: mail.tri-line.net 25

HELO name:

Reply-to:

SMTP authentication: None

Username:

Password:

Web server

Enter IP address & port of the built-in web server

Local host: 192.168.0.115
localhost
127.0.0.1

Port: 80

Bind to this address & port

Field	Description
Database provider	Select the database you are trying to connect to. Be default, TIM Enterprise is connected to a Native database.
Host: Post	Enter the Host name or IP address of the database and the relevant port number.
Username	Enter the username required to log in to the database.
Password	Enter the password required to log in to the database.
Database	Enter the name of the database.

Alerts

TIM Enterprise 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 a disk or sent as an email notification.

timenterprise
Engineering Directory Call View SQL Tariff Editor Alerts

System settings
Refresh settings cache Save settings

Database

Enter connection information of database storage engine

Database provider: Native Database
Microsoft SQL Server
MySQL Server

Host : Port: 127.0.0.1 1433

Username: tim

Password: ••••••

Database: timenterprise

Alerts

Enter logging options for each type of alert

Type	Log	Email address
Critical	<input checked="" type="checkbox"/>	<input style="width: 80%;" type="text" value="example@tri-line.com"/>
Warning	<input checked="" type="checkbox"/>	<input style="width: 80%;" type="text"/>
Information	<input checked="" type="checkbox"/>	<input style="width: 80%;" type="text"/>
Voice audit	<input type="checkbox"/>	
Audit	<input type="checkbox"/>	

Current log location:
C:\Program Files (x86)\Tri-Line\TIM Enterprise\logs\

Email

Enter email server details for system alerts

SMTP host : Port: mail.tri-line.net 25

HELO name:

Reply-to:

SMTP authentication: None

Username:

Password:

Web server

Enter IP address & port of the built-in web server

Local host: 192.168.0.115
localhost
127.0.0.1

Port: 80

Bind to this address & port

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

Email

This section allows you to configure the details of your mail server in order to enable TIM Enterprise to send out scheduled reports, call alarms, missed call notifications or system alerts.

timenterprise
Engineering Directory Call View SQL Tariff Editor Alerts

System settings

Refresh settings cache
Save settings

Database

Enter connection information of database storage engine

Database provider: Native Database
Microsoft SQL Server
MySQL Server

Host : Port: 127.0.0.1 1433

Username: tim

Password: ••••••

Database: timenterprise

Alerts

Enter logging options for each type of alert

Type	Log	Email address
Error	<input checked="" type="checkbox"/>	<input style="width: 80%;" type="text" value="example@tri-line.com"/>
Warning	<input checked="" type="checkbox"/>	<input style="width: 80%;" type="text"/>
Info	<input checked="" type="checkbox"/>	<input style="width: 80%;" type="text"/>
Help	<input type="checkbox"/>	
Checkmark	<input type="checkbox"/>	

Current log location:
C:\Program Files (x86)\Tri-Line\TIM Enterprise\logs\

Email

Enter email server details for system alerts

SMTP host : Port: mail.tri-line.net 25

HELO name:

Reply-to:

SMTP authentication: None

Username:

Password:

Web server

Enter IP address & port of the built-in web server

Local host: 192.168.0.115
localhost
127.0.0.1

Port: 80

Bind to this address & port

Field name	Description
SMTP host: Port	The IP address or host name of your company's mail server and the port number, which by default is 25
HELO 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 Enterprise
Reply-to address	The email address you want to use to send a test email, in order to verify your email settings
SMTP authentication	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

Web server

TIM Enterprise 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.

timenterprise
Engineering Directory Call View SQL Tariff Editor Alerts

System settings
Refresh settings cache Save settings

Database

Enter connection information of database storage engine

Database provider: Native Database
Microsoft SQL Server
MySQL Server

Host : Port: 127.0.0.1 1433

Username: tim

Password: ••••••

Database: timenterprise

Alerts

Enter logging options for each type of alert

Type	Log	Email address
X	<input checked="" type="checkbox"/>	example@tri-line.com
!	<input checked="" type="checkbox"/>	
i	<input checked="" type="checkbox"/>	
!	<input type="checkbox"/>	
i	<input type="checkbox"/>	

Current log location:
C:\Program Files (x86)\Tri-Line\TIM Enterprise\logs\

Email

Enter email server details for system alerts

SMTP host : Port: mail.tri-line.net 25

HELO name:

Reply-to: example@tri-line.net

SMTP authentication: None

Username:

Password:

Web server

Enter IP address & port of the built-in web server

Local host: 192.168.0.115
localhost
127.0.0.1

Port: 80

Bind to this address & port

Remote access & diagnostics

This feature is reserved for future use.

Engineering

Engineering

- Backup & restore
- Cache
- Sockets & timers
- License details

Backup & restore

This section allow you to create or restore a system backup.

timententerprise Engineering Directory Call View SQL Tariff Editor Alerts

Backup & restore Cache Sockets & timers License details Refresh system status

Backup

Create a backup point

Backup name

Backup all data from the database
 Backup selected period only

Start date

End date

Remove backup set from the database

Backup

Restore

Restore data and settings

Backup name

Restore

To create a backup of the database, enter a name for the backup file, select the period you want to run the backup for, then click on the **Backup** button, as shown below:

timententerprise Engineering Directory Call View SQL Tariff Editor Alerts

Backup & restore Cache Sockets & timers License details Refresh system status

Backup

Create a backup point

Backup name

Backup all data from the database
 Backup selected period only

Start date

End date

Remove backup set from the database

Backup

Restore

Restore data and settings

Backup name

Restore

To restore an existing backup, select it from the drop-down list and click on the **Restore** button.

timenterprise Engineering Directory Call View SQL Tariff Editor Alerts

Backup & restore Cache Sockets & timers License details Refresh system status

Backup

Create a backup point

Backup name

Backup all data from the database
 Backup selected period only

Start date

End date

Remove backup set from the database

Backup

Restore

Restore data and settings

Backup name

Restore

Cache

This section displays information about the data cached by the system and allows you to reload a tariff table if any changes were made.

timenterprise Engineering Directory Call View SQL Tariff Editor Alerts

Backup & restore Cache Sockets & timers License details Refresh system status

Directory

Page 1 of 2 Clear cache...

Type	Fullkey	Name
webuser	\1\	admin
webuser	\90\	Joe Bloggs
user	\43\2\13\14\	VM Channel 42
user	\43\2\13\15\	8888
user	\43\2\13\17\	C Chester

Tariff tables

Reload tariffs...

Title	File name	File path	Call count
BT	Default	C:\Program Files (x86)\Tri-Line\TIM Enterprise\tariffs\Default.xml	0

Sockets and timers

This section displays information about the web sessions in progress, the status of the currently established sockets and the interval timers set up on the system.

The screenshot shows the TIM Enterprise web interface with the 'Sockets & timers' tab selected. The interface includes a navigation bar with 'timmerprise' logo and menu items: Engineering, Directory, Call View, SQL, Tariff Editor, Alerts. Below the navigation bar are tabs: Backup & restore, Cache, Sockets & timers, License details. A 'Refresh system status' button is visible in the top right.

Web sessions

Remote IP	Time connected	State	Last URI
127.0.0.1	00:00:00	User is connec..	/sys.js?cmd..

Sockets

Name	Directory name	State	Remote IP
0 RADIUSReply	[SYSTEM]	Closed	
RADIUS	[SYSTEM]	Closed	
SysLog	[SYSTEM]	Closed	
Socket.Mail	[SYSTEM]	Closed	
udpin	[SYSTEM]	Closed	
0 Socket.Out	[SYSTEM]	Closed	
0 Socket.TCP	[SYSTEM]	Closed	
0 Socket.IPPBX	[SYSTEM]	Closed	

Timers

Name	Index	Interval
Timer.License		60000
Timer.StartHTTPS		1000
Timer.StopHTTPS		1000
Timer.ClearCLTA		2000
Timer.TestEmail		1000
Timer.RenewKeys		1000
Timer.TCP	0	2000
Timer.IPPBX	0	2000
Timer.Checks		60000
Timer.FileScout		3000

License details

This section contains information about your software license, such as the number of users it covers or the expiry date. If you need to update your license details, click on the [Get license](#) button.

The screenshot shows the TIM Enterprise web interface with the 'License details' tab selected. The interface includes the same navigation bar and tabs as the previous screenshot. The 'License details' tab is active, displaying the 'License' section.

License

Here are your license details:-

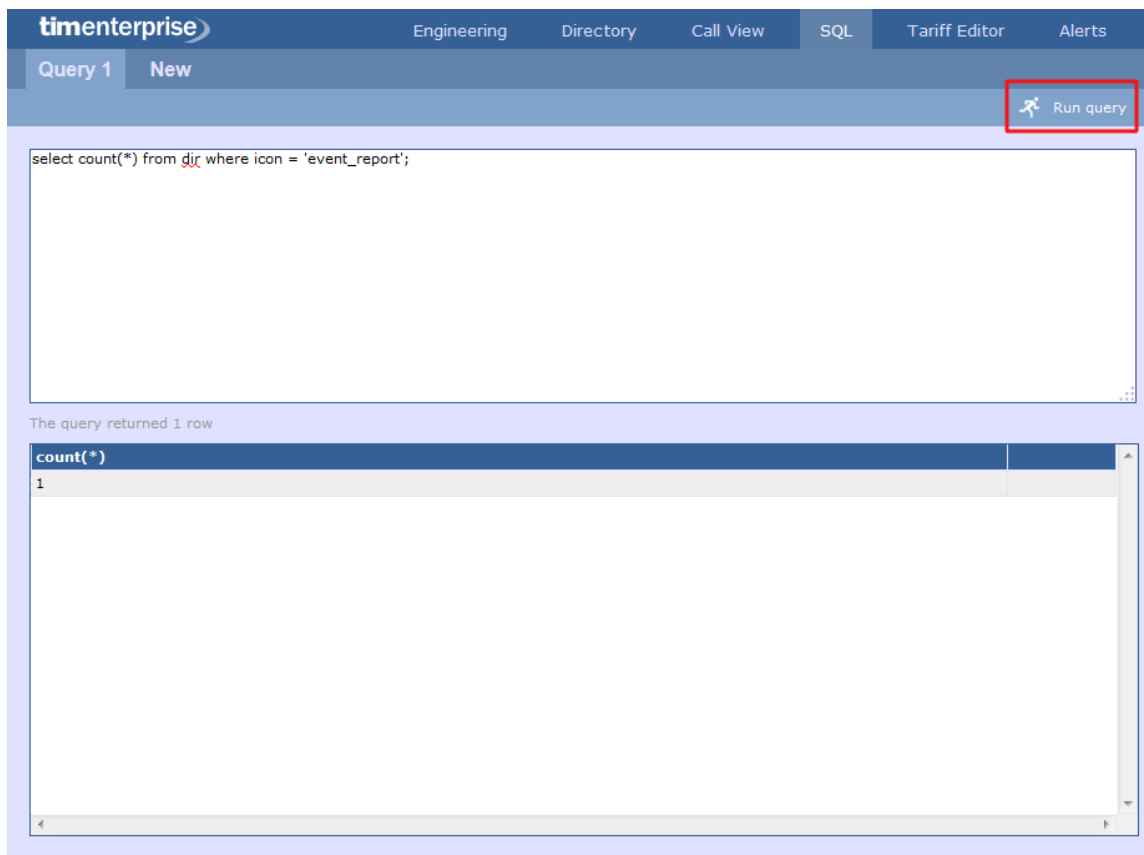
Company	Your Company PLC
Capacity	2500
Expiry	04 February 2014
Code	255

You can check for a new license online right now. Ensure the computer running TIM Enterprise is connected to the internet, then press the **Get license** button.

[Get license](#)

SQL

The `SQL` tab allows you to query the TIM Enterprise database, in order to retrieve specific information related to your calls, reports, users, etc. In the example below, the query will display how many scheduled reports are configured on the system.



The screenshot shows the TIM Enterprise SQL interface. The top navigation bar includes the TIM Enterprise logo and tabs for Engineering, Directory, Call View, SQL, Tariff Editor, and Alerts. The SQL tab is active, and the interface shows a query editor with the following SQL query:

```
select count(*) from djr where icon = 'event_report';
```

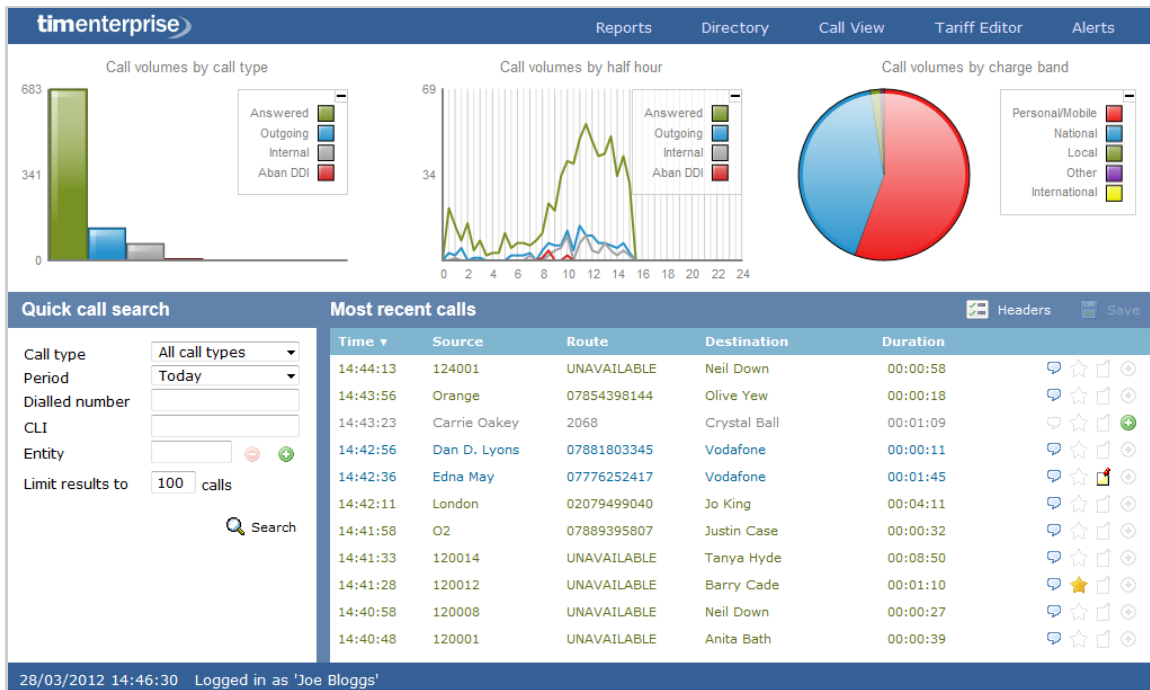
A red box highlights the "Run query" button in the top right corner. Below the query editor, a message states "The query returned 1 row". The results are displayed in a table with one row:

count(*)
1

Main screen

Overview

When logging in to TIM Enterprise, 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 Enterprise. 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.

The three panels that make up the dashboard screen are as follows:

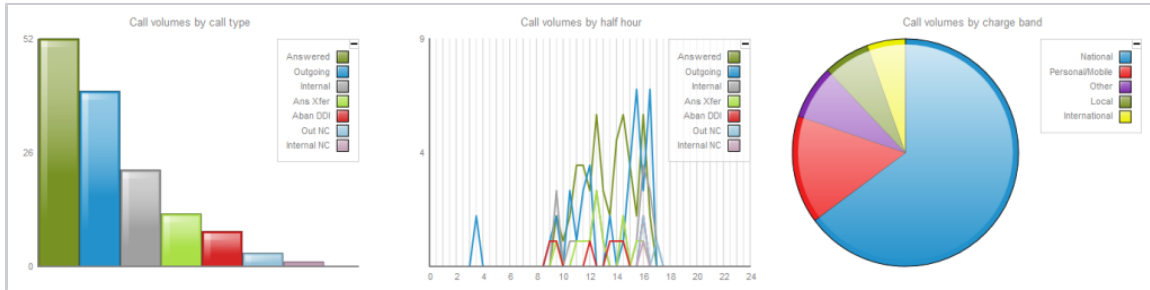
- [Summary graphs](#)
- [Quick call search](#)
- [Most recent calls](#)

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](#)

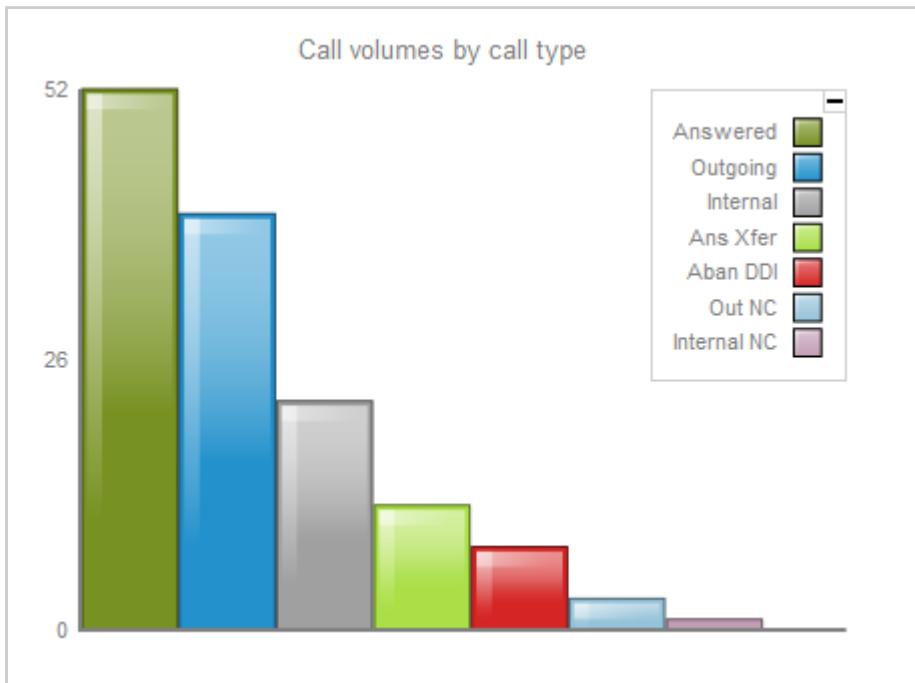
■ Call volumes by charge band



The information you see in each graph pertains only to the area which the logged-in user has been granted access to.

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.



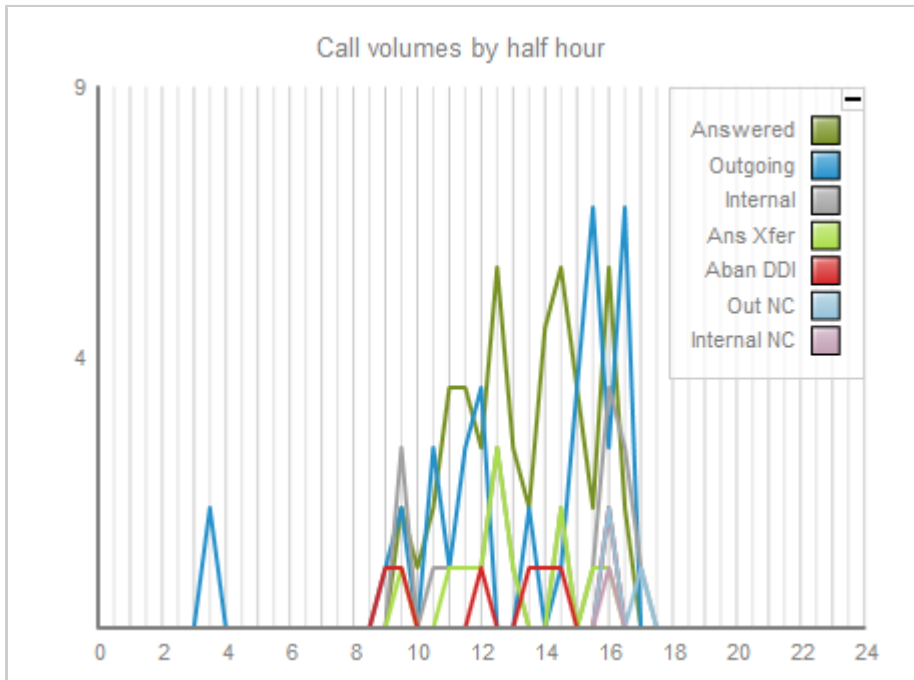
Each call type in the graph is colour-coded as follows:

- **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 Dialed In) calls
- **Pink:** Tandem calls

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 as follows:

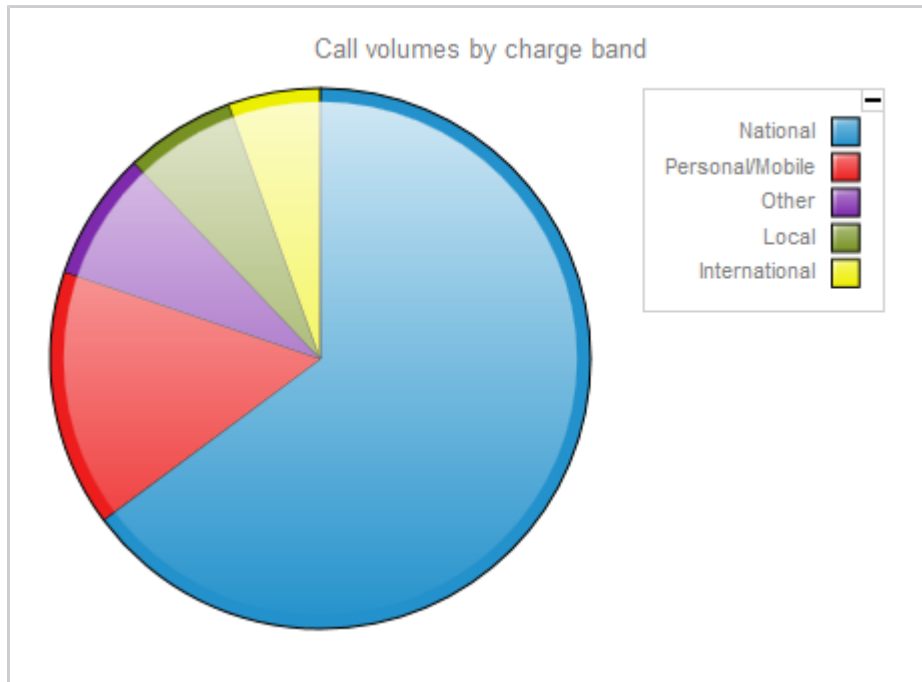
- **Green:** Incoming calls
- **Light green:** Answered transferred calls
- **Blue:** Outgoing calls
- **Light blue:** Outgoing non-connected calls
- **Grey:** Internal calls
- **Mauve:** Internal non-connected calls
- **Red:** Abandoned DDI (Direct Dialed In) calls
- **Pink:** Tandem calls



The same call type colour scheme applies throughout TIM Enterprise.

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.

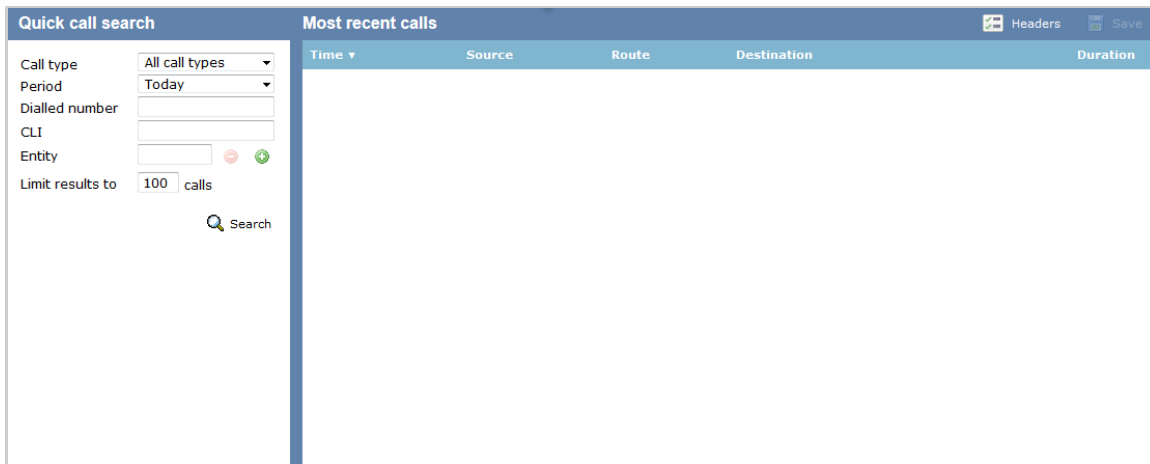


By default, the following colour scheme is used to identify calls to each geographical group:

- **Red:** Personal/Mobile calls
- **Green:** Local calls
- **Blue:** National calls
- **Yellow:** International calls
- **Purple:** Other calls

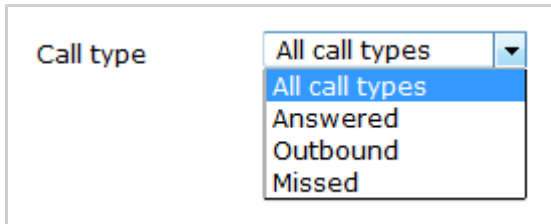
Quick call search

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:



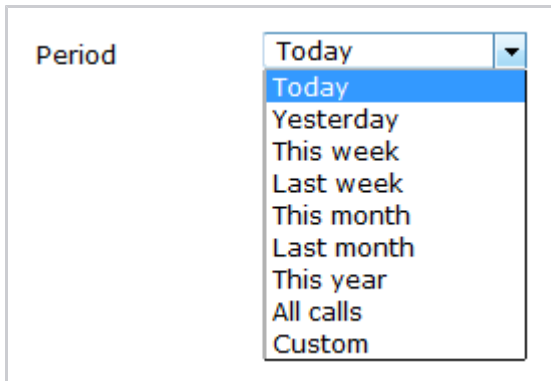
Call type

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**.

Dialled number


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**.


CLI

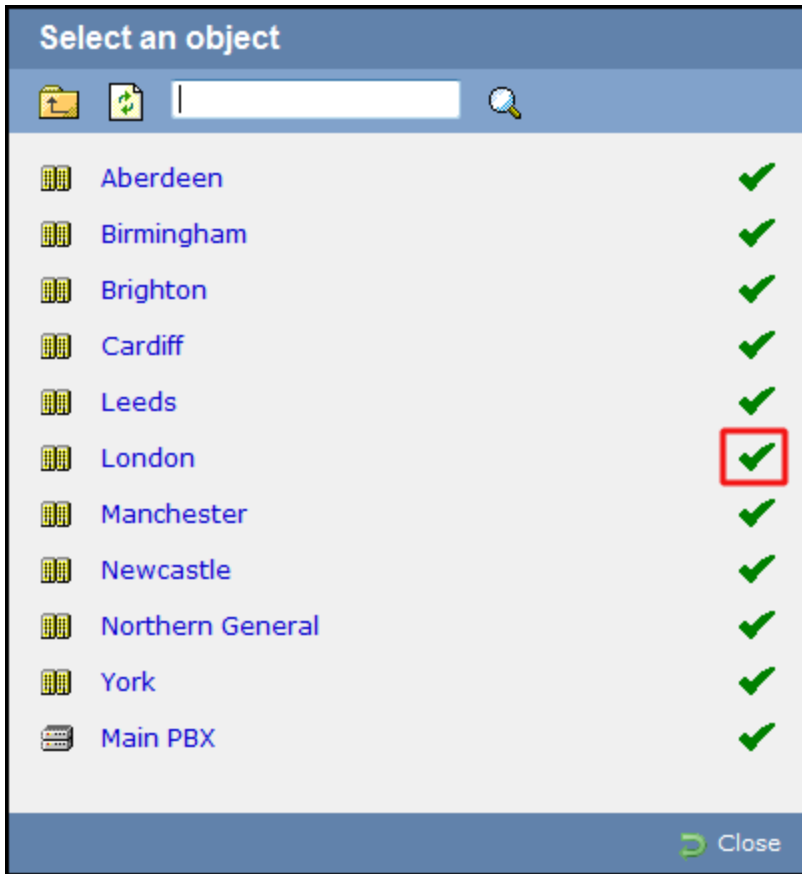
Entity


If you want to limit the search results to a particular site, group or user, click on the  button, as shown below:

Entity

A new window will open, allowing you to navigate through the Directory in order to locate the entity whose calls the search results should include. To select an entity, click on the  icon alongside it.















































If you want to search for a specific entity, you can enter its name in the search bar at the top of the window and click on the  icon.

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.

Limit results to calls



























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	
10:28:58	T-Mobile	07958725862	Alf A. Romeo	00:00:05	   
10:28:56	Amanda Lynn	07871990245	O2	00:00:35	   
10:28:31	124001	UNAVAILABLE	Ty Coon	00:01:36	   
10:27:26	Ty Coon	07969104684	Orange	00:00:19	   
10:27:26	124002	UNAVAILABLE	Hugh Ass	00:00:18	   
10:27:13	Mike Stand	2043	Anna Recksiek	00:00:35	   
10:26:58	London	02087411123	Jo King	00:01:30	   
10:26:16	Bill Loney	07976274178	Orange	00:01:51	   
10:25:58	London	02073942660	Holly Day	00:00:59	   
10:25:08	120029	UNAVAILABLE	Billy Cann	00:00:24	   
10:25:01	London	02072400260	Carrie Oakey	00:00:42	   

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 Enterprise, 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	
10:28:58	T-Mobile	07958725862	Alf A. Romeo	00:00:05	   
10:28:56	Amanda Lynn	07871990245	O2	00:00:35	   
10:28:31	124001	UNAVAILABLE	Ty Coon	00:01:36	   
10:27:26	Ty Coon	07969104684	Orange	00:00:19	   
10:27:26	124002	UNAVAILABLE	Hugh Ass	00:00:18	   
10:27:13	Mike Stand	2043	Anna Recksiek	00:00:35	   
10:26:58	London	02087411123	Jo King	00:01:30	   
10:26:16	Bill Loney	07976274178	Orange	00:01:51	   
10:25:58	London	02073942660	Holly Day	00:00:59	   
10:25:08	120029	UNAVAILABLE	Billy Cann	00:00:24	   
10:25:01	London	02072400260	Carrie Oakey	00:00:42	   

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 Dialed 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 **Headers** button, which will display the following selection panel:

The screenshot shows the 'Most recent calls' interface. A 'Headers' button is highlighted with a red box, and a selection panel is open over it. The panel contains the following fields:









- Date
- Time
- Source
- Route
- Destination
- Response
- Duration
- Cost
- CLI
- Dialed number
- Source name
- Source ID
- Destination name
- Destination ID
- Tariff
- Tariff band
- Account code
- LCR digits
- Trunk access code
- Data source
- Call reference
- Flags
- Voice location
- Voice filename

A 'Save' button is located at the bottom right of the selection 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: <ul style="list-style-type: none"> for incoming calls, this shows the CLI of the caller for incoming internal calls, this shows either the caller's username or extension number for outgoing calls, this shows the dialled number

Destination	<p>The information displayed in this field is determined by the type of call:</p> <ul style="list-style-type: none"> ▪ for incoming calls, this shows the name of the user whose extension answered the call, or the extension number if not available ▪ for outgoing calls, this shows the geographical location that was dialled, or an alias if defined in your contacts list ▪ 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	<p>Any flags associated with a call, as described below:</p> <ul style="list-style-type: none"> ▪  The call has no associated voice recording ▪  The call has an associated voice recording; click on the icon to listen to the call ▪  The call has not been scored; click on the icon to score the call ▪  The call has been scored; click on the icon to review scoring information for the call ▪  The call has not been annotated; click on the icon to add a note to the call ▪  The call has one or more associated notes; click on the icon to review the note(s) ▪  The call has no related transfer legs ▪  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:

Most recent calls					Headers	Save
Time ▼	Source	Route	Destination	Duration		
10:45:23	London	02073781122	Warren Pease	00:04:51		
10:45:06	London	02075914200	Jim Shorts	00:07:05		
10:44:28	Aretha Holly	73776031	Local Call	00:00:02		
10:44:18	O2	07889106306	Rick Shaw	00:00:59		

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.

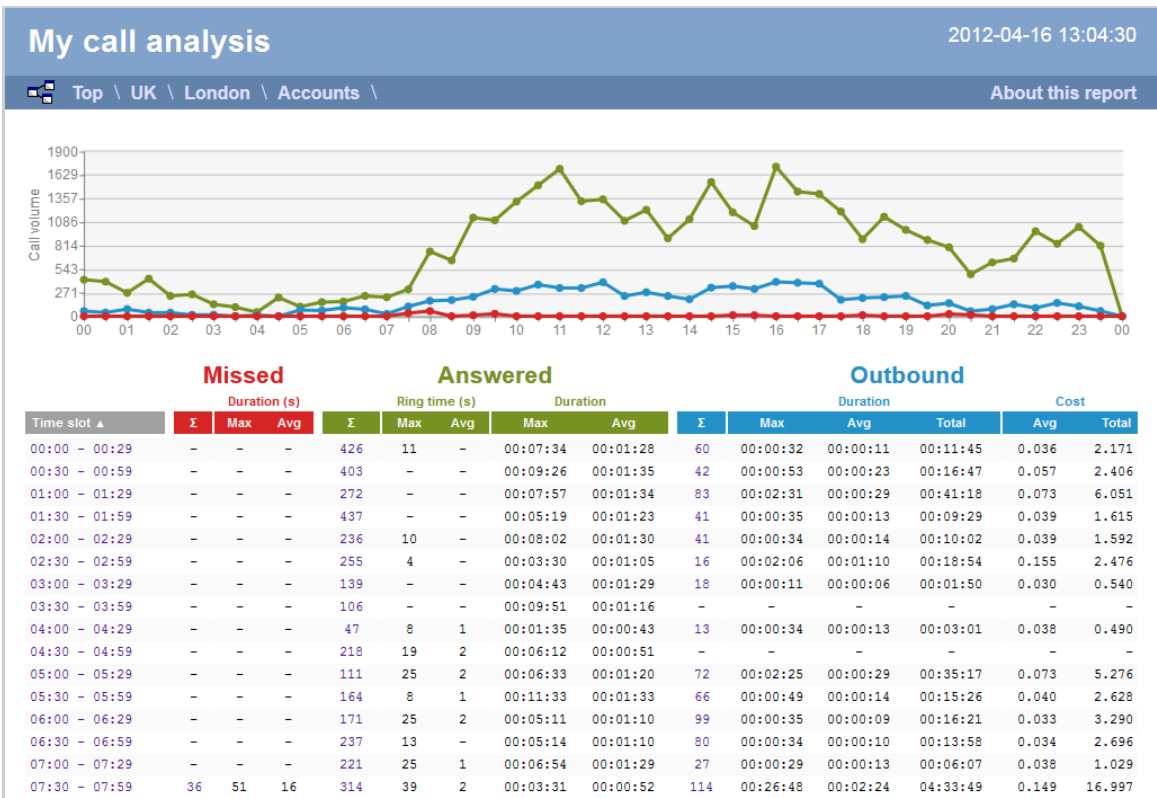
Reports

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 procedure. All report types accept filters and options, allowing you to tailor the results to exactly the information you are looking for.

The reports 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 select the report you want to run from the **Type** list on the left-hand side of the screen, as shown below:

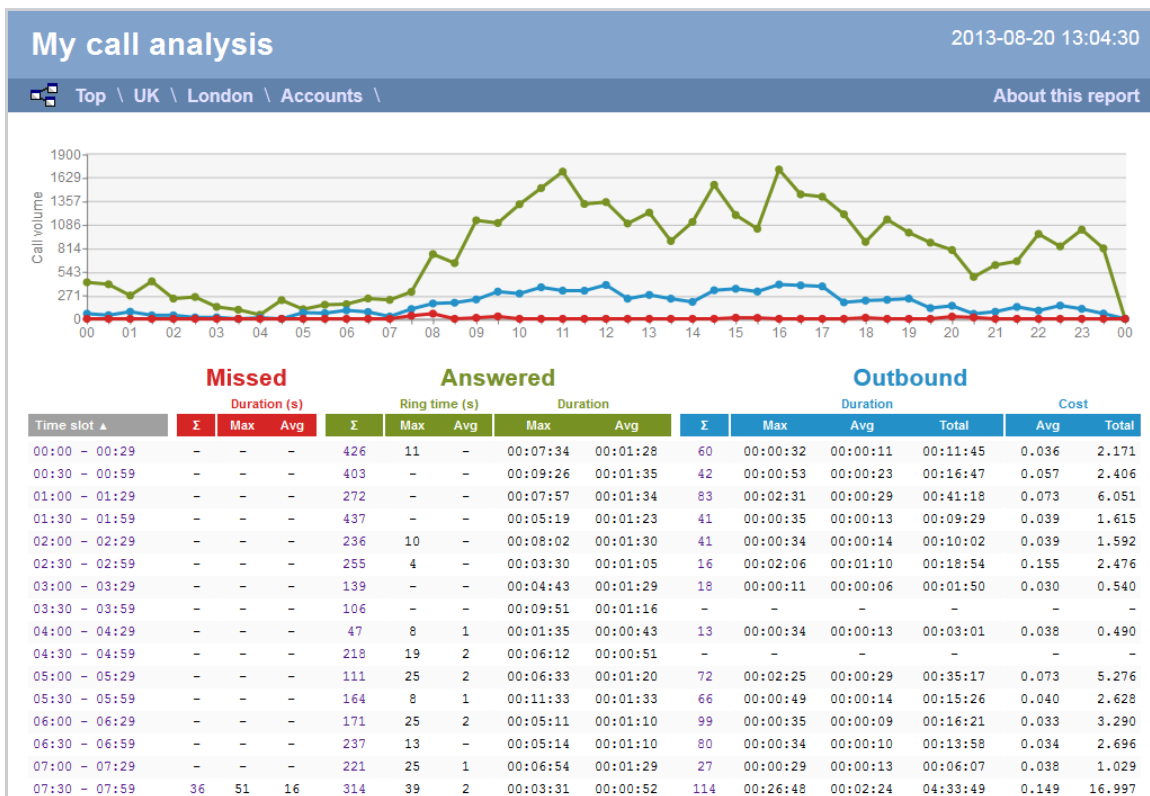
The screenshot displays the TIM Enterprise Reports interface. The top navigation bar includes 'Reports', 'Directory', 'Call View', 'Tariff Editor', and 'Alerts'. Below this, there are tabs for 'Create a report' and 'Scheduled reports'. The left sidebar, titled 'Type', lists various report categories, with 'Call analysis' highlighted in a red box. The main content area is divided into four sections: 'Entity', 'Period', 'Format', and 'Options'. The 'Period' section shows a 'Preset' of 'Yesterday' and a 'From' date of '08 Aug 2013' at '00:00:00' and a 'To' date of '08 Aug 2013' at '23:59:59'. The 'Format' section shows options for 'Web', 'PDF', 'XML', and 'Excel'.

To change any of the report's parameters, refer to the relevant instructions from the following pages:

- [Entity](#)
- [Period](#)
- [Filters](#)
- [Options](#)
- [Format](#)

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. The example below shows a Call Analysis report in web format:





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 exclude pop-up blocking for the host name of the computer running TIM Enterprise.

Scheduling reports

How to schedule a report?

To schedule a report, click on the **Reports** tab and select the report you want to run from the available list on the left-hand side of the screen, as shown below:

The screenshot shows the TIM Enterprise interface for scheduling reports. The top navigation bar includes 'Reports', 'Directory', 'Call View', 'Tariff Editor', and 'Alerts'. Below this, there are tabs for 'Create a report' and 'Scheduled reports'. A 'Report queue' section shows 'My reports' and a 'Save' button. The main content area is divided into several sections: 'Type' (a list of report types with 'Call analysis' highlighted), 'Entity', 'Period' (with options for 'Preset', 'Last', and 'From/To'), 'Format' (with options for 'Web', 'PDF', 'XML', 'CSV', and 'Excel'), 'Filters', and 'Options'.

To change any of the report's parameters, refer to the relevant page(s) in the list below:

- Entity
- Period
- Filters
- Options
- Format

When you have configured these parameters, click on the **Schedule** button, as shown below:

The screenshot displays the TIM Enterprise web interface. At the top, there is a navigation bar with the logo and menu items: Reports, Directory, Call View, Tariff Editor, and Alerts. Below this, a secondary bar contains 'Create a report' and 'Scheduled reports' tabs. A 'Report queue' icon is on the left, and 'My reports', 'Save', and 'Schedule' (highlighted with a red box) are in the center. 'Run now' is on the right. The main content area is divided into four sections: 'Type' (a list of report categories with 'Call analysis' selected), 'Entity' (empty), 'Period' (with 'Preset' selected, 'Yesterday' chosen, and a '1 hours' interval), and 'Format' (with 'Web' selected and options for PDF, XML, CSV, and Excel). 'Filters' and 'Options' sections are also present but empty.

A new window will open, where 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

Schedule a report
✕

Date

Start running the report on at

Thereafter, repeat the report every

Delivery

Email
 File
 FTP
 HTTP POST

Recipient email address

Please select a delivery method, and report start time from the boxes above

Scheduling parameters



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.

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:

Date

Start running the report on at

Thereafter, repeat the report every

How often do you want the report to recur?

If you want the report to recur, tick the *Thereafter, repeat the report* box and select the frequency for re-runs from the drop-down list, as shown below:

Date

Start running the report on at

Thereafter, repeat the report every

How do you want the report delivered?

Select the method by which you want your report to be delivered and enter the destination parameters, as explained in the table below:

Delivery

- Email
- File
- FTP
- HTTP POST

Recipient email address

Delivery method	Description
E-mail	<ul style="list-style-type: none"> ▪ Enter the e-mail address that you want the report to be delivered to ▪ If you want the report to be e-mailed to more than one person, separate each address using the ; symbol.

File	<ul style="list-style-type: none"> ▪ Type the full filename, including folder, of the location that you want the report to be saved as, e.g. <code>C:\My Reports\My Call Analysis.html</code> ▪ The filename can include the following variables: <table border="1"> <thead> <tr> <th>Variable</th> <th>Description</th> </tr> </thead> <tbody> <tr> <td>{year}</td> <td>The current year</td> </tr> <tr> <td>{month}</td> <td>The current month</td> </tr> <tr> <td>{week}</td> <td>The current week number</td> </tr> <tr> <td>{day}</td> <td>The current day of the month</td> </tr> <tr> <td>{hhmmss}</td> <td>The time that the report ran, in a compact hours, minutes and seconds format</td> </tr> <tr> <td>{name}</td> <td>The name given to the report</td> </tr> <tr> <td>{uiv}</td> <td>A unique numeric report identifier</td> </tr> </tbody> </table> <ul style="list-style-type: none"> ▪ 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 Enterprise service has access privileges to write to the file you have specified. 	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
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																
FTP	<table border="1"> <thead> <tr> <th>Field</th> <th>Description</th> </tr> </thead> <tbody> <tr> <td>Host IP : port</td> <td>Enter the IP address or host name of the FTP server.</td> </tr> <tr> <td>Remote folder</td> <td>Enter the name of the folder where you want the report to be saved.</td> </tr> <tr> <td>Username</td> <td>Enter the username required to connect to the FTP server.</td> </tr> <tr> <td>Password</td> <td>Enter the password required to connect to the FTP server.</td> </tr> </tbody> </table>	Field	Description	Host IP : port	Enter the IP address or host name of the FTP server.	Remote folder	Enter the name of the folder where you want the report to be saved.	Username	Enter the username required to connect to the FTP server.	Password	Enter the password required to connect to the FTP server.						
Field	Description																
Host IP : port	Enter the IP address or host name of the FTP server.																
Remote folder	Enter the name of the folder where you want the report to be saved.																
Username	Enter the username required to connect to the FTP server.																
Password	Enter the password required to connect to the FTP server.																
HTTP POST	<table border="1"> <thead> <tr> <th>Field</th> <th>Description</th> </tr> </thead> <tbody> <tr> <td>Host IP : port</td> <td>Enter the IP address and port number of the Web server.</td> </tr> <tr> <td>Remote script</td> <td>Enter the name of the script used to post the file to the Web server.</td> </tr> <tr> <td>Username</td> <td>Enter the username required to connect to the Web server, if applicable.</td> </tr> <tr> <td>Password</td> <td>Enter the password required to connect to the FTP server, if applicable.</td> </tr> </tbody> </table>	Field	Description	Host IP : port	Enter the IP address and port number of the Web server.	Remote script	Enter the name of the script used to post the file to the Web server.	Username	Enter the username required to connect to the Web server, if applicable.	Password	Enter the password required to connect to the FTP server, if applicable.						
Field	Description																
Host IP : port	Enter the IP address and port number of the Web server.																
Remote script	Enter the name of the script used to post the file to the Web server.																
Username	Enter the username required to connect to the Web server, if applicable.																
Password	Enter the password required to connect to the FTP server, if applicable.																

When you have configured the scheduling parameters, click on the **Schedule** button to save the report's definition.

Schedule a report
✕

Date

Start running the report on at

Thereafter, repeat the report every

Delivery

Email
 File
 FTP
 HTTP POST

Recipient email address

Please select a delivery method, and report start time from the boxes above

The newly-scheduled reports will be added to the `scheduled reports` list, as shown below:

Report	Runs every	Last run	Next runs	
My enterprise overview	1 month	10 July 2013 13:00:19	10 August 2013 12:59:53	
My user activity	1 month	01 August 2013 09:01:00	01 September 2013 09:00:32	

Editing the report definition

To edit the definition of a scheduled report, select it from the `scheduled reports` list and click on the Edit definition button, as shown below:

Report	Runs every	Last run	Next runs
My enterprise overview	1 month	10 July 2013 13:00:19	10 August 2013 12:59:53
My user activity	1 month	01 August 2013 09:01:00	01 September 2013 09:00:32

A new window will open, where you can edit the entity, period, filters, options and format of the report.

Type

- Account summary
- Busy channels
- Busy times
- Call analysis**
- Call geography
- Call scoring
- Call volumes
- Custom report
- Daily activity
- Enterprise overview
- Frequent numbers
- Inbound call performance
- Missed calls
- Phone bill
- Random call selection
- Target response
- Top calls
- Unused devices
- User activity

Entity

Period

- Preset: Yesterday
- Last: 1 hours
- From: 08 Aug 2013 at 00:00:00
- To: 08 Aug 2013 at 23:59:59

Format

- Web
- PDF
- XML
- CSV
- Excel

Filters

Options

For details about how to configure these parameters, refer to the relevant page(s) in the list below:

- [Entity](#)
- [Period](#)
- [Filters](#)
- [Options](#)
- [Format](#)

To apply any changes to the report's definition, click on the **Save** button, as shown below:

The screenshot shows the 'Scheduled reports' configuration page in the TIM Enterprise interface. The top navigation bar includes 'Reports', 'Directory', 'Call View', 'Tariff Editor', and 'Alerts'. Below this, there are tabs for 'Create a report' and 'Scheduled reports'. A 'Report queue' section shows 'My reports' and a 'Save' button, which is highlighted with a red box. The main content area is divided into four sections: 'Type' (a list of report types with 'Call analysis' selected), 'Entity' (empty), 'Period' (with 'Preset' selected and 'Yesterday' chosen, and date/time fields for 'From' and 'To'), 'Format' (with 'Web' selected and options for PDF, XML, CSV, and Excel), 'Filters' (empty), and 'Options' (empty).

Editing the report delivery

To edit the delivery of a report, select it from the **scheduled reports** list and click on the **Edit delivery** button, as shown below:

The screenshot shows the 'Scheduled reports' list in the TIM Enterprise interface. The top navigation bar includes 'Reports', 'Directory', 'Call View', 'Tariff Editor', and 'Alerts'. Below this, there are tabs for 'Create a report' and 'Scheduled reports'. A toolbar contains 'Edit delivery' (highlighted with a red box), 'Edit definition', 'Delete schedule', 'Suspend all', and 'Run now'. The main content area is a table with the following data:

Report	Runs every	Last run	Next runs
My enterprise overview	1 month	10 July 2013 13:00:19	10 August 2013 12:59:53
My user activity	1 month	01 August 2013 09:01:00	01 September 2013 09:00:32

A new window will open, allowing you to edit the scheduling parameters of the report. For details about how to configure these parameters, refer to the **Scheduling parameters** section above.

Schedule a report
✕

Date

Start running the report on at

Thereafter, repeat the report every

Delivery


Email
 File
 FTP
 HTTP POST

Recipient email address

Please select a delivery method, and report start time from the boxes above

Suspending a scheduled report

Suspend a report

To temporarily suspend the delivery of a report, select it from the `Scheduled reports` list and click on the  icon, as shown below:

Report	Runs every	Last run	Next runs	
My busy times	3 months	Never	01 September 2013 09:00:00	
My call analysis	1 months	01 August 2013 09:00:00	01 September 2013 09:00:00	

The  icon will now become , highlighting the report is suspended, as shown below:

Report	Runs every	Last run	Next runs	
My busy times	3 months	Never	01 September 2013 09:00:00	
My call analysis	1 months	01 August 2013 09:00:00	01 September 2013 09:00:00	

Suspend all reports


To suspend all of your scheduled reports, click on the **Suspend all** button at the top-right of the screen, as shown below:



The screenshot shows the 'Scheduled reports' section of the application. At the top, there are navigation buttons: 'Create a report', 'Edit delivery', 'Edit definition', 'Delete schedule', 'Suspend all' (highlighted with a red box), and 'Run now'. Below this is a table with the following data:

Report	Runs every	Last run	Next runs
My busy times	3 months	Never	01 September 2013 09:00:00
My call analysis	1 months	01 August 2013 09:00:00	01 September 2013 09:00:00

Resume running a suspended report

To resume running a suspended report, click on the  icon, as shown below:



The screenshot shows the 'Scheduled reports' section. The 'Suspend all' button is visible at the top. In the table, the 'My busy times' report row is highlighted, and the hand icon in the rightmost column of that row is highlighted with a red box.

Report	Runs every	Last run	Next runs
My busy times	3 months	Never	01 September 2013 09:00:00
My call analysis	1 months	01 August 2013 09:00:00	01 September 2013 09:00:00

Deleting a scheduled report

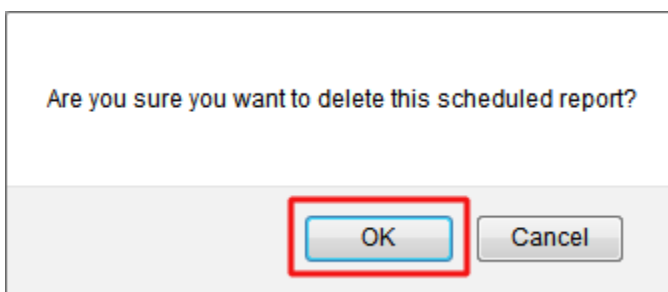
To delete a scheduled report, select it from the `scheduled reports` list and click on the **Delete schedule** button at the top-left of the screen, as shown below:



The screenshot shows the 'Scheduled reports' section. The 'Delete schedule' button is highlighted with a red box. The table below it is the same as in the previous screenshots.

Report	Runs every	Last run	Next runs
My busy times	3 months	Never	01 September 2013 09:00:00
My call analysis	1 months	01 August 2013 09:00:00	01 September 2013 09:00:00

When prompted to confirm the deletion, click on the **OK** button to remove the report from the system.



The screenshot shows a confirmation dialog box with the text: "Are you sure you want to delete this scheduled report?". At the bottom, there are two buttons: "OK" (highlighted with a red box) and "Cancel".

Saving reports

To save the definition of a complex report that you may need to re-run at a later time, configure its parameters and click on the **Save** button at the top-centre of the screen, as shown below:

The screenshot shows the TIM Enterprise interface with the 'Save' button highlighted in a red box. The interface includes a top navigation bar with 'Reports', 'Directory', 'Call View', 'Tariff Editor', and 'Alerts'. Below this is a 'Create a report' section with 'Scheduled reports' and 'My reports' tabs. The 'Save' button is located in the top-right corner of the main content area. The main content area is divided into several sections: 'Type' (with a list of report types like 'Account summary', 'Busy channels', etc.), 'Entity' (showing '\ UK \ Birmingham \ Avaya IP Office \'), 'Period' (with 'Preset' set to 'Yesterday', 'Last' set to '1 hours', and 'From'/'To' dates), 'Format' (with 'Web' selected, and options for PDF, XML, CSV, and Excel), 'Filters' (with three filters: 'CLI begins with 0207', 'Duration is greater than 30', and 'Dialled number begins with 0778'), and 'Options' (with 'Sort results by Average answered duration' and 'Scores only Yes').

A new window will appear, allowing you to name the report's definition.

The screenshot shows a dialog box titled 'Save report definition'. It has a text input field for 'Name' containing the text 'My Busy channels - London'. Below the input field are two buttons: 'Cancel' and 'Save'.

Accessing a saved report

To access a saved report, click on the **My reports** button at the top-centre of the screen, as shown below:

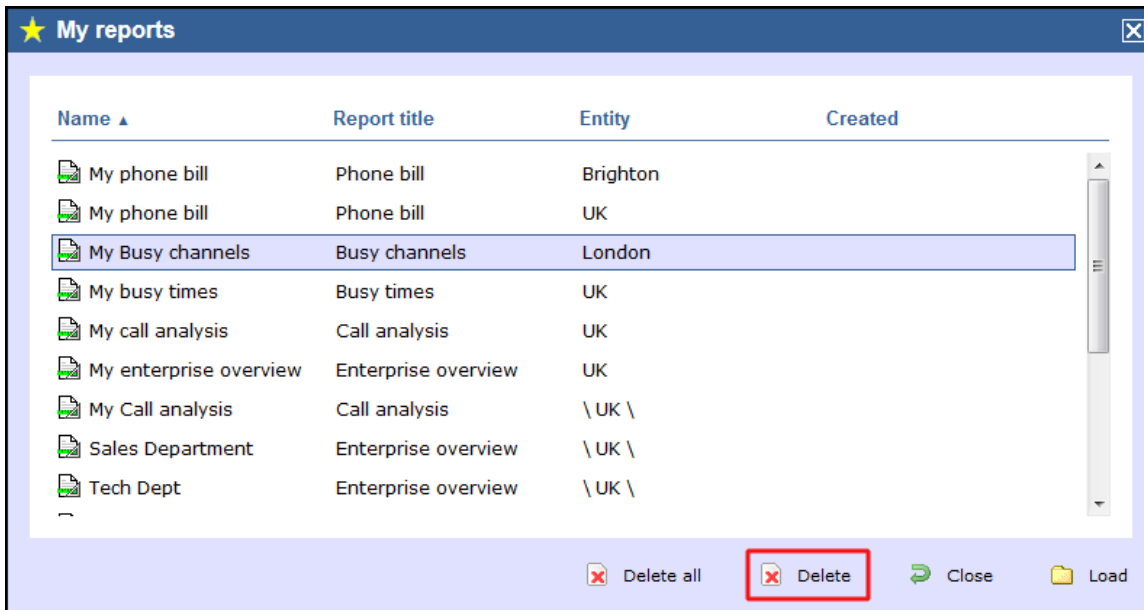
The screenshot shows the TIM Enterprise interface. At the top, there are navigation tabs: Reports, Directory, Call View, Tariff Editor, and Alerts. Below these, there are sub-tabs: Create a report, Scheduled reports, and My reports (highlighted with a red box). The 'My reports' section contains a 'Report queue' icon, a 'Save' button, and 'Schedule' and 'Run now' buttons. On the left, a 'Type' sidebar lists various report categories. The main area is divided into sections: 'Entity', 'Period' (with 'Preset' set to 'Yesterday', 'Last' set to '1 hours', and 'From'/'To' dates), 'Format' (with options for Web, PDF, XML, CSV, and Excel), 'Filters', and 'Options'.

A new window will open, displaying a list with all the reports previously saved in the system. To run or edit the properties of a report, select it from the list and click the **Load** button, as shown below:

The screenshot shows a window titled 'My reports' with a list of saved reports. The list has columns for Name, Report title, Entity, and Created. The 'My Busy channels' report is selected. At the bottom, there are buttons for 'Delete all', 'Delete', 'Close', and 'Load' (highlighted with a red box).

Name	Report title	Entity	Created
My phone bill	Phone bill	Brighton	
My phone bill	Phone bill	UK	
My Busy channels	Busy channels	London	
My busy times	Busy times	UK	
My call analysis	Call analysis	UK	
My enterprise overview	Enterprise overview	UK	
My Call analysis	Call analysis	\ UK \	
Sales Department	Enterprise overview	\ UK \	
Tech Dept	Enterprise overview	\ UK \	

To delete a saved report, select it from the list and click on the **Delete** button, as shown below:



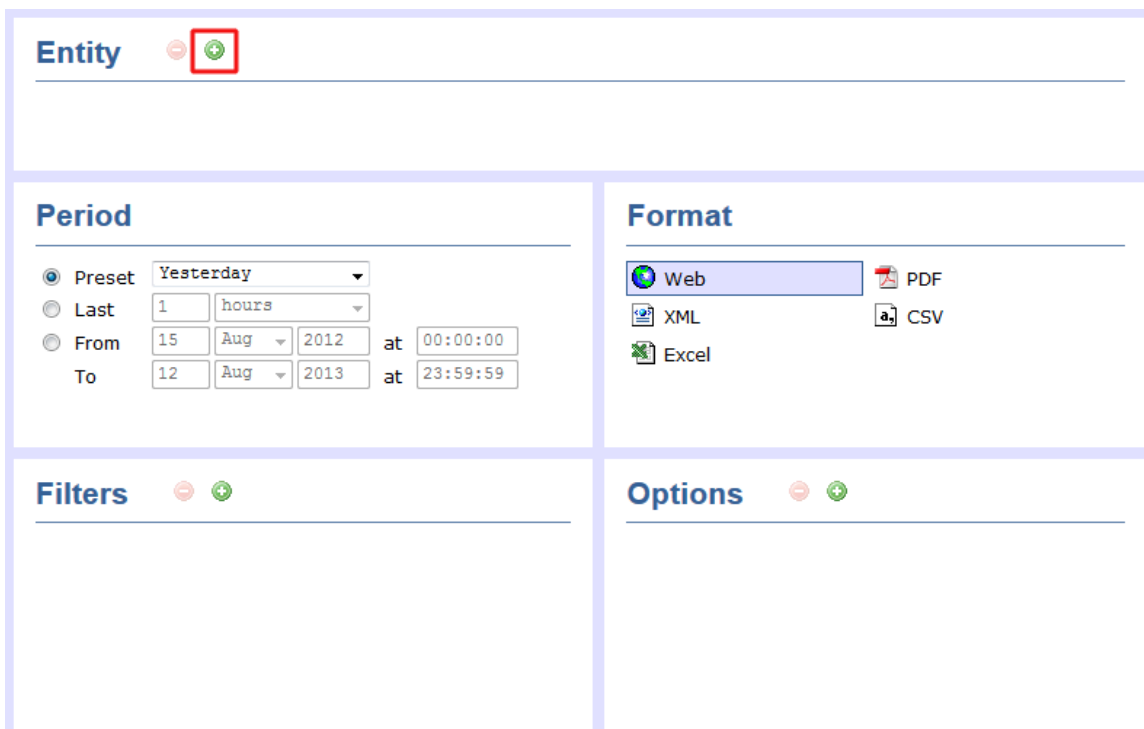
Report parameters

Entity

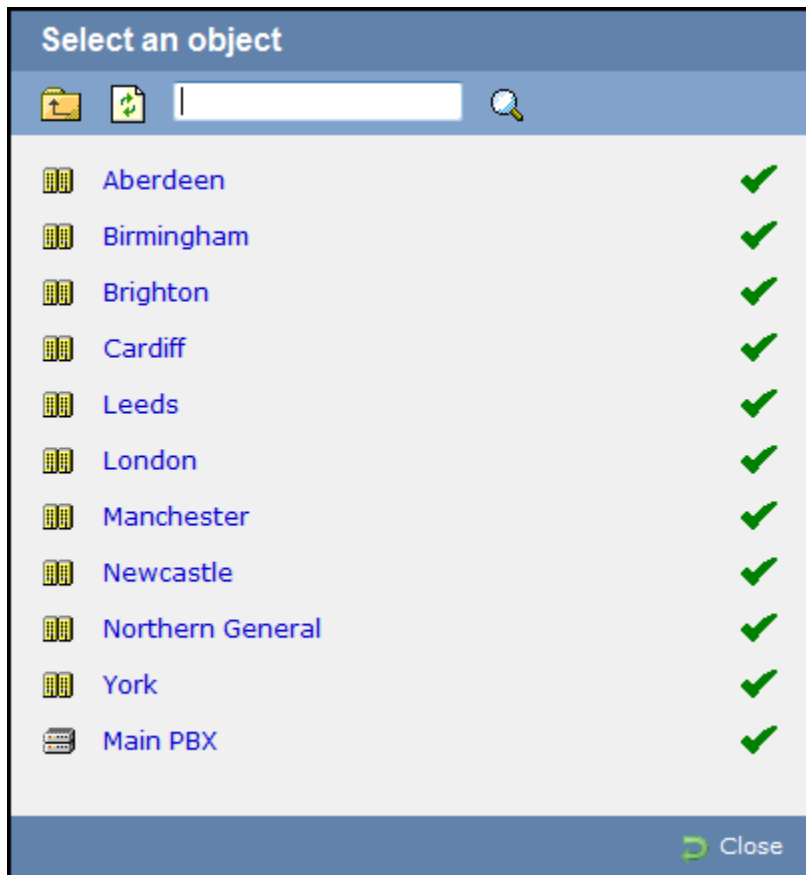
The **Entity** parameter allows you to select the part of your organisation whose calls the report should include, e.g. a site, a group or an individual user.

Selecting an entity

To select an entity, click on the  button, as shown below:

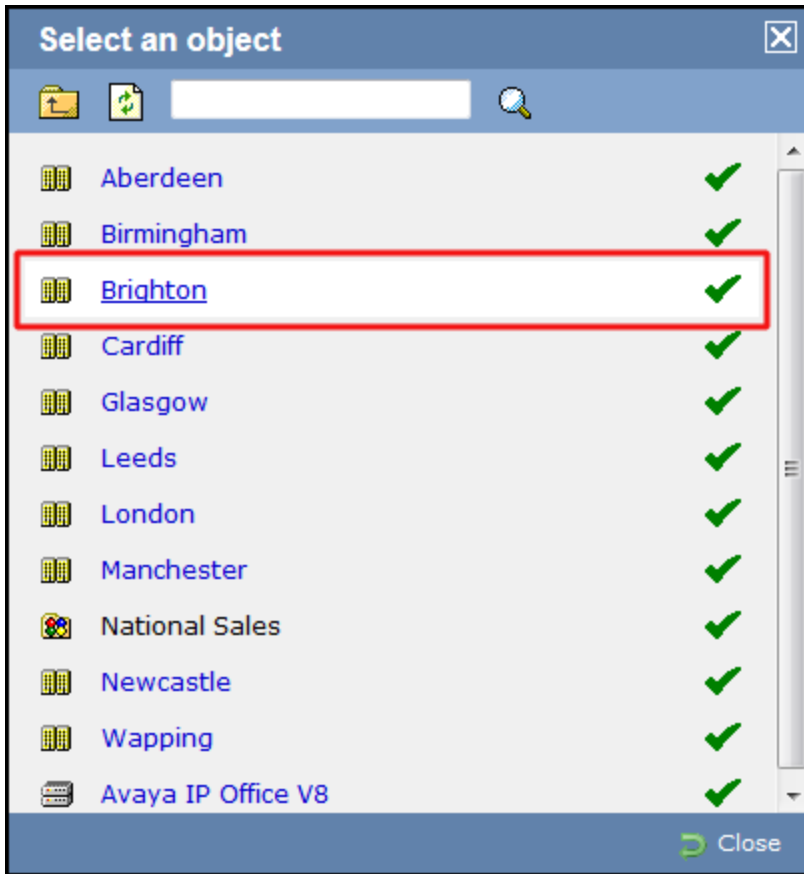



A new window will open, allowing you to navigate through the Directory in order to locate the entity you want to report on.

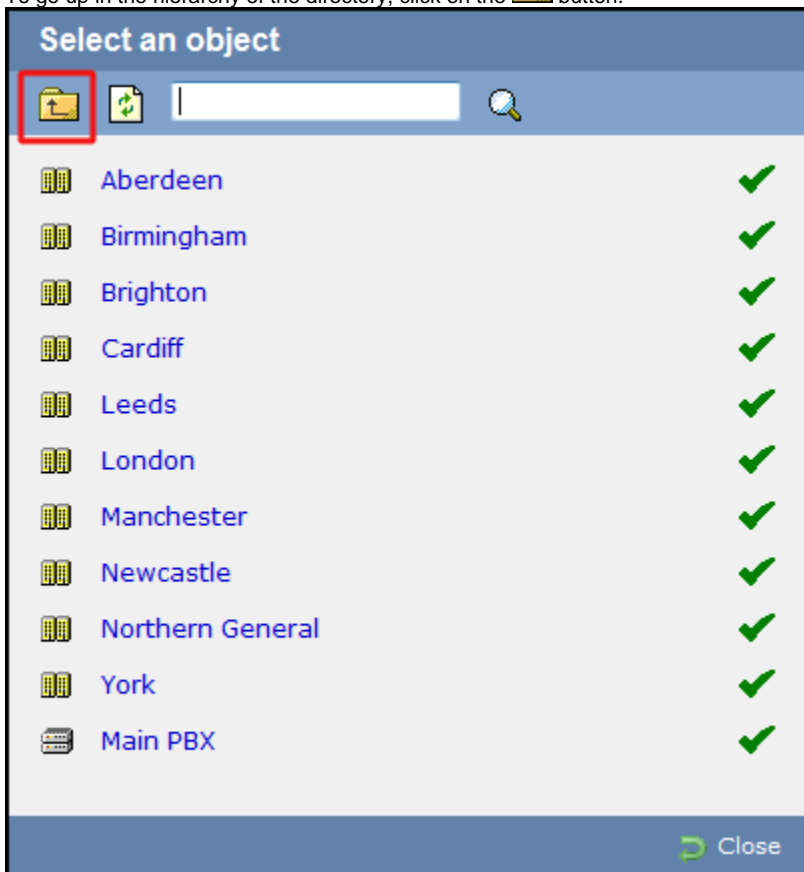



If your web account is restricted to a specific part of the Directory, only those entities which you are allowed to access will show in this window.

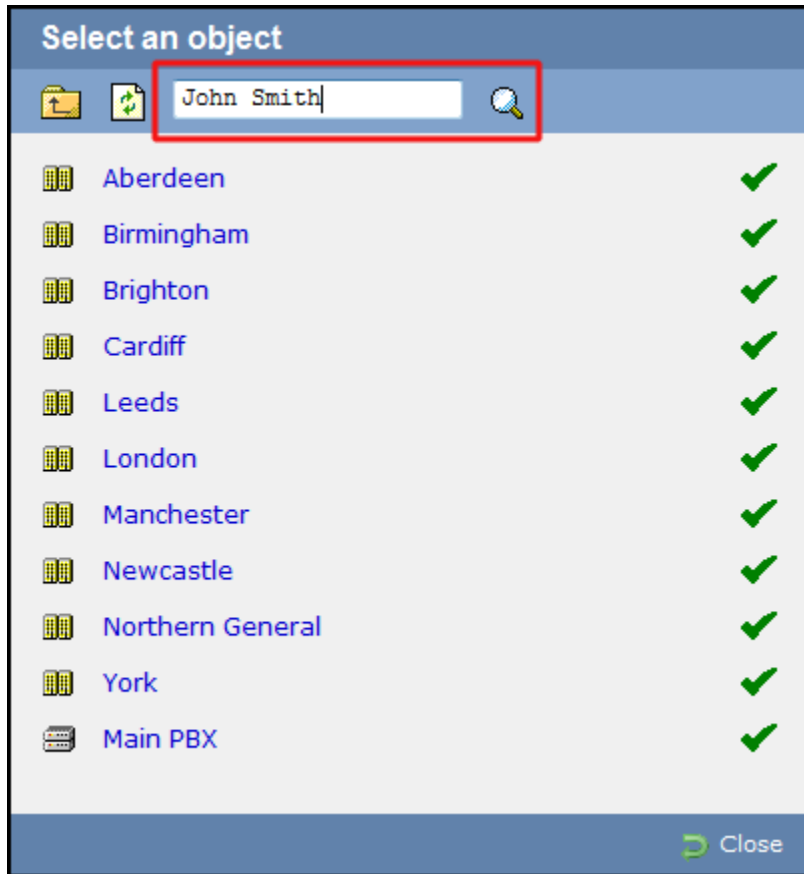
To drill-down into the directory structure, click on a hyperlink.




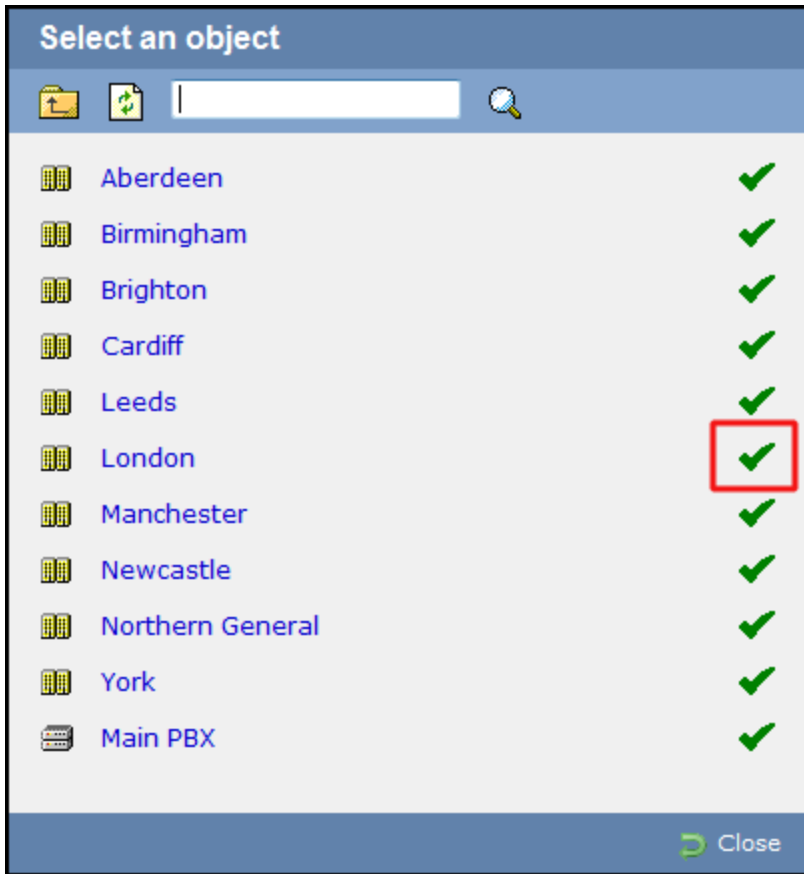
To go up in the hierarchy of the directory, click on the  button.



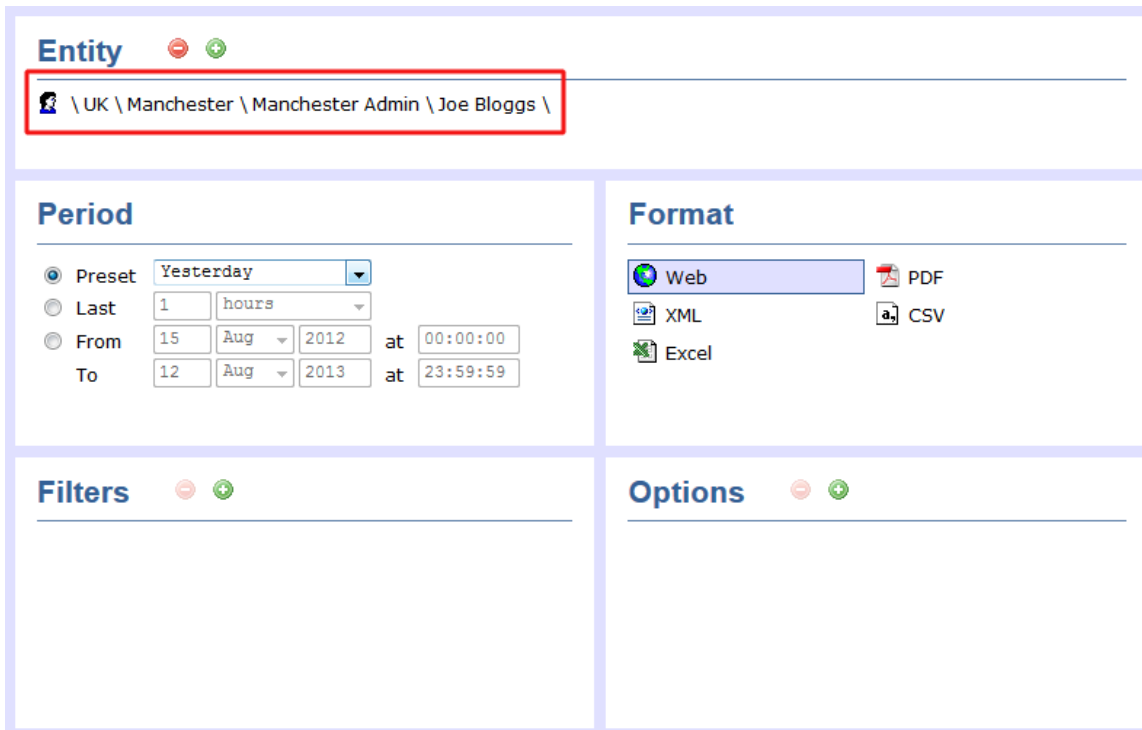
To search for a specific entity, e.g. site, group or user, enter its name in the search bar at the top of the window and click on the  icon.




To select an entity, click on the  icon alongside it.



The name and directory path of the selected entity will be added in the Entity field, as shown below:



Deleting an entity

To delete an entity, select it from the Entity field and click on the  button, as shown below:

Entity ⊖ ⊕

\ UK \ Manchester \ Manchester Admin \ Joe Bloggs \

Period

Preset Yesterday ▾

Last 1 hours ▾

From 15 Aug ▾ 2012 at 00:00:00

To 12 Aug ▾ 2013 at 23:59:59

Format

Web PDF

XML CSV

Excel

Filters ⊖ ⊕

Options ⊖ ⊕

Period

The `Period` parameter allows you to specify a time span that covers the calls you want the report to include. This is known as the "reporting period".

Entity ⊖ ⊕

Period

Preset Yesterday ▾

Last 1 hours ▾

From 15 Aug ▾ 2012 at 00:00:00

To 12 Aug ▾ 2013 at 23:59:59

Format

Web PDF

XML CSV

Excel

Filters ⊖ ⊕

Options ⊖ ⊕

Preset period

The `Preset` option contains several reporting periods available for selection, based on the standard Gregorian calendar. The table

below describes how the start and end times are defined for each preset period:

Period

Preset

Last

From

To

▼
Yesterday

Today

Yesterday

This week

Last week

This month

Last month

This year

All calls

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.

Last period

The **Last** period option is an alternative to the preset periods described above, allowing you to choose the number of minutes, days, months etc, you want to run the report for.

Period

Preset

Last

From

To



The start and end times are defined as for the **Preset** periods described above. For example, **Last week** is defined as Monday to Sunday of the previous week, while **Last 7 days** is the preceding 7 days from the current day.

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.

Period

Preset

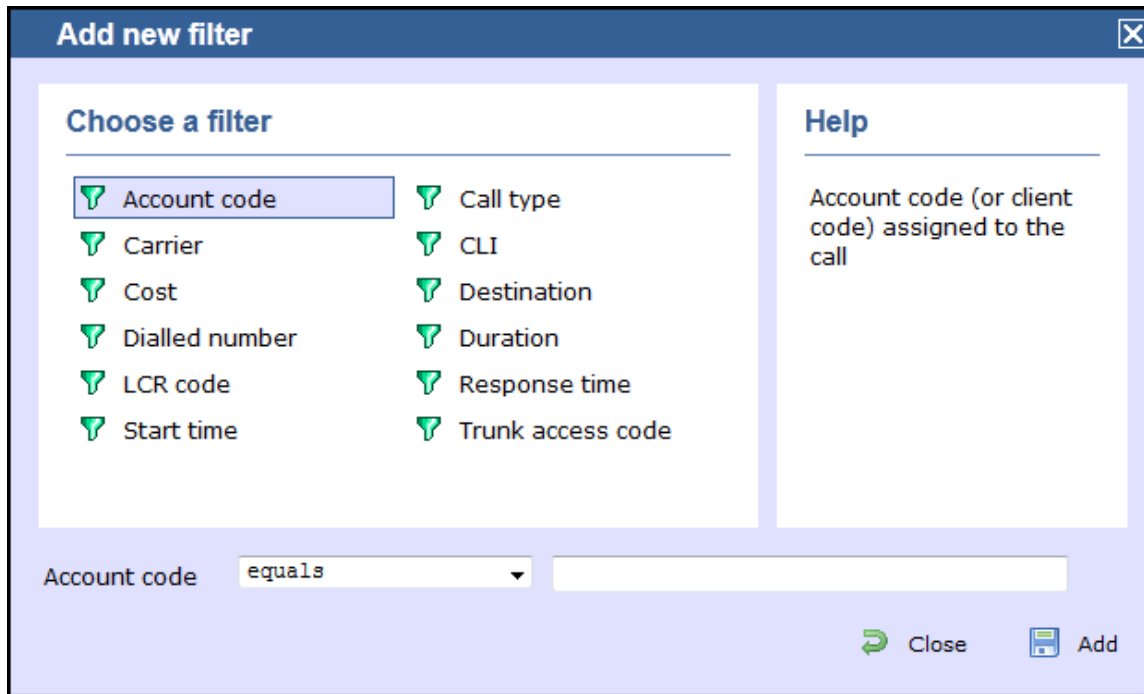
Last

From

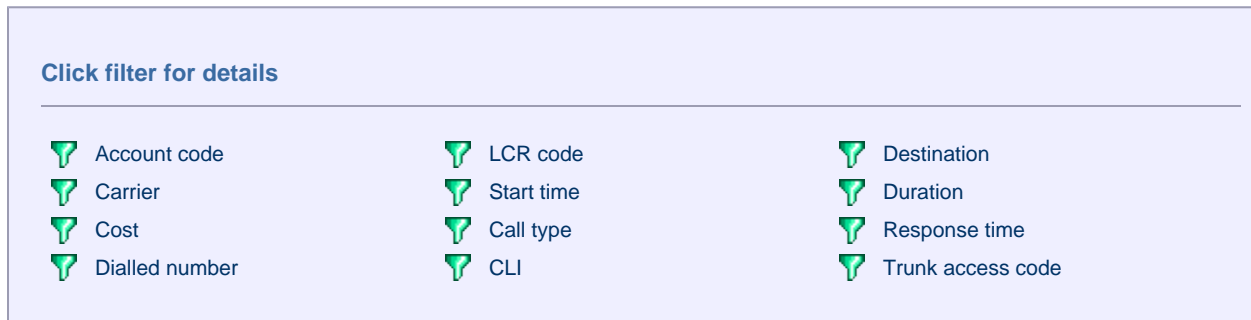
To

Filters

The **Filter** parameter allows you to add one or more filters to your report in order to narrow down your search results. Each filter consists of two elements: a text box where you can enter the filtering value and a drop-down list containing the criteria by which this value should be matched in the results.



A list describing all filters available in TIM Enterprise is presented below; however, note that not all filters are relevant to all reports.



Account code

To filter a report by account code, enter the relevant value in the box provided and select the criteria by which you want this to be matched in the results. The options contained in the drop-down list are described in the table below:

Criteria	Description
<code>equals</code>	<p>Search for calls whose account code matches a particular value. In the example below, the results will show only calls whose account code is 1140.</p> <div style="border: 1px solid #ccc; padding: 5px; margin: 10px 0;"> Account Code <input type="text" value="equals"/> <input type="text" value="1140"/> </div>
<code>is not equal to</code>	<p>Exclude calls whose account code matches a particular value. In the example below, the results will exclude calls whose account code is 1140.</p> <div style="border: 1px solid #ccc; padding: 5px; margin: 10px 0;"> Account code <input type="text" value="is not equal to"/> <input type="text" value="1140"/> </div>

begins with	<p>Search for calls whose account code begins with a particular combination of digits. In the example below, the results will show only calls whose account code begins with 11.</p> <p>Account code begins with 11</p>
does not begin with	<p>Exclude calls whose account code begins with a particular combination of digits. In the example below, the results will exclude calls whose account code begins with 11.</p> <p>Account code does not begin with 11</p>
ends with	<p>Search for calls whose account code ends with a particular combination of digits. In the example below, the results will show only calls whose account code ends with 40.</p> <p>Account codes ends with 40</p>
does not end with	<p>Exclude calls whose account code ends with a particular combination of digits. In the example below, the results will exclude calls whose account code ends with 40.</p> <p>Account codes does not end with 40</p>
contains	<p>Search for calls whose account code contains a particular combination of digits. In the example below, the results will show only calls whose account code contains 14.</p> <p>Account codes contains 14</p>
does not contain	<p>Exclude calls whose account code contains a particular combination of digits. In the example below, the results will exclude calls whose account code contains 14.</p> <p>Account codes does not contain 14</p>

Carrier

The carrier is the tariff table used to cost calls. If you use more than one carrier, you can choose to filter your results by displaying or excluding calls routed over a particular carrier.

Criteria	Description
equals	<p>Search for calls that were routed over a particular carrier. In the example below, the results will show only calls routed over BT carrier.</p> <p>Carrier equals BT</p>
is not equal to	<p>Exclude calls that were routed over a particular carrier. In the example below, the results will exclude calls routed over BT carrier.</p> <p>Carrier is not equal to BT</p>

Cost

You can define a cost filter to include calls above or below specific values by entering your criteria, as shown below:

Criteria	Description
is greater than	<p>Search for calls whose cost is greater than a particular value. In the example below, the results will show only calls whose cost is greater than 5.00.</p> <p>Cost is greater than 5.00</p>
is less than	<p>Search for calls whose cost is less than a particular value. In the example below, the results will show only calls whose cost is less than 15.00.</p> <p>Cost is less than 15.00</p>
equals	<p>Search for calls whose cost is equal to a particular value. In the example below, the results will show only calls whose cost is 7.00.</p> <p>Cost equals 7.00</p>
is not equal to	<p>Exclude calls whose cost is equal to a particular value. In the example below, the results will exclude calls whose cost is 1.00.</p> <p>Cost is not equal 1.00</p>

Dialled number

To filter a report by dialled number, enter the relevant value in the box provided and select the criteria by which you want this to be matched in the results. The options contained in the drop-down list are described in the table below:

Criteria	Description
equals	<p>Search for calls whose dialled number matches a particular value. In the example below, the results will show only calls whose dialled number is 02072652600.</p> <p>Dialled number equals 02072652600</p>
is not equal to	<p>Exclude calls whose dialled number matches a particular value. In the example below, the results will exclude calls whose dialled number is 02072652600.</p> <p>Dialled number is not equal to 02072652600</p>

begins with	<p>Search for calls whose dialled number begins with a particular combination of digits. In the example below, the results will show only calls whose dialled number begins with 00.</p> <p>Dialled number <input type="text" value="begins with"/> <input type="text" value="00"/></p>
does not begin with	<p>Exclude calls whose dialled number begins with a particular combination of digits. In the example below, the results will exclude calls whose dialled number begins with 00.</p> <p>Dialled number <input type="text" value="does not begin with"/> <input type="text" value="00"/></p>
ends with	<p>Search for calls whose dialled number ends with a particular combination of digits. In the example below, the results will show only calls whose dialled number ends with 2600.</p> <p>Dialled number <input type="text" value="ends with"/> <input type="text" value="2600"/></p>
does not end with	<p>Exclude calls whose dialled number ends with a particular combination of digits. In the example below, the results will exclude calls whose dialled number ends with 2600.</p> <p>Dialled number <input type="text" value="does not end with"/> <input type="text" value="2600"/></p>
contains	<p>Search for calls whose dialled number contains a particular combination of digits. In the example below, the results will show only calls whose dialled number contains 265.</p> <p>Dialled number <input type="text" value="contains"/> <input type="text" value="265"/></p>
does not contain	<p>Exclude calls whose dialled number contains a particular combination of digits. In the example below, the results will exclude calls whose dialled number contains 265.</p> <p>Dialled number <input type="text" value="does not contain"/> <input type="text" value="265"/></p>

LCR code

To filter your results by Least Cost Routing (LCR) code, enter it in the box provided and select the criteria by which you want this to be matched in the results. The options contained in the drop-down list are described in the table below:

Criteria	Description
equals	<p>Search for calls whose LCR code matches a particular value. In the example below, the results will show only calls whose LCR code is 1470.</p> <p>LCR code <input type="text" value="equals"/> <input type="text" value="1470"/></p>
is not equal to	<p>Exclude calls whose LCR code matches a particular value. In the example below, the results will exclude calls whose LCR code is 1470.</p> <p>LCR code <input type="text" value="is not equal to"/> <input type="text" value="1470"/></p>

<p>begins with</p>	<p>Search for calls whose LCR code begins with a particular combination of digits. In the example below, the results will show only calls whose LCR code begins with 14.</p> <div style="border: 1px solid #ccc; padding: 5px; background-color: #f0f8ff;"> <p>LCR code <input type="text" value="begins with"/> <input type="text" value="14"/></p> </div>
<p>does not begin with</p>	<p>Exclude calls whose LCR code begins with a particular combination of digits. In the example below, the results will exclude calls whose LCR code begins 14.</p> <div style="border: 1px solid #ccc; padding: 5px; background-color: #f0f8ff;"> <p>LCR code <input type="text" value="does not begin with"/> <input type="text" value="14"/></p> </div>
<p>ends with</p>	<p>Search for calls whose LCR code ends with a particular combination of digits. In the example below, the results will show only calls whose LCR code ends with 70.</p> <div style="border: 1px solid #ccc; padding: 5px; background-color: #f0f8ff;"> <p>LCR code <input type="text" value="ends with"/> <input type="text" value="70"/></p> </div>
<p>does not end with</p>	<p>Exclude calls whose LCR code ends with a particular combination of digits. In the example below, the results will exclude calls whose LCR code is 70.</p> <div style="border: 1px solid #ccc; padding: 5px; background-color: #f0f8ff;"> <p>LCR code <input type="text" value="does not end with"/> <input type="text" value="70"/></p> </div>
<p>contains</p>	<p>Search for calls whose LCR code contains a particular combination of digits. In the example below, the results will show only calls whose LCR code contains 47.</p> <div style="border: 1px solid #ccc; padding: 5px; background-color: #f0f8ff;"> <p>LCR code <input type="text" value="contains"/> <input type="text" value="47"/></p> </div>
<p>does not contain</p>	<p>Exclude calls whose LCR code contains a particular combination of digits. In the example below, the results will exclude calls whose LCR code contains 47.</p> <div style="border: 1px solid #ccc; padding: 5px; background-color: #f0f8ff;"> <p>LCR code <input type="text" value="does not contain"/> <input type="text" value="47"/></p> </div>

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:m:ss** format and choose from the drop-down list the criteria by which you want this to be matched in the reports.


Criteria	Description
<p>is greater than</p>	<p>Search for calls that started after a particular time. In the example below, the results will show only calls that began after 10 am.</p> <div style="border: 1px solid #ccc; padding: 5px; background-color: #f0f8ff;"> <p>Start time <input type="text" value="is greater than"/> <input type="text" value="10:00:00"/></p> </div>
<p>is less than</p>	<p>Search for calls that started before a particular time. In the example below, the results will show only calls that began before 10 am.</p> <div style="border: 1px solid #ccc; padding: 5px; background-color: #f0f8ff;"> <p>Start time <input type="text" value="is less than"/> <input type="text" value="10:00:00"/></p> </div>

<p>equals</p>	<p>Search for calls that started at a particular time. In the example below, the results will show only calls that started at 10:30:00.</p> <div style="border: 1px solid #ccc; padding: 5px; background-color: #f0f8ff;"> Cost <input type="text" value="equals"/> <input type="text" value="10:30:00"/> </div>
<p>is not equal to</p>	<p>Exclude calls that started at a particular time. In the example below, the results will exclude calls that started at 10:30:00.</p> <div style="border: 1px solid #ccc; padding: 5px; background-color: #f0f8ff;"> Cost <input type="text" value="is not equal"/> <input type="text" value="10:30:00"/> </div>

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.

Call type	Description
-----------	-------------

All inbound Inbound answered Inbound DDI only Inbound transfer only Inbound missed call All outbound calls Outbound connected only Outbound not connected only Outbound operator assisted Tandem User mobile calls User SMS All internal Internal answered only Internal not answered only Internal not connected Private wire Feature	<table border="1"> <thead> <tr> <th>Criteria</th> <th>Description</th> </tr> </thead> <tbody> <tr> <td>equals</td> <td> Search for calls of a particular type. In the example below, the results will show only internal calls. <div style="border: 1px solid #ccc; padding: 5px; margin-top: 10px;"> Call type equals All internal </div> </td> </tr> <tr> <td>is not equal to</td> <td> Exclude calls of a particular type. In the example below, the results will show all call types, except internal calls. <div style="border: 1px solid #ccc; padding: 5px; margin-top: 10px;"> Call type is not equal All internal </div> </td> </tr> </tbody> </table>	Criteria	Description	equals	Search for calls of a particular type. In the example below, the results will show only internal calls. <div style="border: 1px solid #ccc; padding: 5px; margin-top: 10px;"> Call type equals All internal </div>	is not equal to	Exclude calls of a particular type. In the example below, the results will show all call types, except internal calls. <div style="border: 1px solid #ccc; padding: 5px; margin-top: 10px;"> Call type is not equal All internal </div>
	Criteria	Description					
	equals	Search for calls of a particular type. In the example below, the results will show only internal calls. <div style="border: 1px solid #ccc; padding: 5px; margin-top: 10px;"> Call type equals All internal </div>					
is not equal to	Exclude calls of a particular type. In the example below, the results will show all call types, except internal calls. <div style="border: 1px solid #ccc; padding: 5px; margin-top: 10px;"> Call type is not equal All internal </div>						
<div style="border: 1px solid #add8e6; padding: 10px; margin-top: 20px;">  To report on all types of call, select the (All call types) option. </div>							

CLI

Calling Line Identification (CLI) is the telephone number of the remote caller in an incoming call scenario. To filter a report by CLI, enter the relevant value in the box provided and select the criteria by which you want this to be matched in the results. The options contained in the drop-down list are described in the table below:

Criteria	Description
equals	Search for calls whose CLI matches a particular value. In the example below, the results will show only calls whose CLI is 02072652600. <div style="border: 1px solid #ccc; padding: 5px; background-color: #f0f8ff;"> CLI equals 02072652600 </div>
is not equal to	Exclude calls whose CLI matches a particular value. In the example below, the results will exclude calls whose CLI is 02072652600. <div style="border: 1px solid #ccc; padding: 5px; background-color: #f0f8ff;"> CLI is not equal to 02072652600 </div>
begins with	Search for calls whose CLI begins with a particular combination of digits. In the example below, the results will show only calls whose CLI begins with 0789. <div style="border: 1px solid #ccc; padding: 5px; background-color: #f0f8ff;"> CLI begins with 0789 </div>
does not begin with	Exclude calls whose CLI begins with a particular combination of digits. In the example below, the results will exclude calls whose CLI begins with 0789. <div style="border: 1px solid #ccc; padding: 5px; background-color: #f0f8ff;"> CLI does not begin with 0789 </div>
ends with	Search for calls whose CLI ends with a particular combination of digits. In the example below, the results will show only calls whose CLI ends with 2600. <div style="border: 1px solid #ccc; padding: 5px; background-color: #f0f8ff;"> CLI ends with 2600 </div>
does not end with	Exclude calls whose CLI ends with a particular combination of digits. In the example below, the results will exclude calls whose CLI ends with 2600. <div style="border: 1px solid #ccc; padding: 5px; background-color: #f0f8ff;"> CLI does not end with 2600 </div>
contains	Search for calls whose CLI contains a particular combination of digits. In the example below, the results will show only calls whose CLI contains 265. <div style="border: 1px solid #ccc; padding: 5px; background-color: #f0f8ff;"> CLI contains 265 </div>
does not contain	Exclude calls whose CLI contains a particular combination of digits. In the example below, the results will exclude calls whose CLI contains 265. <div style="border: 1px solid #ccc; padding: 5px; background-color: #f0f8ff;"> CLI does not contain 265 </div>

Destination

If you want to filter calls to a specific, known destination, type the name of the destination in the text box provided and select the criteria by which you want this to be matched in the results. The options contained in the drop-down list are described in the table

below:

Criteria	Description
equals	Search for calls whose destination matches a particular name. In the example below, the results will show only calls whose destination is <i>Warren Smith</i> . <div style="border: 1px solid #ccc; padding: 5px; background-color: #f0f0f0;"> Destination <input type="text" value="equals"/> <input type="text" value="Warren Smith"/> </div>
is not equal to	Exclude calls whose destination matches a particular name. In the example below, the results will exclude calls whose destination is <i>Warren Smith</i> . <div style="border: 1px solid #ccc; padding: 5px; background-color: #f0f0f0;"> Destination <input type="text" value="is not equal to"/> <input type="text" value="Warren Smith"/> </div>
begins with	Search for calls whose destination name begins with a particular combination of letters. In the example below, the results will show only calls whose destination name begins with <i>Warren S</i> . <div style="border: 1px solid #ccc; padding: 5px; background-color: #f0f0f0;"> Destination <input type="text" value="begins with"/> <input type="text" value="Warren S"/> </div>
does not begin with	Exclude calls whose destination name begins with a particular combination of letters. In the example below, the results will exclude calls whose destination name begins with <i>Warren S</i> . <div style="border: 1px solid #ccc; padding: 5px; background-color: #f0f0f0;"> Destination <input type="text" value="does not begin with"/> <input type="text" value="Warren S"/> </div>
ends with	Search for calls whose destination name ends with a particular combination of letters. In the example below, the results will show only calls whose destination name ends with <i>Smith</i> . <div style="border: 1px solid #ccc; padding: 5px; background-color: #f0f0f0;"> Destination <input type="text" value="ends with"/> <input type="text" value="Smith"/> </div>
does not end with	Exclude calls whose destination name ends with a particular combination of letters. In the example below, the results will exclude calls whose destination name ends with <i>Smith</i> . <div style="border: 1px solid #ccc; padding: 5px; background-color: #f0f0f0;"> Destination <input type="text" value="does not end with"/> <input type="text" value="Smith"/> </div>
contains	Search for calls whose destination name contains a particular combination of letters. In the example below, the results will show only calls whose destination name contains <i>Warren</i> . <div style="border: 1px solid #ccc; padding: 5px; background-color: #f0f0f0;"> Destination <input type="text" value="contains"/> <input type="text" value="Warren"/> </div>
does not contain	Exclude calls whose destination name contains a particular combination of letters. In the example below, the results will exclude calls whose destination name contains <i>Warren</i> . <div style="border: 1px solid #ccc; padding: 5px; background-color: #f0f0f0;"> Destination <input type="text" value="does not contain"/> <input type="text" value="Warren"/> </div>

Duration

To filter calls above or below a particular duration, enter the duration (in seconds) in the text box provided and select the criteria by

which you want this to be matched in the results. The options contained in the drop-down list are described in the table below:

Criteria	Description
is greater than	Search for calls whose duration is longer than a particular value. In the example below, the results will show only calls whose duration is longer than 30 seconds. <div style="border: 1px solid #ccc; padding: 5px; background-color: #f0f8ff;"> Duration <input type="text" value="is greater than"/> <input type="text" value="30"/> </div>
is less than	Search for calls whose duration is shorter than a particular value. In the example below, the results will show only calls whose duration is shorter than 60 seconds. <div style="border: 1px solid #ccc; padding: 5px; background-color: #f0f8ff;"> Duration <input type="text" value="is less than"/> <input type="text" value="60"/> </div>
equals	Search for calls whose duration is equal to a particular value. In the example below, the results will show only calls whose duration is 10 seconds. <div style="border: 1px solid #ccc; padding: 5px; background-color: #f0f8ff;"> Duration <input type="text" value="equals"/> <input type="text" value="10"/> </div>
is not equal to	Exclude calls whose duration is equal to a particular value. In the example below, the results will exclude calls whose duration is 10 seconds. <div style="border: 1px solid #ccc; padding: 5px; background-color: #f0f8ff;"> Duration <input type="text" value="is not equal"/> <input type="text" value="10"/> </div>

Response time

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 and select the criteria by which you want this to be matched in the results. The options contained in the drop-down list are described in the table below:

Criteria	Description
is greater than	Search for calls whose response time is longer than a particular value. In the example below, the results will show only calls whose response time is longer than 10 seconds. <div style="border: 1px solid #ccc; padding: 5px; background-color: #f0f8ff;"> Response time <input type="text" value="is greater than"/> <input type="text" value="10"/> </div>
is less than	Search for calls whose response time is shorter than a particular value. In the example below, the results will show only calls whose response time is shorter than 10 seconds. <div style="border: 1px solid #ccc; padding: 5px; background-color: #f0f8ff;"> Response time <input type="text" value="is less than"/> <input type="text" value="10"/> </div>
equals	Search for calls whose response time is equal to a particular value. In the example below, the results will show only calls whose response time is 3 seconds. <div style="border: 1px solid #ccc; padding: 5px; background-color: #f0f8ff;"> Response time <input type="text" value="equals"/> <input type="text" value="3"/> </div>

is not equal to	<p>Exclude calls whose response time is equal to a particular value. In the example below, the results will exclude calls whose response time is 10 seconds.</p> <div style="border: 1px solid #ccc; padding: 5px; margin-top: 10px;"> Response time <input type="text" value="is not equal"/> <input type="text" value="10"/> </div>
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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 and select the criteria by which you want this to be matched in the results. The options contained in the drop-down list are described in the table below:

Criteria	Description
equals	<p>Search for calls whose trunk access code matches a particular value. In the example below, the results will show only calls whose trunk access code is 12.</p> <div style="border: 1px solid #ccc; padding: 5px; margin-top: 10px;"> Trunk access code <input type="text" value="equals"/> <input type="text" value="12"/> </div>
is not equal to	<p>Exclude calls whose trunk access code matches a particular value. In the example below, the results will exclude calls whose trunk access code is 12.</p> <div style="border: 1px solid #ccc; padding: 5px; margin-top: 10px;"> Trunk access code <input type="text" value="is not equal to"/> <input type="text" value="12"/> </div>
begins with	<p>Search for calls whose trunk access code begins with a particular combination of digits. In the example below, the results will show only calls whose trunk access code begins with 1.</p> <div style="border: 1px solid #ccc; padding: 5px; margin-top: 10px;"> Trunk access code <input type="text" value="begins with"/> <input type="text" value="1"/> </div>
does not begin with	<p>Exclude calls whose trunk access code begins with a particular combination of digits. In the example below, the results will exclude calls whose trunk access code begins with 1.</p> <div style="border: 1px solid #ccc; padding: 5px; margin-top: 10px;"> Trunk access code <input type="text" value="does not begin with"/> <input type="text" value="1"/> </div>
ends with	<p>Search for calls whose trunk access code ends with a particular combination of digits. In the example below, the results will show only calls whose trunk access code ends with 3.</p> <div style="border: 1px solid #ccc; padding: 5px; margin-top: 10px;"> Trunk access code <input type="text" value="ends with"/> <input type="text" value="2600"/> </div>
does not end with	<p>Exclude calls whose trunk access code ends with a particular combination of digits. In the example below, the results will exclude calls whose trunk access code ends with 3.</p> <div style="border: 1px solid #ccc; padding: 5px; margin-top: 10px;"> Trunk access code <input type="text" value="does not end with"/> <input type="text" value="2600"/> </div>

<p>contains</p>	<p>Search for calls whose trunk access code contains a particular combination of digits. In the example below, the results will show only calls whose trunk access code contains 2.</p> <div style="border: 1px solid #ccc; padding: 5px; margin: 10px 0;"> Trunk access code <input type="text" value="contains"/> <input type="text" value="2"/> </div>
<p>does not contain</p>	<p>Exclude calls whose trunk access code contains a particular combination of digits. In the example below, the results will exclude calls whose trunk access code contains 2.</p> <div style="border: 1px solid #ccc; padding: 5px; margin: 10px 0;"> Trunk access code <input type="text" value="does not contain"/> <input type="text" value="2"/> </div>

Options

The `options` parameter allows you to further narrow down your report results, by excluding certain types of call or sorting the results in a particular manner.

Add new option ✕

Choose an option

☰ Exclude transfers

☰ Exclude weekends

☰ Sort results by

☰ Sort order

☰ Ignore missed

☰ Audio only

☰ Notes only

☰ Scored only

Help

Choose an option from the panel on the left

Exclude transfers

↶ Close
📄 Add

These options are specific to the type of report you are running and differ between report types.

Click option for details

☰ Audio only

☰ Hide unused

☰ Rank data by

☰ Callback interval

☰ Hide contacts

☰ Sort order

☰ Call frequency

☰ Hide charges

☰ Sort results by

☰ Exclude weekends

☰ Ignore missed

☰ Scored only

☰ Exclude transfers

☰ Include internal

☰ Summary only

☰ Group results by

☰ Notes only

☰ Show legs

<input type="checkbox"/> Show account codes	Audio only This option allows you to include in your results only calls that have an associated voice recording.
<input type="checkbox"/> Show 'Do not log' calls	
<input type="checkbox"/> Show unconnected calls	
<input type="checkbox"/> Thresholds	
Audio only	Yes

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:

Callback interval	24
-------------------	----

Call frequency

This option determines how frequently a call must have been dialled in order to feature in the results of the 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:

Call frequency	20
----------------	----

Exclude weekends

To exclude weekend calls from your report's results, select the **Yes** option from the drop-down list, as shown below:

Exclude weekends	No
------------------	----

Exclude transfers

To exclude transferred calls from your report's results, select the **Yes** option from the drop-down list, as shown below:

Exclude transfers	Yes
-------------------	-----

Group results by

Choose from the drop-down list whether to group your results by CLI or dialled number.

Group results	Dialled number
---------------	----------------

Hide unused

This option allows you to exclude unused extensions from your report's results.

Hide unused	Yes
-------------	-----

Hide contacts

This option allows you to hide the names associated with dialled numbers, CLIs and account codes, as defined in your web user's contacts list. To show only the phone number, select the **Yes** option from the drop-down list, as shown below:

Hide contacts	Yes
---------------	-----

Hide charges

This option allows you to hide any charges applied to your report. To hide charges, select the **Yes** option from the drop-down list, as shown below:

Hide charges	Yes
--------------	-----

Ignore missed

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**.

Ignore missed calls shorter than	3
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Include internal

To include internal calls in your report's results, select the **Yes** option from the drop-down list, as shown below:

Include internal	Yes
------------------	-----

Notes only

If you want your search results to include only calls that have notes associated with them, select the **Yes** option from the drop-down list, as shown below:

Notes only	Yes
------------	-----

Rank data by

Select from the drop-down list the criteria by which you want to order the report's results.

Criteria	Description		
Number of calls	Order results based on the number of calls <table border="1"> <tr> <td>Rank data by</td> <td>Number of calls</td> </tr> </table>	Rank data by	Number of calls
Rank data by	Number of calls		
Cost	Order results based on the cost of calls <table border="1"> <tr> <td>Rank data by</td> <td>Cost</td> </tr> </table>	Rank data by	Cost
Rank data by	Cost		
Dialled number	Order results based on dialled number <table border="1"> <tr> <td>Rank data by</td> <td>Dialled number</td> </tr> </table>	Rank data by	Dialled number
Rank data by	Dialled number		
Location	Order the results based on location <table border="1"> <tr> <td>Rank data by</td> <td>Location</td> </tr> </table>	Rank data by	Location
Rank data by	Location		

Sort order

Select from the drop-down list if you want your report's results to appear in ascending or descending order.

Sort order	Ascending ▼
------------	-------------

Sort results by

Select from the drop-down list the column by which you want to sort your report's results.

Sort results by	Total duration ▼
-----------------	------------------

Scored only

This option allows you to include only calls that have a score associated with them, e.g. calls that have already been listened to and scored.


Scored only	Yes ▼
-------------	-------

Summary only

To show only a summary of calls, instead of an itemised list, select the **Yes** option from the drop-down list, as shown below:

Summary only	Yes ▼
--------------	-------

Show legs

To show the legs of transferred calls, select the **Yes** option from the drop-down list. A  icon will be displayed next to any call with associated call legs.

Show legs	Yes ▼
-----------	-------

Show account codes

Select this option to display any associated account codes as an additional column in this report.

Show account code	Yes ▼
-------------------	-------

Show 'Do not log'

This option allows you to include in your results devices whose status is set to not log calls.

Show "Do not log" devices	Yes ▼
---------------------------	-------

Show unconnected calls

To show unconnected calls in the report's results, select the **Yes** option from the drop-down list, as shown below:

Show unconnected calls	Yes ▼
------------------------	-------

Thresholds

This option allows you to 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.

Thresholds	5,10,15
------------	---------

Format

This section allows you to choose the media format of your completed report.

Entity

- +

Period

Preset Yesterday

Last 1 hours

From 15 Aug 2012 at 00:00:00

To 12 Aug 2013 at 23:59:59

Format

Web

PDF

XML

CSV

Excel

Filters





- +

Options

- +

The following formats are available:

Format	Description
 Web	<ul style="list-style-type: none"> ▪ 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. ▪ To navigate through a report consisting of multiple pages, click on the , , or icons at the top-right corner of the screen. ▪ 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	<ul style="list-style-type: none"> ▪ 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. ▪ 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	<p>The Excel format is useful for onward manipulation of the data contained in your reports, or for including results in popular spreadsheet packages.</p>
 CSV	<p>The CSV format allows report results to be arranged in comma-separated lists of data.</p> <p>CSV files are often used for transferring data between different applications, such as databases, spreadsheets, and other third-party programs.</p>
 XML	<p>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.</p>

Report types

Account Summary

Overview

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		2013-08-20 13:04:30		
Top \ UK \ London \ Accounts \		About this report		
Calls with no account code				
Carrier	Charge band	Σ	Total duration	Total cost
BT		9398	247:25:54	-
BT	International	106	02:41:48	34.335
BT	National	11105	321:43:11	137.121
BT	Local	501	11:59:29	26.503
BT	Other	114	06:43:21	-
BT	Personal/Mobile	17985	363:46:59	343.475
		39209	954:20:42	541.434
52001				
Carrier	Charge band	Σ	Total duration	Total cost
BT	Personal/Mobile	77	00:53:17	7.027
BT	Other	9	00:28:14	-
BT	Local	10	00:17:50	0.711
BT	National	19	00:10:45	0.338
		115	01:50:06	8.076
52002				
Carrier	Charge band	Σ	Total duration	Total cost
BT	National	41	01:35:55	9.414
BT	Personal/Mobile	117	01:15:29	7.654
		158	02:51:24	17.068

Running the report

Click on the **Reports** tab and select **Account summary** from the left-hand pane. The screen displaying the parameters of the report will appear, where you can configure the entity, period, filters, options and format of the report.

The screenshot shows the 'timenterprise' interface with the 'Reports' tab selected. The left-hand pane lists various report types, with 'Account summary' highlighted. The main configuration area is divided into several sections:

- Entity:** A field for specifying the report entity.
- Period:** Configuration for the report period, including a 'Preset' dropdown (set to 'Yesterday'), a 'Last' field (set to '1 hours'), and 'From' and 'To' date/time pickers (From: 15 Aug 2012 00:00:00, To: 20 Aug 2013 23:59:59).
- Format:** Selection of the report output format, with 'Web' selected and other options like PDF, XML, CSV, and Excel.
- Filters:** A section for adding filters to the report.
- Options:** A section for additional report options.

For details about how to configure these parameters, refer to the relevant page(s) in the list below:

- Entity
- Period
- Filters
- Options
- Format

Creating the report

When you have configured the report's parameters, click on the **Run now** button to run the report immediately; alternatively, you can save the report's definition or schedule the report for future delivery.

The screenshot displays the 'Scheduled reports' configuration page in the TIM Enterprise application. The top navigation bar includes 'Reports', 'Directory', 'Call View', 'Tariff Editor', and 'Alerts'. Below this, there are tabs for 'Create a report' and 'Scheduled reports'. A 'Report queue' section shows 'My reports' and a 'Save' button. A 'Schedule' button and a 'Run now' button (highlighted with a red box) are also visible.

The main configuration area is divided into several sections:

- Type:** A sidebar on the left lists various report types, with 'Account summary' selected.
- Entity:** The entity is set to '\ UK \ London \'. There are minus and plus icons for adding or removing entities.
- Period:** The 'Preset' is 'Last month'. The 'Last' option is selected with a value of '1' and unit 'hours'. The 'From' date is '15 Aug 2012' at '00:00:00', and the 'To' date is '20 Aug 2013' at '23:59:59'.
- Format:** The output format is 'Web'. Other available formats include PDF, XML, and Excel.
- Filters:** A filter is applied: 'Dialled number equals 02072652626'.
- Options:** This section is currently empty.

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		2013-08-20 13:04:30		
Top \ UK \ London \ Accounts \		About this report		
Calls with no account code				
Carrier	Charge band	Σ	Total duration	Total cost
BT		9398	247:25:54	-
BT	International	106	02:41:48	34.335
BT	National	11105	321:43:11	137.121
BT	Local	501	11:59:29	26.503
BT	Other	114	06:43:21	-
BT	Personal/Mobile	17985	363:46:59	343.475
		39209	954:20:42	541.434
52001				
Carrier	Charge band	Σ	Total duration	Total cost
BT	Personal/Mobile	77	00:53:17	7.027
BT	Other	9	00:28:14	-
BT	Local	10	00:17:50	0.711
BT	National	19	00:10:45	0.338
		115	01:50:06	8.076
52002				
Carrier	Charge band	Σ	Total duration	Total cost
BT	National	41	01:35:55	9.414
BT	Personal/Mobile	117	01:15:29	7.654
		158	02:51:24	17.068

As with all reports produced by TIM Enterprise, 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.

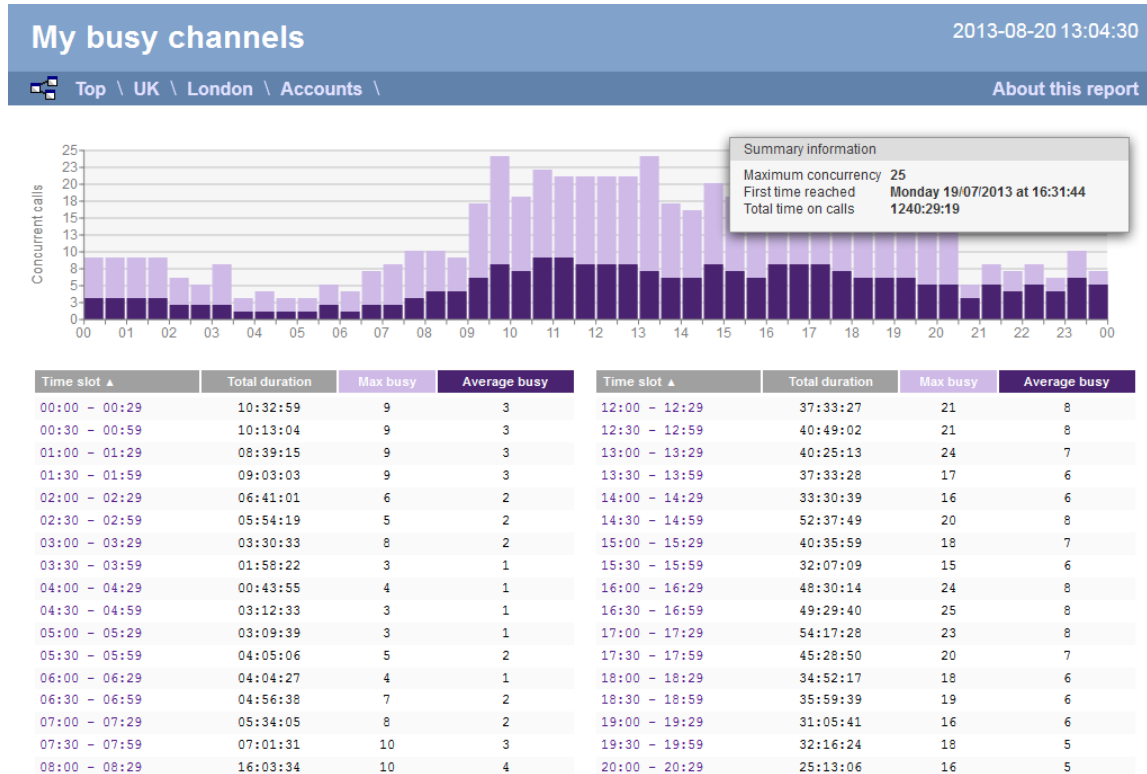
To modify your report to cover a larger organisational scope, click on an element of the breadcrumb as shown below:

Top \ UK \ London \ Accounts \	About this report
---------------------------------------	-------------------

Busy Channels

Overview

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.



Running the report

Click on the **Reports** tab and select **Busy channels** from the left-hand pane. The screen displaying the parameters of the report will appear, where you can configure the entity, period, filters, options and format of the report.

The screenshot shows the 'Reports' configuration page in the TIM Enterprise interface. The top navigation bar includes 'Reports', 'Directory', 'Call View', 'Tariff Editor', and 'Alerts'. Below this, there are tabs for 'Create a report' and 'Scheduled reports'. The 'Type' sidebar on the left lists various report types, with 'Busy channels' highlighted. The main configuration area is divided into four sections: 'Entity', 'Period', 'Format', and 'Options'. The 'Period' section is configured with 'Preset' set to 'Yesterday', 'Last' set to '1 hours', and 'From' set to '15 Aug 2012' and 'To' set to '20 Aug 2013'. The 'Format' section shows 'Web' selected, with 'Excel' also visible. The 'Filters' and 'Options' sections are currently empty.

For details about how to configure these parameters, refer to the relevant page in the list below:

- Entity
- Period
- Filters
- Options
- Format

Creating the report

When you have configured the report's parameters, click on the **Run now** button to run the report immediately; alternatively, you can save the report's definition or schedule the report for future delivery.

timenterprise Reports Directory Call View Tariff Editor Alerts

Create a report Scheduled reports

Report queue My reports Save Schedule **Run now**

Type

- Account summary
- Busy channels**
- Busy times
- Call analysis
- Call geography
- Call scoring
- Call volumes
- Custom report
- Daily activity
- Enterprise overview
- Frequent numbers
- Inbound call performance
- Missed calls
- Phone bill
- Random call selection
- Target response
- Top calls
- Unused devices

Entity \ UK \ London \

Period

Preset Last month

Last 1 hours

From 15 Aug 2012 at 00:00:00

To 20 Aug 2013 at 23:59:59

Format

Web PDF

XML CSV

Excel

Filters

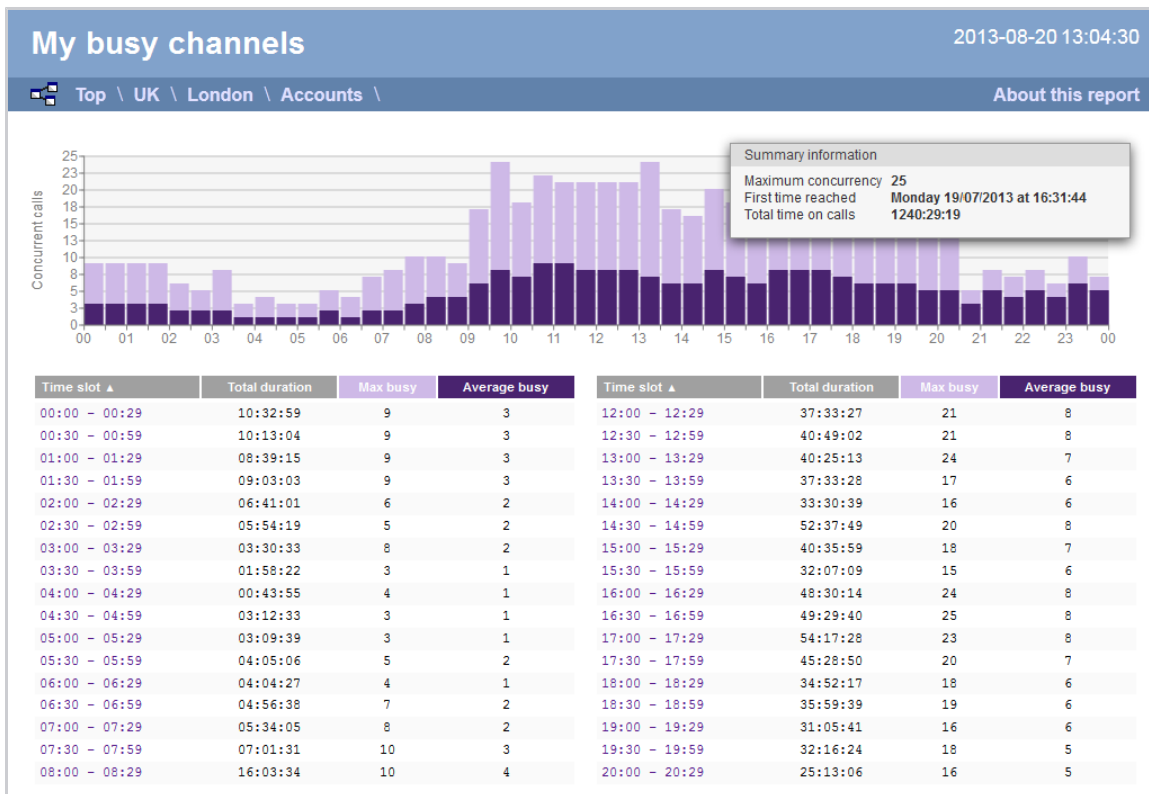
Options

Sort results by Time slot

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:



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 Enterprise, 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 within 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.

My busy channels

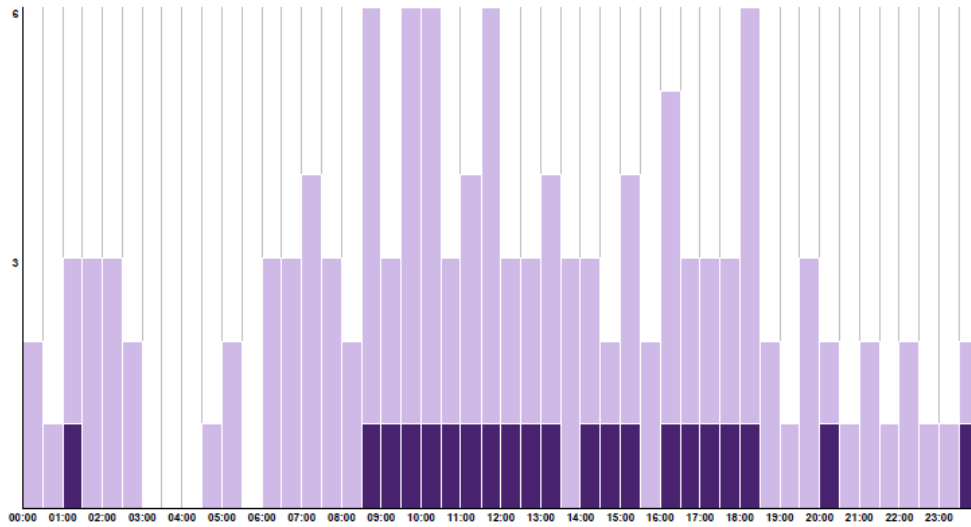
Prepared by Joe Bloggs

Covering period 01 March 2013 00:00:00
to 31 March 2013 23:59:59

Entity \ UK \ London \ Accounts

The second page has a graph depicting the average and maximum number of channels used, as shown below:

Report



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.

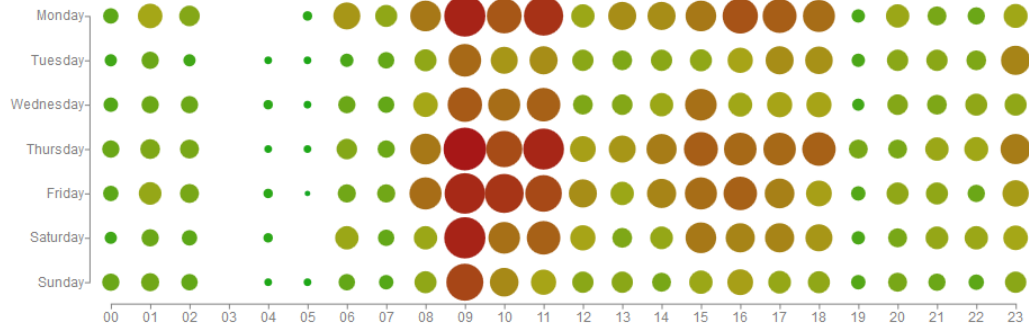
Data

Time slot	Total duration	Max busy	Average busy	Time slot	Total duration	Max busy	Average busy
00:00 - 00:29	00:09:06	2	-	12:00 - 12:29	01:11:34	3	1
00:30 - 00:59	00:01:24	1	-	12:30 - 12:59	00:36:41	3	1
01:00 - 01:29	00:52:45	3	1	13:00 - 13:29	00:58:11	4	1
01:30 - 01:59	00:13:54	3	-	13:30 - 13:59	00:07:28	3	-
02:00 - 02:29	00:52:27	3	-	14:00 - 14:29	00:52:04	3	1
02:30 - 02:59	00:22:47	2	-	14:30 - 14:59	01:34:11	2	1
03:00 - 03:29	-	-	-	15:00 - 15:29	01:36:15	4	1
03:30 - 03:59	-	-	-	15:30 - 15:59	00:21:46	2	-
04:00 - 04:29	-	-	-	16:00 - 16:29	00:27:52	5	1
04:30 - 04:59	00:15:08	1	-	16:30 - 16:59	01:44:37	3	1
05:00 - 05:29	00:01:19	2	-	17:00 - 17:29	00:45:47	3	1
05:30 - 05:59	-	-	-	17:30 - 17:59	02:18:00	3	1
06:00 - 06:29	00:09:22	3	-	18:00 - 18:29	02:40:29	6	1
06:30 - 06:59	00:38:00	3	-	18:30 - 18:59	01:28:19	2	-
07:00 - 07:29	00:34:10	4	-	19:00 - 19:29	00:31:57	1	-
07:30 - 07:59	00:47:09	3	-	19:30 - 19:59	00:01:43	3	-
08:00 - 08:29	00:51:52	2	-	20:00 - 20:29	00:56:20	2	1
08:30 - 08:59	01:49:55	6	1	20:30 - 20:59	00:13:47	1	-
09:00 - 09:29	03:59:58	3	1	21:00 - 21:29	00:46:09	2	-
09:30 - 09:59	04:19:29	6	1	21:30 - 21:59	00:14:49	1	-
10:00 - 10:29	02:33:48	6	1	22:00 - 22:29	01:46:40	2	-
10:30 - 10:59	01:22:35	3	1	22:30 - 22:59	00:13:29	1	-
11:00 - 11:29	02:07:29	4	1	23:00 - 23:29	01:11:37	1	-
11:30 - 11:59	01:44:31	6	1	23:30 - 23:59	00:01:28	2	1

Busy Times

Overview

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

Click on the **Reports** tab and select **Busy times** from the left-hand pane. The screen displaying the parameters of the report will appear, where you can configure the entity, period, filters, options and format of the report.

Entity

Period

- Preset: Yesterday
- Last: 1 hours
- From: 15 Aug 2012 at 00:00:00
- To: 20 Aug 2013 at 23:59:59

Format

- Web
- PDF
- XML
- CSV
- Excel

Filters

Options

For details about how to configure these parameters, refer to the relevant page(s) in the list below:

- Entity
- Period
- Filters
- Options
- Format

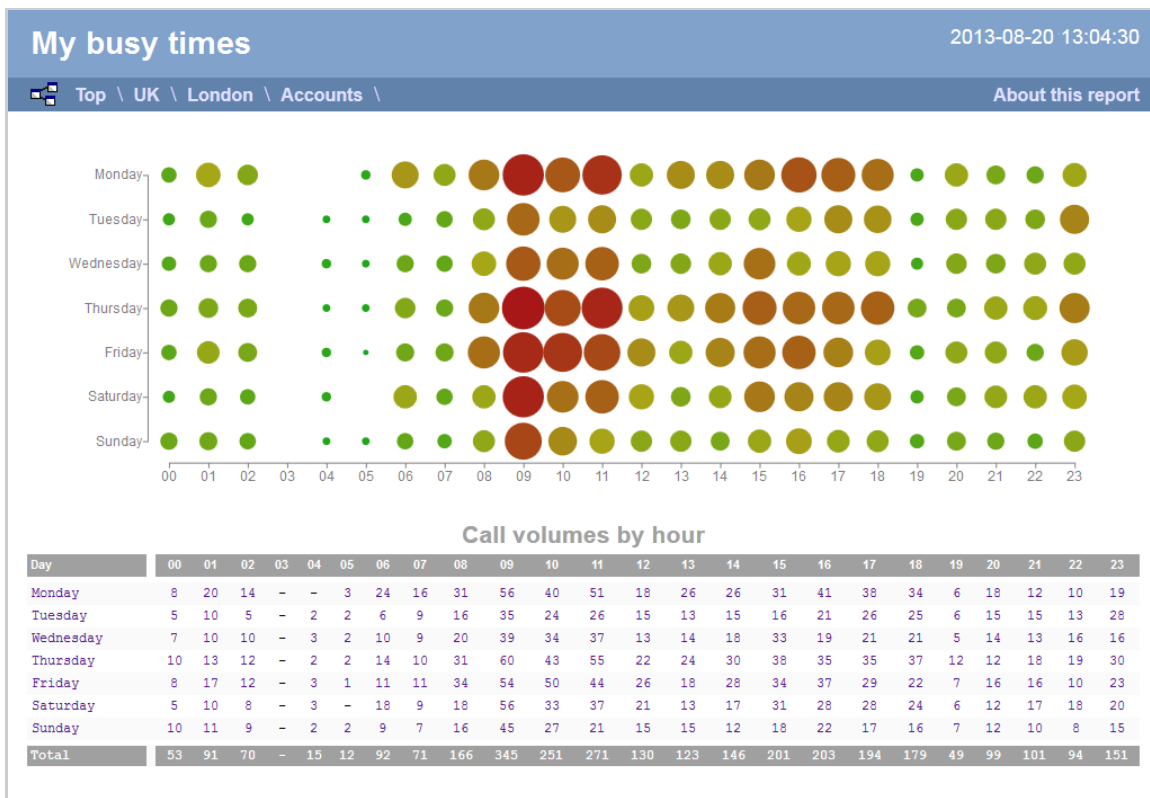
Creating the report

When you have configured the report's parameters, click on the **Run now** button to run the report immediately; alternatively, you can save the report's definition or schedule the report for future delivery.

The screenshot displays the TIM Enterprise web interface for configuring a report. The top navigation bar includes 'Reports', 'Directory', 'Call View', 'Tariff Editor', and 'Alerts'. Below this, there are tabs for 'Create a report' and 'Scheduled reports'. A toolbar contains 'Report queue', 'My reports', 'Save', 'Schedule', and a red-bordered 'Run now' button. The main content area is divided into four sections: 'Type' (a list of report types with 'Busy times' selected), 'Entity' (set to '\ UK \ London \'), 'Period' (with 'Preset' selected and 'Last month' chosen, and date/time fields for 'From' and 'To'), and 'Format' (with 'Web' selected and other options like PDF, XML, CSV, and Excel). 'Filters' and 'Options' sections are also present but empty.

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.



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 2013-04-15 15:43:34

Top \ UK \ London \ About this report

Date & Time ▲	Source	CLI	Route	Destination	Response	Duration	Cost
2013-07-05 07:07:28	Vodafone	07787575871	-	Cheri Pitts	-	00:00:31	-
2013-07-05 07:09:16	Vodafone	07919445550	-	Cheri Pitts	-	00:00:20	-
2013-07-05 07:42:56	T-Mobile	07932768466	-	Bea Minor	-	00:00:10	-
2013-07-05 07:59:01	Orange	07854181950	-	Rob Banks	4	00:01:02	-
2013-07-12 07:07:28	Vodafone	07787849051	-	Cheri Pitts	-	00:02:52	-
2013-07-12 07:09:16	Vodafone	07919445550	-	Cheri Pitts	-	00:01:26	-
2013-07-12 07:28:01	Orange	07854181059	-	Bea Minor	1	00:00:04	-
2013-07-12 07:42:56	T-Mobile	07932857786	-	Bea Minor	2	00:00:12	-
2013-07-12 07:48:28	Orange	07977404409	-	Cheri Pitts	-	00:00:52	-
2013-07-12 07:52:08	Vodafone	07887722242	-	Cheri Pitts	-	00:00:22	-
2013-07-12 07:59:01	Orange	07854181950	-	Rob Banks	4	00:02:30	-
2013-07-19 07:07:28	Vodafone	07787575871	-	Cheri Pitts	-	00:01:38	-
2013-07-19 07:42:56	T-Mobile	07932768466	-	Bea Minor	1	00:00:11	-
2013-07-19 07:52:08	Vodafone	07887824142	-	Cheri Pitts	-	00:01:10	-
2013-07-19 07:57:56	Orange	07971710819	-	Cheri Pitts	-	00:01:21	-
2013-07-26 07:28:01	Orange	07854181059	-	Bea Minor	9	00:00:05	-
2013-07-26 07:42:56	T-Mobile	07932768466	-	Bea Minor	3	00:00:03	-
2013-07-26 07:48:28	Orange	07977404409	-	Cheri Pitts	-	00:02:57	-
2013-07-26 07:52:08	Vodafone	07887722242	-	Cheri Pitts	-	00:00:03	-
2013-07-26 07:57:56	Orange	07971710819	-	Cheri Pitts	-	00:00:33	-
20 calls						00:18:22	-

As with all reports produced by TIM Enterprise 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.

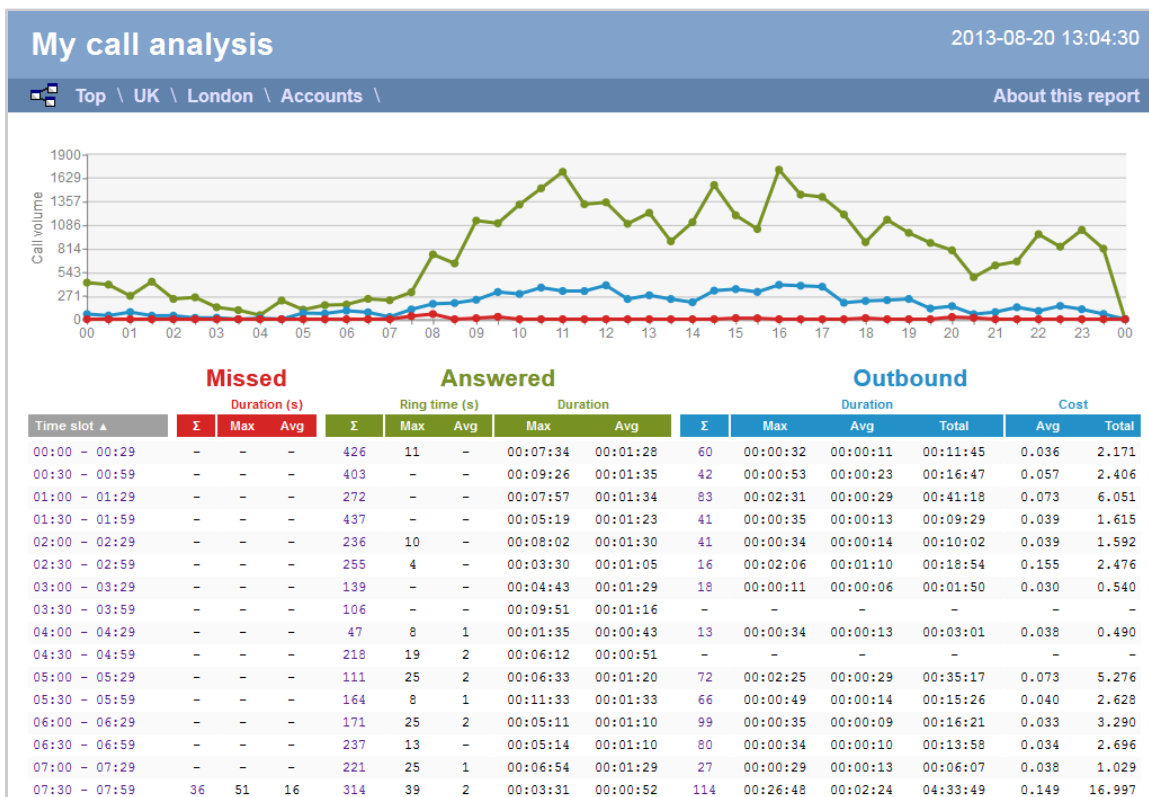
To modify your report to cover a larger organisational scope, click on an element of the breadcrumb as shown below:



Call Analysis

Overview

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.



Running the report

Click on the **Reports** tab and select **Call Analysis** from the left-hand pane. The screen displaying the parameters of the report will appear, where you can configure the entity, period, filters, options and format of the report.

The screenshot shows the TIM Enterprise Reports configuration interface. The 'Reports' tab is highlighted in the top navigation bar. The 'Call analysis' report type is selected in the left-hand menu. The main configuration area is divided into four sections: Entity, Period, Format, and Options. The Period section is configured with 'Preset' set to 'Yesterday', 'Last' set to '1 hours', 'From' set to '15 Aug 2012 at 00:00:00', and 'To' set to '20 Aug 2013 at 23:59:59'. The Format section shows 'Web' as the selected output format, with 'PDF', 'XML', and 'Excel' also listed as options.

For details about how to configure these parameters, refer to the relevant page(s) in the list below:

- Entity
- Period
- Filters
- Options
- Format

Creating the report

When you have configured the report's parameters, click on the **Run now** button to run the report immediately; alternatively, you can save the report's definition or schedule the report for future delivery.

timenterprise Reports Directory Call View Tariff Editor Alerts

Create a report Scheduled reports

Report queue My reports Save Schedule **Run now**

Type

- Account summary
- Busy channels
- Busy times
- Call analysis**
- Call geography
- Call scoring
- Call volumes
- Custom report
- Daily activity
- Enterprise overview
- Frequent numbers
- Inbound call performance
- Missed calls
- Phone bill
- Random call selection
- Target response
- Top calls
- Unused devices

Entity \ UK \ London \

Period

Preset: Last month

Last: 1 hours

From: 15 Aug 2012 at 00:00:00

To: 20 Aug 2013 at 23:59:59

Format

Web PDF XML CSV Excel

Filters

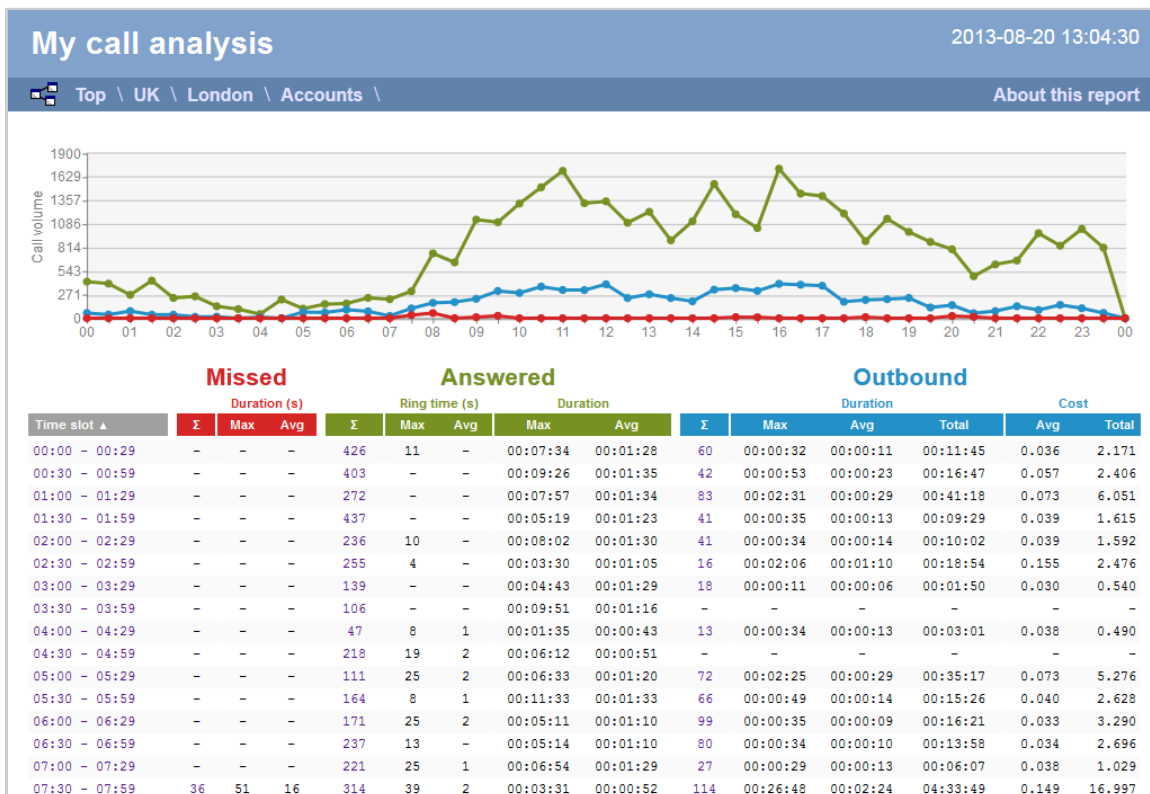
Duration is greater than 30

Options

Sort order Ascending

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:



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 Enterprise, 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	<ul style="list-style-type: none"> ▪ : The total number of missed calls ▪ Max: The maximum length of time a caller waited before abandoning the call (in seconds) ▪ Avg: The average length of time a caller waited before abandoning the call (in seconds)
Answered	<ul style="list-style-type: none"> ▪ : The total number of answered calls ▪ Ring time Max: The maximum length of time a caller waited before a call was answered (in seconds) ▪ Ring time Avg: The average length of time a caller waited before the call was answered (in seconds) ▪ Duration Max: The duration of the longest answered call (in hours, mins, secs) ▪ Duration Avg: The average length of all answered calls (in hours, mins, secs)
Outbound	<ul style="list-style-type: none"> ▪ : The total number of outbound calls ▪ Duration Max: The duration of the longest outbound call (in hours, mins, secs) ▪ Duration Avg: The average length of all outbound calls (in hours, mins, secs) ▪ Duration Total: The total duration of time spent on outbound calls ▪ Cost Avg: The average cost of all outbound calls ▪ 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:

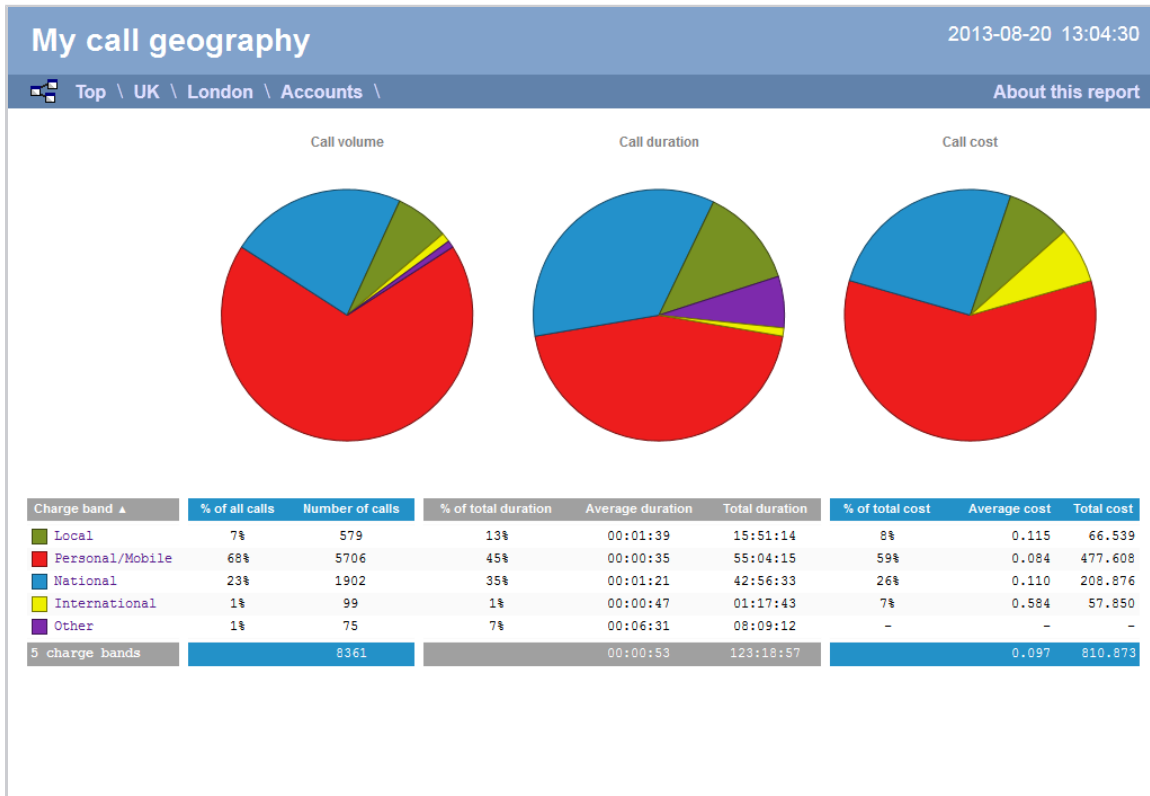


Call Geography

Overview

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.



Running the report

Click on the **Reports** tab and select **Call geography** from the left-hand pane. The screen displaying the parameters of the report will appear, where you can configure the entity, period, filters, options and format of the report.

The screenshot shows the TIM Enterprise Reports configuration interface. The top navigation bar includes 'Reports', 'Directory', 'Call View', 'Tariff Editor', and 'Alerts'. Below this, there are buttons for 'Create a report', 'Scheduled reports', 'Report queue', 'My reports', 'Save', 'Schedule', and 'Run now'. The left sidebar lists various report types, with 'Call geography' highlighted. The main area is divided into four sections: 'Entity', 'Period', 'Format', and 'Options'. The 'Period' section is configured with 'Preset' set to 'Yesterday', 'Last' set to '1 hours', 'From' set to '15 Aug 2012 at 00:00:00', and 'To' set to '20 Aug 2013 at 23:59:59'. The 'Format' section shows 'Web' selected, with 'PDF', 'XML', 'CSV', and 'Excel' as options.

For details about how to configure these parameters, refer to the relevant page(s) in the list below:

- Entity
- Period
- Filters
- Options
- Format

Creating the report

When you have configured the report's parameters, click on the **Run now** button to run the report immediately; alternatively, you can save the report's definition or schedule the report for future delivery.

The screenshot shows the 'Create a report' interface in TIM Enterprise. The top navigation bar includes 'Reports', 'Directory', 'Call View', 'Tariff Editor', and 'Alerts'. Below this, there are tabs for 'Create a report' and 'Scheduled reports'. A 'Report queue' icon is on the left, and 'My reports', 'Save', 'Schedule', and 'Run now' (highlighted with a red box) are on the right. The main area is divided into four sections: 'Type' (a list of report types with 'Call geography' selected), 'Entity' (set to '\ UK \ London \ IT \'), 'Period' (set to 'Last month' with a date range from 15 Aug 2012 to 20 Aug 2013), 'Format' (set to 'Web' with options for PDF, XML, CSV, and Excel), and 'Options' (set to 'Sort results by Total cost').

The report's results

Below is an example of this report's output in web format:

The screenshot shows the 'My call geography' report output. The title is 'My call geography' and the date/time is '2013-08-20 13:04:30'. The breadcrumb is 'Top \ UK \ London \ Accounts \'. There are three pie charts: 'Call volume', 'Call duration', and 'Call cost'. Below the charts is a table with the following data:

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 Enterprise, 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

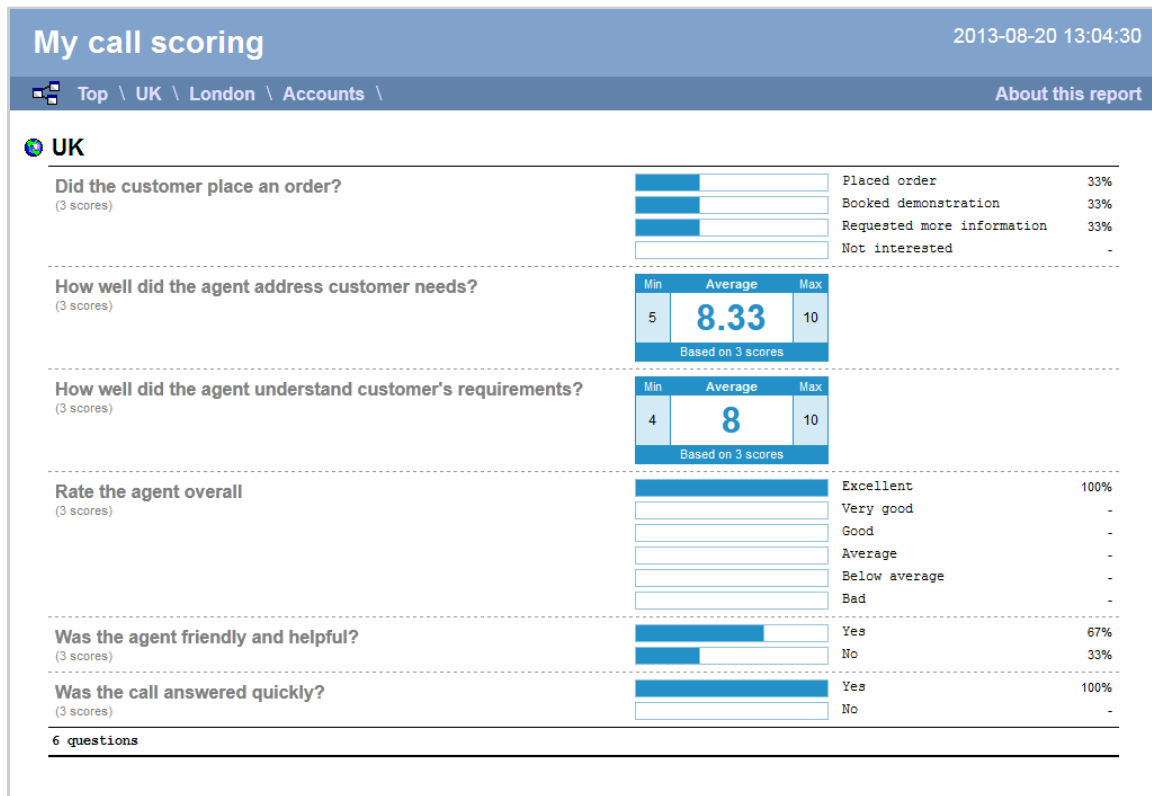
Overview

The Call Scoring report provides a comprehensive analysis of previously-scored calls, enabling you to more efficiently assess the performance of your staff. TIM Enterprise 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:

Requirements
✕

Question options

Name

Question text

Type Yes / No Range Choice

Values

Min

Max

↶ Cancel
💾 Save

Running the report

Click on the **Reports** tab and select **Call scoring** from the left-hand pane. The screen displaying the parameters of the report will appear, where you can configure the entity, period, filters, options and format of the report.

tiameterprise

Reports
Directory
Call View
Tariff Editor
Alerts

Create a report
Scheduled reports

Report queue

★ My reports
💾 Save
🕒 Schedule
🏃 Run now

Type

- Account summary
- Busy channels
- Busy times
- Call analysis
- Call geography
- Call scoring
- Call volumes
- Custom report
- Daily activity
- Enterprise overview
- Frequent numbers
- Inbound call performance
- Missed calls
- Phone bill
- Random call selection
- Target response
- Top calls
- Unused devices

Entity

Period

Preset Yesterday

Last 1 hours

From 15 Aug 2012 at 00:00:00

To 20 Aug 2013 at 23:59:59

Format

Web PDF

XML CSV

Excel

Filters

Options

For details about how to configure these parameters, refer to the relevant page(s) in the list below:

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- Entity
- Period
- Filters
- Options
- Format

Creating the report

When you have configured the report's parameters, click on the **Run now** button to run the report immediately; alternatively, you can save the report's definition or schedule the report for future delivery.

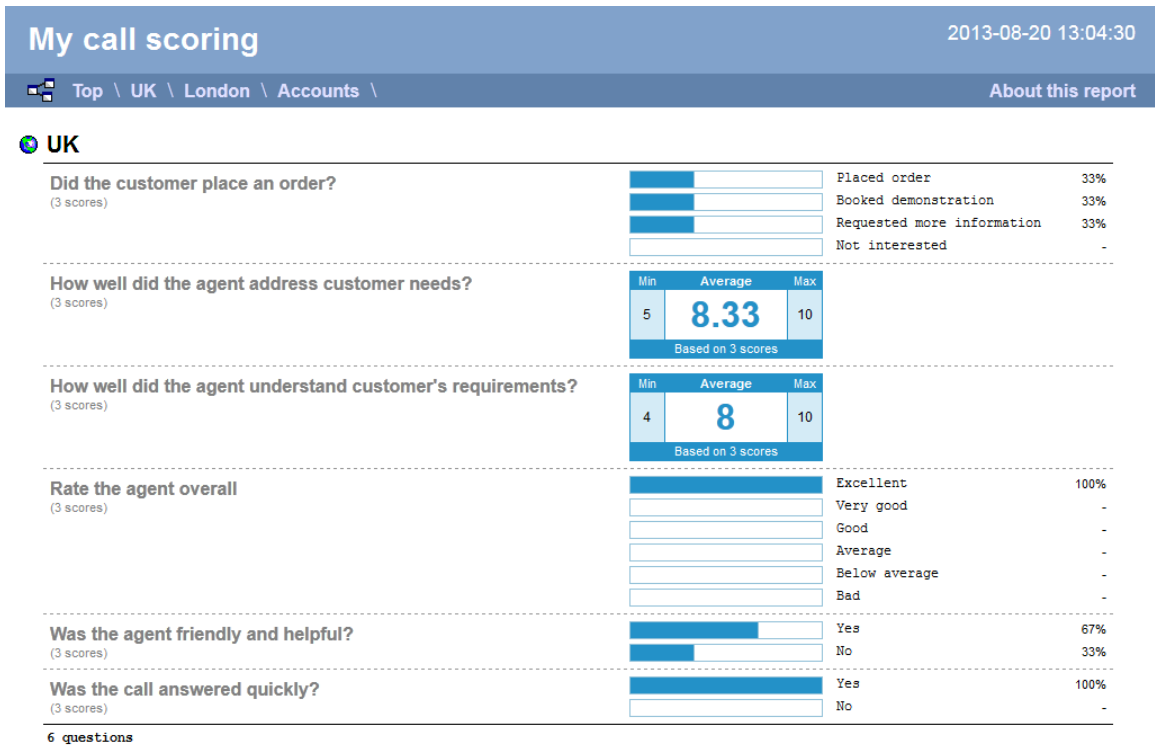
The screenshot shows the 'timenterprise' web interface for creating a report. The top navigation bar includes 'Reports', 'Directory', 'Call View', 'Tariff Editor', and 'Alerts'. Below this, there are tabs for 'Create a report' and 'Scheduled reports'. A 'Report queue' icon is on the left, and 'My reports', 'Save', 'Schedule', and 'Run now' buttons are on the right. The 'Run now' button is highlighted with a red box.

The main configuration area is divided into several sections:

- Type:** A list of report types on the left, with 'Call scoring' selected.
- Entity:** A dropdown menu showing the path '\ UK \ London \ IT \ '.
- Period:** Configuration for the report's time range.
 - Preset:** 'Last month' (selected)
 - Last:** '1' hours
 - From:** '15' 'Aug' '2012' at '00:00:00'
 - To:** '20' 'Aug' '2013' at '23:59:59'
- Format:** Output format options: 'Web' (selected), 'PDF', 'XML', 'CSV', and 'Excel'.
- Filters:** A section for adding filters, currently empty.
- Options:** Configuration for report options, with 'Sort order Ascending' selected.

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 Enterprise, each page of the report includes the following information:

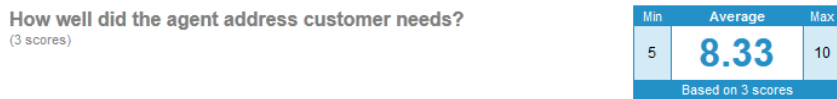
- the report's title
- the date and time that the report was generated
- the name of the report, if applicable

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.



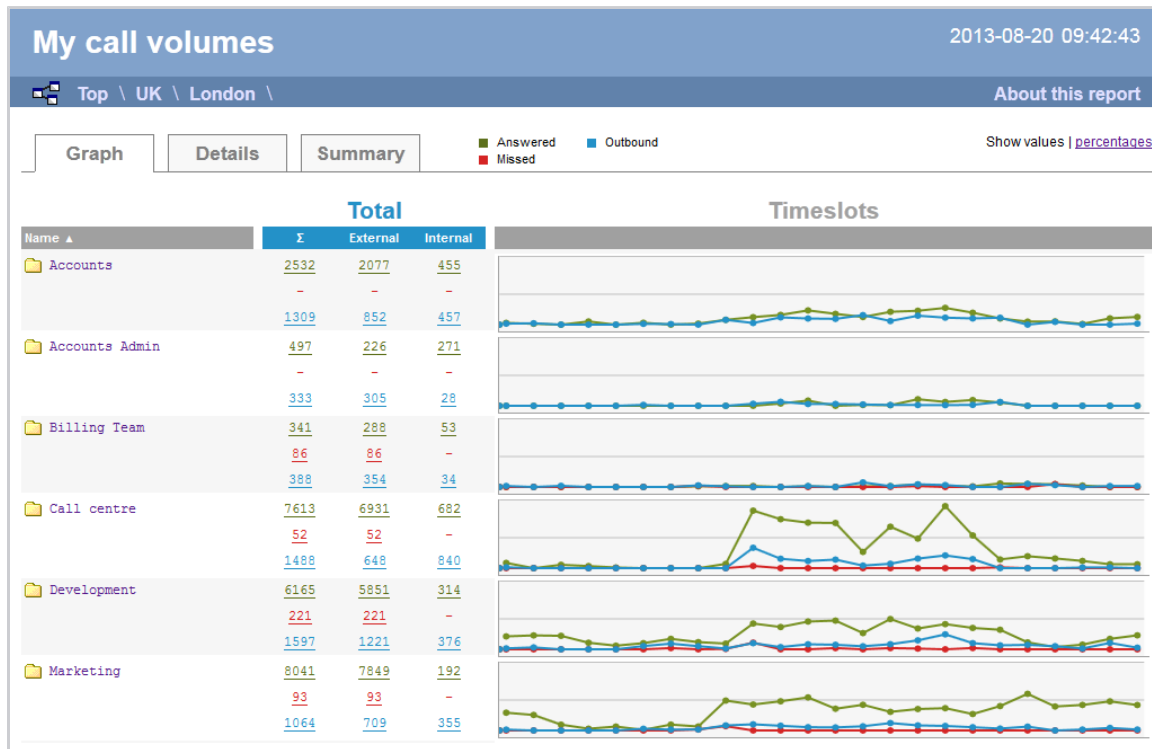
To modify your report to cover a larger organisational scope, click on an element of the breadcrumb as shown below:



Call Volumes

Overview

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

Click on the Reports tab and select Call volumes from the left-hand pane. The screen displaying the parameters of the report will appear, where you can configure the entity, period, filters, options and format of the report.

The screenshot shows the TIM Enterprise Reports configuration interface. The top navigation bar includes 'Reports', 'Directory', 'Call View', 'Tariff Editor', and 'Alerts'. Below this, there are tabs for 'Create a report' and 'Scheduled reports'. The left sidebar lists various report types, with 'Call volumes' highlighted. The main configuration area is divided into four sections: 'Entity', 'Period', 'Format', and 'Options'. The 'Period' section is configured with 'Preset' set to 'Yesterday', 'Last' set to '1 hours', and 'From' set to '15 Aug 2012' and 'To' set to '20 Aug 2013'. The 'Format' section shows 'Web' selected, with options for PDF, XML, CSV, and Excel. The 'Filters' and 'Options' sections are currently empty.

For details about how to configure these parameters, refer to the relevant page(s) in the list below:

- Entity
- Period
- Filters
- Options
- Format

Creating the report

When you have configured the report's parameters, click on the **Run now** button to run the report immediately; alternatively, you can save the report's definition or schedule the report for future delivery.

timenterprise Reports Directory Call View Tariff Editor Alerts

Create a report Scheduled reports

Report queue My reports Save Schedule **Run now**

Type

- Account summary
- Busy channels
- Busy times
- Call analysis
- Call geography
- Call scoring
- Call volumes**
- Custom report
- Daily activity
- Enterprise overview
- Frequent numbers
- Inbound call performance
- Missed calls
- Phone bill
- Random call selection
- Target response
- Top calls
- Unused devices

Entity \ UK \ London \

Period

Preset: Last month

Last: 1 hours

From: 15 Aug 2012 at 00:00:00

To: 20 Aug 2013 at 23:59:59

Format

Web PDF

XML CSV

Excel

Filters

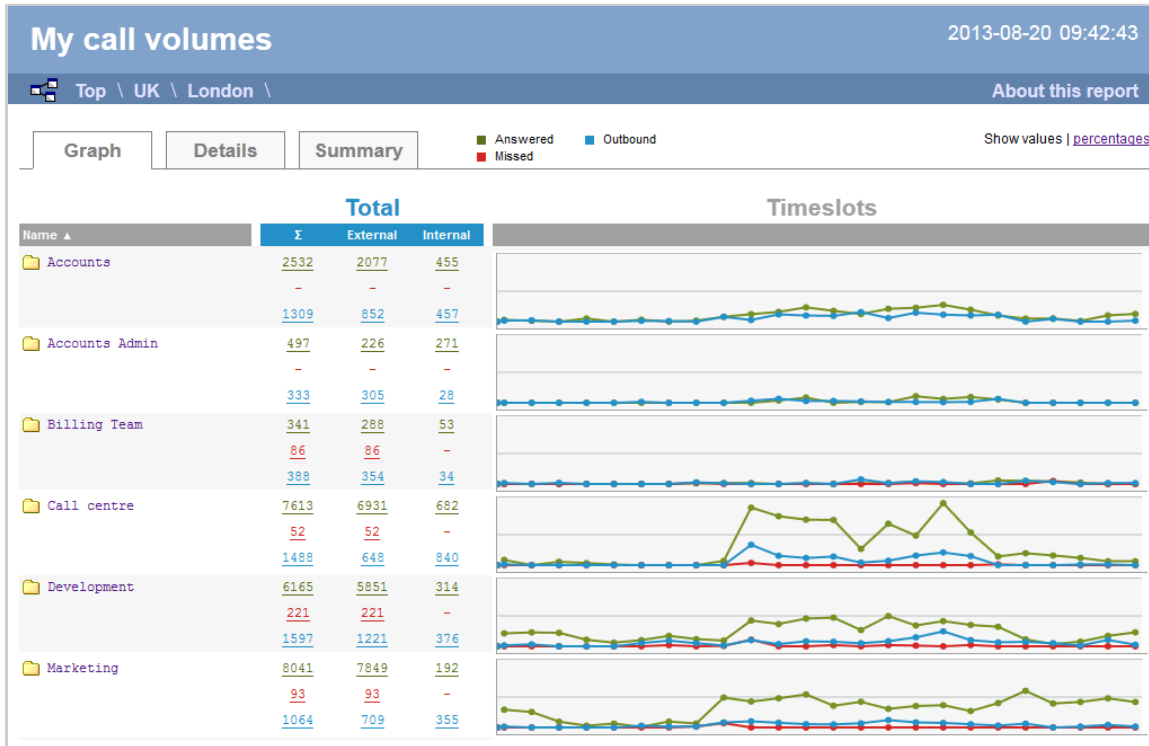
Dialled number begins with 07788

Options

Sort order Ascending

The report's results

Below is an example of this report's output in web format:



As with all reports produced by TIM Enterprise, each page of the report includes the following information:

- the report's title

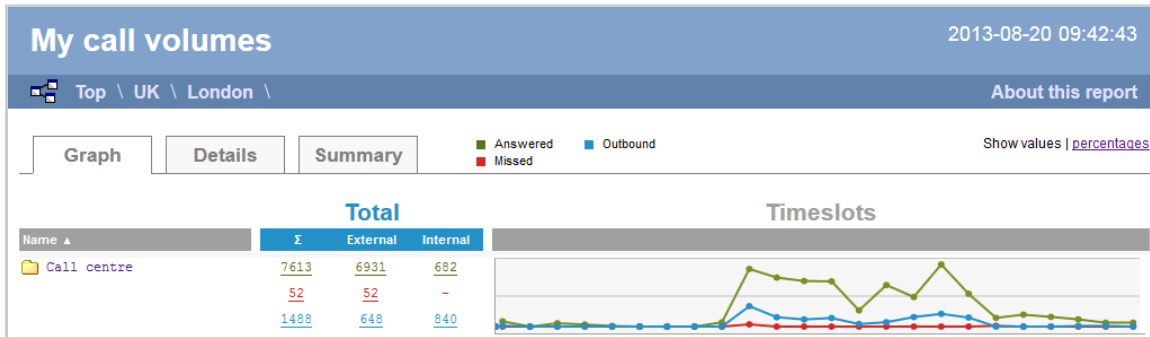
- the date and time that the report was generated
- the name of the report, if applicable

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.

Name	Total			Timeslots																							
	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
Accounts	2532	2077	455	31	15	-	55	-	33	-	19	84	130	169	247	187	132	222	240	290	207	107	53	56	13	109	133
Accounts Admin	497	226	271	-	-	-	-	-	-	-	-	-	40	91	-	15	11	114	68	100	58	-	-	-	-	-	-
Billing Team	341	288	53	-	-	-	-	-	-	12	16	18	-	12	-	13	16	40	15	11	62	53	48	25	-	-	
Call centre	7613	6931	682	91	-	58	36	12	-	-	74	995	846	786	782	281	717	511	1072	566	151	207	168	125	67	68	
Development	6165	5851	314	224	241	233	114	63	107	181	125	99	446	386	480	496	281	523	360	436	370	338	120	38	81	181	242
Marketing	8041	7849	192	308	268	101	31	68	11	102	69	517	449	505	572	376	444	322	371	386	284	422	634	415	442	504	440

All numeric figures are shown as hyperlinks, allowing you to drill down into an itemised list of the calls that they represent.

My call volumes							2013-08-20 09:42:43	
Top \ UK \ London \ Accounts \ Tanya Burrell \							About this report	
All		Outbound	Answered	Missed	Internal	Show all 1 of 19		
Date & Time ▲	Source	CLI	Route	Destination	Response	Duration	Cost	
13:15:26	London	02073536734	-	Norma Leigh	-	00:00:40	-	
13:15:36	Vodafone	07775872259	-	Brock Lee	14	00:00:11	-	
13:19:33	Pearl E White	-	07810669018	Vodafone	-	00:00:25	0.054	
13:27:48	Penny Wise	-	07841401258	O2	-	00:02:28	0.321	
13:38:38	Pearl E White	-	02071051229	London	-	00:00:33	0.055	
13:49:33	London	02087729999	-	Brock Lee	10	00:01:06	-	
13:56:33	Penny Wise	-	2054	Harry Patel	-	00:00:31	-	
14:01:51	Gaye Barr	-	07960425550	T-Mobile	-	00:00:04	0.030	
14:05:11	London	02071847559	-	Brock Lee	7	00:00:08	-	
14:10:31	London	02074956590	-	Brock Lee	10	00:00:06	-	
14:10:31	London	02074131490	-	Doug Hole	-	00:02:32	-	
14:18:01	Easton West	-	07760202596	Vodafone	-	00:00:09	0.030	
14:44:43	Orange	07973894927	-	Mika Stai	-	00:03:28	-	
14:44:46	Orange	07973894927	-	Mika Stai	2	00:01:09	-	
14:48:08	London	02078022337	-	Don Key	5	00:00:01	-	
15:02:38	Gene Poole	-	2071	Pearl E White	-	00:01:22	-	

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	<p>The information displayed in this field is determined by the type of call:</p> <ul style="list-style-type: none"> for incoming calls, this shows the CLI of the caller for incoming internal calls, this shows either the caller's username or extension number for outgoing calls, this shows the dialled number
Destination	<p>The information displayed in this field is determined by the type of call:</p> <ul style="list-style-type: none"> for incoming calls, this shows the name of the user whose extension answered the call, or the extension number if not available for outgoing calls, this shows the geographical location that was dialled, or an alias if defined in your contacts list 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.

My call volumes 2013-08-20 09:42:43

Top \ UK \ London \ Accounts \ About this report

Answered
 Outbound
 Missed

Show values | [percentages](#)

	Total			Timeslots																							
	£	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	49772	45672	4100	1091	891	609	348	327	337	532	669	1860	3258	3741	4037	3230	2746	3434	3040	4112	3276	2566	2189	1501	1501	2208	2269
Missed	465	465	-	-	-	-	-	-	-	21	39	82	153	-	-	21	-	21	41	-	23	14	-	50	-	-	-
Outbound	13885	9785	4100	156	145	89	21	26	164	284	192	684	1197	1090	1172	985	853	900	1191	1378	901	748	501	275	300	382	251
	64122	55922	8200	1247	1036	698	369	353	501	837	900	2626	4608	4831	5209	4236	3599	4355	4272	5490	4200	3328	2690	1826	1801	2590	2520

To modify your report to cover a larger organisational scope, click on an element of the breadcrumb as shown below:

Top \ **UK** \ London \ Accounts \ About this report

Custom

Overview

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.

My custom report 2013-08-22 13:04:30

Top \ UK \ London \ Accounts \ About this report

[Show all](#)
1 of 16

Date & Time ▲	Source	CLI	Route	Destination	Response	Duration	Cost
21/08/2013 05:43:43	Adam Zapel	-	07767254860	Vodafone	-	00:00:27	0.058
21/08/2013 06:05:58	Adam Zapel	-	07939041916	T-Mobile	-	00:00:04	0.030
21/08/2013 06:06:53	Adam Zapel	-	02074787000	London	-	00:00:08	0.030
21/08/2013 06:20:58	London	02070108086	-	Tom Morrow	-	00:01:03	-
21/08/2013 07:28:01	London	02079603334	-	Tom Morrow	-	00:02:10	-
21/08/2013 08:08:16	Orange	07968426619	-	Tom Morrow	-	00:01:35	-
21/08/2013 09:02:21	O2	07921668518	-	Tom Morrow	-	00:01:44	-
21/08/2013 09:47:16	Adam Zapel	-	07932040779	T-Mobile	-	00:00:10	0.030
21/08/2013 11:20:41	London	02086719759	-	Tom Morrow	-	00:00:40	-
21/08/2013 11:37:01	Orange	07971060111	-	Cheri Pitts	-	00:00:46	-
21/08/2013 12:40:01	London	02070152800	-	Cheri Pitts	-	00:00:21	-
21/08/2013 12:53:23	Adam Zapel	-	07949250374	T-Mobile	-	-	0.030
21/08/2013 13:20:08	Adam Zapel	-	07985980159	T-Mobile	-	00:00:13	0.030
21/08/2013 13:47:48	T-Mobile	07957503577	-	Cheri Pitts	-	00:06:37	-
21/08/2013 13:57:58	Adam Zapel	-	07788646633	Vodafone	-	00:00:18	0.039
21/08/2013 14:04:43	O2	07834585328	-	Tom Morrow	-	00:01:05	-
21/08/2013 14:20:28	London	02085103628	-	Tom Morrow	-	-	-
21/08/2013 14:58:06	Adam Zapel	-	07786276358	Vodafone	-	00:00:22	0.048
21/08/2013 14:59:13	Adam Zapel	-	07717514310	Vodafone	-	00:00:01	0.030
21/08/2013 15:04:08	London	02073511550	-	Tom Morrow	-	00:00:20	-
21/08/2013 16:12:18	UNAVAILABLE	-	-	Tom Morrow	-	00:01:09	-
21/08/2013 16:17:13	Vodafone	07796251027	-	Claire Annette	-	00:00:30	-
21/08/2013 16:24:33	London	02073368085	-	Tom Morrow	-	00:03:12	-
21/08/2013 16:47:56	Adam Zapel	-	02073076700	London	-	00:00:15	0.030
21/08/2013 17:01:41	London	02078227654	-	Tom Morrow	-	00:00:28	-
21/08/2013 18:19:08	London	02087402420	-	Claire Annette	-	00:02:34	-
21/08/2013 19:11:58	Tom Morrow	-	07944789366	T-Mobile	-	00:01:09	0.150
21/08/2013 20:03:56	UNAVAILABLE	-	-	Cheri Pitts	-	00:01:38	-
21/08/2013 22:52:21	O2	07739071992	-	Tom Morrow	-	-	-

Running the report

Click on the **Reports** tab and select **Custom report** from the left-hand pane. The screen displaying the parameters of the report will appear, where you can configure the entity, period, filters, options and format of the report.

The screenshot shows the TIM Enterprise Reports configuration interface. The top navigation bar includes 'Reports', 'Directory', 'Call View', 'Tariff Editor', and 'Alerts'. Below this, there are tabs for 'Create a report' and 'Scheduled reports'. The left-hand pane lists various report types, with 'Custom report' highlighted. The main area is divided into sections for Entity, Period, Format, Filters, and Options. The Period section is configured with 'Preset' set to 'Yesterday', 'Last' set to '1 hours', and a date range from '15 Aug 2012' to '22 Aug 2013'. The Format section shows 'Web' selected as the output format, with options for PDF, XML, CSV, and Excel.

For details about how to configure these parameters, refer to the relevant page(s) in the list below:

- Entity
- Period
- Filters
- Options
- Format

Creating the report

When you have configured the report's parameters, click on the **Run now** button to run the report immediately; alternatively, you can save the report's definition or schedule the report for future delivery.

The screenshot shows the TIM Enterprise interface. At the top, there is a navigation bar with 'timenterprise' logo and menu items: Reports, Directory, Call View, Tariff Editor, Alerts. Below this is a sub-header with 'Create a report' and 'Scheduled reports'. A 'Report queue' section contains 'My reports', 'Save', 'Schedule', and a red-bordered 'Run now' button. On the left is a 'Type' sidebar with a list of report categories, including 'Custom report' which is selected. The main area is divided into four panels: 'Entity' (path: \ UK \ London \ IT \), 'Period' (Preset: Yesterday, Last: 1 hours, From: 15 Aug 2012 00:00:00, To: 22 Aug 2013 23:59:59), 'Format' (Web, PDF, XML, CSV, Excel), and 'Options' (Sort order: Ascending, Sort results by: Total cost). The 'Filters' section contains two active filters: 'Dialled number begins with 07788' and 'Duration is greater than 30'.

The report's results

Below is an example of this report's output in web format:

My custom report								2013-08-22 13:04:30
Top \ UK \ London \ Accounts \								About this report
All	Outbound	Answered	Missed	Internal	Show all			1 of 16
Date & Time ▲	Source	CLI	Route	Destination	Response	Duration	Cost	
21/08/2013 05:43:43	Adam Zapel	-	07767254860	Vodafone	-	00:00:27	0.058	
21/08/2013 06:05:58	Adam Zapel	-	07939041916	T-Mobile	-	00:00:04	0.030	
21/08/2013 06:06:53	Adam Zapel	-	02074787000	London	-	00:00:08	0.030	
21/08/2013 06:20:58	London	02070108086	-	Tom Morrow	-	00:01:03	-	
21/08/2013 07:28:01	London	02079603334	-	Tom Morrow	-	00:02:10	-	
21/08/2013 08:08:16	Orange	07968426619	-	Tom Morrow	-	00:01:35	-	
21/08/2013 09:02:21	O2	07921668518	-	Tom Morrow	-	00:01:44	-	
21/08/2013 09:47:16	Adam Zapel	-	07932040779	T-Mobile	-	00:00:10	0.030	
21/08/2013 11:20:41	London	02086719759	-	Tom Morrow	-	00:00:40	-	
21/08/2013 11:37:01	Orange	07971060111	-	Cheri Pitts	-	00:00:46	-	
21/08/2013 12:40:01	London	02070152800	-	Cheri Pitts	-	00:00:21	-	
21/08/2013 12:53:23	Adam Zapel	-	07949250374	T-Mobile	-	-	0.030	
21/08/2013 13:20:08	Adam Zapel	-	07985980159	T-Mobile	-	00:00:13	0.030	
21/08/2013 13:47:48	T-Mobile	07957503577	-	Cheri Pitts	-	00:06:37	-	
21/08/2013 13:57:58	Adam Zapel	-	07788646633	Vodafone	-	00:00:18	0.039	
21/08/2013 14:04:43	O2	07834585328	-	Tom Morrow	-	00:01:05	-	
21/08/2013 14:20:28	London	02085103628	-	Tom Morrow	-	-	-	
21/08/2013 14:58:06	Adam Zapel	-	07786276358	Vodafone	-	00:00:22	0.048	
21/08/2013 14:59:13	Adam Zapel	-	07717514310	Vodafone	-	00:00:01	0.030	
21/08/2013 15:04:08	London	02073511550	-	Tom Morrow	-	00:00:20	-	
21/08/2013 16:12:18	UNAVAILABLE	-	-	Tom Morrow	-	00:01:09	-	
21/08/2013 16:17:13	Vodafone	07796251027	-	Claire Annette	-	00:00:30	-	
21/08/2013 16:24:33	London	02073368085	-	Tom Morrow	-	00:03:12	-	
21/08/2013 16:47:56	Adam Zapel	-	02073076700	London	-	00:00:15	0.030	
21/08/2013 17:01:41	London	02078227654	-	Tom Morrow	-	00:00:28	-	
21/08/2013 18:19:08	London	02087402420	-	Claire Annette	-	00:02:34	-	
21/08/2013 19:11:58	Tom Morrow	-	07944789366	T-Mobile	-	00:01:09	0.150	
21/08/2013 20:03:56	UNAVAILABLE	-	-	Cheri Pitts	-	00:01:38	-	
21/08/2013 22:52:21	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 Enterprise, 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: <ul style="list-style-type: none"> ▪ for incoming and outgoing calls, this shows the number that was dialled ▪ 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: <ul style="list-style-type: none"> ▪ for incoming calls, this shows the name of the user whose extension answered the call, or the extension number if not available ▪ for outgoing calls, this shows the geographical location that was dialled, or an alias if defined in your contacts list ▪ 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

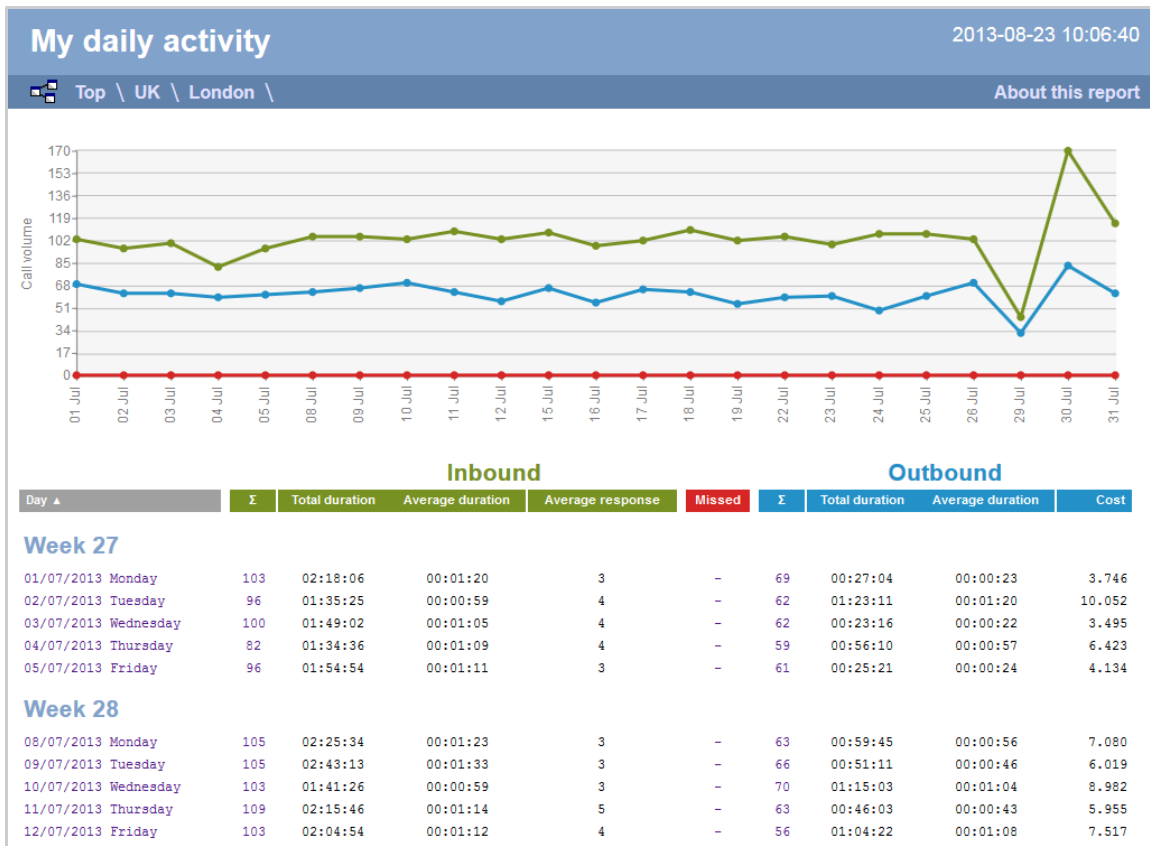
To modify your report to cover a larger organisational scope, click on an element of the breadcrumb as shown below:



Daily Activity

Overview

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.



Running the report

Click on the **Reports** tab and select **Daily Activity** from the left-hand pane. The screen displaying the parameters of the report will appear, where you can configure the entity, period, filters, options and format of the report.

timenterprise | Reports | Directory | Call View | Tariff Editor | Alerts

Create a report | Scheduled reports

Report queue | My reports | Save | Schedule | Run now

Type

- Account summary
- Busy channels
- Busy times
- Call analysis
- Call geography
- Call scoring
- Call volumes
- Custom report
- Daily activity**
- Enterprise overview
- Frequent numbers
- Inbound call performance
- Missed calls
- Phone bill
- Random call selection
- Target response
- Top calls
- Unused devices

Entity

Period

Preset Yesterday

Last 1 hours

From 15 Aug 2012 at 00:00:00 To 23 Aug 2013 at 23:59:59

Format

Web PDF

XML CSV

Excel

Filters

Options

For details about how to configure these parameters, refer to the relevant page(s) in the list below:

- Entity
- Period
- Filters
- Options
- Format

Creating the report

When you have configured the report's parameters, click on the **Run now** button to run the report immediately; alternatively, you can save the report's definition or schedule the report for future delivery.

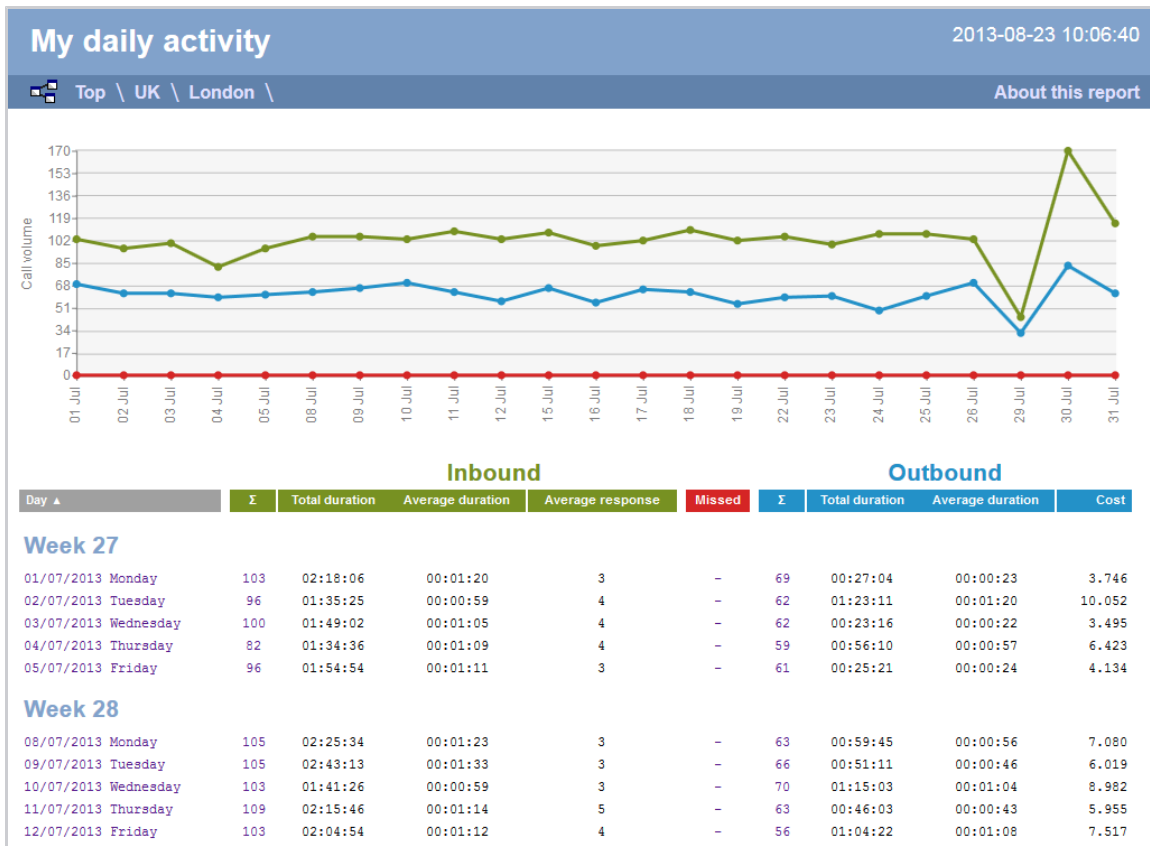
The screenshot shows the 'Create a report' interface in the TIM Enterprise system. The top navigation bar includes 'Reports', 'Directory', 'Call View', 'Tariff Editor', and 'Alerts'. Below this, there are tabs for 'Create a report' and 'Scheduled reports'. A 'Report queue' icon is visible on the left. The main area is divided into several sections:

- Entity:** Shows the path '\ UK \ London \'. There are minus and plus icons for expansion.
- Period:** Includes a 'Preset' dropdown set to 'Last month', a 'Last' field with '1' and 'hours', and a date range from '15 Aug 2012' to '23 Aug 2013' with a time range from '00:00:00' to '23:59:59'.
- Format:** Offers output formats: 'Web' (selected), 'PDF', 'XML', 'CSV', and 'Excel'.
- Filters:** Currently empty, with minus and plus icons.
- Options:** Includes a checkbox for 'Exclude weekends' which is checked and labeled 'Yes'.

A 'Run now' button with a play icon is highlighted with a red box in the top right corner of the configuration area.

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.



As with all reports produced by TIM Enterprise, 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	<ul style="list-style-type: none"> ▪ £ : The total volume of calls received ▪ Total duration: The total length of time spent on incoming calls ▪ Average duration: The average call duration of inbound calls ▪ Average response: The average length of time taken to answer a call ▪ 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	<ul style="list-style-type: none"> ▪ Total volume: The total volume of outbound calls ▪ Total duration: The total length of time spent on outbound calls ▪ Average duration: The average duration of outbound calls ▪ Cost: The total cost of all calls made, irrespective of each call's local currency

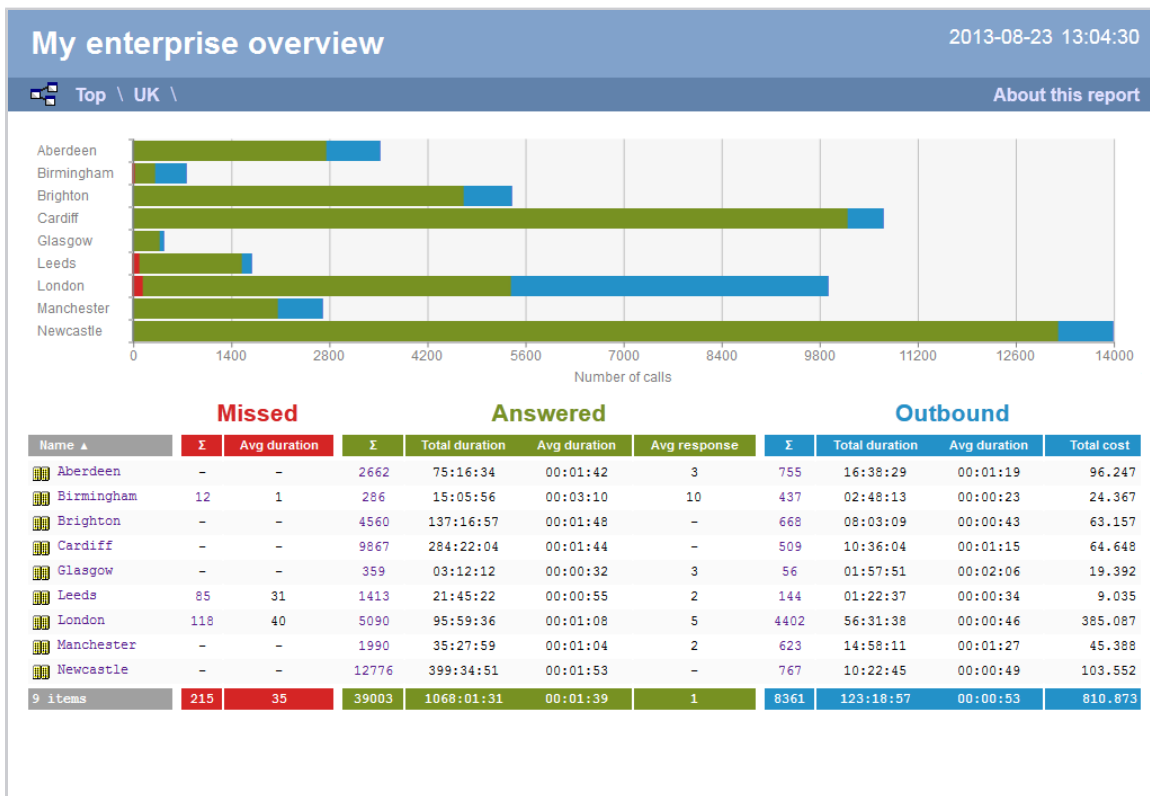
To modify your report to cover a larger organisational scope, click on an element of the breadcrumb as shown below:

Top \
 UK \
 London \
 Accounts \
 About this report

Enterprise Overview

Overview

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.



Running the report

Click on the **Reports** tab and select **Enterprise overview** from the left-hand pane. The screen displaying the parameters of the report will appear, where you can configure the entity, period, filters, options and format of the report.

The screenshot shows the TIM Enterprise Reports configuration interface. The top navigation bar includes 'Reports', 'Directory', 'Call View', 'Tariff Editor', and 'Alerts'. Below this, there are tabs for 'Create a report' and 'Scheduled reports'. The left-hand pane lists various report types, with 'Enterprise overview' highlighted and circled in red. The main area is divided into four sections: 'Entity', 'Period', 'Format', and 'Options'. The 'Period' section is configured with 'Preset' set to 'Yesterday', 'Last' set to '1 hours', and 'From' set to '15 Aug 2012 at 00:00:00' and 'To' set to '20 Aug 2013 at 23:59:59'. The 'Format' section shows 'Web' selected, with 'PDF', 'XML', and 'Excel' also visible.

For details about how to configure these parameters, refer to the relevant page(s) in the list below:

- Entity
- Period
- Filters
- Options
- Format

Creating the report

When you have configured the report's parameters, click on the **Run now** button to run the report immediately; alternatively, you can save the report's definition or schedule the report 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 Enterprise, each page of the report includes the following information:

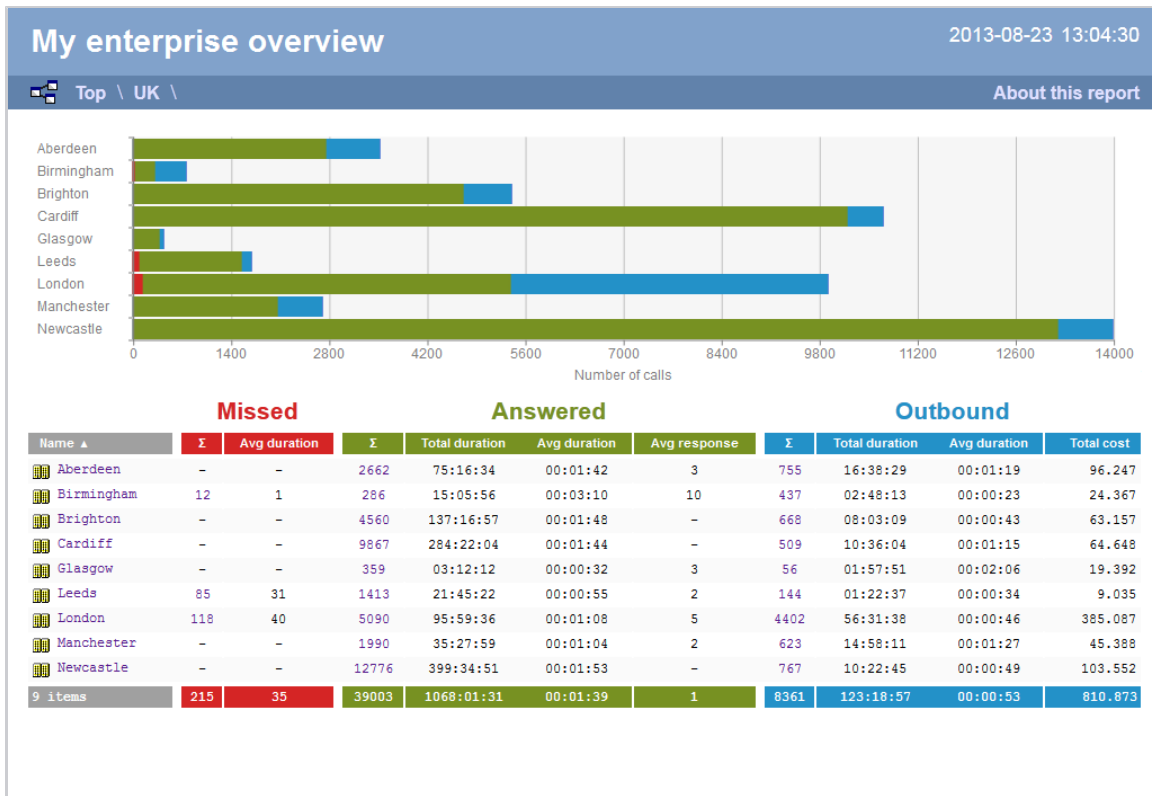
- the report's title
- the date and time that the report was generated
- the name of the report, if applicable

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.

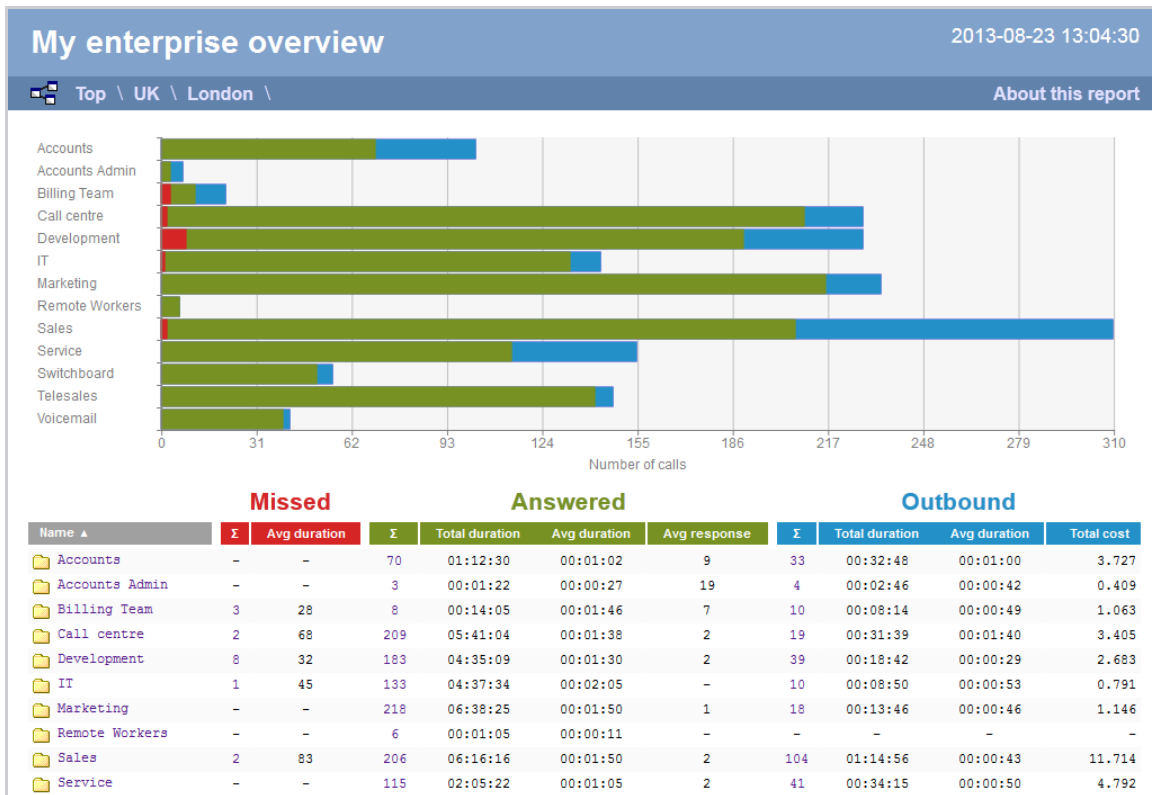
Site level

At site level, the report will show call summary information for each site, as shown below:



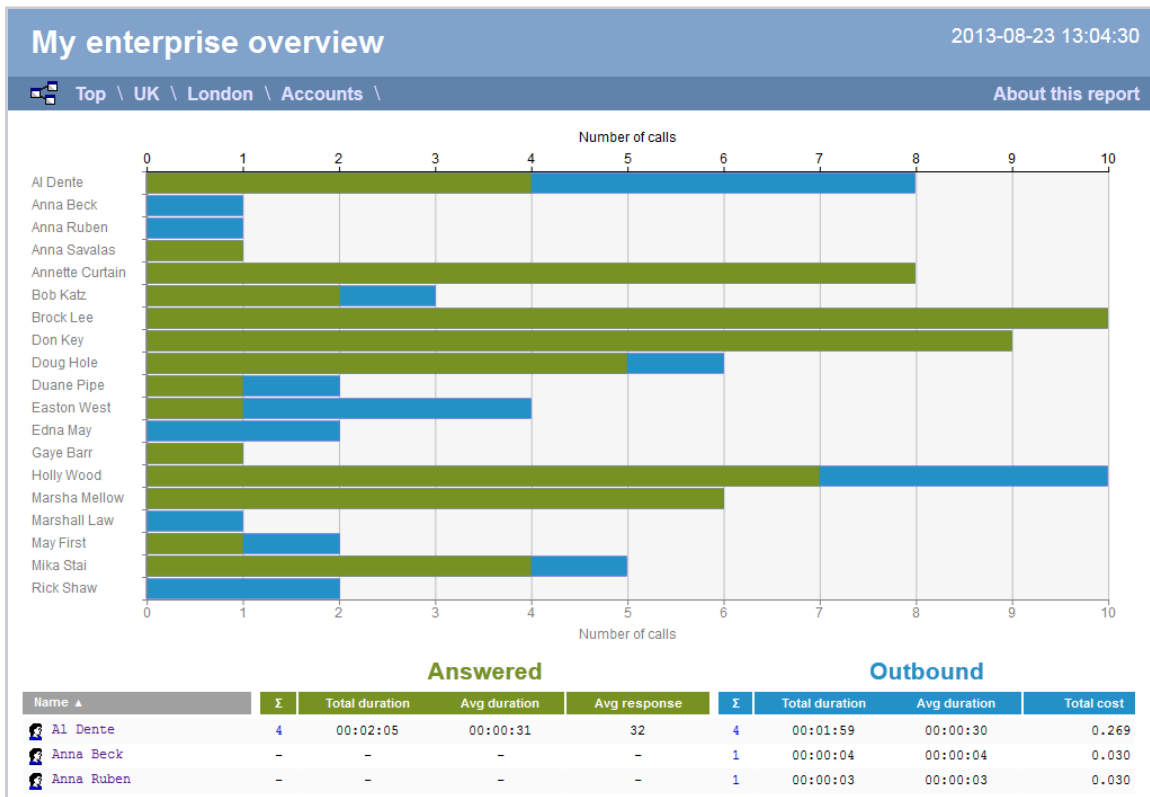
Group level

By clicking on a site, you can drill down into group-level information, as shown below:



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:



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	<ul style="list-style-type: none"> Σ : The total number of missed calls Avg duration: The average duration of all missed calls (in seconds)
Answered	<ul style="list-style-type: none"> Σ : The number of incoming calls answered by extensions within the selected entity, including transferred calls Total duration: The total duration of all incoming calls (in hours, minutes and seconds) Avg duration: The average duration of all incoming calls (in hours, minutes and seconds) Avg response: The average time taken to respond to all incoming calls (in seconds)

Outbound	<ul style="list-style-type: none"> ▪ : The number of outbound calls ▪ Total duration: The total duration of all outgoing calls (in hours, minutes and seconds) ▪ Avg duration: The average duration of all outgoing calls (in hours, minutes and seconds) ▪ 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							2013-08-23 11:09:10	
... \ ... \ ... \ Birmingham accounts \ Anna Sasin \							About this report	
All		Outbound	Answered	Missed	Internal			
Date & Time ▲	Source	CLI	Route	Destination	Response	Duration	Cost	
23/08/2013 01:33:28	Anna Sasin	-	07808791272	O2	-	00:00:05	0.030	
23/08/2013 05:06:41	Anna Sasin	-	07919185533	Vodafone	-	00:00:05	0.030	
23/08/2013 05:36:36	Anna Sasin	-	07939818734	T-Mobile	-	00:00:09	0.030	
23/08/2013 06:41:38	Anna Sasin	-	07852929342	T-Mobile	-	00:00:11	0.030	
23/08/2013 07:27:03	Anna Sasin	-	07775863304	Vodafone	-	00:00:07	0.030	
23/08/2013 08:26:58	Orange	07854426792	-	Anna Sasin	2	00:00:20	-	
23/08/2013 08:39:53	Pat Downe	-	3380	Anna Sasin	-	00:00:38	-	
23/08/2013 09:10:08	Orange	07976222991	-	Anna Sasin	4	00:00:36	-	
23/08/2013 09:20:08	Bournemouth	01202770777	-	Anna Sasin	-	00:00:01	-	
9 calls						00:02:12	0.150	

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	<p>The information displayed in this field is determined by the type of call:</p> <ul style="list-style-type: none"> ▪ for incoming calls, this shows the CLI of the caller ▪ for incoming internal calls, this shows either the caller's username or extension number ▪ for outgoing calls, this shows the dialled number

Destination	The information displayed in this field is determined by the type of call: <ul style="list-style-type: none"> ▪ for incoming calls, this shows the name of the user whose extension answered the call, or the extension number if not available ▪ for outgoing calls, this shows the geographical location that was dialled, or an alias if defined in your contacts list ▪ 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

Overview

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.

My frequent numbers 2013-08-23 13:04:30				
Top \ UK \ 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

Running the report

Click on the **Reports** tab and select **Frequent numbers** from the left-hand pane. The screen displaying the parameters of the report will appear, where you can configure the entity, period, filters, options and format of the report.

The screenshot shows the 'Reports' configuration screen in the TIM Enterprise application. The top navigation bar includes 'Reports', 'Directory', 'Call View', 'Tariff Editor', and 'Alerts'. Below this, there are tabs for 'Create a report' and 'Scheduled reports'. The left-hand pane lists various report types, with 'Frequent numbers' selected and highlighted in red. The main configuration area is divided into four sections: 'Entity', 'Period', 'Format', and 'Options'. The 'Period' section is configured for 'Yesterday' from 15 Aug 2012 to 23 Aug 2013. The 'Format' section is configured for 'Web', 'XML', 'CSV', and 'Excel'. The 'Filters' and 'Options' sections are currently empty.

For details about how to configure these parameters, refer to the relevant page(s) in the list below:

- Entity
- Period
- Filters
- Options
- Format

Creating the report

When you have configured the report's parameters, click on the **Run now** button to run the report immediately; alternatively, you can save the report's definition or schedule the report for future delivery.

The screenshot shows the 'timenterprise' interface for creating a report. The top navigation bar includes 'Reports', 'Directory', 'Call View', 'Tariff Editor', and 'Alerts'. Below this, there are tabs for 'Create a report' and 'Scheduled reports'. A 'Report queue' icon is on the left, and 'My reports', 'Save', 'Schedule', and 'Run now' buttons are on the right. The 'Run now' button is highlighted with a red box.

The main configuration area is divided into several sections:

- Type:** A sidebar on the left lists various report types, with 'Frequent numbers' selected.
- Entity:** Shows the selected entity as '\ UK \ London \'. There are minus and plus icons for adding or removing entities.
- Period:** Includes a 'Preset' dropdown set to 'Yesterday', a 'Last' field with '1' and 'hours', and a 'From' field with '15 Aug 2012 at 00:00:00' and a 'To' field with '23 Aug 2013 at 23:59:59'.
- Format:** Offers output formats: 'Web' (selected), 'PDF', 'XML', 'CSV', and 'Excel'.
- Filters:** Shows a filter: 'Duration is greater than 30'.
- Options:** Shows an option: 'Exclude weekends Yes'.

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 2013-08-23 13:04:30				
Top \ UK \ 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 Enterprise, 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:

Top \ UK \ London \ Accounts \				About this report
Top	UK	London	Accounts	

Inbound Call Performance

Overview

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.



Running the report

Click on the **Reports** tab and select **Inbound call performance** from the left-hand pane. The screen displaying the parameters of the report will appear, where you can configure the entity, period, filters, options and format of the report.

The screenshot displays the TIM Enterprise Reports configuration interface. The top navigation bar includes 'Reports', 'Directory', 'Call View', 'Tariff Editor', and 'Alerts'. Below this, there are tabs for 'Create a report' and 'Scheduled reports'. The left sidebar lists various report types, with 'Inbound call performance' highlighted in a red box. The main configuration area is divided into four sections: 'Entity', 'Period', 'Format', and 'Options'. The 'Period' section is configured with 'Preset' set to 'Yesterday', 'Last' set to '1 hours', and a date range from '15 Aug 2012 00:00:00' to '20 Aug 2013 23:59:59'. The 'Format' section shows 'Web' as the selected output format, with options for PDF, XML, CSV, and Excel.

For details about how to configure these parameters, refer to the relevant page(s) in the list below:

- Entity
- Period
- Filters
- Options
- Format

Creating the report

When you have configured the report's parameters, click on the **Run now** button to run the report immediately; alternatively, you can save the report's definition or schedule the report for future delivery.

The screenshot shows the TIM Enterprise interface. At the top, there are navigation tabs: Reports, Directory, Call View, Tariff Editor, and Alerts. Below these are buttons for 'Create a report', 'Scheduled reports', 'Report queue', 'My reports', 'Save', 'Schedule', and 'Run now' (highlighted with a red box). The main content area is divided into several sections:

- Type:** A sidebar menu listing various report types such as 'Account summary', 'Busy channels', 'Call analysis', etc. 'Inbound call performance' is currently selected.
- Entity:** A dropdown menu showing the selected entity as '\ UK \ London \'. There are minus and plus icons for expanding/collapsing this section.
- Period:** Configuration for the report period. 'Preset' is set to 'Yesterday'. 'Last' is set to '1 hours'. 'From' is '15 Aug 2012' and 'To' is '23 Aug 2013' at '23:59:59'.
- Format:** Output format options including 'Web' (selected), 'PDF', 'XML', 'CSV', and 'Excel'.
- Filters:** A section for applying filters, currently empty.
- Options:** A section for report options, with 'Exclude weekends' set to 'Yes'.

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.

The screenshot displays the 'My inbound call performance' report for the date 2013-08-23 15:49:50. The report is for the entity 'Top \ UK \ London \ IT \'. It features a horizontal bar chart showing call volume across seven timeslots (1-7). Below the chart is a data table with the following structure:

Day	I	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%	38
2	1396	1382	00:01:37	1	154	96%	4%	0%	0%	99%	1%	38
3	1361	1349	00:01:43	1	143	97%	2%	0%	0%	99%	1%	42
4	1343	1327	00:01:37	1	77	97%	2%	0%	0%	99%	1%	33
5	1367	1355	00:01:38	1	131	96%	3%	1%	0%	99%	1%	33
6	1408	1394	00:01:35	1	168	97%	3%	1%	0%	99%	1%	45
7	1414	1400	00:01:38	1	71	97%	3%	0%	0%	99%	1%	36
SUMMARY	9713	9620	00:01:38	1	168	92%	2%	3%	1%	99%	1%	38

As with all reports produced by TIM Enterprise, 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

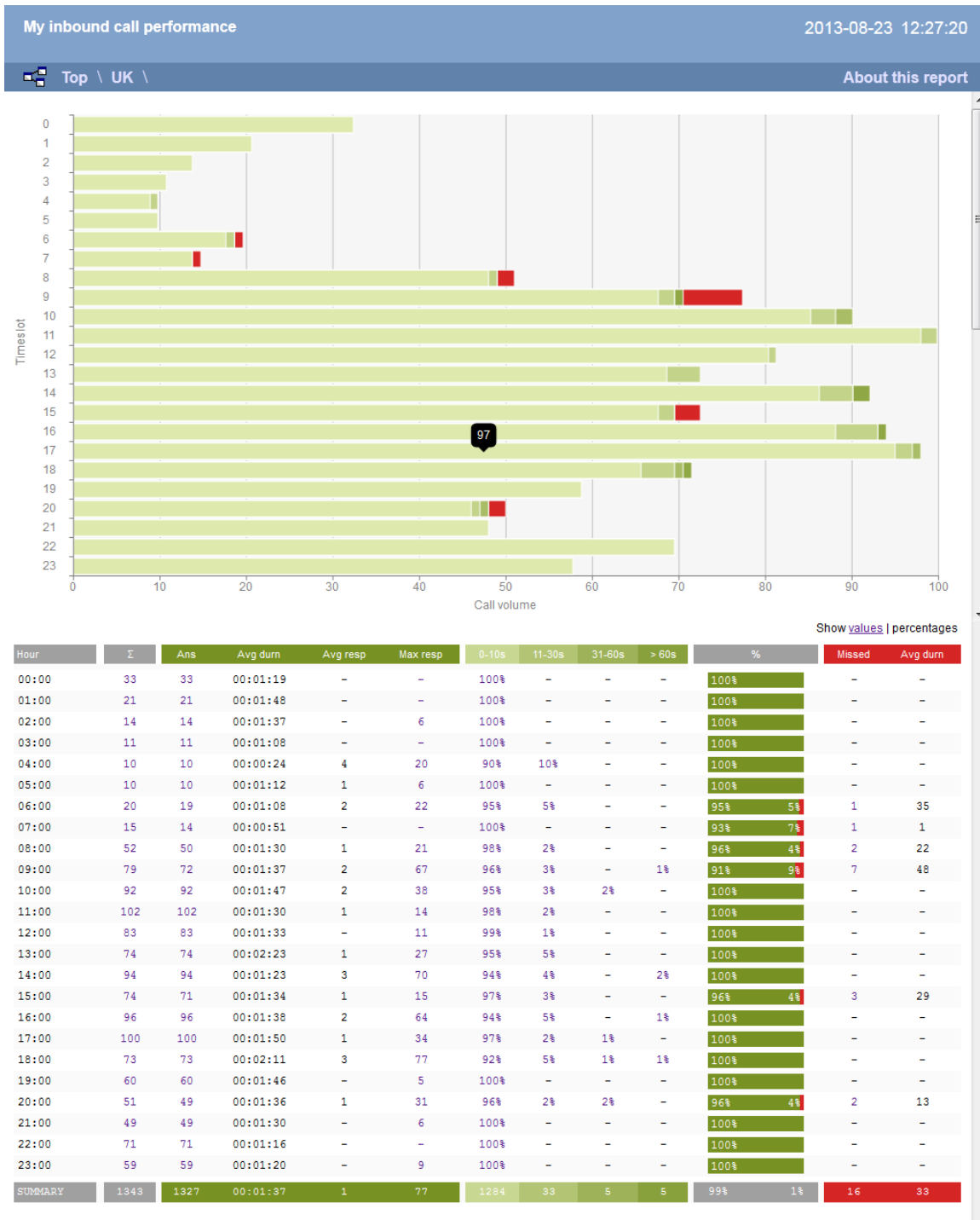
can be drilled down into, allowing deeper analysis of your results.

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	<ul style="list-style-type: none"> ▪ Ans: The total number of answered calls in each period. ▪ Avg durn: The average length of time of all answered calls in each period. ▪ Avg resp: The average response time of all answered calls in each period. ▪ Max resp: The maximum time it took to answer a call in each period. ▪ 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	<ul style="list-style-type: none"> ▪ : The total number of missed calls in each period. ▪ 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.



To modify your report to cover a larger organisational scope, click on an element of the breadcrumb as shown below:



Missed Calls

Overview

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.

My missed calls							2013-08-22 13:04:30
Top \ UK \							About this report
<input checked="" type="checkbox"/> Missed <input type="checkbox"/> Handled Expand all Collapse all							
First attempt ▲	CLI	Contact	Avg ring time	Attempts	Priority		
22 August 2013 07:55:13	07883218233	Lucy White	00:00:02	1		<input type="text"/>	
22 August 2013 08:25:31	07854181008	Lucy White	00:00:19	1		<input type="text"/>	
22 August 2013 08:25:48	07740783158	Lucy White	00:01:03	1		<input type="text"/>	
22 August 2013 08:27:46	07887618737	Lucy White	00:00:38	2		<input type="text"/>	
Date & time	Dialled number	Contact	Ring time				
22 August 2013 08:27:46		Lucy White	00:00:18				
22 August 2013 08:27:46		Lucy White	00:00:58				
22 August 2013 09:20:08	01202770777	Anna Sasin	00:00:01	1		<input type="text"/>	
22 August 2013 09:57:13	07854181348	Jennifer Lister	00:01:03	1		<input type="text"/>	
22 August 2013 15:01:48	07952931786	Alan Prentice	-	1		<input type="text"/>	
22 August 2013 20:05:41	07854180960	Alan Prentice	00:00:52	1		<input type="text"/>	
Date & time	Dialled number	Contact	Ring time				
22 August 2013 20:05:41		Alan Prentice	00:00:52				
22 August 2013 20:14:13	07971032133	Alan Prentice	00:00:46	1		<input type="text"/>	
22 August 2013 20:51:46	07940515848	Alan Prentice	00:00:09	1		<input type="text"/>	
10 rows			00:00:30				

Running the report

Click on the **Reports** tab and select **Missed calls** from the left-hand pane. The screen displaying the parameters of the report will appear, where you can configure the entity, period, filters, options and format of the report.

The screenshot shows the 'Reports' configuration interface. The 'Reports' tab is active in the top navigation bar. The left-hand pane lists various report types, with 'Missed calls' selected and highlighted. The main configuration area is divided into four sections: Entity, Period, Format, and Options. The 'Period' section is configured with 'Preset' set to 'Yesterday', 'Last' set to '1 hours', 'From' set to '15 Aug 2012 at 00:00:00', and 'To' set to '20 Aug 2013 at 23:59:59'. The 'Format' section shows 'Web' selected, with options for PDF, XML, CSV, and Excel.

For details about how to configure these parameters, refer to the relevant page(s) in the list below:

- Entity
- Period
- Filters
- Options
- Format

Creating the report

When you have configured the report's parameters, click on the **Run now** button to run the report immediately; alternatively, you can save the report's definition or schedule the report for future delivery.

The screenshot shows the 'timenterprise' web interface for creating a report. The top navigation bar includes 'Reports', 'Directory', 'Call View', 'Tariff Editor', and 'Alerts'. Below this, there are tabs for 'Create a report' and 'Scheduled reports'. A 'Report queue' icon is on the left, and 'My reports' and 'Save' icons are in the center. On the right, there are 'Schedule' and 'Run now' buttons, with the 'Run now' button highlighted by a red rectangle.

The main configuration area is divided into several sections:

- Type:** A list of report types on the left, with 'Missed calls' selected.
- Entity:** A dropdown menu showing '\ UK \ London \'. There are minus and plus icons next to the title.
- Period:** Radio buttons for 'Preset', 'Last', and 'From'. The 'Preset' option is selected, with a dropdown menu showing 'Yesterday'. Below it, 'Last' is set to '1 hours'. The 'From' date is '15 Aug 2012 at 00:00:00' and the 'To' date is '23 Aug 2013 at 23:59:59'.
- Format:** Radio buttons for 'Web', 'PDF', 'XML', and 'Excel'. The 'Web' option is selected.
- Filters:** A list of filters with minus and plus icons next to the title. Two filters are shown: 'CLI begins with 0788' and 'Duration is greater than 2'.
- Options:** A section with a minus and plus icon next to the title, currently empty.

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 missed calls						2013-08-22 13:04:30
Top \ UK \						About this report
Missed		Handled		Expand all Collapse all		
First attempt ▲	CLI	Contact	Avg ring time	Attempts	Priority	
22 August 2013 07:55:13	07883218233	Lucy White	00:00:02	1		
22 August 2013 08:25:31	07854181008	Lucy White	00:00:19	1		
22 August 2013 08:25:48	07740783158	Lucy White	00:01:03	1		
22 August 2013 08:27:46	07887618737	Lucy White	00:00:38	2		
Date & time	Dialled number	Contact	Ring time			
22 August 2013 08:27:46		Lucy White	00:00:18			
22 August 2013 08:27:46		Lucy White	00:00:58			
22 August 2013 09:20:08	01202770777	Anna Sasin	00:00:01	1		
22 August 2013 09:57:13	07854181348	Jennifer Lister	00:01:03	1		
22 August 2013 15:01:48	07952931786	Alan Prentice	-	1		
22 August 2013 20:05:41	07854180960	Alan Prentice	00:00:52	1		
Date & time	Dialled number	Contact	Ring time			
22 August 2013 20:05:41		Alan Prentice	00:00:52			
22 August 2013 20:14:13	07971032133	Alan Prentice	00:00:46	1		
22 August 2013 20:51:46	07940515848	Alan Prentice	00:00:09	1		
10 rows			00:00:30			

As with all reports produced by TIM Enterprise, 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 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

Overview

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

2013-08-23 15:11:02

Top \ UK \ London \ IT \

[About this report](#)

Bea Minor (3389)

Call charges

Date & time ▲	Dialled number	Destination	Duration	Cost
22/08/2013 06:05:58	07717189227	Vodafone	00:00:15	0.032
22/08/2013 06:05:58	07717189227	Vodafone	00:00:12	0.030
22/08/2013 08:32:56	07956116604	T-Mobile	00:00:09	0.030
22/08/2013 09:02:21	07828882231	Hutchison 3G	00:00:01	0.030
22/08/2013 11:42:48	07724559575	O2	00:00:22	0.048
22/08/2013 12:53:23	07956166876	T-Mobile	00:00:22	0.048
22/08/2013 13:20:08	07768414534	Vodafone	00:01:41	0.219
22/08/2013 14:58:06	72426320	Local Call	00:00:14	0.030
22/08/2013 14:58:06	72426320	Local Call	00:00:33	0.055
22/08/2013 16:24:33	07724559575	O2	00:00:21	0.046
22/08/2013 18:24:03	07922435007	O2	00:00:06	0.030
22/08/2013 18:58:01	07932101096	T-Mobile	00:01:51	0.240
22/08/2013 21:55:06	07958327107	T-Mobile	00:00:20	0.043
13 calls			00:06:27	0.881

Subtotal **0.881**

Sunita Patel (3400)

Call charges

Date & time ▲	Dialled number	Destination	Duration	Cost
22/08/2013 09:02:56	02085795549	London	00:00:22	0.037
22/08/2013 09:02:56	02085795549	London	00:00:26	0.043
2 calls			00:00:48	0.080

Subtotal **0.080**

Summary of bill

Bill total	0.96
Tax (20%)	0.19
Total payable	1.15

Running the report

Click on the **Reports** tab and select **Phone bill** from the left-hand pane. The screen displaying the parameters of the report will appear, where you can configure the entity, period, filters, options and format of the report.

The screenshot shows the TIM Enterprise Reports configuration interface. The top navigation bar includes 'Reports', 'Directory', 'Call View', 'Tariff Editor', and 'Alerts'. Below this, there are tabs for 'Create a report' and 'Scheduled reports'. The 'Type' sidebar on the left lists various report categories, with 'Phone bill' highlighted in a red box. The main configuration area is divided into four sections: 'Entity', 'Period', 'Format', and 'Options'. The 'Period' section shows a 'Preset' of 'Last month', 'From' date of 15 Aug 2012 at 00:00:00, and 'To' date of 23 Aug 2013 at 23:59:59. The 'Format' section shows 'Web' as the selected output format, with other options like PDF, XML, CSV, and Excel.

For details about how to configure these parameters, refer to the relevant page(s) in the list below:

- [Entity](#)
- [Period](#)
- [Filters](#)
- [Options](#)
- [Format](#)

Creating the report

When you have configured the report's parameters, click on the **Run now** button to run the report immediately; alternatively, you can save the report's definition or schedule the report for future delivery.

The screenshot shows the 'Scheduled reports' configuration interface. At the top, there are navigation tabs: 'Create a report' and 'Scheduled reports'. Below these are utility buttons: 'Report queue', 'My reports', 'Save', 'Schedule', and 'Run now' (highlighted with a red box). The main content area is divided into several sections:

- Type:** A list of report types including Account summary, Busy channels, Busy times, Call analysis, Call geography, Call scoring, Call volumes, Custom report, Daily activity, Enterprise overview, Frequent numbers, Inbound call performance, Missed calls, **Phone bill** (selected), Random call selection, Target response, Top calls, and Unused devices.
- Entity:** A folder icon followed by the path: \ UK \ London \ Accounts \.
- Period:**
 - Preset:** Last month
 - Last:** 1 hours
 - From:** 15 Aug 2012 at 00:00:00
 - To:** 23 Aug 2013 at 23:59:59
- Format:**
 - Web** (selected)
 - PDF
 - XML
 - CSV
 - Excel
- Filters:**
 - Response time is greater than 3
- Options:**
 - Hide contacts **Yes**
 - Hide unused **Yes**

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

2013-08-23 15:11:02

Top \ UK \ London \ IT \

About this report

Bea Minor (3389)

Call charges

Date & time ▲	Dialled number	Destination	Duration	Cost
22/08/2013 06:05:58	07717189227	Vodafone	00:00:15	0.032
22/08/2013 06:05:58	07717189227	Vodafone	00:00:12	0.030
22/08/2013 08:32:56	07956116604	T-Mobile	00:00:09	0.030
22/08/2013 09:02:21	07828882231	Hutchison 3G	00:00:01	0.030
22/08/2013 11:42:48	07724559575	O2	00:00:22	0.048
22/08/2013 12:53:23	07956166876	T-Mobile	00:00:22	0.048
22/08/2013 13:20:08	07768414534	Vodafone	00:01:41	0.219
22/08/2013 14:58:06	72426320	Local Call	00:00:14	0.030
22/08/2013 14:58:06	72426320	Local Call	00:00:33	0.055
22/08/2013 16:24:33	07724559575	O2	00:00:21	0.046
22/08/2013 18:24:03	07922435007	O2	00:00:06	0.030
22/08/2013 18:58:01	07932101096	T-Mobile	00:01:51	0.240
22/08/2013 21:55:06	07958327107	T-Mobile	00:00:20	0.043
13 calls			00:06:27	0.881

Subtotal **0.881**

Sunita Patel (3400)

Call charges

Date & time ▲	Dialled number	Destination	Duration	Cost
22/08/2013 09:02:56	02085795549	London	00:00:22	0.037
22/08/2013 09:02:56	02085795549	London	00:00:26	0.043
2 calls			00:00:48	0.080

Subtotal **0.080**

Summary of bill

Bill total	0.96
Tax (20%)	0.19
Total payable	1.15

s with all reports produced by TIM Enterprise, 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

Overview

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. You can annotate, score, or listen to any of the calls that appear in the report's results.

My random call selection								2013-08-23 16:50:27
Top \ UK \								About this report
<input type="radio"/> All <input type="radio"/> Outbound <input type="radio"/> Answered <input type="radio"/> Internal								
Date & Time ▲	Source	CLI	Route	Destination	Response	Duration	Cost	
2013-08-12 09:57:13	London	02072671942	-	Dusty Rhodes	-	00:01:35	-	
2013-08-12 10:10:08	London	02077772580	-	Barry Cade	-	00:01:51	-	
2013-08-12 10:21:56	Vodafone	07787500043	-	Barb E. Dahl	-	00:00:48	-	
2013-08-12 10:32:11	Mona Lott	-	07951385212	T-Mobile	-	00:00:08	0.030	
2013-08-12 10:34:43	UNAVAILABLE	-	-	Megan Doyle	-	00:01:11	-	
2013-08-12 10:36:23	UNAVAILABLE	-	-	Barb E. Dahl	-	00:00:32	-	
2013-08-12 13:33:38	Hazel Nutt	-	2062	Adam Zapel	-	00:00:18	-	
2013-08-12 13:47:16	Carl Mason	-	07813933029	Orange	-	00:00:03	0.030	
2013-08-12 15:40:51	Mike Stand	-	07956727125	T-Mobile	-	00:00:31	0.067	
2013-08-12 16:14:56	T-Mobile	07956403840	-	Mike Francis	27	00:00:49	-	
2013-08-13 09:19:18	Mary Christmas	-	1050	Gerry Clunes	-	00:05:31	-	
2013-08-13 09:28:08	London	02070488595	-	Barbara Seville	18	00:02:03	-	
2013-08-13 14:11:28	UNAVAILABLE	-	-	Anita Bath	-	00:00:49	-	
2013-08-13 17:09:28	UNAVAILABLE	-	-	Barry Cade	-	00:00:12	-	
2013-08-13 18:53:51	UNAVAILABLE	-	-	Constance Noring	-	00:01:13	-	
2013-08-13 19:02:58	London	02074712347	-	Doug Graves	-	00:02:09	-	
2013-08-13 20:51:41	Vodafone	07771566118	-	Jim Shorts	-	00:02:50	-	
2013-08-13 21:27:28	O2	07739694989	-	Brandon Cattell	-	00:00:58	-	
2013-08-13 23:07:31	London	02074129204	-	Brina Smith	-	00:00:06	-	
2013-08-14 00:47:11	UNAVAILABLE	-	-	Barb E. Dahl	-	00:01:42	-	
2013-08-14 08:27:46	Orange	07854181706	-	Reese Francis	4	00:00:10	-	
2013-08-14 15:06:53	Kathy Burke	-	2044	Gwyn Osbourne	-	00:00:24	-	
2013-08-15 01:33:28	Anna Sasin	-	07808791272	O2	-	00:00:12	0.030	
2013-08-15 09:07:28	Orange	07812357079	-	Billy Byrne	4	00:01:08	-	
2013-08-15 12:31:21	T-Mobile	07940341885	-	Sally Forth	-	00:00:47	-	
2013-08-15 15:09:38	UNAVAILABLE	-	-	Jo King	-	00:00:20	-	
2013-08-15 16:53:46	Arthur Gros	-	Joe Bloggs Mobile	Hutchison 3G	-	00:08:22	1.088	
2013-08-15 22:19:21	London	02079385700	-	Barb E. Dahl	-	00:03:08	-	
2013-08-16 01:55:38	London	02074955999	-	Barb Dwyer	-	00:03:18	-	
2013-08-16 09:24:26	London	02079092000	-	Jo King	-	00:01:35	-	

Running the report

Click on the **Reports** tab and select **Random Call Selection** from the left-hand pane. The screen displaying the parameters of the report will appear, where you can configure the entity, period, filters, options and format of the report.

The screenshot shows the TIM Enterprise Reports configuration interface. The top navigation bar includes 'Reports', 'Directory', 'Call View', 'Tariff Editor', and 'Alerts'. Below this, there are tabs for 'Create a report' and 'Scheduled reports'. The left sidebar lists various report types, with 'Random call selection' highlighted. The main area is divided into four sections: Entity, Period, Format, and Options. The Period section is configured with 'Preset' set to 'Yesterday', 'Last' set to '1 hours', 'From' set to '15 Aug 2012 at 00:00:00', and 'To' set to '27 Aug 2013 at 23:59:59'. The Format section shows 'Web' selected as the output format, with options for PDF, XML, CSV, and Excel.

For details about how to configure these parameters, refer to the relevant page(s) in the list below:

- Entity
- Period
- Filters
- Options
- Format

Creating the report

When you have configured the report's parameters, click on the **Run now** button to run the report immediately; alternatively, you can save the report's definition or schedule the report 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								2013-08-23 16:50:27
Top \ UK \								About this report
All	Outbound	Answered	Internal					
Date & Time ▲	Source	CLI	Route	Destination	Response	Duration	Cost	
2013-08-12 09:57:13	London	02072671942	-	Dusty Rhodes	-	00:01:35	-	
2013-08-12 10:10:08	London	02077772580	-	Barry Cade	-	00:01:51	-	
2013-08-12 10:21:56	Vodafone	07787500043	-	Barb E. Dahl	-	00:00:48	-	
2013-08-12 10:32:11	Mona Lott	-	07951385212	T-Mobile	-	00:00:08	0.030	
2013-08-12 10:34:43	UNAVAILABLE	-	-	Megan Doyle	-	00:01:11	-	
2013-08-12 10:36:23	UNAVAILABLE	-	-	Barb E. Dahl	-	00:00:32	-	
2013-08-12 13:33:38	Hazel Nutt	-	2062	Adam Zapel	-	00:00:18	-	
2013-08-12 13:47:16	Carl Mason	-	07813933029	Orange	-	00:00:03	0.030	
2013-08-12 15:40:51	Mike Stand	-	07956727125	T-Mobile	-	00:00:31	0.067	
2013-08-12 16:14:56	T-Mobile	07956403840	-	Mike Francis	27	00:00:49	-	
2013-08-13 09:19:18	Mary Christmas	-	1050	Gerry Clunes	-	00:05:31	-	
2013-08-13 09:28:08	London	02070488595	-	Barbara Seville	18	00:02:03	-	
2013-08-13 14:11:28	UNAVAILABLE	-	-	Anita Bath	-	00:00:49	-	
2013-08-13 17:09:28	UNAVAILABLE	-	-	Barry Cade	-	00:00:12	-	
2013-08-13 18:53:51	UNAVAILABLE	-	-	Constance Noring	-	00:01:13	-	
2013-08-13 19:02:58	London	02074712347	-	Doug Graves	-	00:02:09	-	
2013-08-13 20:51:41	Vodafone	07771566118	-	Jim Shortes	-	00:02:50	-	
2013-08-13 21:27:28	O2	07739694989	-	Brandon Cattel	-	00:00:58	-	
2013-08-13 23:07:31	London	02074129204	-	Brina Smith	-	00:00:06	-	
2013-08-14 00:47:11	UNAVAILABLE	-	-	Barb E. Dahl	-	00:01:42	-	
2013-08-14 08:27:46	Orange	07854181706	-	Reese Francis	4	00:00:10	-	
2013-08-14 15:06:53	Kathy Burke	-	2044	Gwyn Osbourne	-	00:00:24	-	
2013-08-15 01:33:28	Anna Sasin	-	07808791272	O2	-	00:00:12	0.030	
2013-08-15 09:07:28	Orange	07812357079	-	Billy Byrne	4	00:01:08	-	
2013-08-15 12:31:21	T-Mobile	07940341885	-	Sally Forth	-	00:00:47	-	
2013-08-15 15:09:38	UNAVAILABLE	-	-	Jo King	-	00:00:20	-	
2013-08-15 16:53:46	Arthur Gros	-	Joe Bloggs Mobile	Hutchison 3G	-	00:08:22	1.088	
2013-08-15 22:19:21	London	02079385700	-	Barb E. Dahl	-	00:03:08	-	
2013-08-16 01:55:38	London	02074955999	-	Barb Dwyer	-	00:03:18	-	
2013-08-16 09:24:26	London	02079092000	-	Jo King	-	00:01:35	-	

As with all reports produced by TIM Enterprise, 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: <ul style="list-style-type: none"> ▪ for incoming calls, this shows the CLI of the caller ▪ for incoming internal calls, this shows either the caller's username or extension number ▪ for outgoing calls, this shows the dialled number
Destination	The information displayed in this field is determined by the type of call: <ul style="list-style-type: none"> ▪ for incoming calls, this shows the name of the user whose extension answered the call, or the extension number if not available ▪ for outgoing calls, this shows the geographical location that was dialled, or an alias if defined in your contacts list ▪ 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

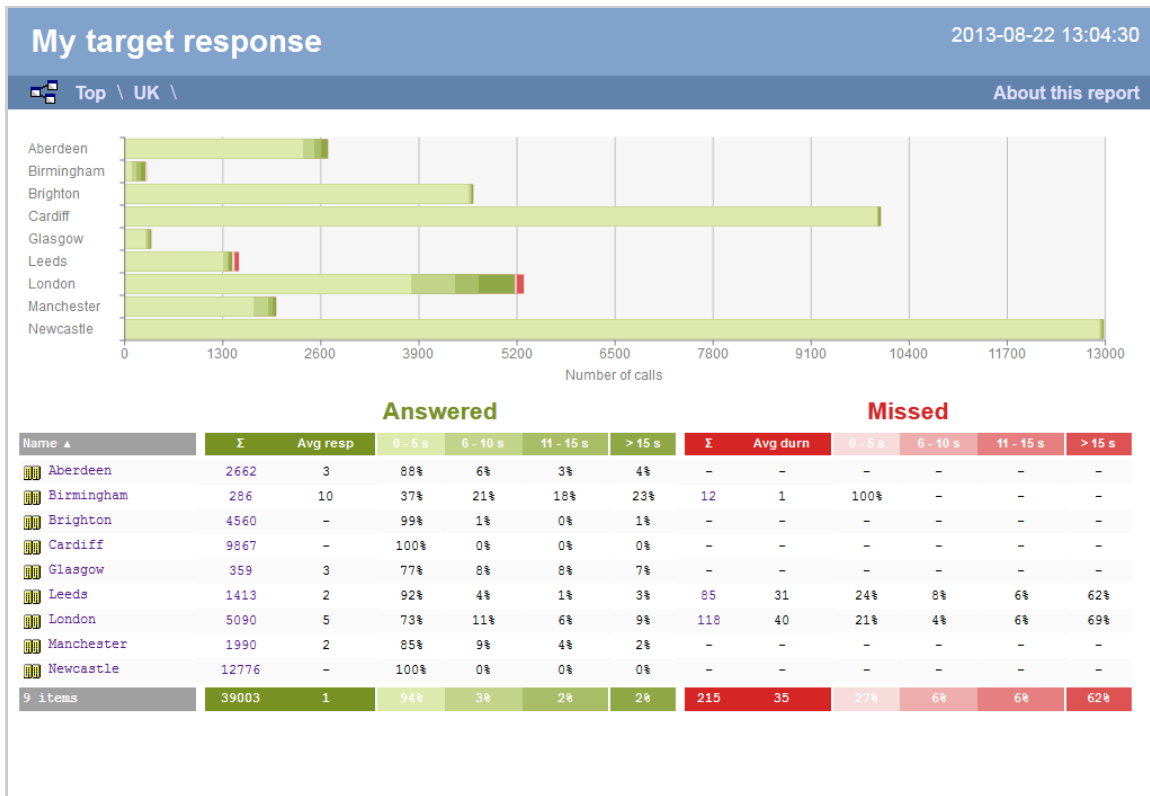
To modify your report to cover a larger organisational scope, click on an element of the breadcrumb as shown below:



Target Response

Overview

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

Click on the **Reports** tab and select **Target response** from the left-hand pane. The screen displaying the parameters of the report will appear, where you can configure the entity, period, filters, options and format of the report.

timenterprise | Reports | Directory | Call View | Tariff Editor | Alerts

Create a report | Scheduled reports

Report queue | My reports | Save | Schedule | Run now

Type

- Account summary
- Busy channels
- Busy times
- Call analysis
- Call geography
- Call scoring
- Call volumes
- Custom report
- Daily activity
- Enterprise overview
- Frequent numbers
- Inbound call performance
- Missed calls
- Phone bill
- Random call selection
- Target response**
- Top calls
- Unused devices
- User activity

Entity

Period

Preset: Yesterday

Last: 1 hours

From: 15 Aug 2012 at 00:00:00

To: 27 Aug 2013 at 23:59:59

Format

Web

PDF

XML

CSV

Excel

Filters

Options

For details about how to configure these parameters, refer to the relevant page(s) in the list below:

- Entity
- Period
- Filters
- Options
- Format

Creating the report

When you have configured the report's parameters, click on the **Run now** button to run the report immediately; alternatively, you can save the report's definition or schedule the report for future delivery.

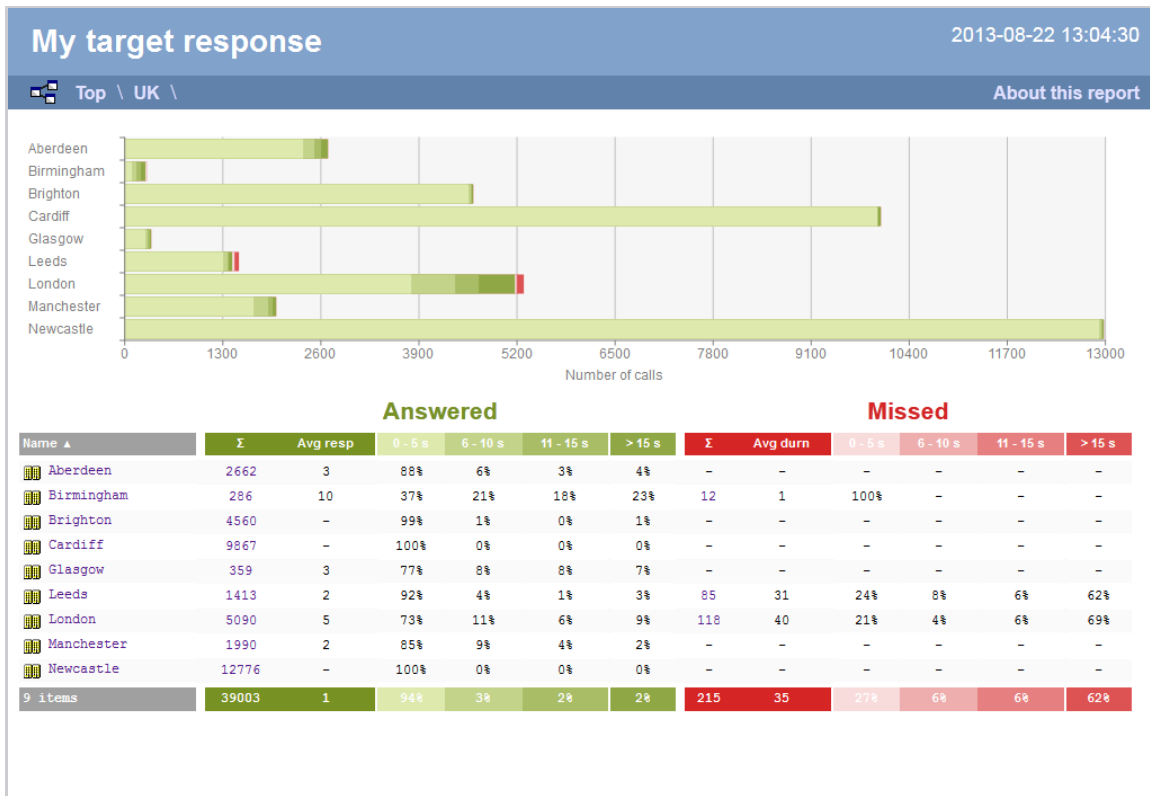
The screenshot shows the 'timenterprise' interface for creating a report. The top navigation bar includes 'Reports', 'Directory', 'Call View', 'Tariff Editor', and 'Alerts'. Below this, there are tabs for 'Create a report' and 'Scheduled reports'. A 'Report queue' icon is on the left, and 'My reports' and 'Save' icons are in the center. On the right, there are 'Schedule' and 'Run now' buttons, with 'Run now' highlighted by a red box.

The main configuration area is divided into several sections:

- Type:** A list of report types on the left, with 'Target response' selected.
- Entity:** A dropdown menu showing '\ UK \ London \'. There are minus and plus icons next to the title.
- Period:** Radio buttons for 'Preset', 'Last', and 'From'. The 'Preset' option is selected, with a dropdown menu showing 'Yesterday'. Below it, there are input fields for '1 hours', 'From 15 Aug 2012 at 00:00:00', and 'To 27 Aug 2013 at 23:59:59'.
- Format:** Radio buttons for 'Web', 'PDF', 'XML', 'CSV', and 'Excel'. The 'Web' option is selected.
- Filters:** A section with a minus and plus icon, currently empty.
- Options:** A section with a minus and plus icon, containing a checkbox for 'Exclude weekends' which is checked and labeled 'Yes'.

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.



As with all reports produced by TIM Enterprise, 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.

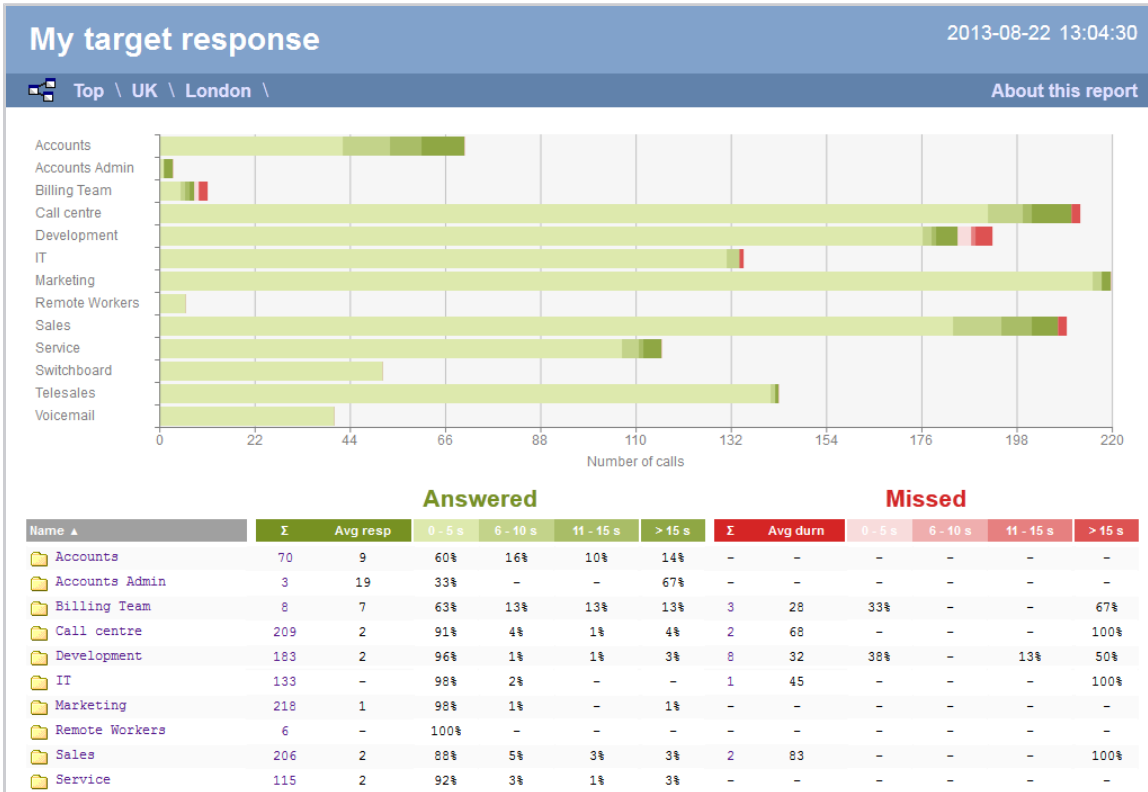
The body of the report consists of a table showing a summary of call information for the period you selected, grouped by entity. Each column header of the table is described below:

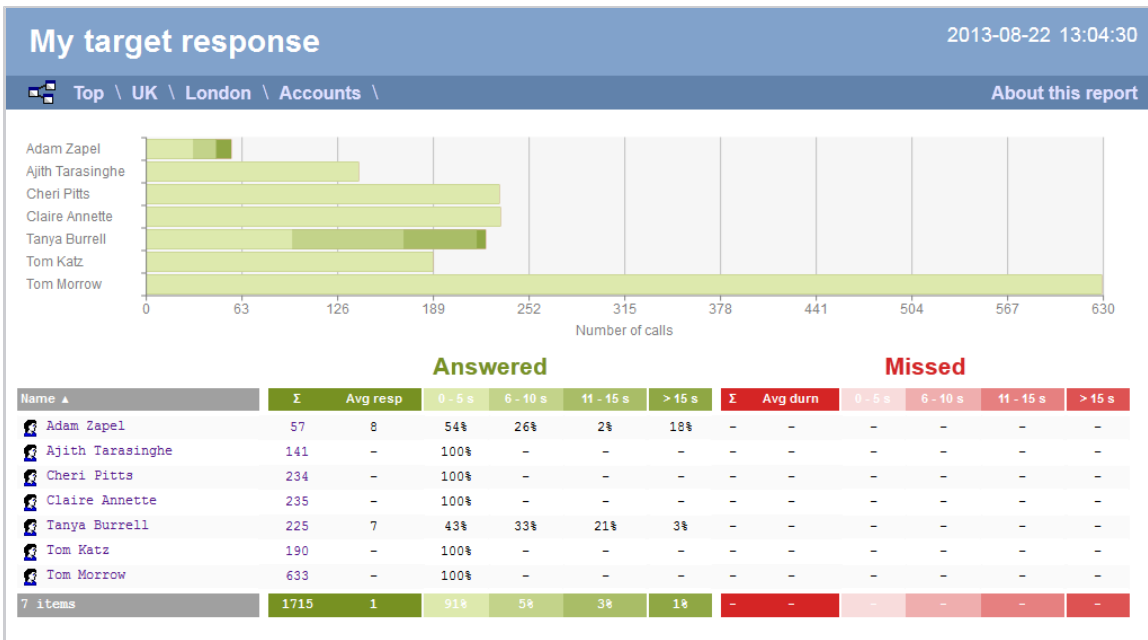
Header	Description
Name	The name of the entity for each line of data
Answered	<ul style="list-style-type: none"> ▪ Σ : The total volume of calls received for each entity ▪ Avg resp: The average response time of all answered calls in each period ▪ x-xx s: The percentage of calls that were answered within each predefined target, e.g. if 50% is displayed under the 0-5s heading, half of all calls were answered sooner than 5 seconds

Missed

- **Σ** : The total number of missed calls for each entity
- **Avg durn**: The average length of time a missed call rang before being abandoned
- **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

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.





To modify your report to cover a larger organisational scope, click on an element of the breadcrumb as shown below:



Top Calls

Overview

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

2013-08-23 13:34:30

Top \ UK \ London \ Accounts \ About this report

All | **Outbound**

Date & Time	Source	CLI	Route	Destination	Response	Duration	Cost
05/03/2012 12:26:21	Adam Zapel	-	07905501453	T-Mobile	-	00:05:20	0.693
20/03/2012 12:26:21	Adam Zapel	-	07905501453	T-Mobile	-	00:05:06	0.663
12/03/2012 12:26:21	Adam Zapel	-	07905036413	T-Mobile	-	00:04:59	0.648
29/03/2012 09:46:41	Adam Zapel	-	00972525456330	Israel Mobile	-	00:00:32	0.613
19/03/2012 12:26:21	Adam Zapel	-	07905501453	T-Mobile	-	00:04:39	0.604
15/03/2012 12:26:21	Adam Zapel	-	07905501453	T-Mobile	-	00:04:23	0.570
18/03/2012 12:26:21	Adam Zapel	-	07905501453	T-Mobile	-	00:03:53	0.505
21/03/2012 09:46:41	Adam Zapel	-	00972525456330	Israel Mobile	-	00:00:27	0.472
17/03/2012 12:26:21	Adam Zapel	-	07905501453	T-Mobile	-	00:03:18	0.429
19/03/2012 11:07:08	Adam Zapel	-	02076232323	London	-	00:04:29	0.404
10 calls						00:37:06	5.601

Running the report

Click on the Reports tab and select Top calls from the left-hand pane. The screen displaying the parameters of the report will

appear, where you can configure the entity, period, filters, options and format of the report.

The screenshot shows the 'Reports' configuration page in the TIM Enterprise interface. The 'Type' list on the left includes 'Top calls', which is highlighted. The 'Period' section is configured with 'Preset' selected and 'Yesterday' in the dropdown. The 'Format' section has 'Web' selected. The 'Entity', 'Filters', and 'Options' sections are currently empty.

For details about how to configure these parameters, refer to the relevant page(s) in the list below:

- Entity
- Period
- Filters
- Options
- Format

Creating the report

When you have configured the report's parameters, click on the **Run now** button to run the report immediately; alternatively, you can save the report's definition or schedule the report for future delivery.

timenterprise Reports Directory Call View Tariff Editor Alerts

Create a report Scheduled reports

Report queue My reports Save Schedule **Run now**

Type

- Account summary
- Busy channels
- Busy times
- Call analysis
- Call geography
- Call scoring
- Call volumes
- Custom report
- Daily activity
- Enterprise overview
- Frequent numbers
- Inbound call performance
- Missed calls
- Phone bill
- Random call selection
- Target response
- Top calls**
- Unused devices
- User activity

Entity \ UK \ London \

Period

Preset Yesterday

Last 1 hours

From 15 Aug 2012 at 00:00:00

To 27 Aug 2013 at 23:59:59

Format

Web PDF

XML CSV

Excel

Filters

Response time is greater than 3

Options

Exclude weekends Yes

The report's results

Below is an example of this report's output in web format:

My top calls								2013-08-23 13:34:30
Top \ UK \ London \ Accounts \								About this report
<input type="button" value="All"/> <input type="button" value="Outbound"/>								
Date & Time	Source	CLI	Route	Destination	Response	Duration	Cost	
05/03/2012 12:26:21	Adam Zapel	-	07905501453	T-Mobile	-	00:05:20	0.693	
20/03/2012 12:26:21	Adam Zapel	-	07905501453	T-Mobile	-	00:05:06	0.663	
12/03/2012 12:26:21	Adam Zapel	-	07905036413	T-Mobile	-	00:04:59	0.648	
29/03/2012 09:46:41	Adam Zapel	-	00972525456330	Israel Mobile	-	00:00:32	0.613	
19/03/2012 12:26:21	Adam Zapel	-	07905501453	T-Mobile	-	00:04:39	0.604	
15/03/2012 12:26:21	Adam Zapel	-	07905501453	T-Mobile	-	00:04:23	0.570	
18/03/2012 12:26:21	Adam Zapel	-	07905501453	T-Mobile	-	00:03:53	0.505	
21/03/2012 09:46:41	Adam Zapel	-	00972525456330	Israel Mobile	-	00:00:27	0.472	
17/03/2012 12:26:21	Adam Zapel	-	07905501453	T-Mobile	-	00:03:18	0.429	
19/03/2012 11:07:08	Adam Zapel	-	02076232323	London	-	00:04:29	0.404	
10 calls						00:37:06	5.601	

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 Enterprise, 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: <ul style="list-style-type: none"> ▪ for incoming calls, this shows the CLI of the caller ▪ for incoming internal calls, this shows either the caller's username or extension number ▪ for outgoing calls, this shows the dialled number
Destination	The information displayed in this field is determined by the type of call: <ul style="list-style-type: none"> ▪ for incoming calls, this shows the name of the user whose extension answered the call, or the extension number if not available ▪ for outgoing calls, this shows the geographical location that was dialled, or an alias if defined in your contacts list ▪ 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

Overview

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.

My unused devices						2013-08-23 13:04:30
Top \ UK \ 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						

Running the report

Click on the **Reports** tab and select **Unused devices** from the left-hand pane. The screen displaying the parameters of the report will appear, where you can configure the entity, period, filters, options and format of the report.

The screenshot shows the 'Reports' configuration page in the TIM Enterprise system. The 'Reports' tab is highlighted in red. The left-hand pane lists various report types, with 'Unused devices' selected and highlighted in red. The main configuration area is divided into several sections:

- Entity:** A section for selecting the report entity, currently empty.
- Period:** A section for selecting the report period. The 'Preset' is set to 'Yesterday'. Other options include 'Last' (1 hours) and 'From' (15 Aug 2012 at 00:00:00 to 27 Aug 2013 at 23:59:59).
- Format:** A section for selecting the report format. The 'Web' format is selected. Other options include PDF, XML, CSV, and Excel.
- Filters:** A section for selecting report filters, currently empty.
- Options:** A section for selecting report options, currently empty.

For details about how to configure these parameters, refer to the relevant page(s) in the list below:

- [Entity](#)
- [Period](#)

- Filters
- Options
- Format

Creating the report

When you have configured the report's parameters, click on the **Run now** button to run the report immediately; alternatively, you can save the report's definition or schedule the report for future delivery.

The screenshot shows the 'Create a report' interface in the TIM Enterprise system. The top navigation bar includes 'Reports', 'Directory', 'Call View', 'Tariff Editor', and 'Alerts'. The main header has 'Create a report' and 'Scheduled reports' tabs. Below the header, there are buttons for 'Report queue', 'My reports', 'Save', 'Schedule', and 'Run now' (highlighted with a red box). The main content area is divided into several sections:

- Type:** A list of report types on the left, with 'Unused devices' selected.
- Entity:** A field containing '\ UK \ London \'. There are minus and plus icons next to the title.
- Period:** Configuration for the report's time range.
 - Preset:** 'Yesterday' (selected)
 - Last:** '1' hours
 - From:** '15' 'Aug' '2012' at '00:00:00'
 - To:** '27' 'Aug' '2013' at '23:59:59'
- Format:** Selection of output format.
 - Web:** (selected)
 - PDF, XML, CSV, Excel (available options)
- Filters:** A section with minus and plus icons, currently empty.
- Options:** A section with minus and plus icons.
 - Show "Do not log" devices:** Yes (selected)

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						2013-08-23 13:04:30	
Top \ UK \ London \ Accounts \					About this report		
<input checked="" type="button" value="Users"/>		<input type="button" value="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		2013-08-23 13:04:30
Top \ UK \ London \ Accounts \		About this report
<input checked="" type="button" value="Users"/>		<input type="button" value="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 Enterprise, 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 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

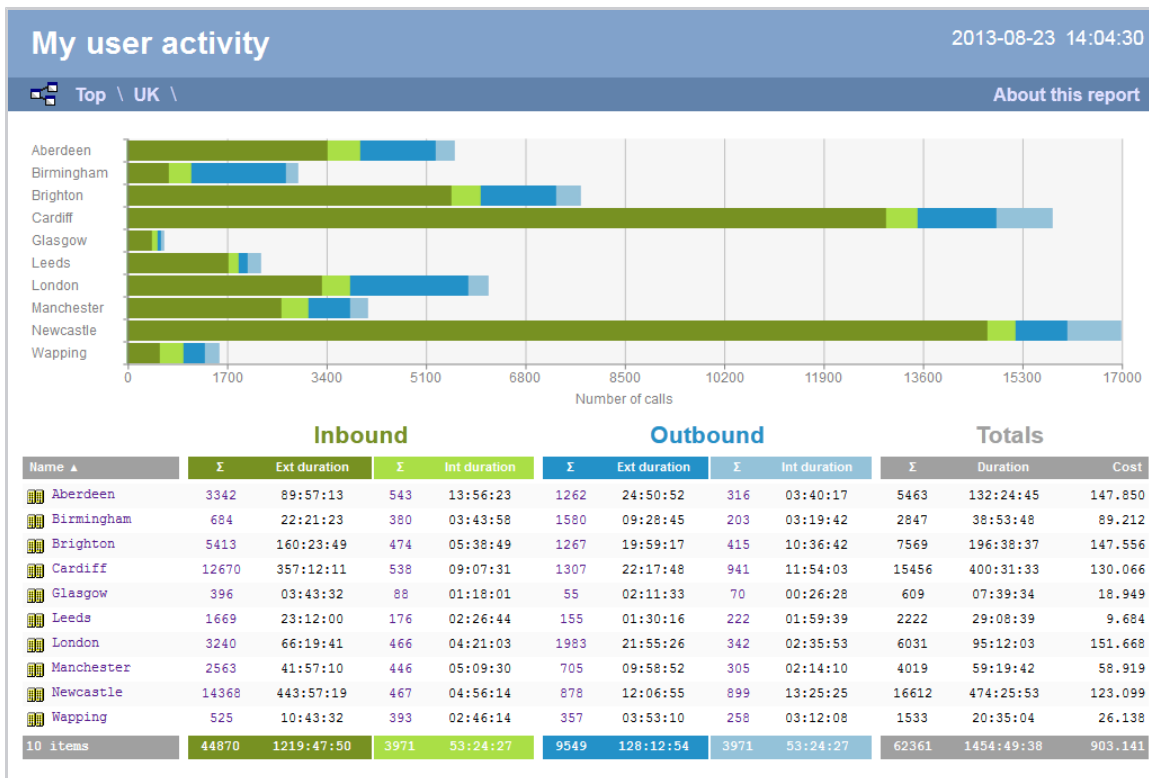
To modify your report to cover a larger organisational scope, click on an element of the breadcrumb as shown below:

Top \
 UK \
 London \
 Accounts \
 About this report

User Activity

Overview

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.



Running the report

Click on the **Reports** tab and select **User activity** from the left-hand pane. The screen displaying the parameters of the report will appear, where you can configure the entity, period, filters, options and format of the report.

The screenshot shows the TIM Enterprise Reports configuration interface. The top navigation bar includes 'Reports', 'Directory', 'Call View', 'Tariff Editor', and 'Alerts'. Below this, there are tabs for 'Create a report' and 'Scheduled reports'. The left-hand pane, titled 'Type', lists various report categories, with 'User activity' selected and highlighted. The main area is divided into four sections: 'Entity', 'Period', 'Format', and 'Options'. The 'Period' section is configured with 'Preset' set to 'Yesterday', 'Last' set to '1 hours', and 'From' set to '15 Aug 2012 at 00:00:00' and 'To' set to '27 Aug 2013 at 23:59:59'. The 'Format' section shows 'Web' selected as the output format, with other options like PDF, XML, CSV, and Excel visible.

For details about how to configure these parameters, refer to the relevant page(s) in the list below:

- Entity
- Period
- Filters
- Options
- Format

Creating the report

When you have configured the report's parameters, click on the **Run now** button to run the report immediately; alternatively, you can save the report's definition or schedule the report 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 Enterprise, 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

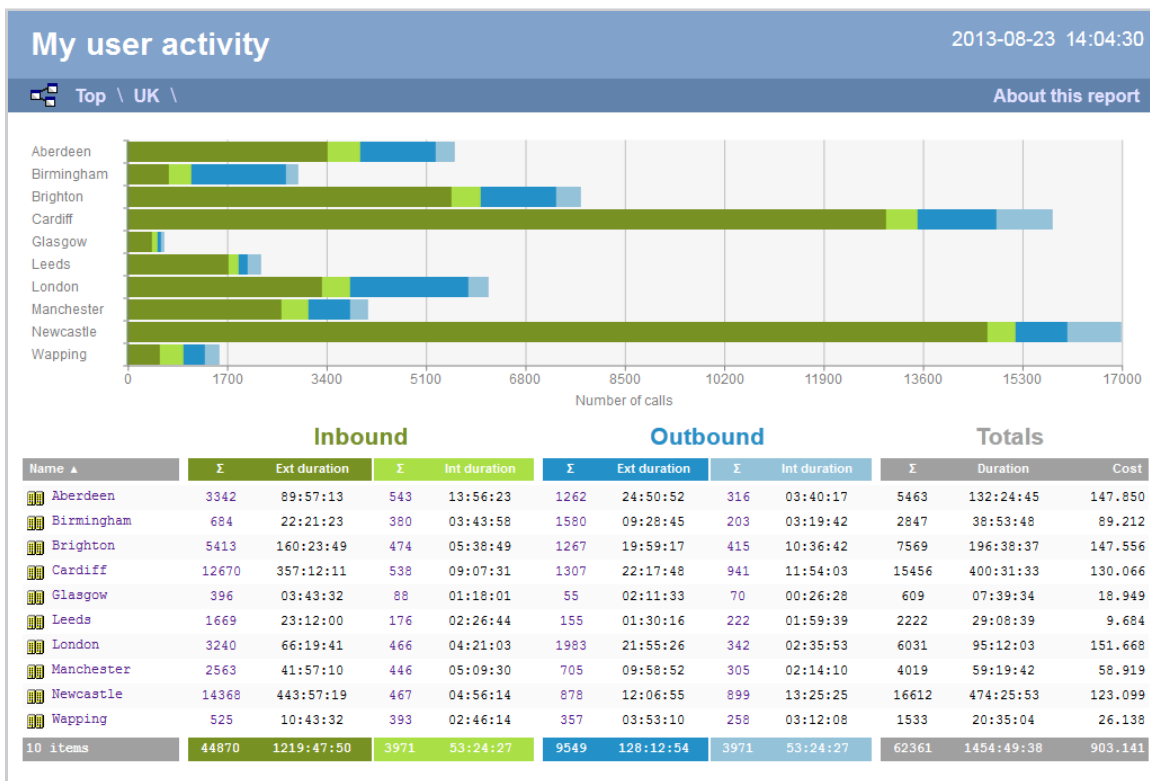
The **web** format is the most interactive of all formats: all column headers are click-sortable and most graphical and tabular elements can be drilled down into, allowing deeper analysis of your results.

Results are shown for each organisational level: site, group and individual user, where a table is shown with the following headers:

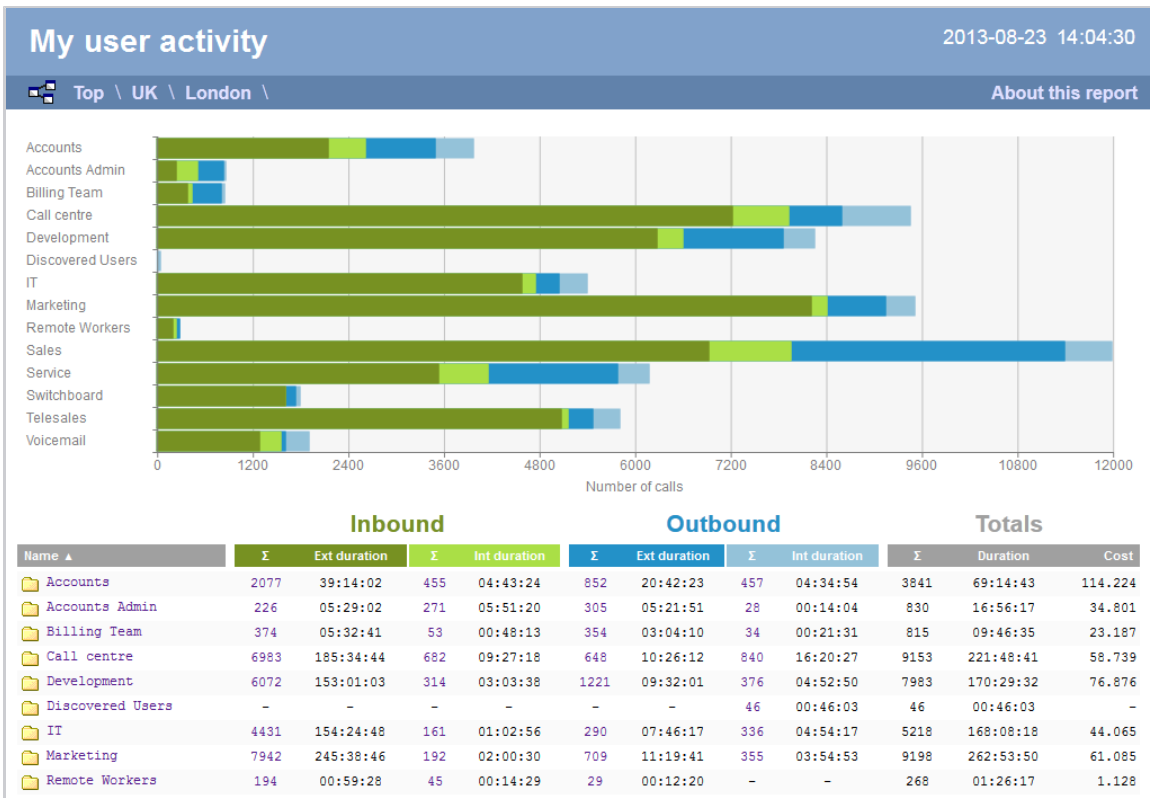
Header	Description
Name	The name of the entity for each line of data
Inbound	<ul style="list-style-type: none"> ▪ Count: The number of inbound answered calls, including transferred calls ▪ Ext duration: The total duration of all inbound external calls (in hours, minutes and seconds) ▪ Int duration: The total duration of all inbound internal calls (in hours, minutes and seconds)

Outbound	<ul style="list-style-type: none"> ▪ : The number of outbound calls made ▪ Ext duration: The total duration of all outbound external calls (in hours, minutes and seconds) ▪ Int duration: The total duration of all outbound internal calls (in hours, minutes and seconds)
Totals	<ul style="list-style-type: none"> ▪ : The total number of calls including all inbound and outbound, both internal and external ▪ Duration: The total duration of time spent on all inbound and outbound calls ▪ Cost: The total cost of all calls

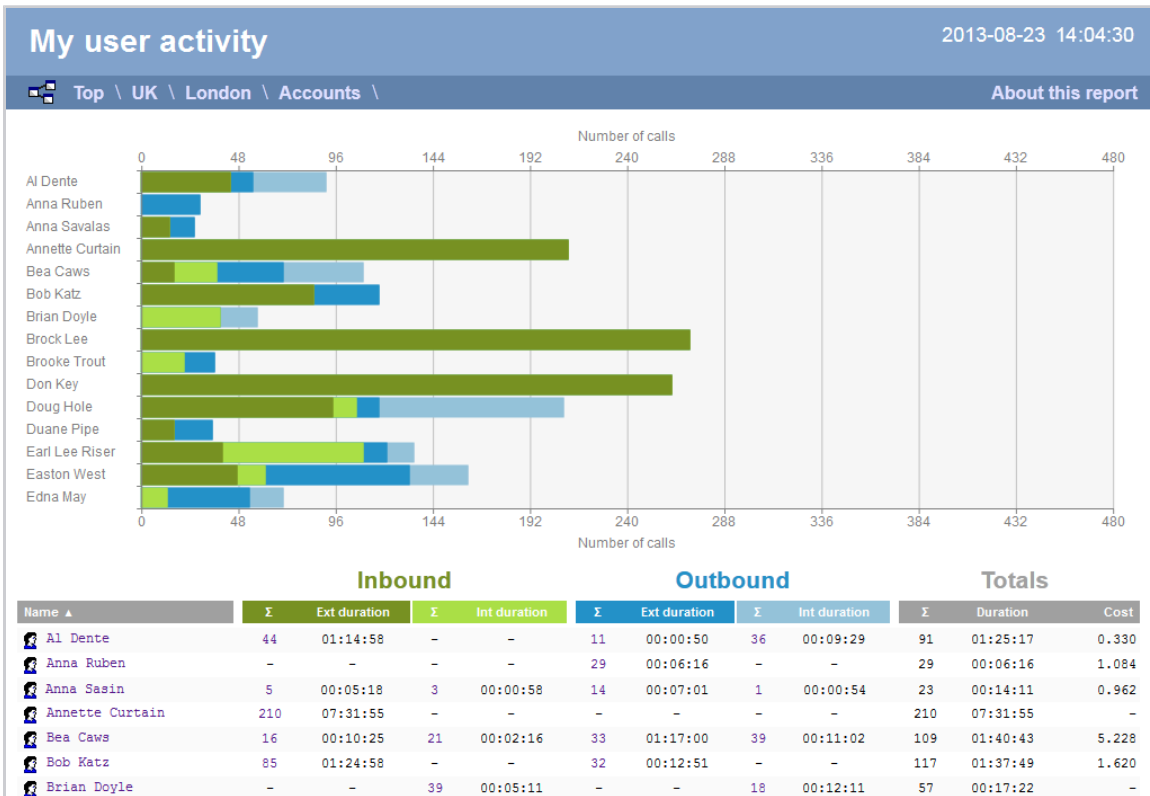
Site level



Group level



Individual user level



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							2013-08-23 14:04:30	
Top \ UK \ London \ Accounts \ Anna Sasin \							About this report	
All	Outbound	Answered	Missed	Internal				
Date & Time ▲	Source	CLI	Route	Destination	Response	Duration	Cost	
26/08/2013 01:33:28	Anna Sasin	-	07808791272	O2	-	00:00:05	0.030	
26/08/2013 05:03:13	Anna Sasin	-	07772467504	Orange	-	00:00:06	0.030	
26/08/2013 05:06:41	Anna Sasin	-	07919185533	Vodafone	-	00:00:01	0.030	
26/08/2013 06:32:53	Anna Sasin	-	07877774520	Hutchison 3G	-	00:00:13	0.030	
26/08/2013 06:56:13	Jean Poole	-	3380	Anna Sasin	-	00:00:24	-	
26/08/2013 07:27:03	Anna Sasin	-	07775863304	Vodafone	-	00:00:10	0.030	
26/08/2013 08:26:58	Orange	07854181742	-	Anna Sasin	6	00:00:30	-	
26/08/2013 08:39:53	Pat Downe	-	3380	Anna Sasin	-	00:00:23	-	
26/08/2013 09:10:08	Orange	07976222991	-	Anna Sasin	4	00:00:45	-	
26/08/2013 09:20:08	Bournemouth	01202227477	-	Anna Sasin	-	-	-	
26/08/2013 14:10:13	Mica Balik	-	3380	Anna Sasin	-	00:00:11	-	
26/08/2013 14:57:46	O2	07701014548	-	Anna Sasin	1	00:00:49	-	
26/08/2013 15:25:23	Anna Sasin	-	77798888	Local Call	-	00:03:30	0.350	
26/08/2013 15:36:41	Anna Sasin	-	2041	Ceri Mason	-	00:00:54	-	
26/08/2013 15:51:48	Anna Sasin	-	07773499227	Orange	-	00:00:31	0.067	
26/08/2013 15:52:38	Anna Sasin	-	07773664507	Orange	-	00:00:01	0.030	
26/08/2013 16:24:53	Anna Sasin	-	07841236238	O2	-	00:00:03	0.030	
26/08/2013 16:44:21	Anna Sasin	-	07769701646	Vodafone	-	00:00:11	0.030	
26/08/2013 17:23:53	Anna Sasin	-	07771580014	Vodafone	-	00:00:45	0.098	
26/08/2013 18:00:01	Anna Sasin	-	07908743502	T-Mobile	-	00:01:08	0.147	
26/08/2013 20:19:46	Anna Sasin	-	07877751586	Hutchison 3G	-	00:00:11	0.030	
26/08/2013 22:27:13	T-Mobile	07984625953	-	Anna Sasin	5	00:03:14	-	
26/08/2013 22:32:48	Anna Sasin	-	07800523337	Orange	-	00:00:06	0.030	
23 calls						00:14:11	0.962	

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: <ul style="list-style-type: none"> for incoming calls, this shows the CLI of the caller for incoming internal calls, this shows either the caller's username or extension number for outgoing calls, this shows the dialled number
Destination	The information displayed in this field is determined by the type of call: <ul style="list-style-type: none"> for incoming calls, this shows the name of the user whose extension answered the call, or the extension number if not available for outgoing calls, this shows the geographical location that was dialled, or an alias if defined in your contacts list 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 video

Understanding the Directory

Understanding the Directory

- Directory overview
- Accessing the Directory
- Adding objects to the Directory
- Moving objects within the Directory

Directory overview

TIM Enterprise is designed upon an object-based directory that places no limits on its hierarchical width or depth. This approach permits the integration of multiple sites within one centralised system, where every user can be grouped into folders, sites, cost centres and divisions, allowing you to create an exact replica of your company's internal structure.

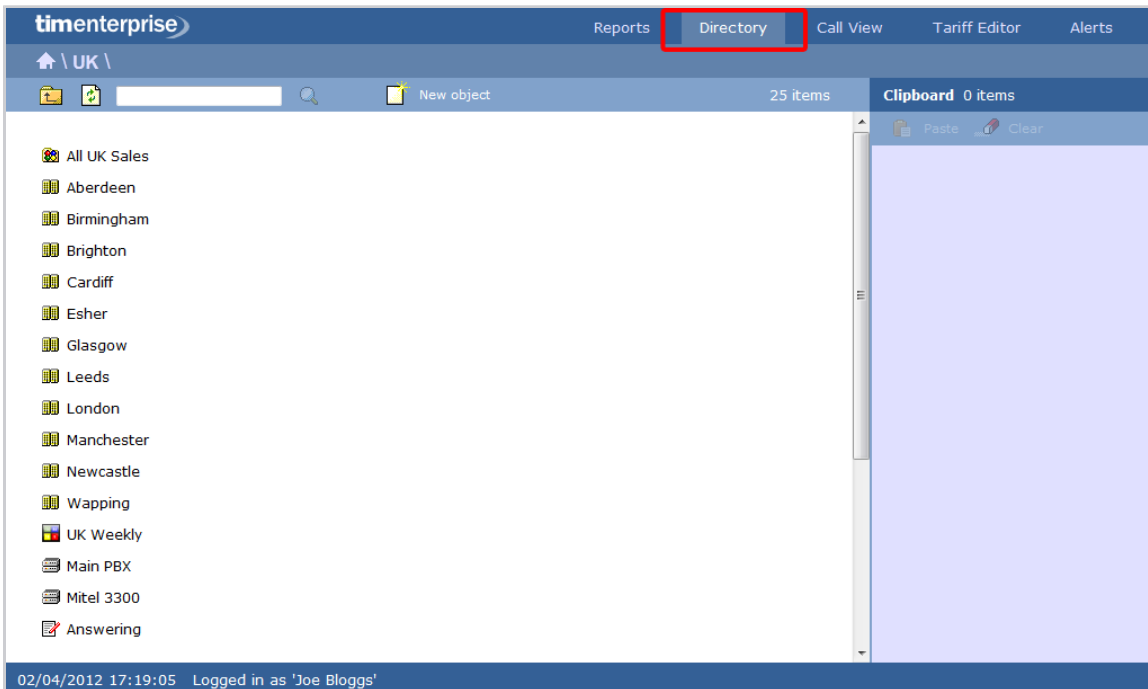
Every system object of the Directory has an explicit, defined relationship with its peers and an entire tree of related objects can be defined, with no width or depth limits of the branches.



To facilitate the configuration and management of large systems, TIM Enterprise supports directory synchronisation with third-party applications such as Active Directory and Cisco AXL.

Accessing the Directory

To access the Directory, click on the **Directory** tab from the main menu tab, as shown below:

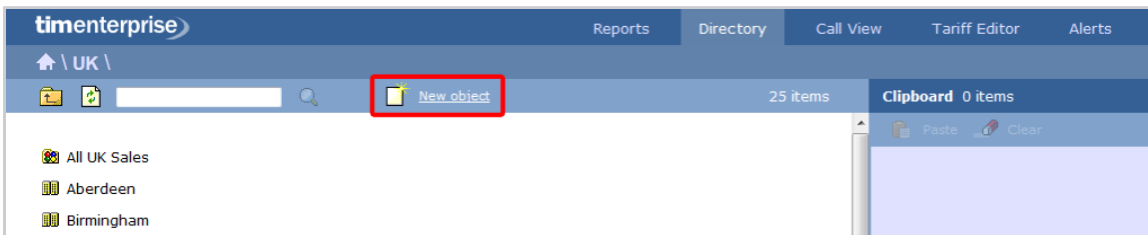




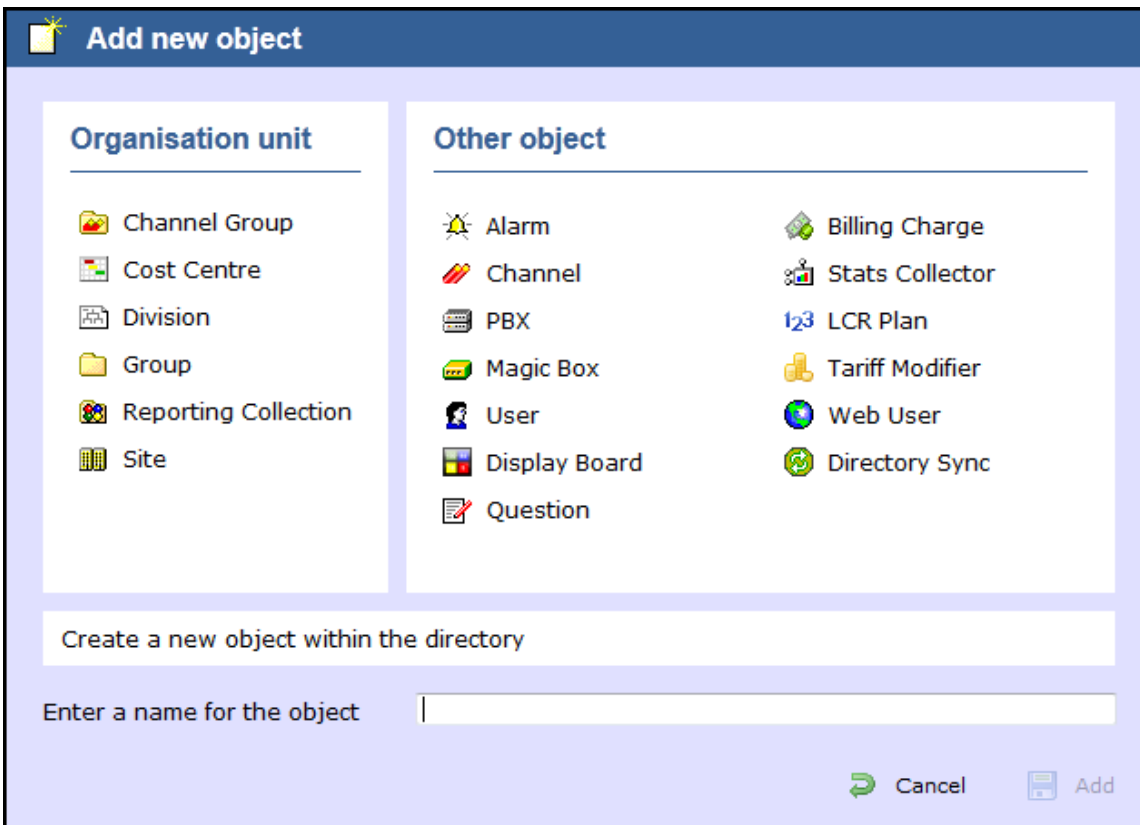
If you are logged in as a standard web user whose access is restricted to a specific site or group, only the information related to that site or group will be displayed in the Directory. For administrative privileges, contact your system maintainer.

Adding objects to the Directory

To add objects to the Directory, click on the **New object** tab, as shown below:



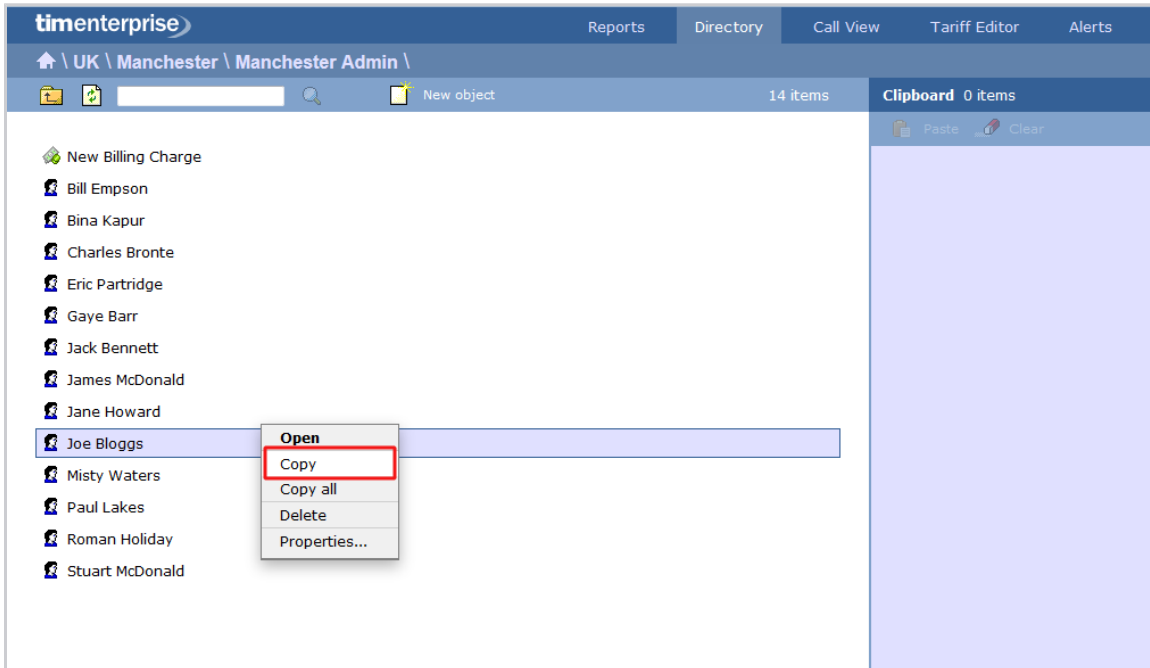
A new window will open, displaying two categories of objects: Organisation units and Other objects. For a detailed description of each object type, refer to the relevant section.



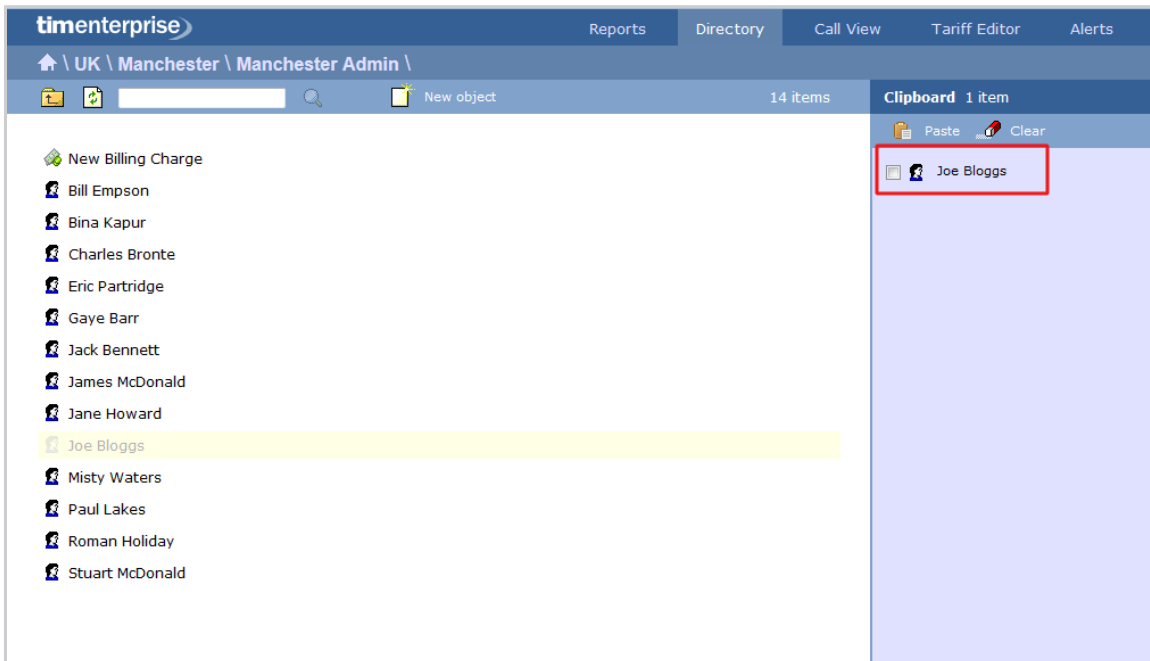
Moving objects within the Directory

To move objects within the Directory, follow the steps below:

1. Locate in the Directory the object you want to move, click on it and select **Copy** from the drop-down list. In the example below, the user Joe Bloggs is being moved from **Manchester Admin** group to **Manchester Sales**.

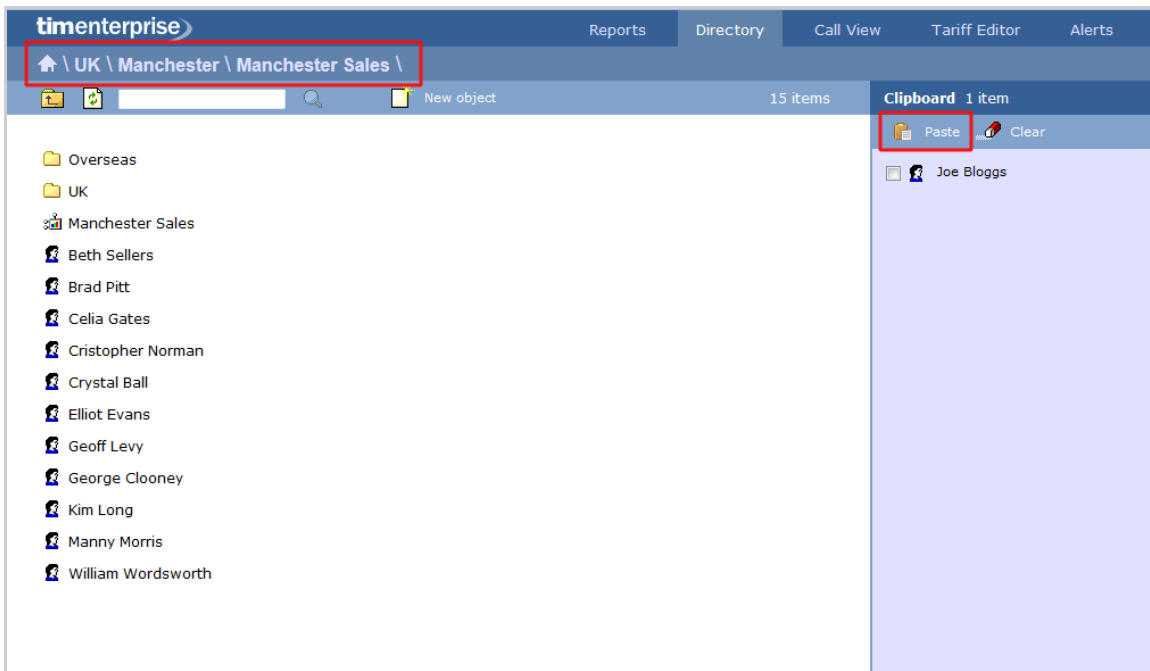


2. The object will be copied on the **Clipboard** panel on the right-hand side of the screen, as shown below:



3. To move the selected object, go to the point in the Directory where you want the object to be moved into, and click on the

Paste button at the top-right of the **Clipboard** screen.



Organisation units

What is an Organisation unit?

The **Organisation unit** section contains a list of objects designed to emulate the structural components of your organisation and it allows you to build the hierarchical levels of your Directory. The choice of objects belonging to this category are: sites, groups, divisions and cost centres. A special type of group is also available, known as **Reporting Collection**, which acts as a virtual container that collates disparate users from anywhere in your organisation, for reporting purposes.



Divisions, Cost centres, Groups and Sites can be placed at any point in your Directory and can be used interchangeably to better reflect the internal structure of your company.

✦
Add new object

Organisation unit

- Channel Group
- Cost Centre
- Division
- Group
- Reporting Collection
- Site

Other object

- Alarm
- Channel
- PBX
- Magic Box
- User
- Display Board
- Question
- Billing Charge
- Stats Collector
- LCR Plan
- Tariff Modifier
- Web User
- Directory Sync

Create a new object within the directory

Enter a name for the object

Cancel
 Add

Organisation unit	Description
Channel Group	Any group of channels or lines coming into your organisation
Cost Centre	A part of your organisation to which specific rates apply; it can contain other organisation units, such as sites or groups, or, it can be part of a larger group or division
Division	A part of your organisation that encompasses a series of smaller units, such as sites, cost centres or groups
Group	A part of your organisation characterised by the type of activity they perform, e.g. designated departments (IT, Sales, Accounts)
Reporting collection	A special type of group that acts as a virtual container, collating disparate users from anywhere in your organisation, for reporting purposes
Site	A part of your organisation that can function independently, usually a designated office branch

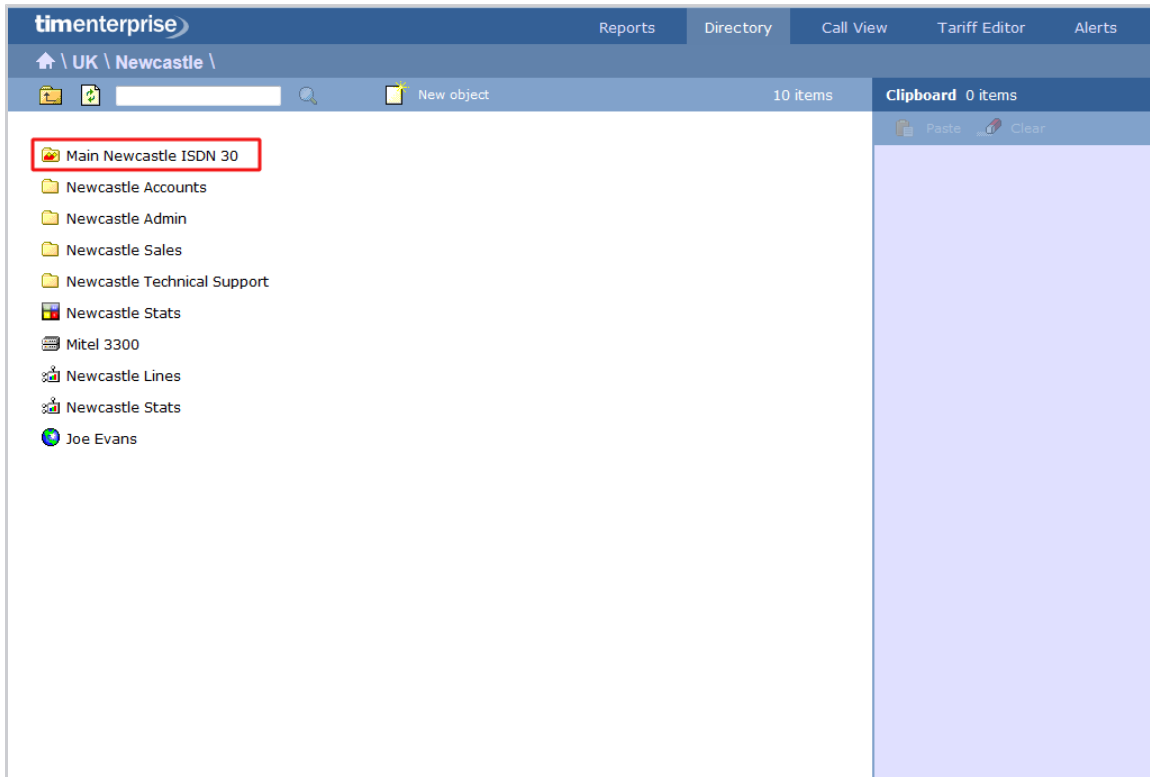
Channel Group

Channel Group

- What is a channel group?
- Adding a channel group
- Configuring a channel group

What is a channel group?

A `Channel Group` object is a container of individual telephone lines coming into your organisation.

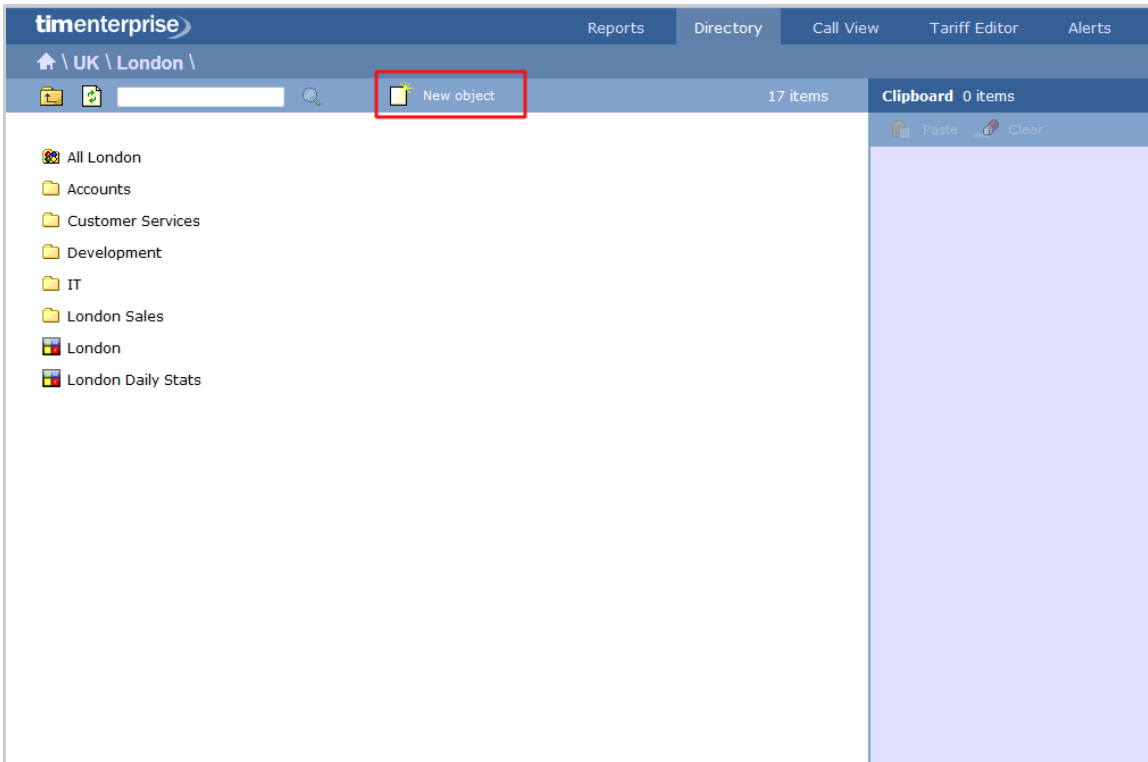


The Discovered Channels folder

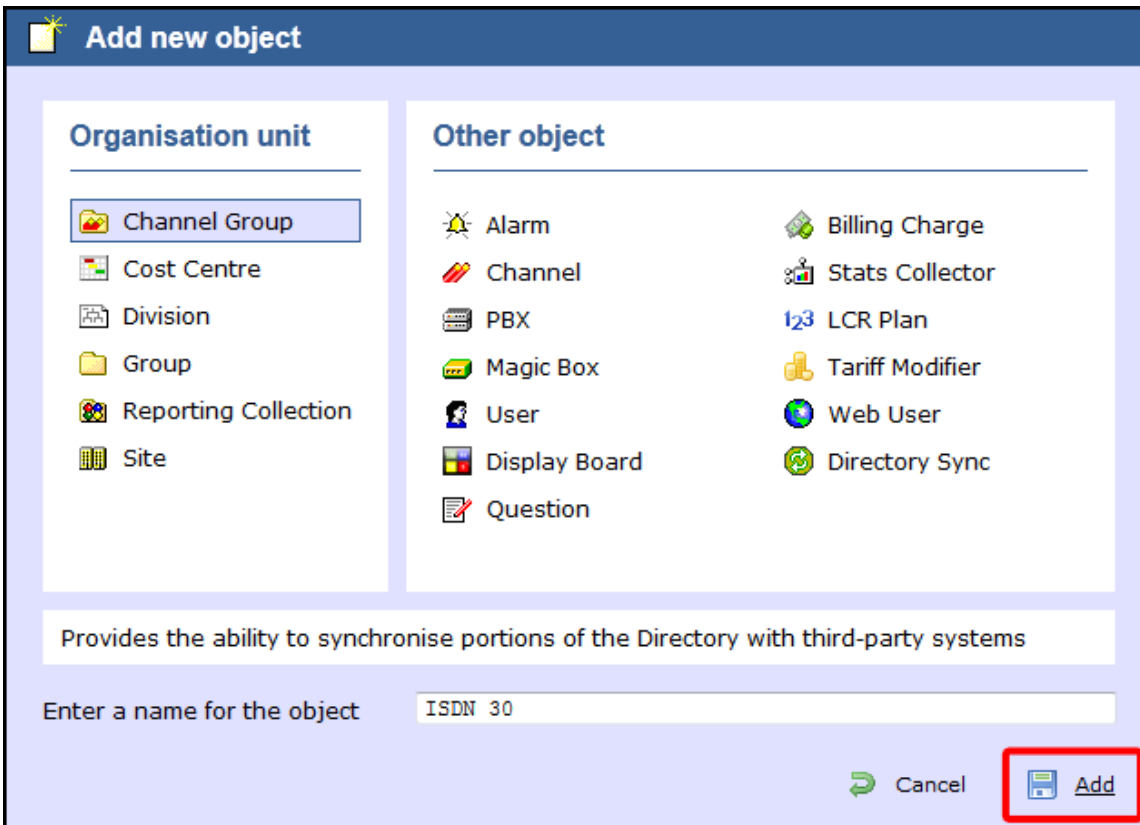
A special channel group, `Discovered Channels`, is automatically created in the Directory, in order to harvest hitherto-unknown channel information from the call data received from your telephone system. Over time, when all possible channels have been collected by the `Discovered Channels` folder, you can create your own channel groups based on the structure of your organisation, and move channels into the new groups.

Adding a channel group

To add a channel group to the system, drill-down to the Directory level where you want to add the group and click on the `New object` tab, as shown below:



In the new window that opens, select the **Channel group** object from the **Organisation unit** list, enter a relevant name and click on the **Add** button, as shown below:

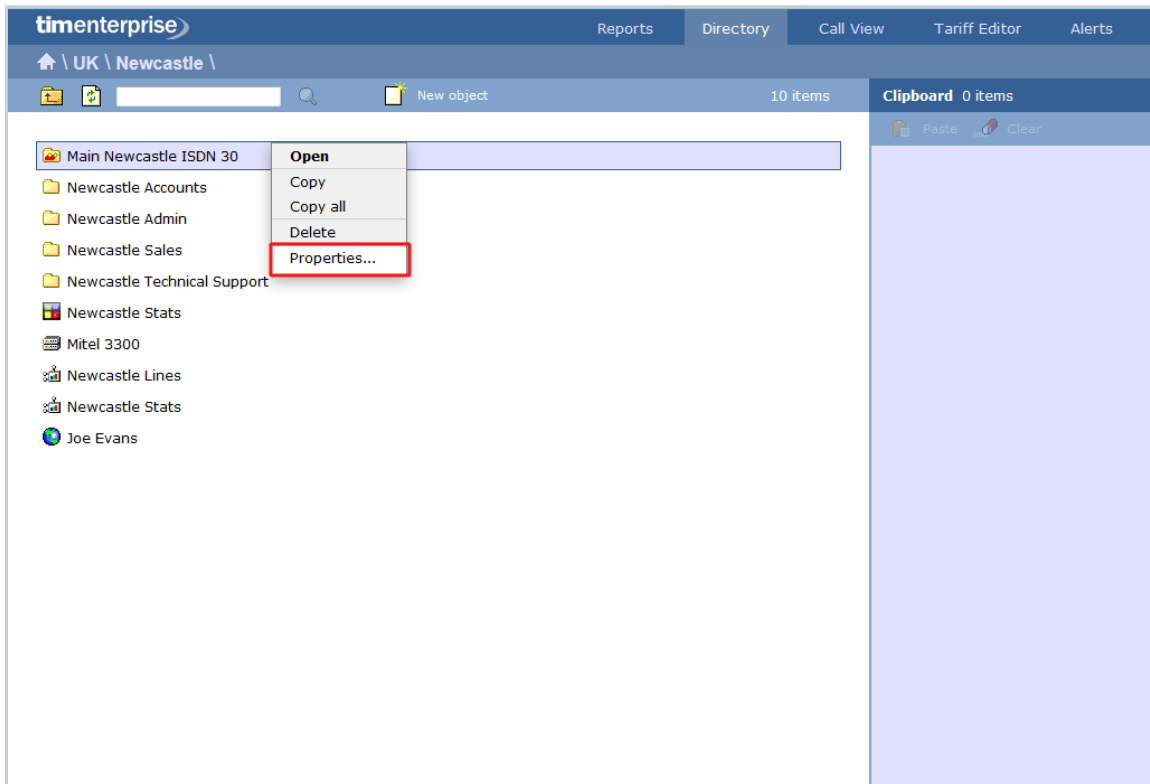




There is no limit to the amount of channel groups you can add to the Directory, which allows you to set up all your ISDN, analogue, fax lines and private circuits exactly as they are on your switch.

Configuring a channel group

To configure a channel group, locate the group in the Directory, click on it and select **Properties** from the drop-down list, as shown below:



A new window will open, where you can configure the properties of your channel group. Each tab in this window is described below:

General

The **General** tab allows you to edit the name of the channel group and its associated access code - if applicable - and exclude the group from being logged or recorded.

Main Newcastle ISDN 30

General

Private circuit

General

Name: Main Newcastle ISDN 30

Access code: 6030


- Do not log calls for channels in this group
- Exclude channels in this group from call statistics
- Do not record calls for channels in this group
- Channels in this group emulate network termination (NT mode)

Cancel Save

Screenshot | URL = /download/attachments...

Option	Description
Do not log	Calls for this channel group will not be logged by TIM Enterprise. In addition, if integrated call recording is in use, no audio recordings will be available.
Exclude channels in this group from call statistics	Collection of statistics will not be performed for this channel group.
Do not record calls	Calls for this channel group will not be recorded, if integrated call recording is in use.
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.

Private circuit

This option allows you to link the currently-selected channel to its counterpart on another site, in order to provide 'on-net' calls. To link the channels, click on the  icon and drill-down through the Directory in order to locate the channel group you would like to add as your `Remote end`, as shown below:



Main ISDN30

General

Private circuit

Private circuit

This channel group is one half of a private circuit

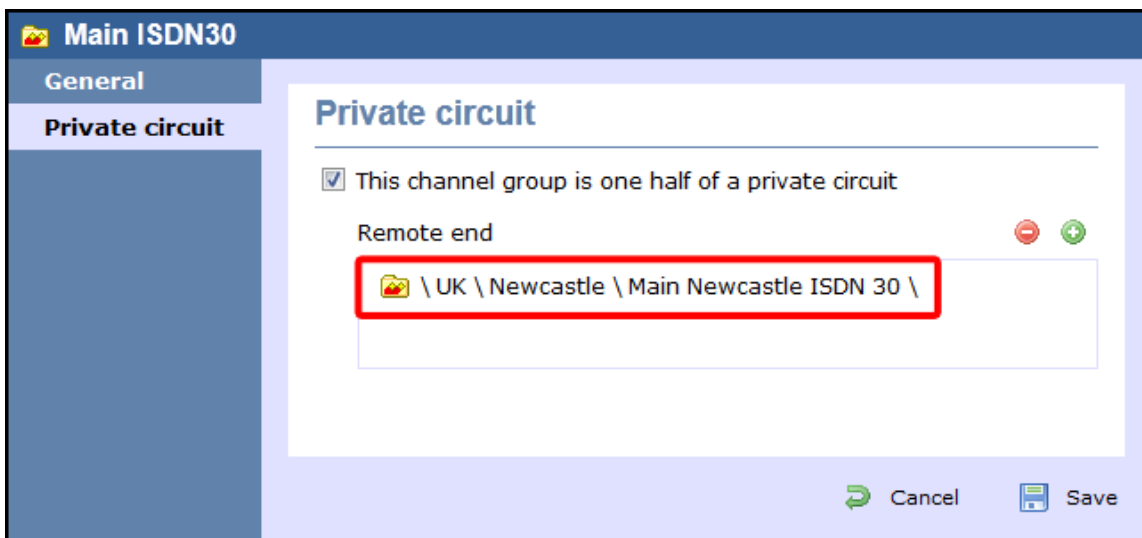
Remote end  

Cancel Save

When you have located the `Remote end` channel in the Directory, click on the  icon to select it:



The new channel group will then be added to the `Remote end` field and calls between sites will be treated as 'on-net' calls, thereby eliminating the call duplication often associated with inter-site links.



Cost Centre

Cost Centre

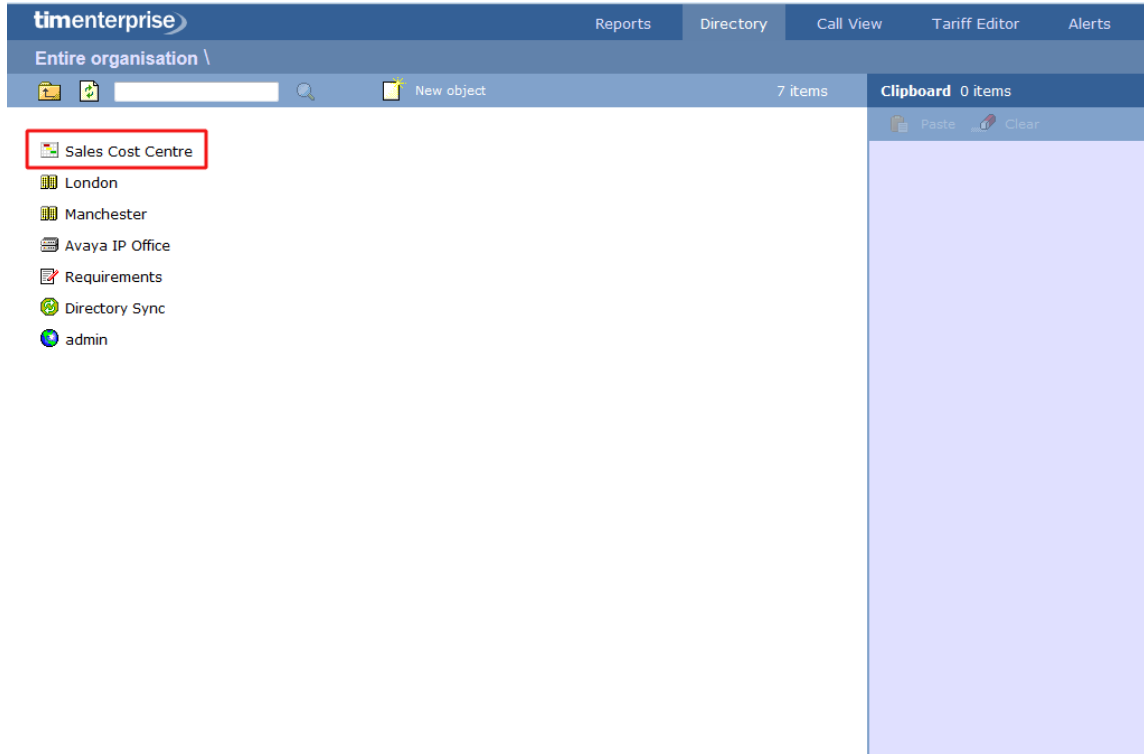
- What is a cost centre?
- Adding a cost centre
- Configuring a cost centre

What is a cost centre?

The `Cost Centre` object is normally used to represent parts of your organisation to which specific rates apply. The cost centre can contain other organisation units, such as sites or groups, or it can be part of a larger group or division.

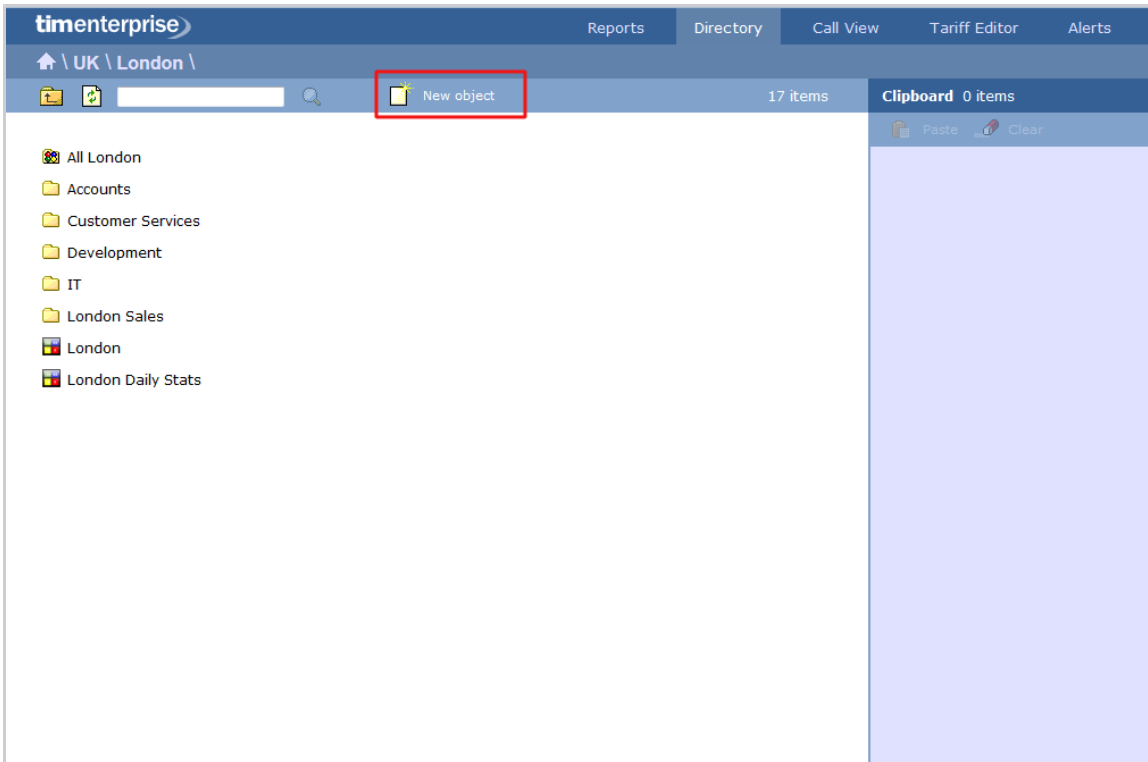


Divisions, Cost Centres, Group and Sites are very similar and can be used interchangeably to better reflect the internal structure of your company.

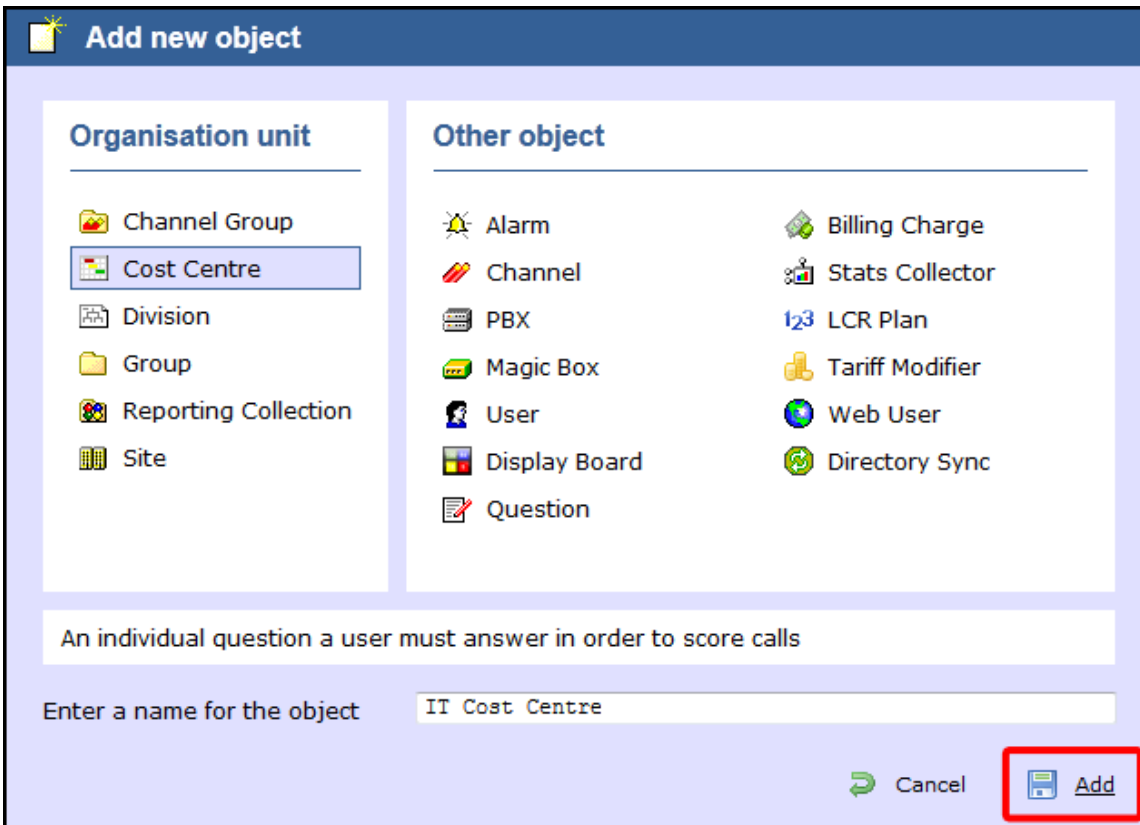


Adding a cost centre

To add a cost centre to the system, drill-down to the Directory level where you want to add the group and click on the **New object** tab, as shown below:



In the new window that opens, select the **Cost Centre** object from the **Organisation unit** list, enter a relevant name and click on the **Add** button, as shown below:

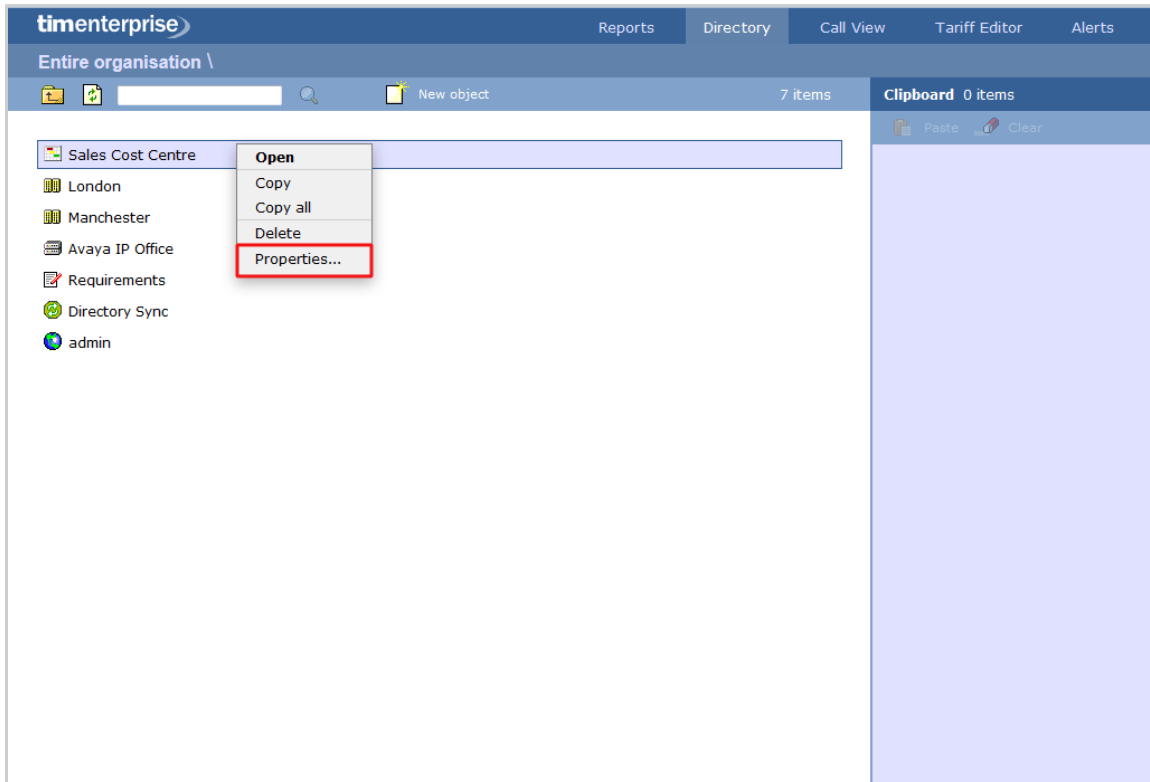




There is no limit to the number of cost centres you can add to the Directory.

Configuring a cost centre

To configure a cost centre, locate the object in the Directory, click on it and select **Properties** from the drop-down list, as shown below:



A new window will open, where you can configure the general properties of the cost centre group, such as name, email address, ID etc, as shown below:

Sales Cost Centre

Name: Sales Cost Centre

Manager's email: [Empty]

ID: [Empty]

Fax: [Empty]

DDI: [Empty]

Address: [Empty]

Do not log calls for users in this group

Exclude users in this group from call statistics

Do not record calls for users in this group

Cancel Save

Additional options are available, allowing you to exclude users within this group from call statistics or from being logged or recorded.

Option	Description
Do not log	Calls for this group will not be logged by TIM Enterprise. In addition, if integrated call recording is in use, no audio recordings will be available.
Exclude users in this group from call statistics	Collection of statistics will not be performed for this group.
Do not record calls	Calls for this group will not be recorded, if integrated call recording is in use.

Division

Division

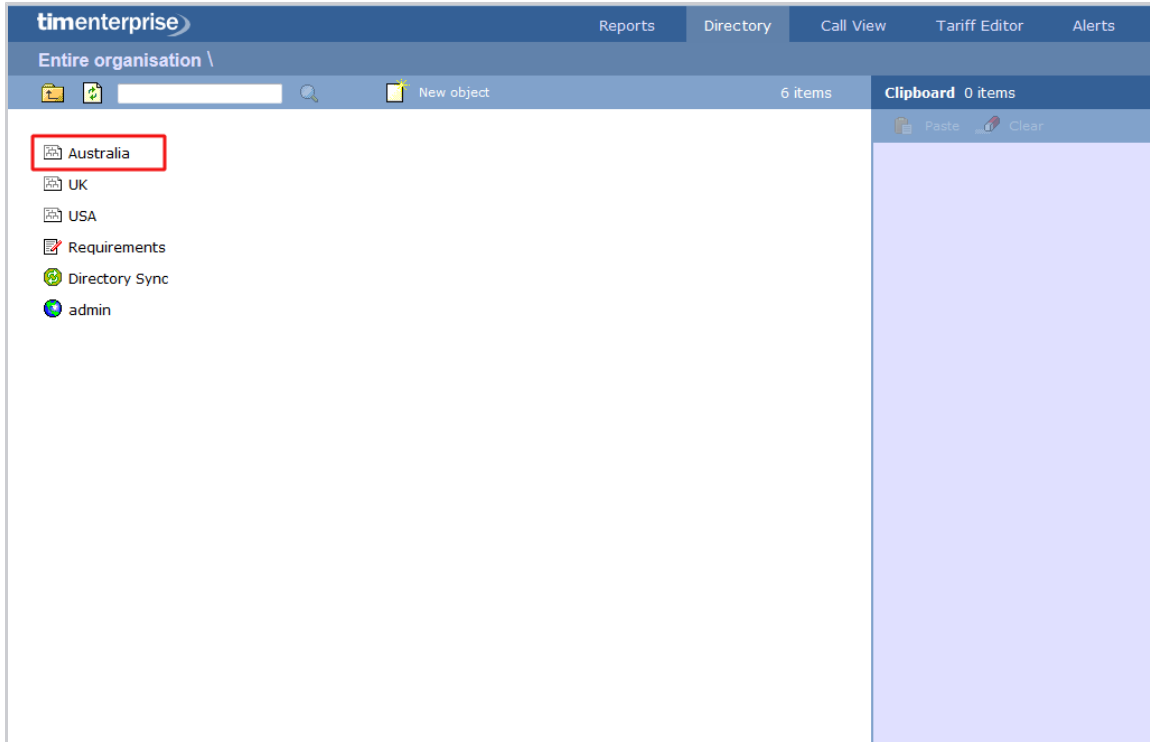
- What is a division?
- Adding a division
- Configuring a division

What is a division?

A **Division** object is normally used to represent parts of your organisation that encompass a series of smaller units, such as sites, cost centres or groups.

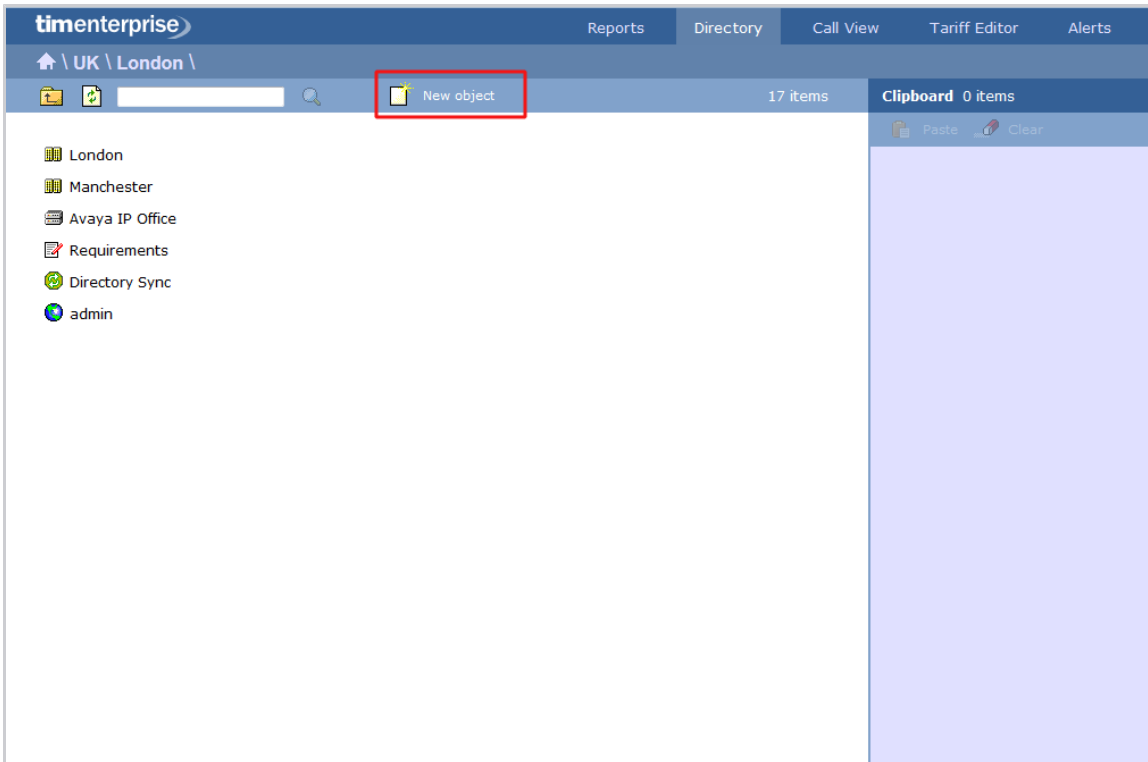


Divisions, Cost Centres, Group and Sites are very similar and can be used interchangeably to better reflect the internal structure of your company.

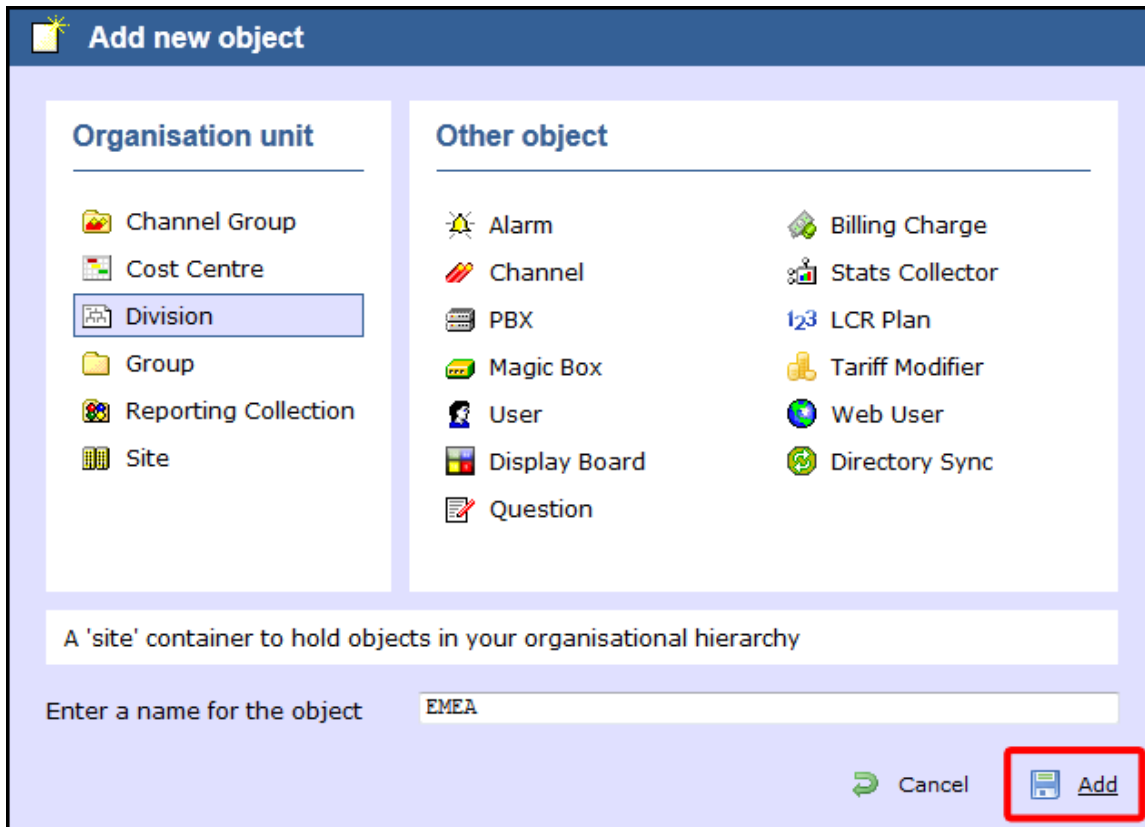


Adding a division

Drill-down to the Directory level where you want to add the division and click on the **New object** tab, as shown below:



In the new window that opens, select the **Division** object from the **Organisation unit** list, enter a relevant name and click on the **Add** button, as shown below:

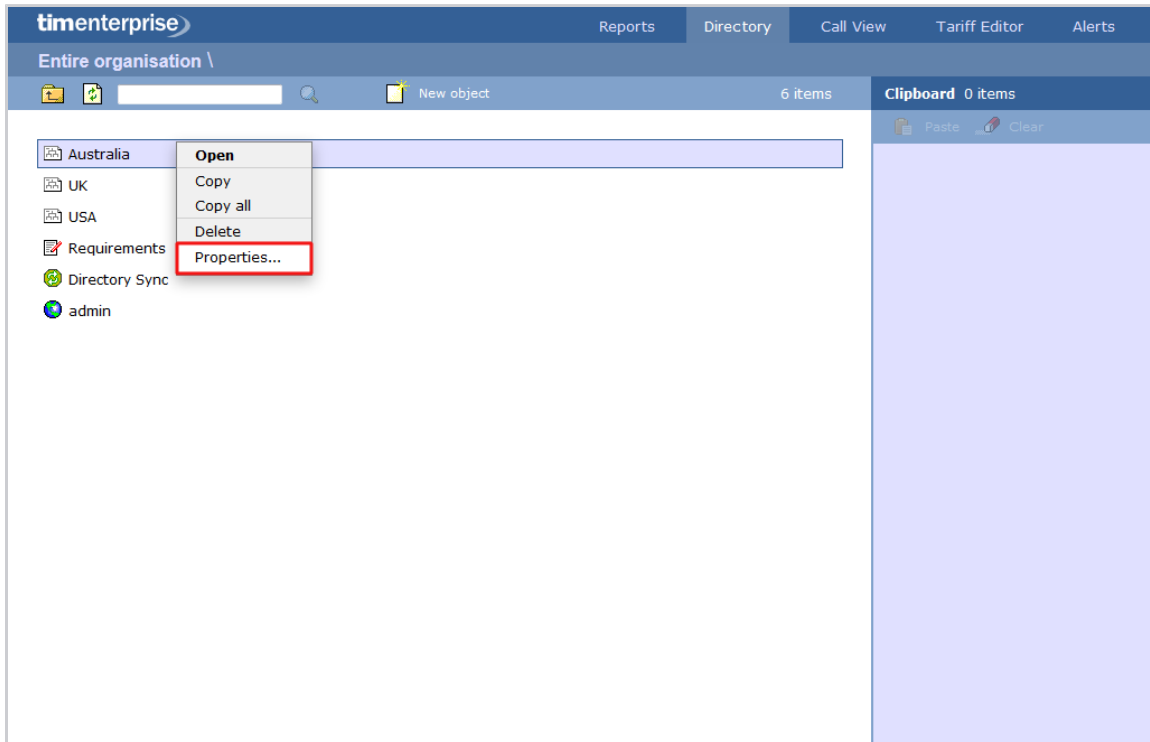




There is no limit to the number of division objects you can add to the Directory.

Configuring a division

To configure a division, locate the object in the Directory, click on it and select **Properties** from the drop-down list, as shown below:



A new window will open, where you can configure the general properties of the group, such as name, email address, ID etc, as shown below:

Additional options are available, allowing you to exclude users within this group from call statistics or from being logged or recorded.

Option	Description
Do not log	Calls for this group will not be logged by TIM Enterprise. In addition, if integrated call recording is in use, no audio recordings will be available.
Exclude users in this group from call statistics	Collection of statistics will not be performed for this group.
Do not record calls	Calls for this group will not be recorded, if integrated call recording is in use.

Group

Group

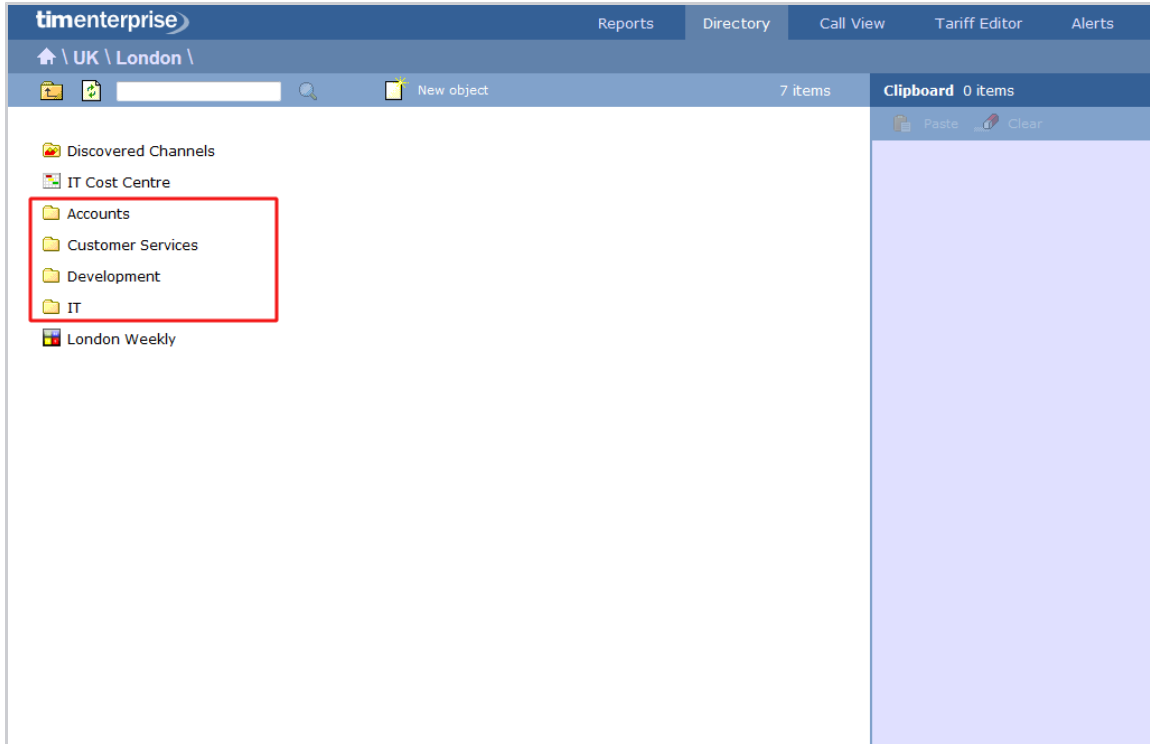
- What is a group?
- Adding a group
- Configuring a group

What is a group?

A **Group** object is normally used to represent parts of your organisation characterised by the activity they perform, e.g. designated departments (IT, Sales, Accounts).

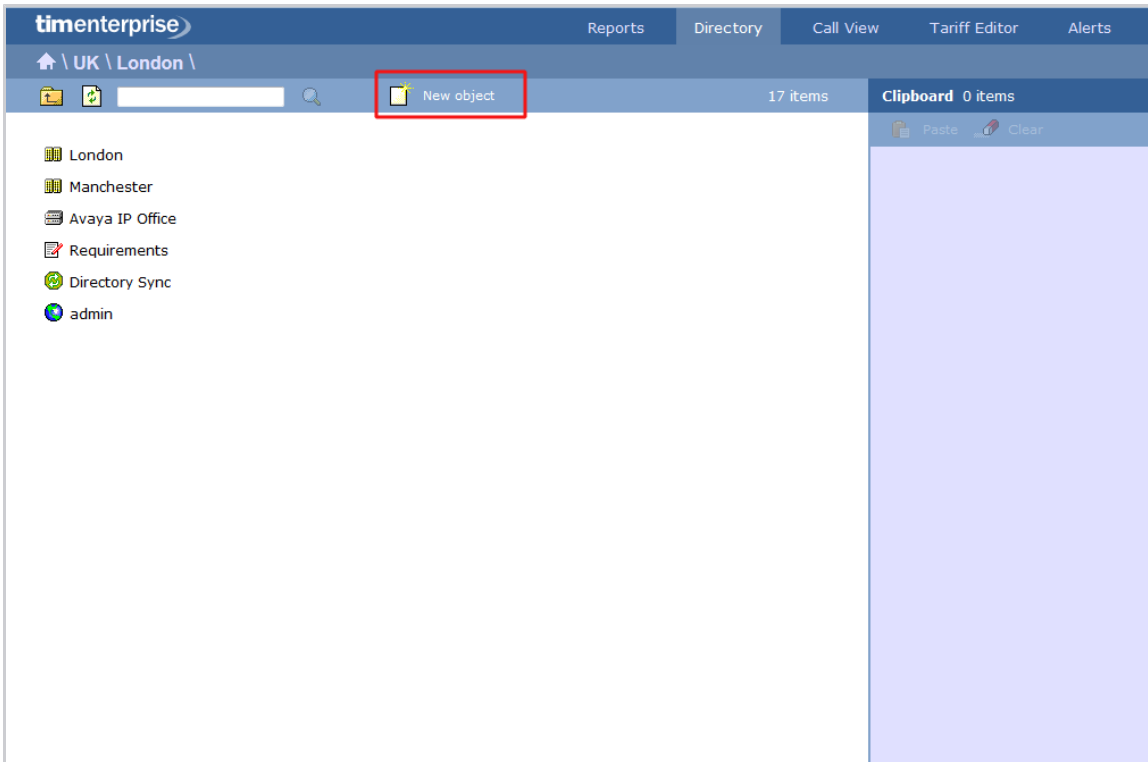


Divisions, Cost Centres, Group and Sites are very similar and can be used interchangeably to better reflect the internal structure of your company.

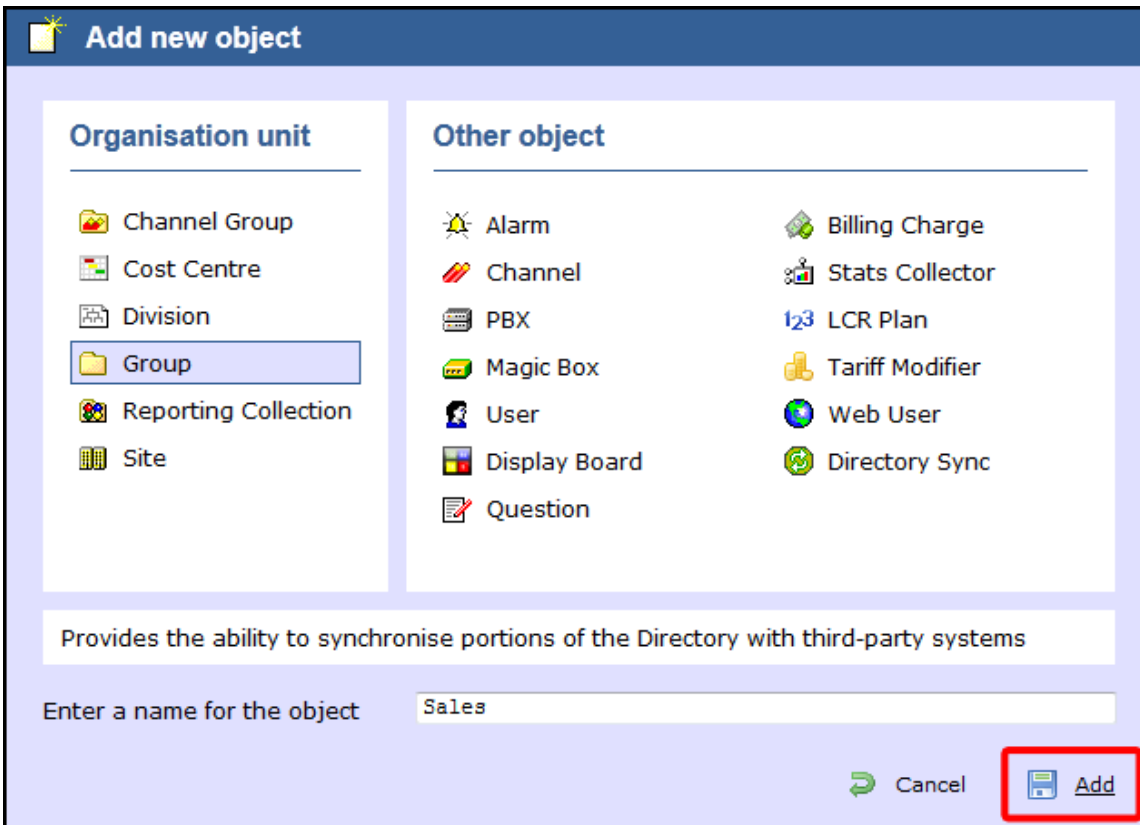


Adding a group

Drill-down to the Directory level where you want to add the group and click on the **New object** tab, as shown below:



In the new window that opens, select the **Group** object from the **Organisation** unit list, enter a relevant name and click on the **Add** button, as shown below:

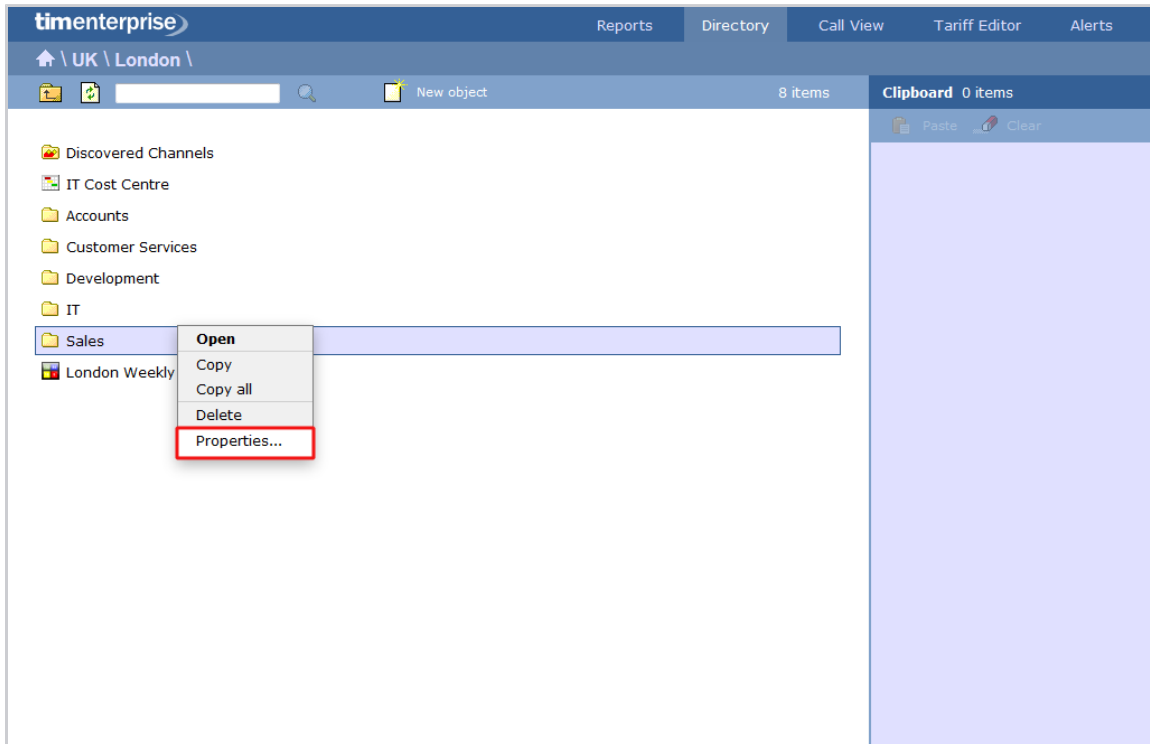




There is no limit to the number of groups you can add to the Directory.

Configuring a group

To configure a group, locate the object in the Directory, click on it and select **Properties** from the drop-down list, as shown below:



A new window will open, where you can configure the general properties of the group, such as name, email address, ID etc, as shown below:

Additional options are available, allowing you to exclude users within this group from call statistics or from being logged or recorded.

Option	Description
Do not log	Calls for this group will not be logged by TIM Enterprise. In addition, if integrated call recording is in use, no audio recordings will be available.
Exclude users in this group from call statistics	Collection of statistics will not be performed for this group.
Do not record calls	Calls for this group will not be recorded, if integrated call recording is in use.

Reporting Collection

Reporting Collection

- What is a Reporting Collection?
- Adding a Reporting Collection
- Adding objects to a Reporting Collection

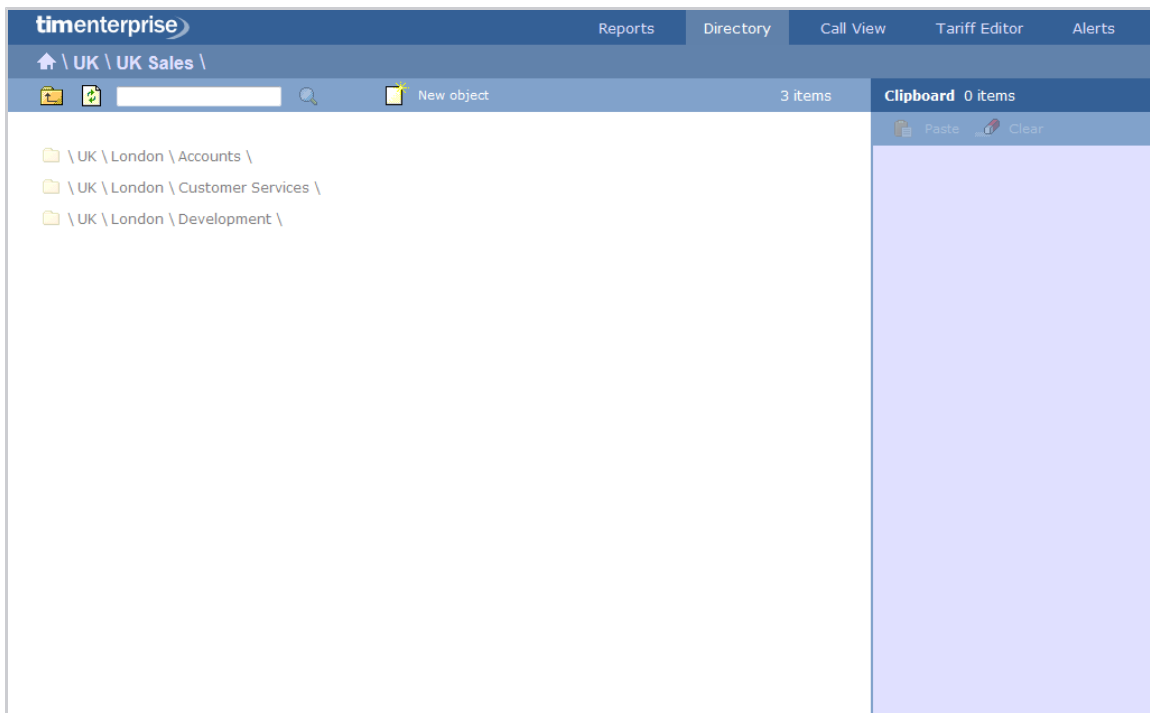
What is a Reporting Collection

The **Reporting Collection** object is a special type of group that acts as a virtual container, collating disparate users from across the entire organisation. This allow you to group any number of directory units together, for reporting purposes, with no constraints on the directory structure. For example, you can compare statistics for all Sales teams from across the country, by

running a single report on the virtual group.

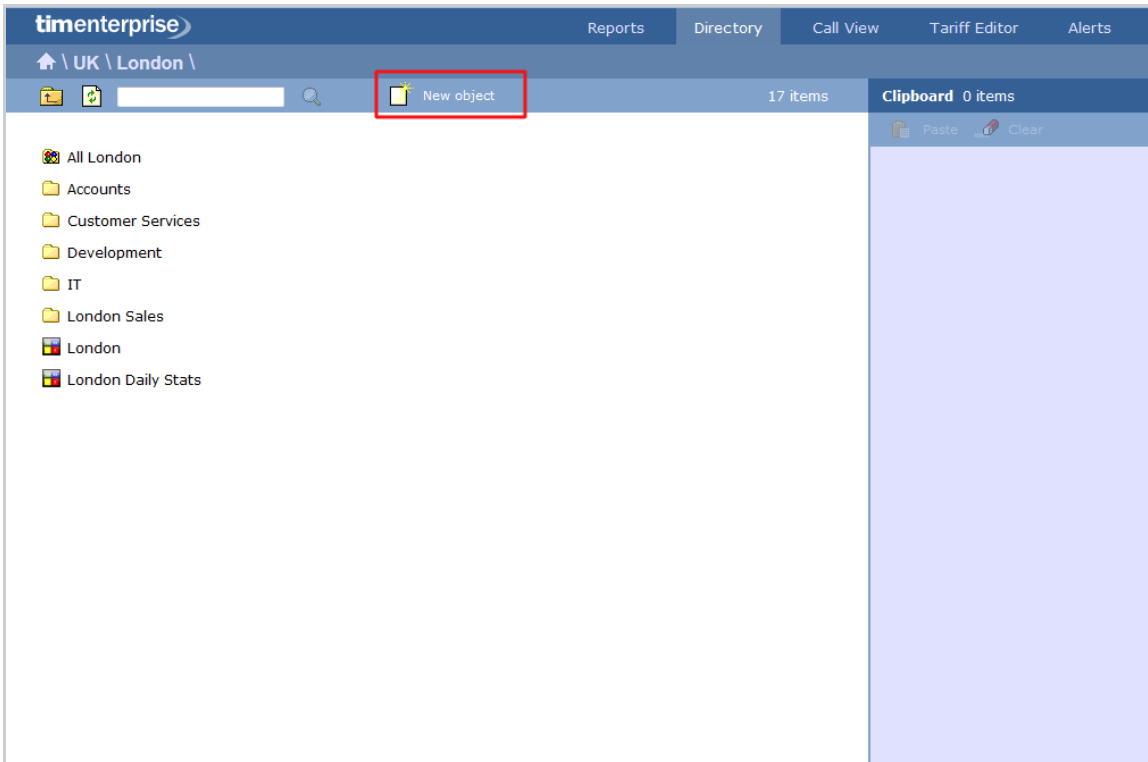


When adding objects to a Reporting Collection, only a copy of the actual entity is being moved into the virtual group. To represent this, the objects in a Reporting Collection group will always show as greyed out.

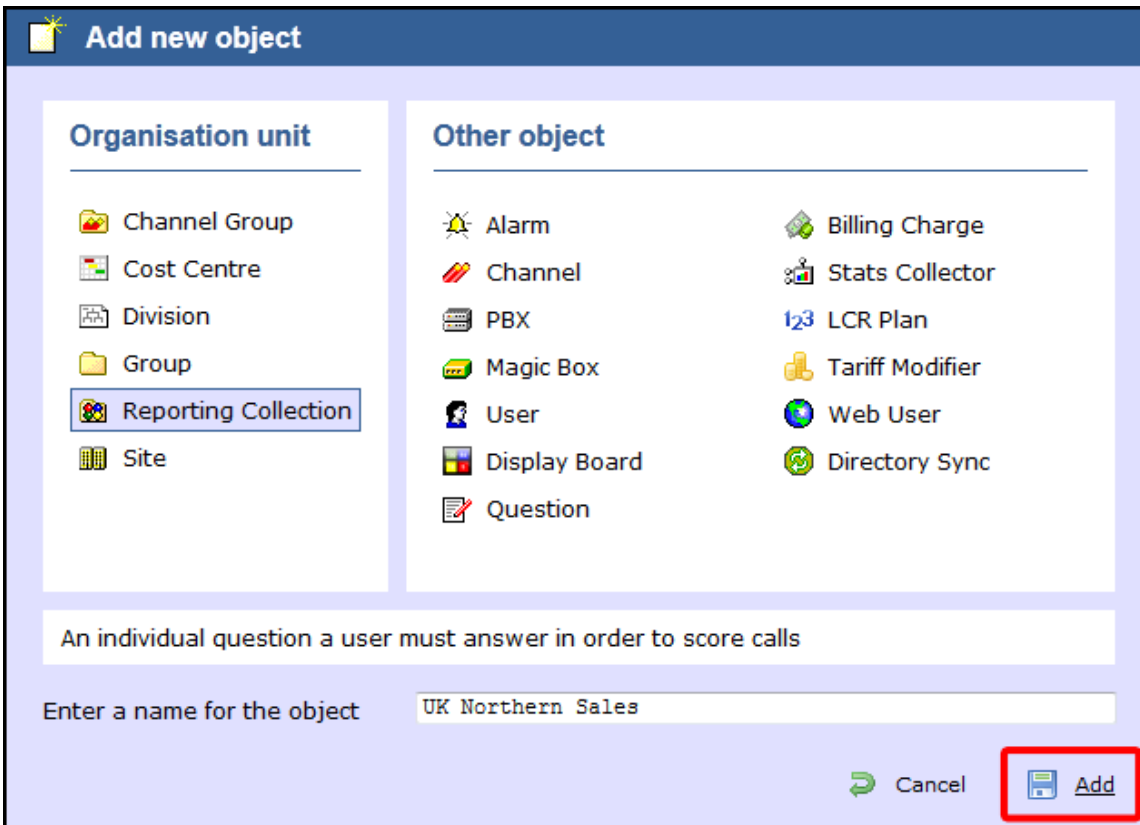


Adding a Reporting Collection

To add a Reporting Collection to the system, drill-down to the Directory level where you want to add the group and click on the **New object** tab, as shown below:



In the new window that opens, select the Reporting Collection object from the Organisation unit list, enter a relevant name and click on the **Add** button, as shown below:



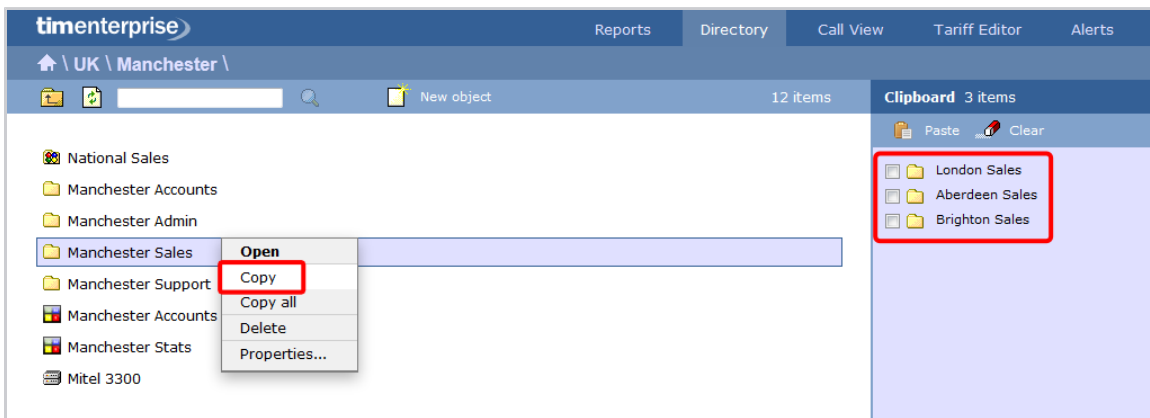


There is no limit to the amount of Reporting Collections you can add to the Directory.

Adding objects to a Reporting Collection

Follow the steps below to add an object to a Reporting Collection, e.g. sites, groups, users:

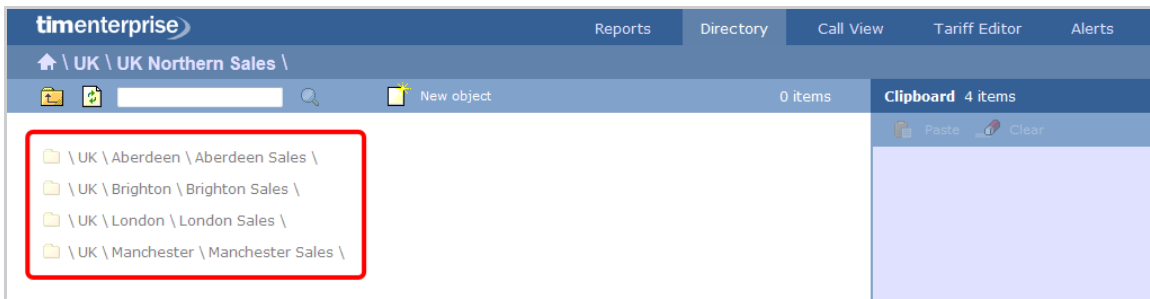
1. Locate in the Directory the object you want to add to the Reporting Collection, click on it and select **Copy** from the drop-down list, as shown below:



2. The object will be copied on the **Clipboard** panel, on the right-hand side of the screen. To add more directory objects to the Reporting Collection, follow the same procedure.
3. To move the objects, open your Reporting Collection group, tick the box alongside the objects you want to move and click on the **Paste** button at the top-left corner of the **Clipboard** screen, as shown below:



4. A copy of selected objects will now be added to the Reporting Collection group.



These groups are designed for reporting purposes only, therefore the calls will not be duplicated.

Site

Site

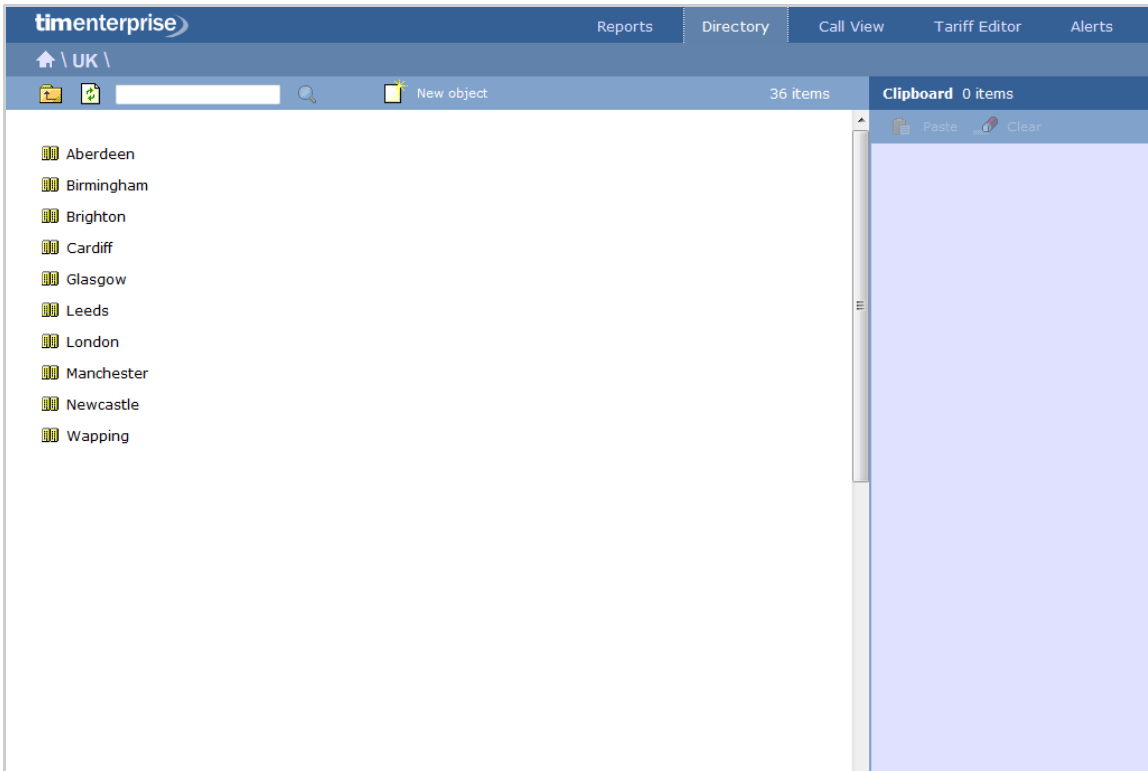
- What is a site?
- Adding a site
- Configuring a site

What is a site?

A `site` object is normally used to represent a designated office branch within your organisation.

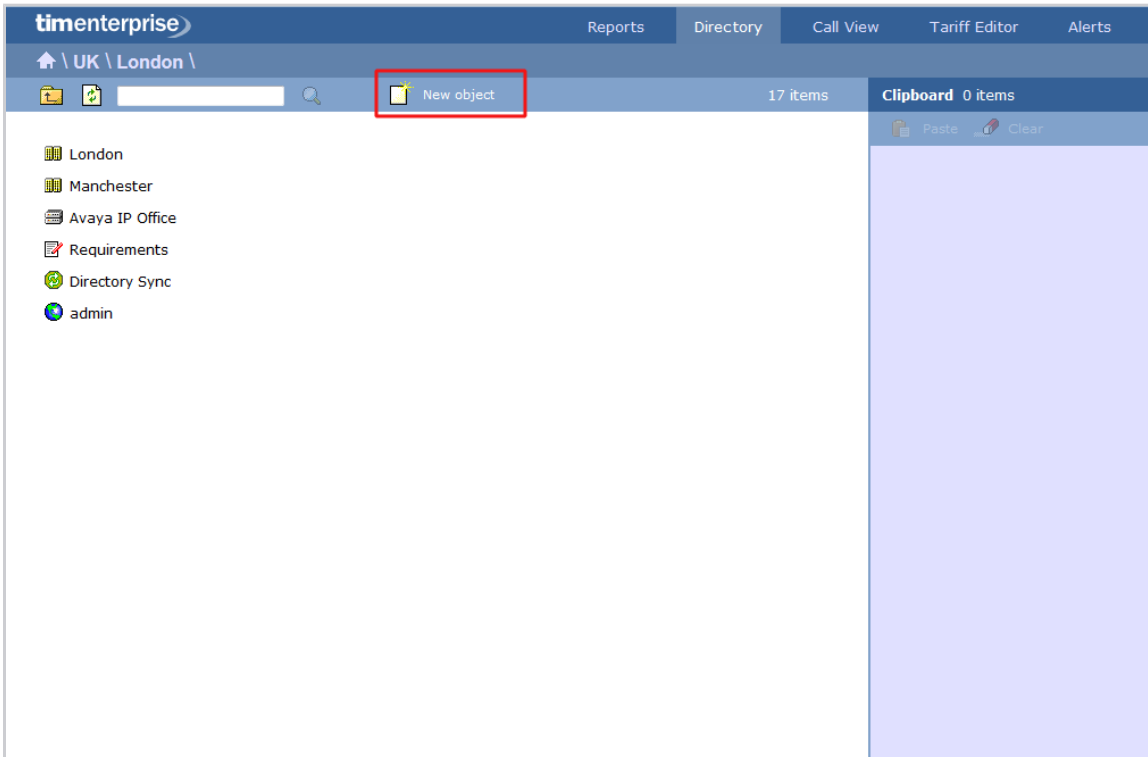


Divisions, Cost Centres, Group and Sites are very similar and can be used interchangeably to better reflect the internal structure of your company.



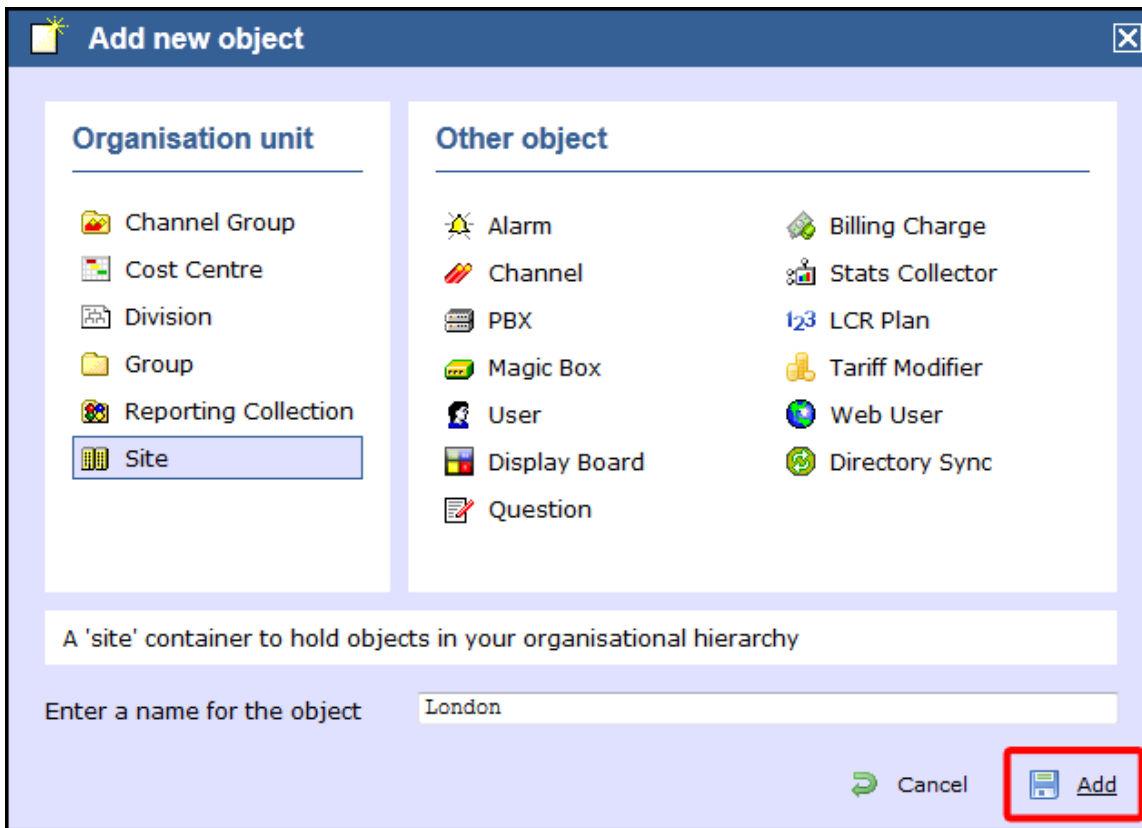
Adding a site

To add a site to the system, drill-down to the Directory level where you want to add the site and click on the **New object** tab, as shown below:



In the new window that opens, select the `Site` object from the `Organisation unit` list, enter a relevant name and click on the

`Add` button, as shown below:



Add new object

Organisation unit

- Channel Group
- Cost Centre
- Division
- Group
- Reporting Collection
- Site**

Other object

- Alarm
- Channel
- PBX
- Magic Box
- User
- Display Board
- Question
- Billing Charge
- Stats Collector
- LCR Plan
- Tariff Modifier
- Web User
- Directory Sync

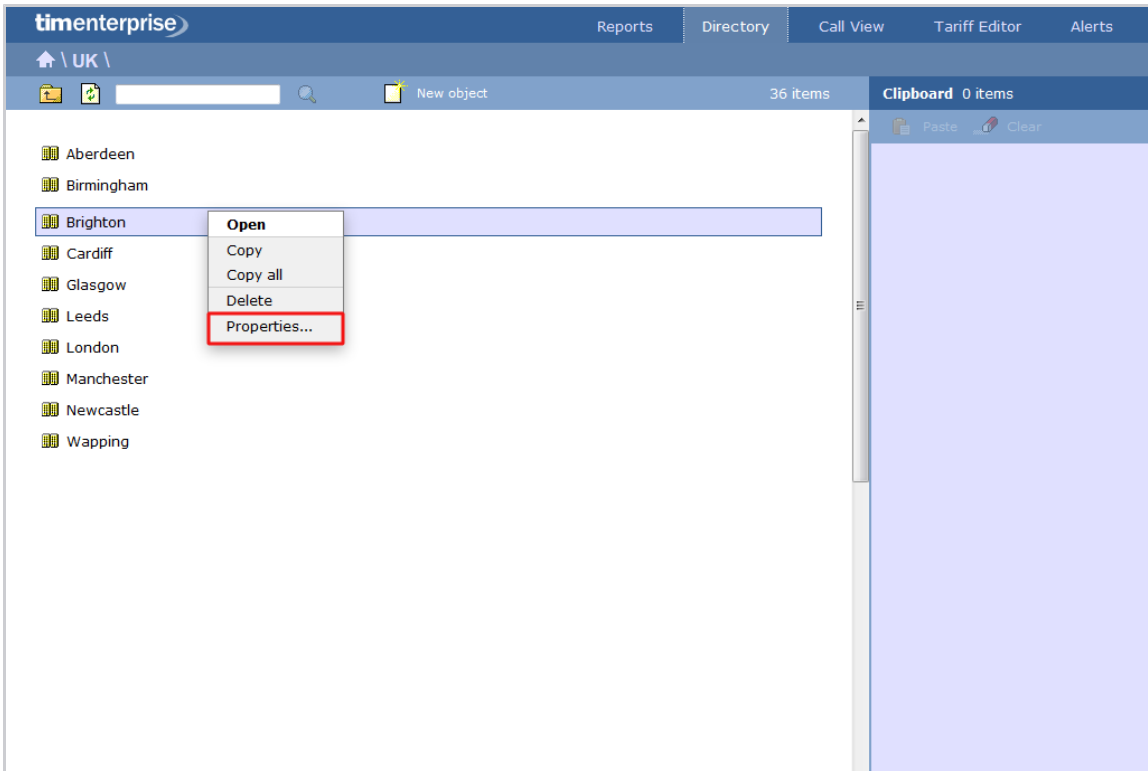
A 'site' container to hold objects in your organisational hierarchy

Enter a name for the object:

i There is no limit to the number of sites you can add to the Directory.

Configuring a site

To configure a site, locate the object in the Directory, click on it and select `Properties` from the drop-down list, as shown below:



A new window will open, where you can configure the general properties of the site, such as name, email address, ID etc, as shown below:



Additional options are available, allowing you to exclude users within this site from call statistics or from being logged or recorded.

Option	Description
Do not log	Calls for this site will not be logged by TIM Enterprise. In addition, if integrated call recording is in use, no audio recordings will be available.
Exclude users in this group from call statistics	Collection of statistics will not be performed for this site.
Do not record calls	Calls for this site will not be recorded, if integrated call recording is in use.

Other objects

What are Other Objects?

The **Other objects** section consists of a list of different objects, each representing an additional feature you can add to the call logger, such as call recording integration, directory sync, display boards etc.

Add new object

Organisation unit

- Channel Group
- Cost Centre
- Division
- Group
- Reporting Collection
- Site

Other object

- Alarm
- Channel
- PBX
- Magic Box
- User
- Display Board
- Question
- Billing Charge
- Stats Collector
- LCR Plan
- Tariff Modifier
- Web User
- Directory Sync

Create a new object within the directory

Enter a name for the object

The objects available are presented in the table below:

Object	Description
Alarm	An Alarm object can be set up at any level of the Directory 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.

Channel	Channels are system objects representing your telephone lines. When you first configure the system, your channels are automatically harvested from the data received from the phone system. The properties of each channel can be edited afterwards, and channels can also be organised subsequently into new groups, if preferred.
PBX	The function of a PBX object is to acquire call logging data from a telephone system. TIM Enterprise can be configured to take call records from a single PBX covering multiple sites or you can connect to a number of PBXs.
Magic Box	The Magic Box object allows you to integrate a call recording device to TIM Enterprise. 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 Enterprise processes.
User	Users represent the people in your organisation who make use of devices such as telephone extensions, fax machines, etc. When you first configure the system, your users are automatically harvested from the data received from the phone system. The properties of each user can be edited afterwards, and users can also be subsequently organised into new user groups, if preferred.
Display Boards	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.
Question	A Question object can be added to the Directory to allow users to score calls. By defining a list of questions, you can apply this to each call that you score, in order to rate calls for evaluation purposes.
Billing Charge	Billing charges allow to add additional charges or markups to calls, users or bills. Billing charges can be applied as a percentage or fixed charge. When several charges are added to a bill, the charges can be prioritised according to their importance.
Stats Collector	A stats collector is a mathematical "counter" that can be placed on any subject and 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.
LCR Plan	LCR Plans can be placed anywhere in the Directory in order to apply your call routing plans for costing purposes.
Tariff Modifier	Tariff Modifiers can be placed anywhere in the Directory in order to apply different rates to the designated object.
Web User	When accessing TIM Enterprise you are required to enter a username and password in the web browser, which form a login credential known as Web user . Web user can be allowed access to the entire system or restricted to any specific area of your Directory.
Directory Sync	The Directory sync object in TIM Enterprise allows you to sync any partition of TIM Enterprise with a third-party directory, such as Active Directory or Cisco AXL.

Alarm

Alarm

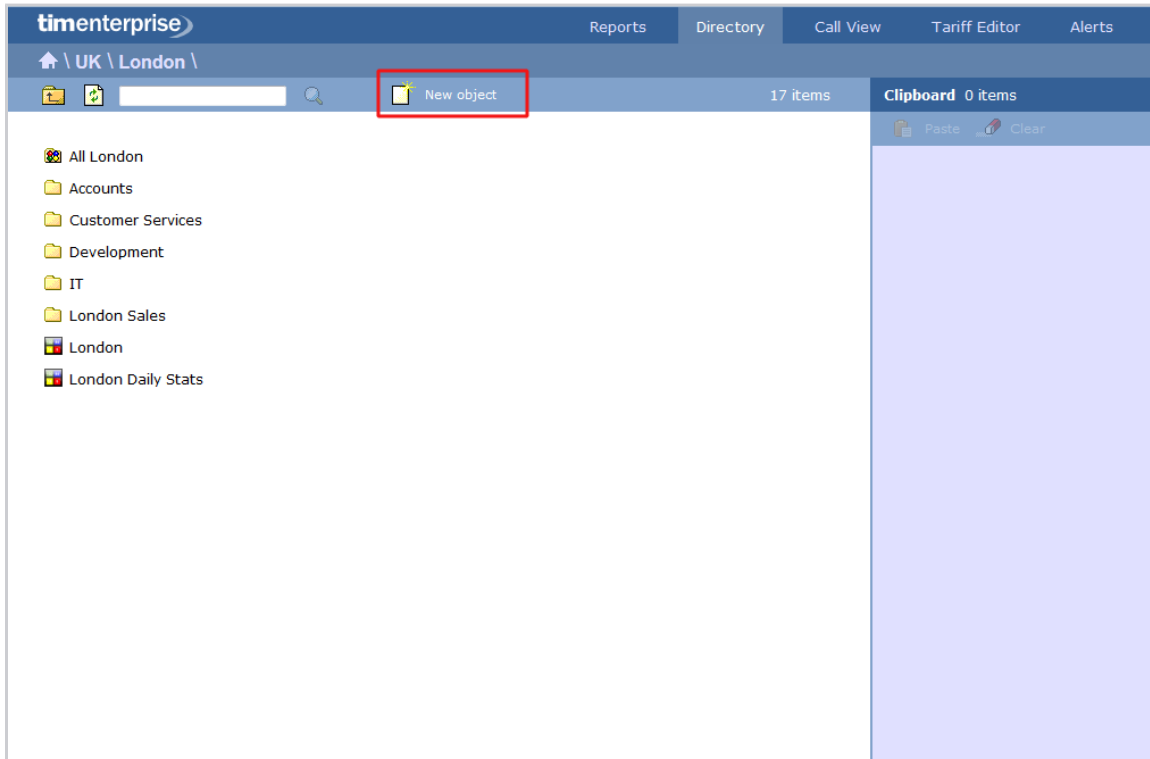
- What is an alarm?
- Adding an alarm
- Configuring an alarm
- Call alarms
- Stats alarms

What is an alarm?

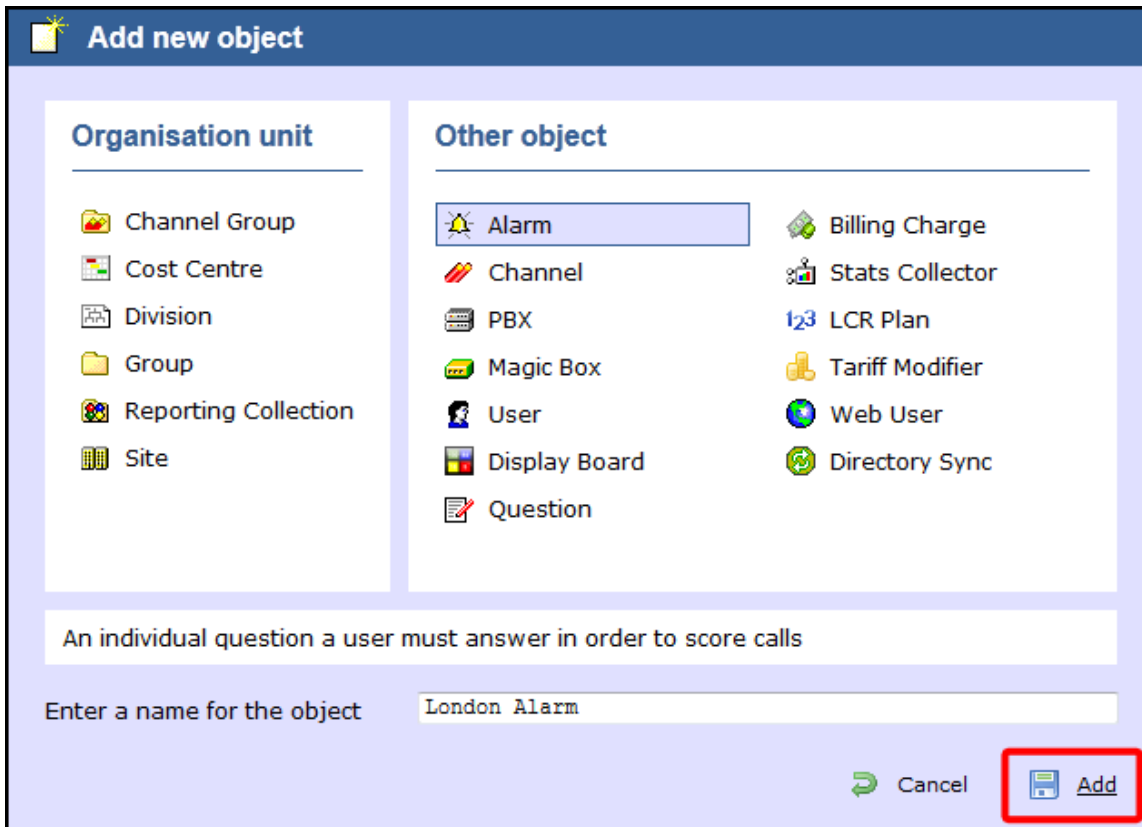
An alarm object can be set up at any point in the Directory in order to trigger an alert when calls whose properties match certain criteria have happened, such as calls above a particular duration, calls to specific phone numbers, or when user-defined cost thresholds are exceeded. The alarm criteria is user-defined and email alerts can be sent to one or more recipients.

Adding an alarm

To add an alarm object to the system, drill-down to the Directory level where you want to place the alarm and click on the **New object** tab, as shown below:

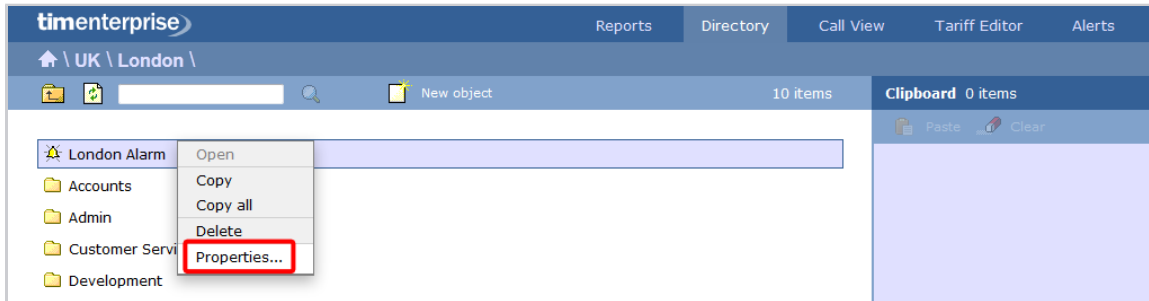


In the new window that opens, select the **Alarm** object from the **Other** object list, enter a relevant name and click on the **Add** button, as shown below:



Configuring an alarm

To configure an alarm, locate the object in the Directory, click on it and select **Properties** from the drop-down list, as shown below:



A new window will open, allowing you to configure the properties of your alarm object.

Call alarms

General

This tab allows you to configure the general properties of your `Call alarm` object:

Field	Description
Alarm name	Enter a relevant name for the alarm object.
Alarm type	Select the type of alarm you want to add to the Directory.
Trigger only once until alarm is reset	Enable this option if you want the alarm to be triggered only the first time the alarm's criteria is met.

Criteria

To set up the criteria that must be met in order to trigger the alarm, click on the  icon, as shown below:

London Alarm

General

Criteria

Notification

Criteria

Alarm activates when of these criteria are met

Cancel Save

A new window will open, displaying a list of filters you can set up in order to configure the alarm criteria. Each filter consists of three elements: the filter's property (account code, dialled number, etc), an operator and a value field.

Add new filter

Property

- Account code
- Call type
- Carrier
- Channel
- Chargeband
- CLI
- Cost
- Destination

Operator

Value

Close Add

To add a filter to your alarm object, choose the filter type from the **Property** list, enter a relevant value and select an **operator** in order to define its meaning. The filters available for this type of alarm object are described below:

Account code

This filter allows you to set up an alarm based on account codes. To set up the alarm criteria, enter the account code (or part of the account code number) in the box provided and select the appropriate operator. In the example below, an alarm will be triggered when a call whose account code contains **21** is logged.

Account code

Contains

21

Call type

This filter allows you to set up an alarm based on call type, in terms of where the call originated and where it was delivered, e.g. incoming, outgoing, internal, etc. To set up the alarm criteria, choose a call type from the list provided and select the appropriate operator. In the example below, an alarm will be triggered when a **Tandem** call is logged:


 Call type	 Equals	Tandem
---	--	--------

Carrier

This filter allows you to set up an alarm based on the carrier (tariff table) used to cost calls. To set up the alarm criteria, choose a carrier from the list provided and select the appropriate operator. In the example below, an alarm will be triggered when a call routed over a **BT** carrier is logged.

 Carrier	 Equals	BT
---	--	----


Channel

This filter allows you to set up an alarm based on the call traffic going over your telephone lines. To set up the alarm criteria, click on the  icon to locate the relevant channel in the Directory; select the channel and choose the appropriate operator. In the example below, an alarm will be triggered when channel **T234** is used to log a call.

 Channel	 Equals	T234
---	--	------

Chargeband

This filter allows you to set up an alarm based on the chargeband used to cost calls. To set up the alarm criteria, enter the chargeband's name (or a sequence of characters you want to be matched) in the box provided and select the appropriate operator. In the example below, an alarm will be triggered when a call's chargeband begins with the characters **Mob**.

 Chargeband	 Begins with	Mob
--	---	-----



CLI

This filter allows you to set up an alarm based on CLI. To set up the alarm criteria, enter the CLI (or part of the CLI number) in the box provided and select the appropriate operator. In the example below, an alarm will be triggered when a call's CLI contains the digits **2652626**.

 CLI	 Contains	2652626
---	--	---------

Cost

This filter allows you set up an alarm in order to monitor calls below or above a specific cost. To set up the cost criteria, enter the relevant value in the box provided and select the appropriate operator. In the example below, an alarm will be triggered when the cost of a call is greater than **10**.

 Cost	 Is greater than	10
--	---	----



Destination

This filter allows you set up an alarm based on the destination of the call. To set up the alarm criteria, enter the destination name (or part of its name) in the box provided and select the appropriate operator. In the example below, an alarm will be triggered when the destination of a call is **France**.

 Destination	 Equals	France
---	--	--------



Dialled number

This filter allows you set up an alarm when a full or partial number is dialled. To set up the alarm criteria, enter the relevant number in the box provided and select the appropriate operator. In the example below, an alarm will be triggered when the dialled number begins with **074**.

 Dialled number	 Begins with	074
--	---	-----



Duration

This filter allows you set up an alarm based on the duration of a call. To set up the alarm criteria, enter the duration in the box provided and select the appropriate operator. In the example below, an alarm will be triggered when a call whose duration is greater than **3600** seconds is logged.

 Duration	 Is greater than	3600
--	---	------



LCR code

This filter allows you set up an alarm based on Least Cost Routing (LCR) codes. To set up the alarm criteria, enter the LCR code in the box provided and select the appropriate operator. In the example below, an alarm will be triggered when a call whose LCR code ends with **680** is logged.

 LCR code	 Ends with	680
--	---	-----



Response time

This filter allows you set up an alarm based on response time. To set up the alarm criteria, enter the response time in the box provided and select the appropriate operator. In the example below, an alarm will be triggered when the response time of a calls is greater than **20** seconds.

 Response time	 Is greater than	20
---	---	----


Start time

This filter allows you set up an alarm based on the time a call started. To set up the alarm criteria, enter the start time in **hh:mm:ss** format in the box provided and select the appropriate operator. In the example below, an alarm will be triggered when a call that started before **09:00:00** is logged in the system.


 Start time	 Is less than	09:00:00
--	--	----------

Trunk access code

If your telephone system uses trunk access codes to connect calls using specific channels, you can set up an alarm based on calls made using these codes. To set up the alarm criteria, enter the trunk access code in the box provided and select the appropriate operator. In the example below, an alarm will be triggered when a call whose trunk access code is **5480** is logged.

 Trunk access code	 Equals	5480
---	--	------

User

This filter allows you set up an alarm in order to monitor the calls of a particular user. To set up the alarm criteria, click on the  icon on to locate the user in the Directory; select the user and choose an appropriate operator. In the example below, an alarm will be triggered when a call is logged for the user **John Smith**.

 User	 Equals	John Smith
--	--	------------

Weekday

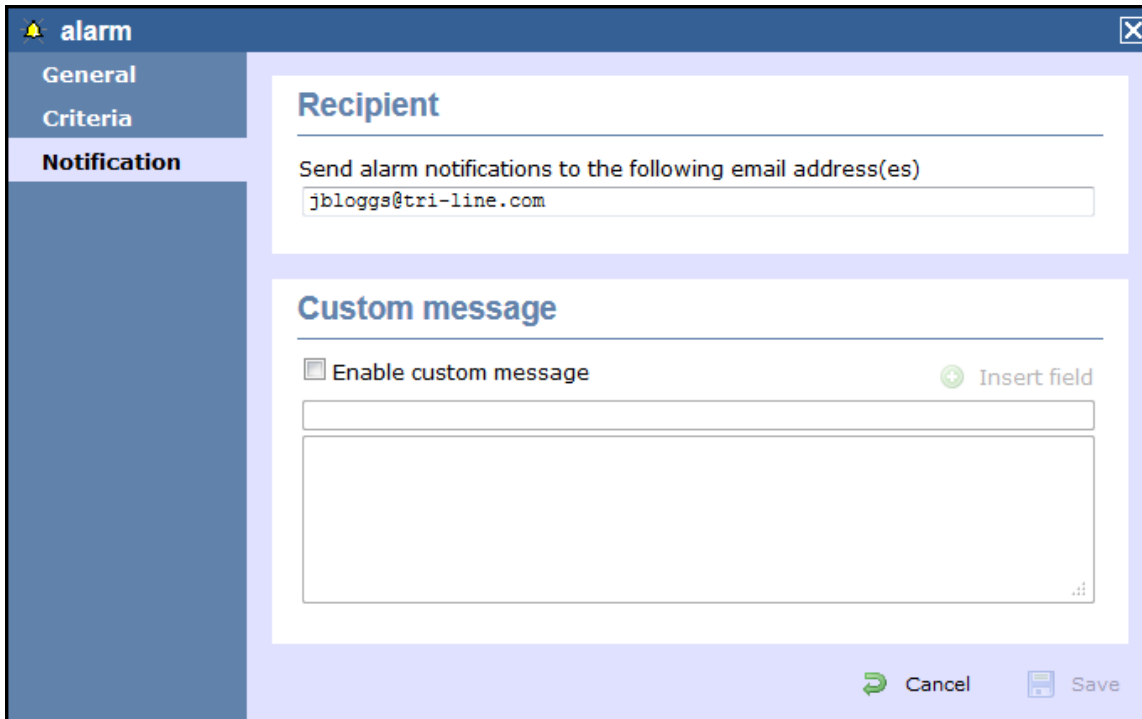
This filter allows you set up an alarm in order to monitor the call activity for a particular day of the week. To set up the alarm criteria, choose the relevant weekday from the list provided and select an appropriate operator. In the example below, an alarm will be triggered when a call is logged on a Sunday.



The screenshot shows a configuration bar with three input fields. The first field is labeled 'Weekday' and contains a green downward arrow icon. The second field is labeled 'Equals' and contains a red exclamation mark icon. The third field is labeled 'Sunday'.

Notification

The `Notification` tab allows you set up an email alert when the alarm is being triggered. To send the notification to multiple email addresses, separate each entry with a comma.



The screenshot shows a dialog box titled 'alarm' with a close button in the top right corner. The dialog has a sidebar on the left with three tabs: 'General', 'Criteria', and 'Notification', with 'Notification' selected. The main content area is divided into two sections: 'Recipient' and 'Custom message'. The 'Recipient' section has a text input field containing 'jbloggs@tri-line.com' and a label 'Send alarm notifications to the following email address(es)'. The 'Custom message' section has a checkbox labeled 'Enable custom message' which is unchecked, and an 'Insert field' button with a green plus icon. Below the checkbox is a large text area for the custom message. At the bottom right of the dialog are 'Cancel' and 'Save' buttons.

Stats alarms

General


This tab allows you to edit the general properties of your `stats alarm` object:

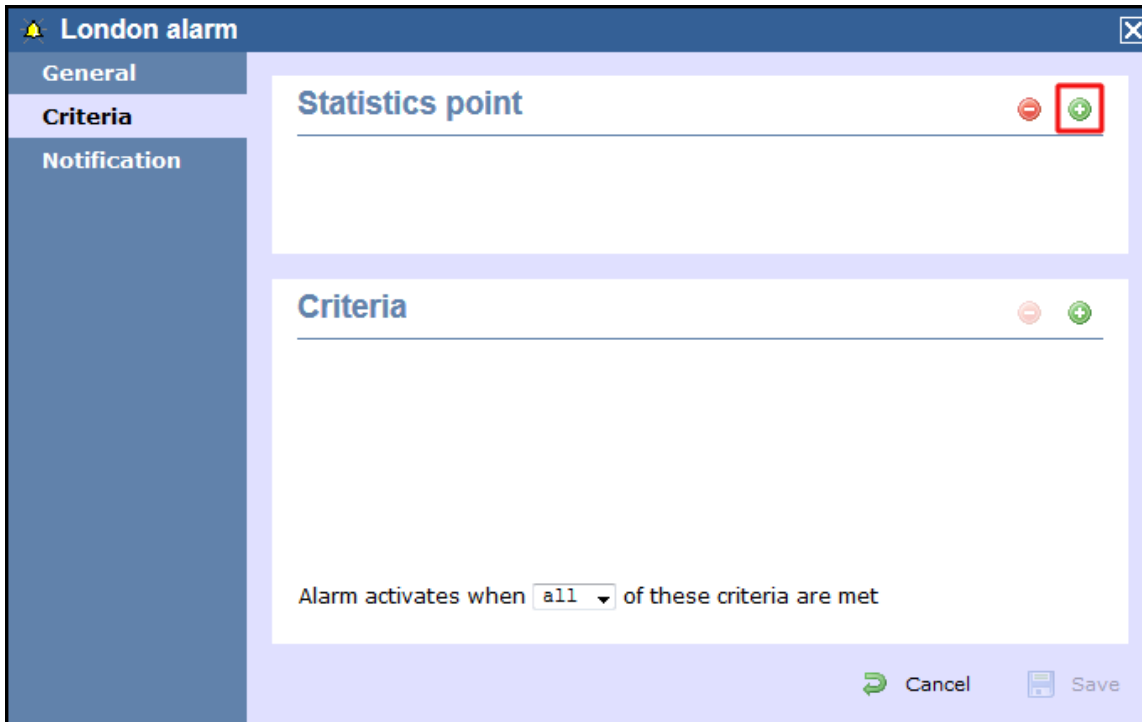
Field	Description
Alarm name	Enter a relevant name for the alarm object.
Alarm type	Select the type of alarm you want to add to the Directory.


Criteria

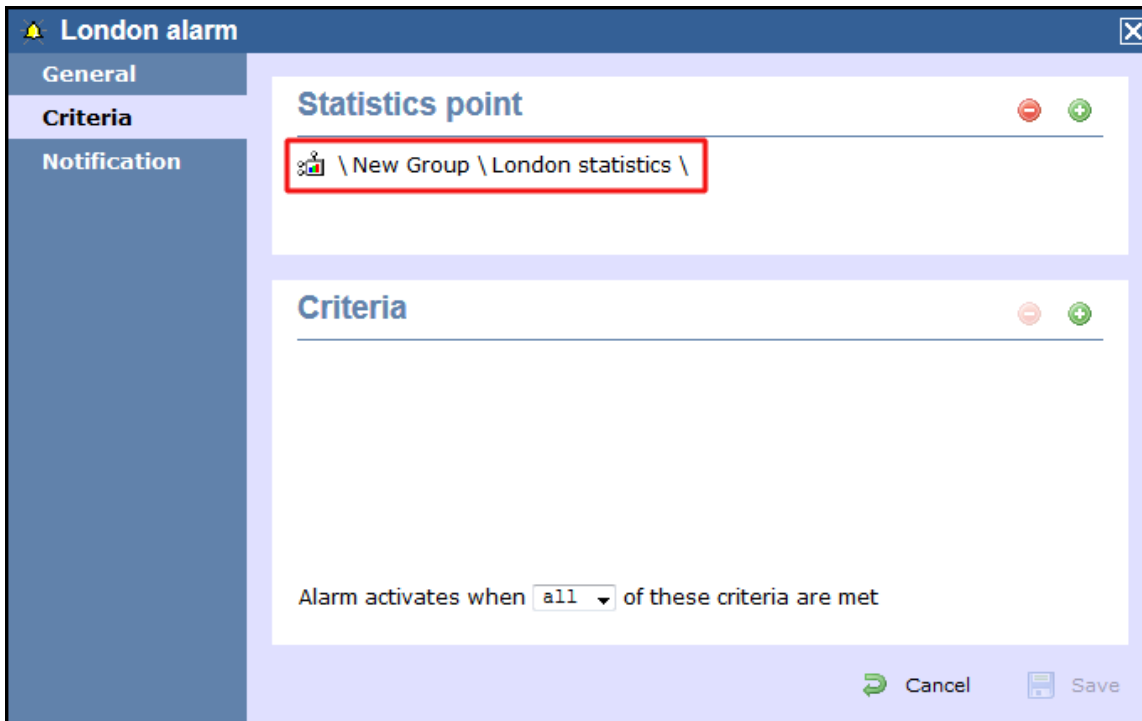
This tab allows you to select the stats point where you want to place your alarm object and to set up the criteria that must be met in order to trigger the alarm.

Selecting a stats point

To select a stats point object, click on the  icon, as shown below:

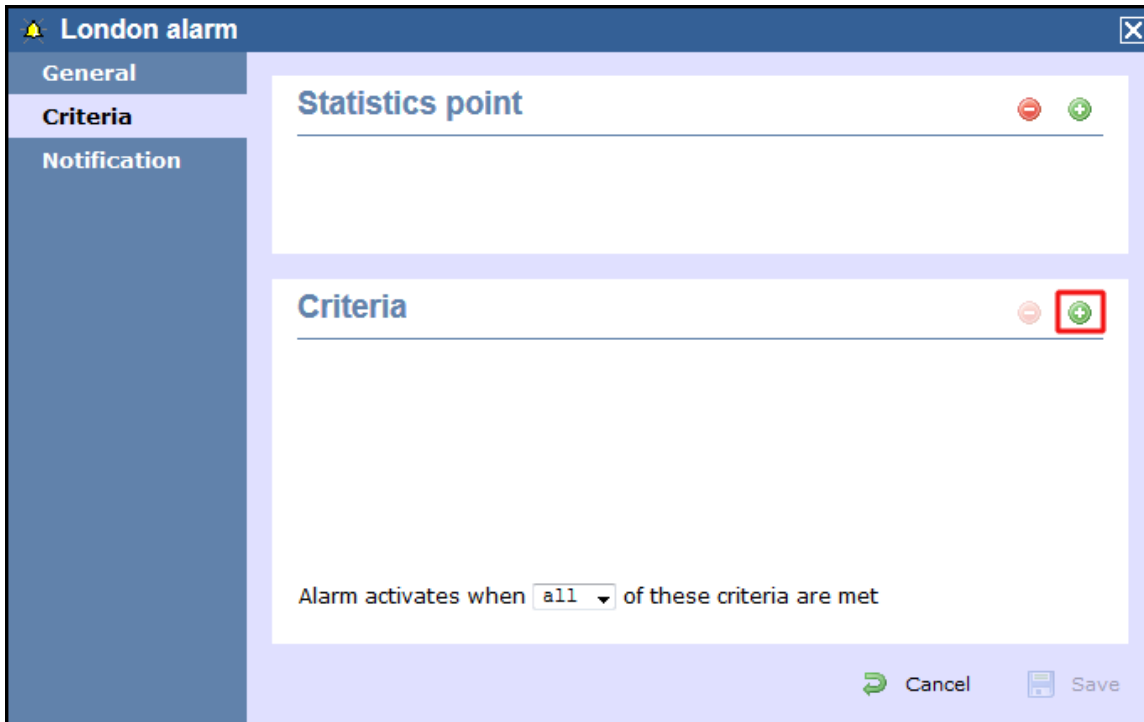


A new window will open, allowing you to drill through the Directory in order to locate the stats point object where you want to add the alarm. Click on the  icon to select it. The stats point will be added in the list, as shown below:

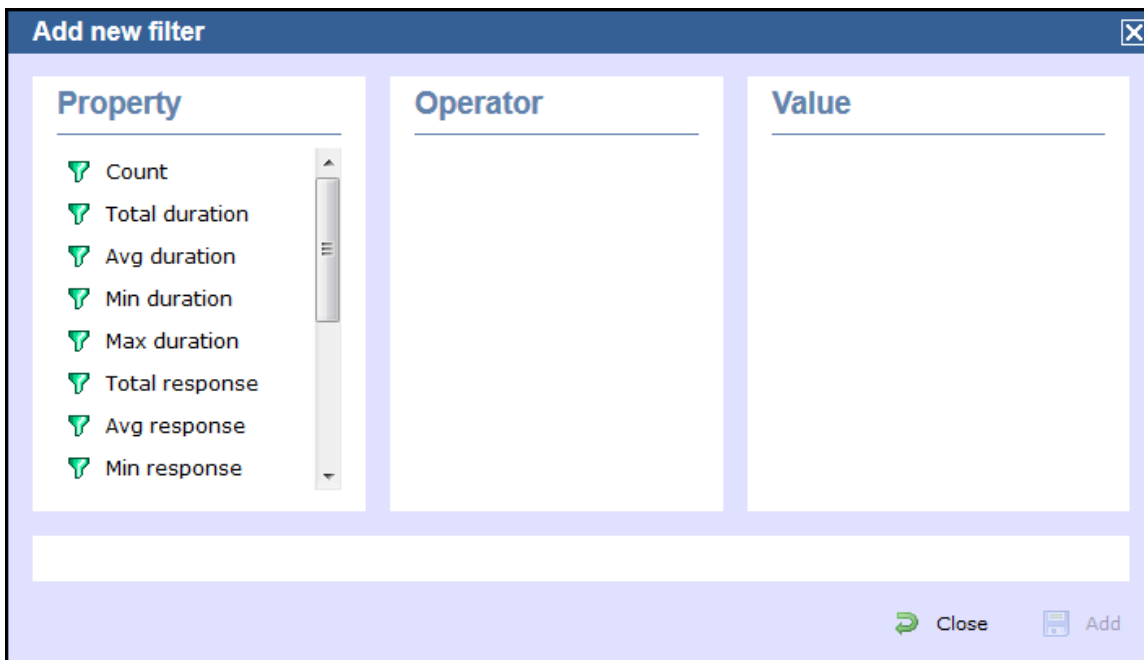


Selecting the criteria

To set up the criteria that must be met in order to trigger the alarm, click on the  icon, as shown below:



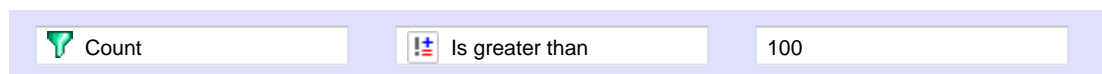
A new window will open, displaying a list of filters you can set up in order to configure the alarm criteria. Each filter consists of three elements: the filter's property (account code, dialled number, etc), an operator and a value field.



To add a filter to your alarm object, choose the filter type from the **Property** list, enter a relevant value and select an **operator** in order to define its meaning. The available filters for this type of alarm object are described in detail in the table below:

Count

This filter allows you set up an alarm based on the total number of calls registered by the selected stats point. To set up the alarm criteria, enter the relevant value in the box provided and select an appropriate operator. In the example below, an alarm will be triggered when the total number of calls collected by the stats point is greater than 100.





Total duration

This filter allows you to set up an alarm based on the total call duration registered by the selected stats point. To set up the alarm criteria, enter the relevant value in the box provided and select an appropriate operator. In the example below, an alarm will be triggered when the total duration registered by the stats point is **3600** seconds.

 Total duration	 Equals	3600
--	--	------

Average duration

This filter allows you to set up an alarm based on the average call duration registered for the calls collected by the selected stats point. To set up the alarm criteria, enter the relevant value in the box provided and select an appropriate operator. In the example below, an alarm will be triggered when the average duration registered by the stats point is not equal to **1800** seconds.

 Avg duration	 Does not equal	1800
--	--	------



Minimum duration

This filter allow you to set up an alarm based on the minimum call duration registered by the selected stats point. To set up the alarm criteria, enter the relevant value in the box provided and select an appropriate operator. In the example below, an alarm will be triggered when the minimum duration registered by the stats point is less than **600** seconds.

 Min duration	 Is less than	600
--	--	-----

Maximum duration

This filter allow you to set up an alarm based on the maximum call duration registered by the selected stats point. To set up the alarm criteria, enter the relevant value in the box provided and select an appropriate operator. In the example below, an alarm will be triggered when the maximum duration registered by the stats point is greater than **600** seconds.

 Max duration	 Is greater than	600
--	---	-----



Total response

This filter allow you to set up an alarm based on the total response time registered by the selected stats point. To set up the alarm criteria, enter the relevant value in the box provided and select an appropriate operator. In the example below, an alarm will be triggered when the total response time registered by the stats point is less than **10** seconds.

 Total response	 Is less than	10
--	--	----

Average response

This filter allow you to set up an alarm based on the average response time registered by the selected stats point. To set up the alarm criteria, enter the relevant value in the box provided and select an appropriate operator. In the example below, an alarm will be triggered when the average response time registered by the stats point is greater than **7** seconds.

 Avg response	 Is greater than	7
--	---	---



Minimum response

This filter allow you to set up an alarm based on the minimum response time registered by the selected stats point. To set up the alarm criteria, enter the relevant value in the box provided and select an appropriate operator. In the example below, an alarm will be triggered when the minimum response time registered by the stats point is **5** seconds.

 Min response	 Equals	5
--	--	---

Maximum response

This filter allows you to set up an alarm based on the maximum response time registered by the selected stats point. To set up the alarm criteria, enter the relevant value in the box provided and select an appropriate operator. In the example below, an alarm will be triggered when the maximum response time registered by the stats point is not 5 seconds.

 Max response	 Does not equal	5
--	--	---



Total cost

This filter allows you to set up an alarm based on the total cost registered for the calls collected by the selected stats point. To set up the alarm criteria, enter the relevant value in the box provided and select an appropriate operator. In the example below, an alarm will be triggered when the total cost registered by the stats point is 50.

 Total cost	 Equals	50
--	--	----

Average cost

This filter allows you set up an alarm based on the average cost registered for the calls collected by the selected stats point. To set up the alarm criteria, enter the relevant value in the box provided and select an appropriate operator. In the example below, an alarm will be triggered when the average cost registered by the stats point is greater than 20.

 Avg cost	 Is greater than	20
--	---	----



Minimum cost

This filter allows you set up an alarm based on the minimum cost registered for the calls collected by the selected stats point. To set up the alarm criteria, enter the relevant value in the box provided and select an appropriate operator. In the example below, an alarm will be triggered when the minimum cost registered by the stats point is 10.

 Min cost	 Equals	10
--	--	----

Maximum cost

This filter allows you set up an alarm based on the maximum cost registered for the calls collected by the selected stats point. To set up the alarm criteria, enter the relevant value in the box provided and select an appropriate operator. In the example below, an alarm will be triggered when the maximum cost registered by the stats point is greater than 60.

 Max cost	 Is greater than	60
--	---	----

Concurrency

This filter allows you set up an alarm based on the concurrency of calls registered by the selected stats point. To set up the alarm criteria, enter the relevant value in the box provided and select an appropriate operator. In the example below, an alarm will be triggered when the call concurrency registered by the stats point is greater than 5.

 Concurrency	 Equals	5
---	--	---

Notification

The **Notification** tab allows you set up an email alert when the alarm is being triggered. To send the notification to multiple email addresses, separate each entry with a comma.

The screenshot shows a configuration window titled 'alarm' with a close button in the top right. On the left is a sidebar with three tabs: 'General', 'Criteria', and 'Notification', with 'Notification' selected. The main area is divided into two sections:

- Recipient:** A section with the heading 'Recipient' and a sub-heading 'Send alarm notifications to the following email address(es)'. Below this is a text input field containing the email address 'jbloggs@tri-line.com'.
- Custom message:** A section with the heading 'Custom message'. It contains a checkbox labeled 'Enable custom message' which is currently unchecked. To the right of the checkbox is a green circular icon with a plus sign and the text 'Insert field'. Below the checkbox is a large, empty text area for entering a custom message.

At the bottom right of the window are two buttons: 'Cancel' (with a circular arrow icon) and 'Save' (with a floppy disk icon).

Channel

Channel

- What is a channel?
- Adding a channel
- Configuring a channel

What is a channel?

Channels are system objects representing your telephone lines. When you first configure TIM Enterprise, 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.

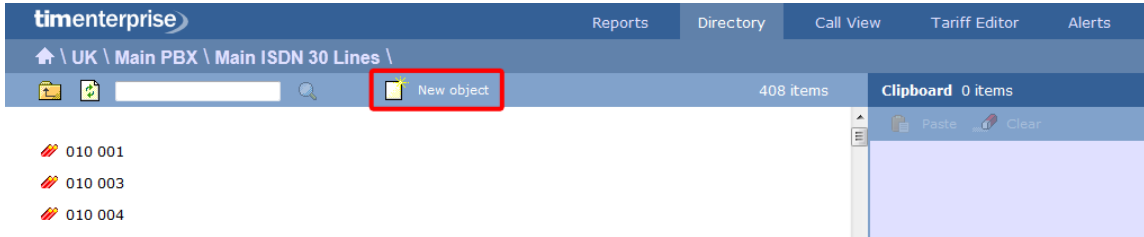
The screenshot shows a configuration window for a channel. The title bar at the top left has a pencil icon and the text '010 007'. The main area contains two input fields:

- Name:** An input field containing the text '010 007'.
- ID:** An input field containing the text '010 007'.

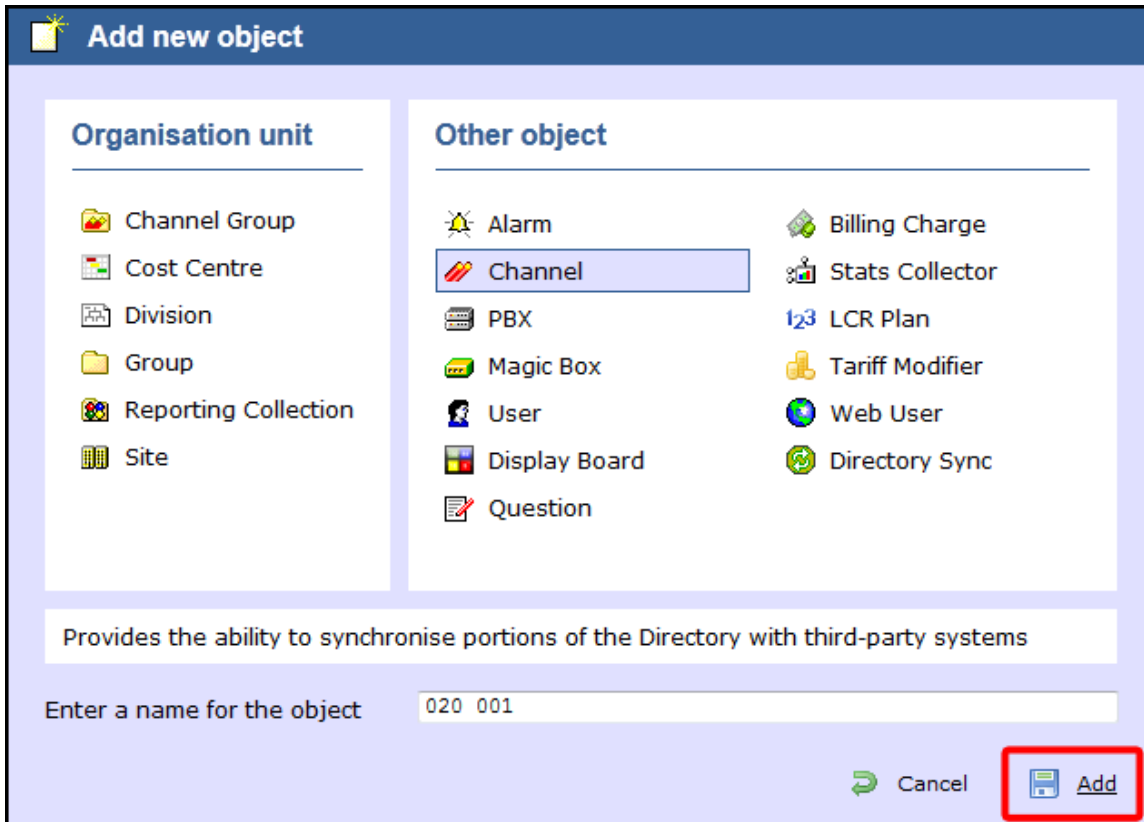
At the bottom of the window are two buttons: 'Cancel' (with a circular arrow icon) and 'Save' (with a floppy disk icon).

Adding a channel

To add a channel object to the system, drill-down to the Directory level where you want to add the channel and click on the **New object** tab, as shown below:

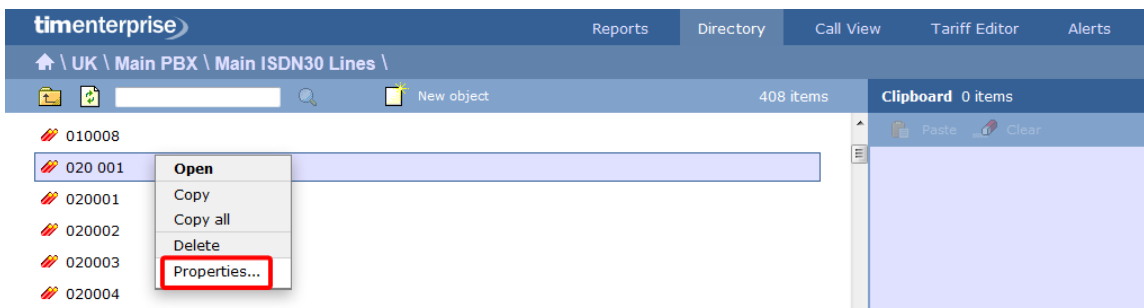


In the new window that opens, select the **Channel** object from the **Other object** list, enter a relevant name and click on the **Add** button, as shown below:



Configuring a channel

To configure a channel, locate the object in the Directory, click on it and select **Properties** from the drop-down list, as shown below:



A new window will open, allowing you to configure the properties of your channel object, as shown below:

Magic Box

Magic Box

- What is a Magic Box
- Adding a Magic Box
- Configuring a Magic Box
- Voice recording - video overview

What is a Magic Box

The **Magic Box** object allows you to add one or more of our supported voice recording options, enabling you to store the audio recording of every telephone call that TIM Enterprise 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 Enterprise 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 Enterprise, and a hybrid network of both types of interface can be used in a single TIM Enterprise deployment.

Adding a Magic Box

To add a recording device object to the system, drill-down to the Directory level where you want to place the object and click on the **New object** tab, as shown below:

In the new window that opens, select the **Magic Box** object from the **Other object** list, enter a name and select the type of telephone lines you are using (PRI, BRI, Analogue, VOIP), as shown below:

Add new object

Organisation unit

- Channel Group
- Cost Centre
- Division
- Group
- Reporting Collection
- Site

Other object

- Alarm
- Channel
- PBX
- Magic Box**
- User
- Display Board
- Question
- Billing Charge
- Stats Collector
- LCR Plan
- Tariff Modifier
- Web User
- Directory Sync

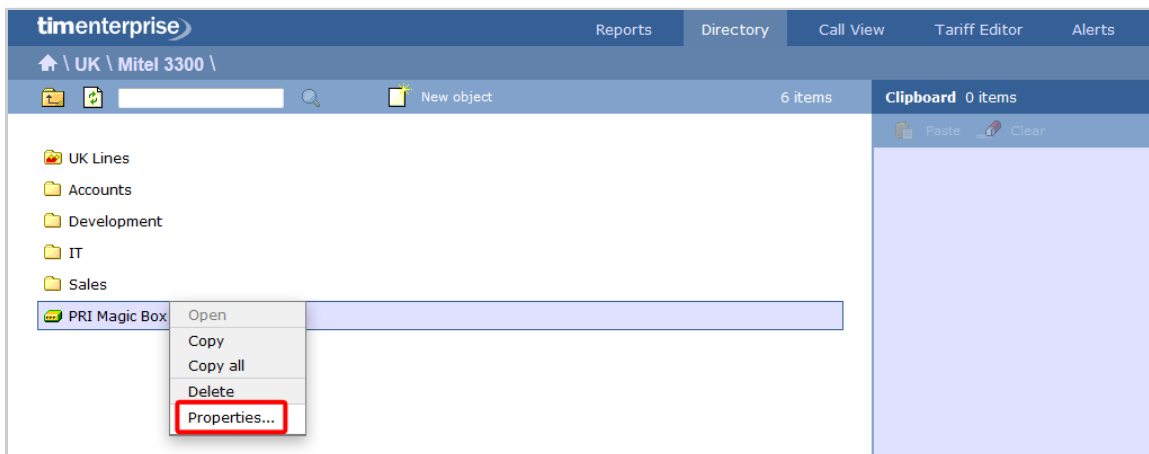
An individual question a user must answer in order to score calls

Enter a name for the object:

Model:

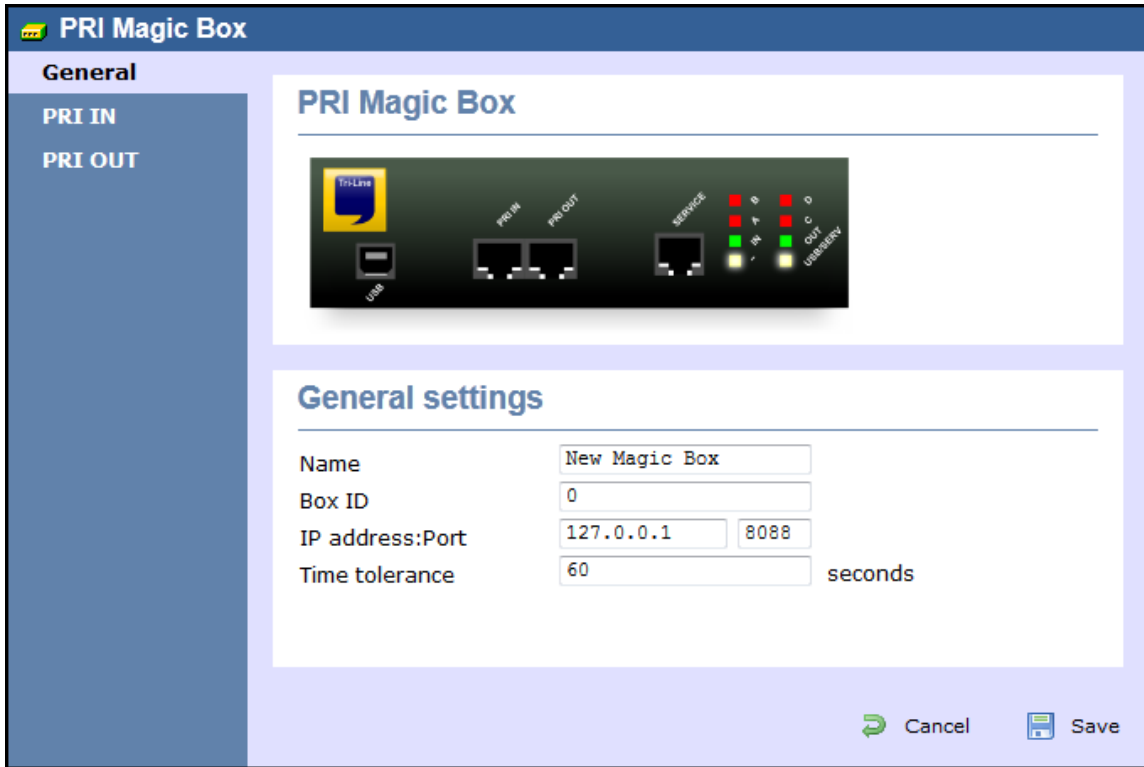
Configuring a Magic Box

To configure your recording device, locate object in the Directory, click on it and select **Properties** from the drop-down list, as shown below:



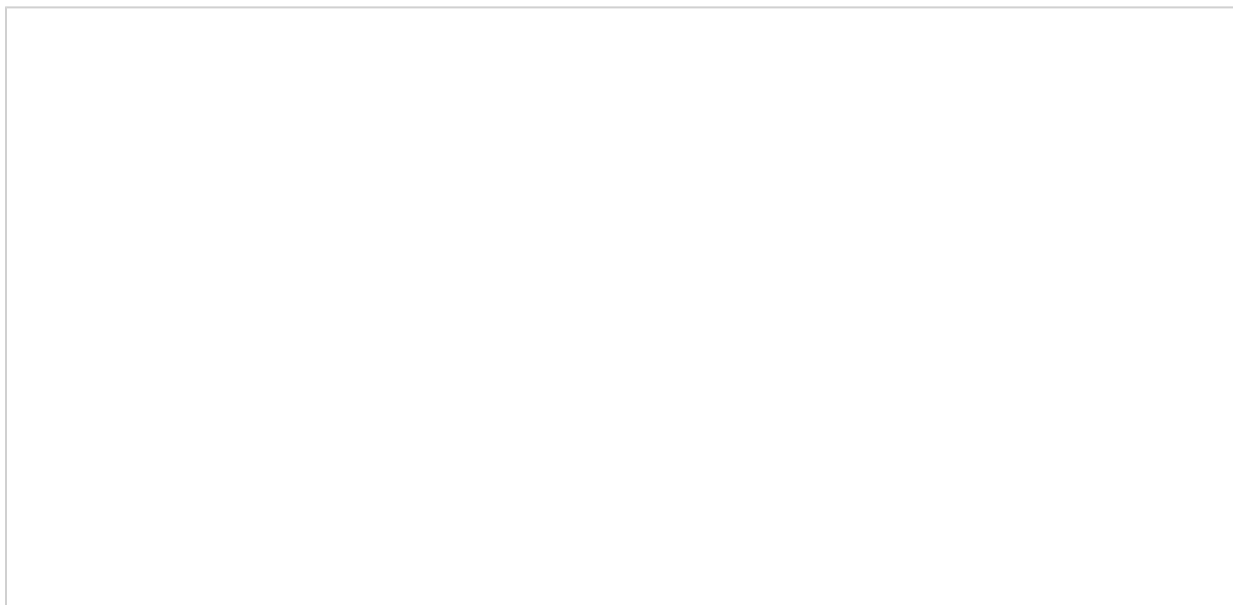
A new window will open, allowing you to configure the properties of your recording device object.

General



Setting	Description
Name	The name of your recording device
Box ID	The unique identifier of each call recording device
IP address: Port	The IP address of the recording device, or computer to which the device is attached and the port number
Time tolerance	The time interval around which TIM Enterprise will search for calls when matching audio files

Voice recording - video overview



PBX

What is a PBX?

The function of a PBX object is to acquire call logging data from your telephone system and can be added at any point in your Directory structure. TIM Enterprise can log an unlimited number of telephone systems and a PBX object must be configured for each one.

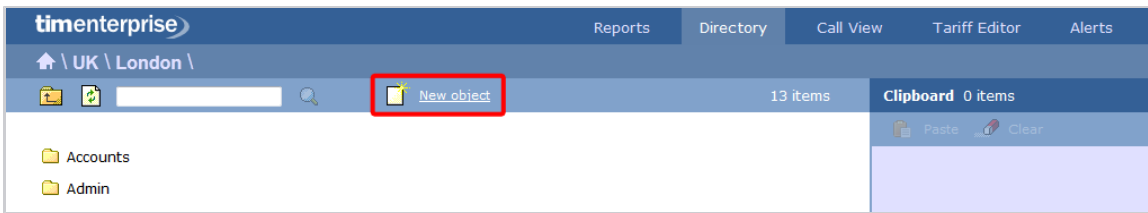


If a large number of PBXs is added to the system, you must ensure you have the required license capacity to log them. If additional users or sites need to be added, you need to increase the license capacity on your software.

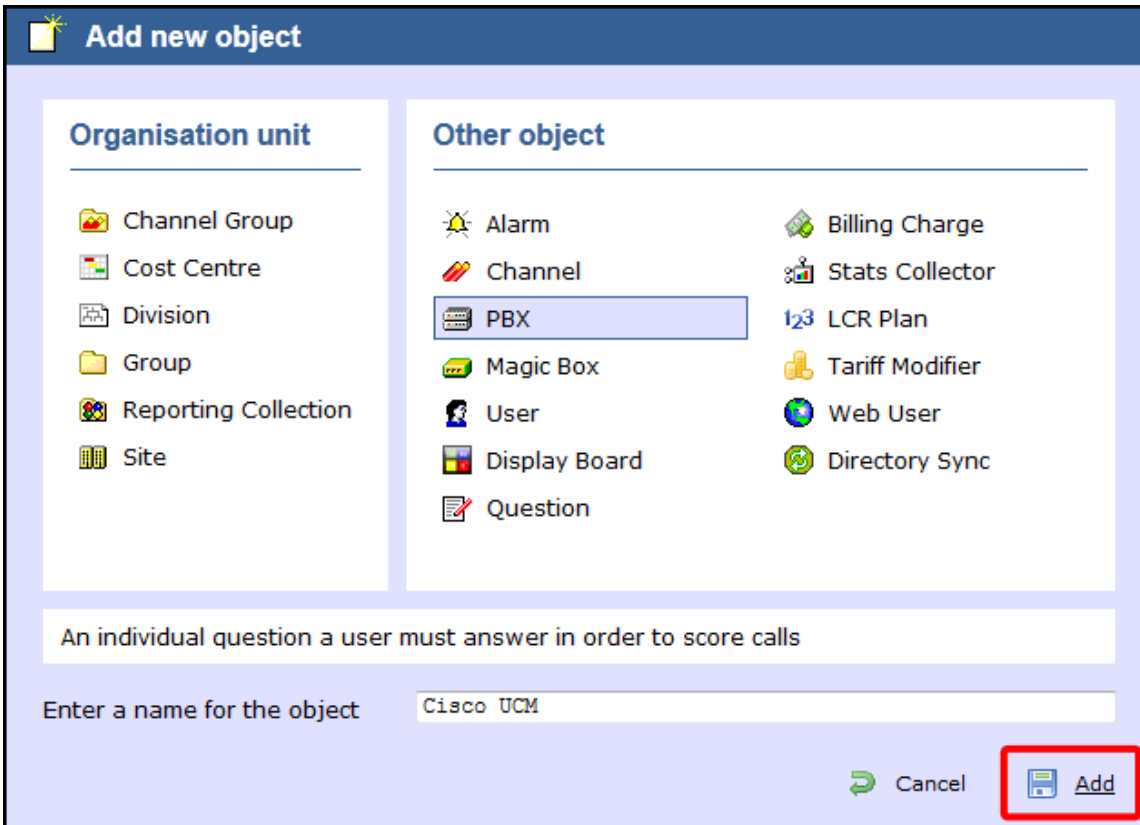
TIM Enterprise supports a large number of PBXs. For a full list of supported PBXs, click [here](#).

Adding a PBX

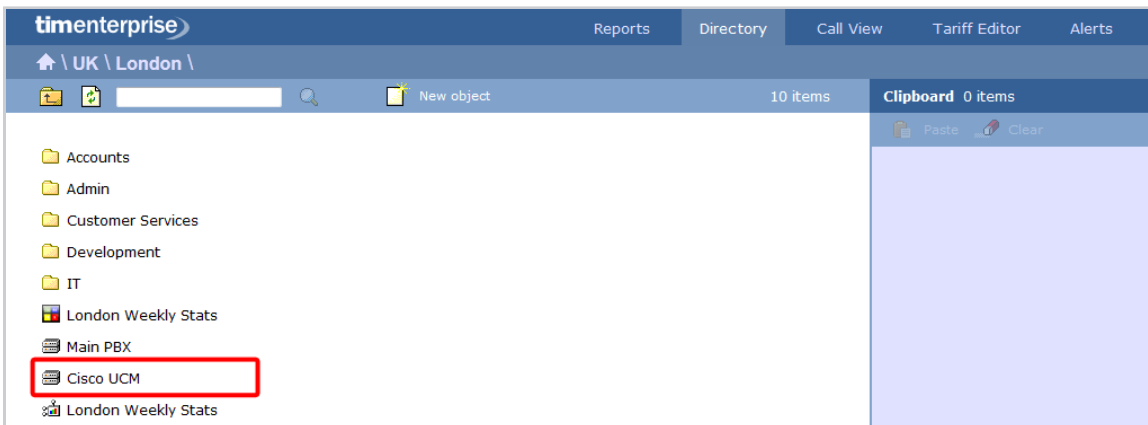
To add a PBX object to the system, drill-down to the Directory level where you want to add the PBX and click on the **New** object tab, as shown below:



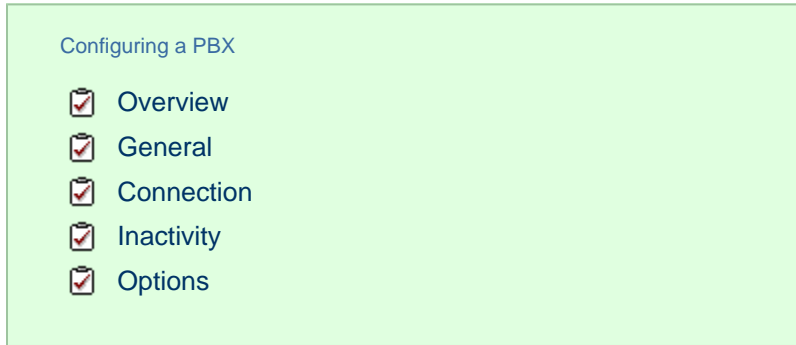
In the new window that opens, select the PBX object from the Other object list, enter a relevant name and click on the **Add** button. The name given to the PBX is usually its make or model ID. In the example below, a Cisco UCM PBX is being added in the UK \ London site.



The PBX object will appear in the Directory as follows:

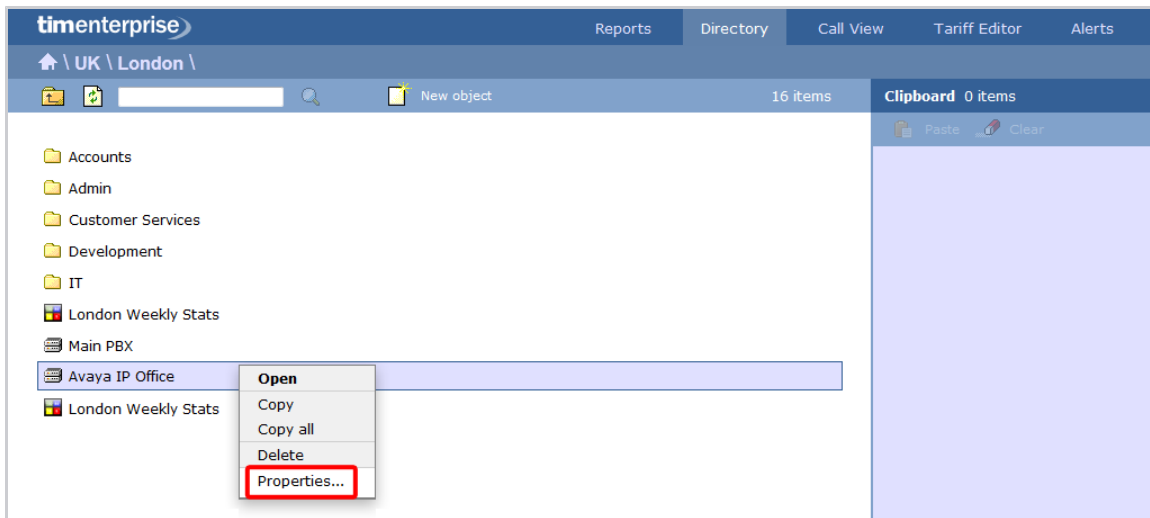


Configuring a PBX



Overview

To configure a PBX, locate the object in the Directory, click on it and select **Properties** from the drop-down list, as shown below:



A new window will open, allowing you to configure the properties of your PBX object, as shown below:

General

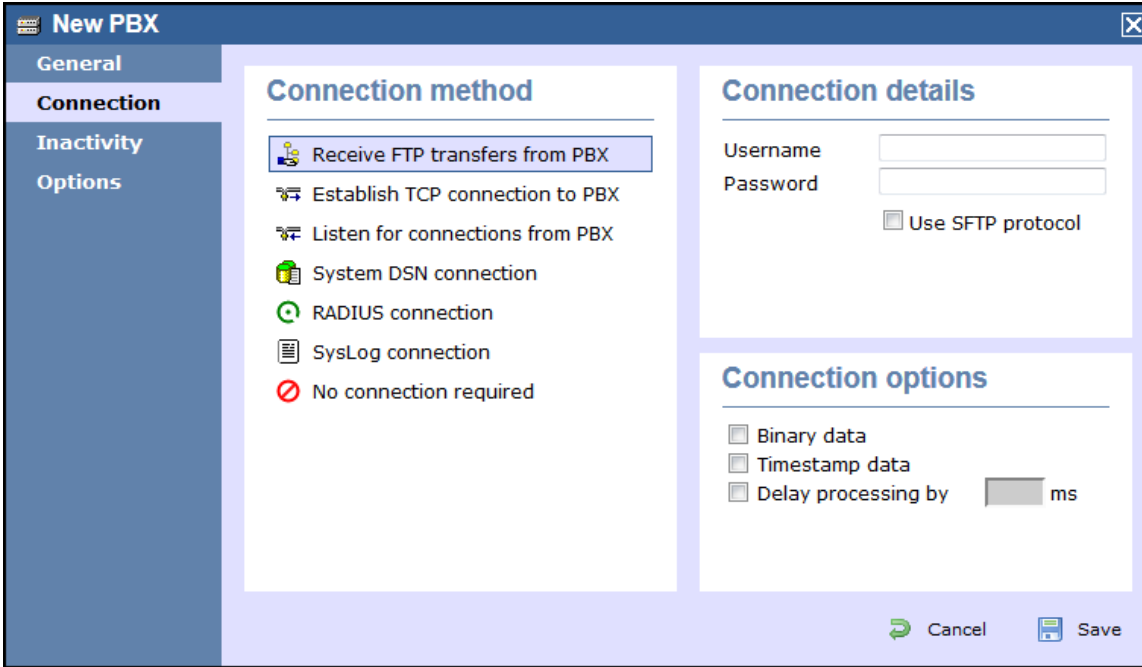
This tab allows you configure the general properties of your PBX object, which are described in the table below:

Field	Description												
Name	The name by which you want your PBX to be identified. Usually, the make or model name of your PBX is used												
Unique ID	The unique ID of the site object												
Time zone	This feature is no longer in use												
Broadcast CDRs from this PBX	This feature is no longer in use												
Keep a local backup of data	<p>Tick this box to backup your call logging data and enter the location of the folder you want to store these files</p> <p>The default path is <code>{app}\backup\backup-{year}-{month}-{day}.{uiv}</code> and can contain dynamic variables, as detailed below:</p> <table border="1"> <thead> <tr> <th>Item</th> <th>Description</th> </tr> </thead> <tbody> <tr> <td><code>app</code></td> <td>The full installation path of TIM Enterprise</td> </tr> <tr> <td><code>year</code></td> <td>The year the data was captured, in <code>yyyy</code> format</td> </tr> <tr> <td><code>month</code></td> <td>The month the data was captured, in <code>mm</code> format</td> </tr> <tr> <td><code>day</code></td> <td>The day of the month when data was captured, in <code>dd</code> format</td> </tr> <tr> <td><code>uiv</code></td> <td>The unique ID representing each site in the Directory</td> </tr> </tbody> </table>	Item	Description	<code>app</code>	The full installation path of TIM Enterprise	<code>year</code>	The year the data was captured, in <code>yyyy</code> format	<code>month</code>	The month the data was captured, in <code>mm</code> format	<code>day</code>	The day of the month when data was captured, in <code>dd</code> format	<code>uiv</code>	The unique ID representing each site in the Directory
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<code>day</code>	The day of the month when data was captured, in <code>dd</code> format												
<code>uiv</code>	The unique ID representing each site in the Directory												

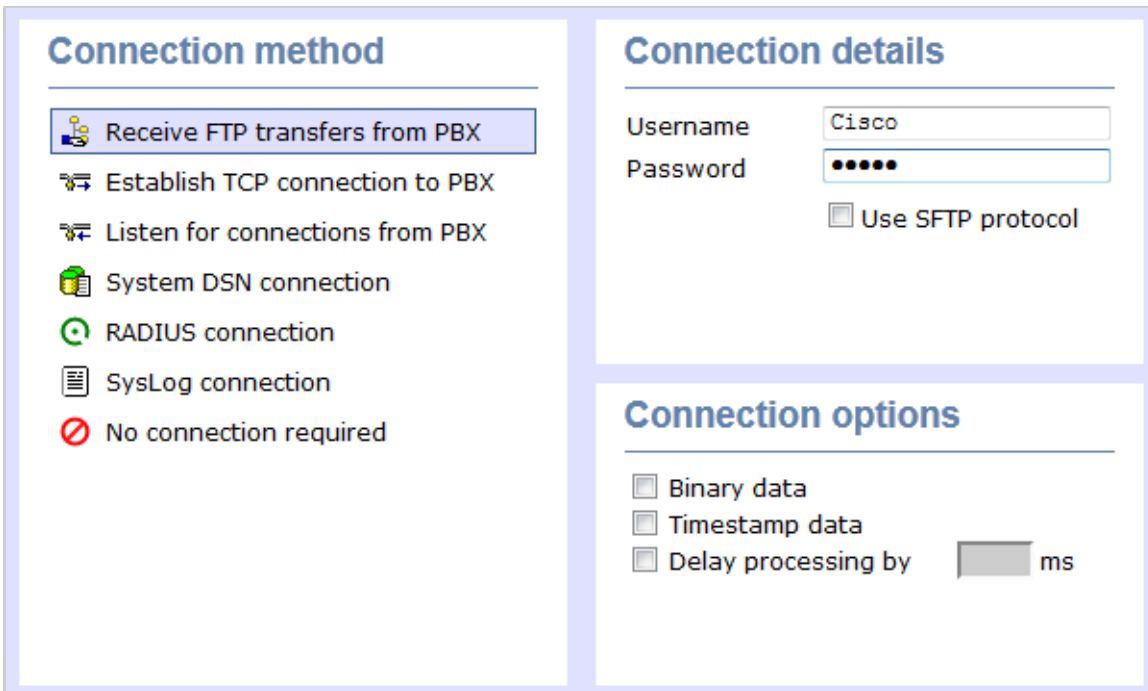
Data format	Each telephone system outputs its call logging data in a different format. Select your PBX model from the list provided to ensure your calls are logging correctly.
--------------------	---

Connection

This tab allows you to configure the connection parameters of your telephone system. The properties presented in the `Connection details` section will vary, depending on the connection method used by your telephone system to provide call logging data. Each type of connection is described below:










Receive FTP transfers from PBX



Field	Description
Username	The username of the FTP account on your telephone system.
Password	The password of the FTP account on your telephone system.

[Establish TCP connection to this PBX](#)

Connection method

-  Receive FTP transfers from PBX
-  Establish TCP connection to PBX
-  Listen for connections from PBX
-  System DSN connection
-  RADIUS connection
-  SysLog connection
-  No connection required

Connection details

Host

Port

Username

Password

IP script

Connection options

Binary data








Timestamp data

Delay processing by ms

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.
IP script	The script file that TIM Enterprise uses when checking for new data.

[Listen for connection to this PBX](#)

Connection method

-  Receive FTP transfers from PBX
-  Establish TCP connection to PBX
-  Listen for connections from PBX
-  System DSN connection
-  RADIUS connection
-  SysLog connection
-  No connection required

Connection details

Host

Port

Connection options

Binary data








Timestamp data

Delay processing by ms

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 Enterprise should listen on for call logging data.

System DSN connection

Connection method

-  Receive FTP transfers from PBX
-  Establish TCP connection to PBX
-  Listen for connections from PBX
-  System DSN connection
-  RADIUS connection
-  SysLog connection
-  No connection required

Connection details

DSN

Frequency

DB script

Connection options

Binary data

Timestamp data








Delay processing by ms

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 Enterprise makes when connecting to the database to determine if new data is available.
DB Script	The database script that TIM Enterprise uses when checking for new data.

RADIUS connection

Connection method

-  Receive FTP transfers from PBX
-  Establish TCP connection to PBX
-  Listen for connections from PBX
-  System DSN connection
-  RADIUS connection
-  SysLog connection
-  No connection required

Connection details

Client IP

Secret key

Connection options

Binary data








Timestamp data

Delay processing by ms

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 Enterprise and your telephone system.

Syslog connection

Connection method

-  Receive FTP transfers from PBX
-  Establish TCP connection to PBX
-  Listen for connections from PBX
-  System DSN connection
-  RADIUS connection
-  SysLog connection
-  No connection required

Connection details

Client IP

Connection options

- Binary data
- Timestamp data
- Delay processing by ms

Field	Description
Client IP	The IP address of your telephone system responsible for sending SysLog events to TIM Enterprise.



For detailed information about connecting to all makes/models of PBX, refer to the [Connecting to your PBX section](#).

Connection options

Option	Description
Binary data	Select this option if your telephone system sends call records in a non-textual format.
Timestamp data	TIM Enterprise can timestamp call records from your telephone system as they are received, if they do not already include dates and times.
Delay processing by	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

This tab allows you to set up an inactivity timer, which can notify you by e-mail when TIM Enterprise has not received data from your telephone system for a given amount of time.

Avaya IP Office v6

General
Connection
Inactivity
Options

Trigger

After minutes of inactivity email

Reset connection to datasource

Exclusions

<input type="checkbox"/> Monday	<input checked="" type="checkbox"/> 00	<input checked="" type="checkbox"/> 07	<input type="checkbox"/> 14	<input checked="" type="checkbox"/> 21
<input type="checkbox"/> Tuesday	<input checked="" type="checkbox"/> 01	<input checked="" type="checkbox"/> 08	<input type="checkbox"/> 15	<input checked="" type="checkbox"/> 22
<input type="checkbox"/> Wednesday	<input checked="" type="checkbox"/> 02	<input type="checkbox"/> 09	<input type="checkbox"/> 16	<input checked="" type="checkbox"/> 23
<input type="checkbox"/> Thursday	<input checked="" type="checkbox"/> 03	<input type="checkbox"/> 10	<input type="checkbox"/> 17	
<input type="checkbox"/> Friday	<input checked="" type="checkbox"/> 04	<input type="checkbox"/> 11	<input type="checkbox"/> 18	
<input checked="" type="checkbox"/> Saturday	<input checked="" type="checkbox"/> 05	<input type="checkbox"/> 12	<input checked="" type="checkbox"/> 19	
<input checked="" type="checkbox"/> Sunday	<input checked="" type="checkbox"/> 06	<input type="checkbox"/> 13	<input checked="" type="checkbox"/> 20	

Cancel Save

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

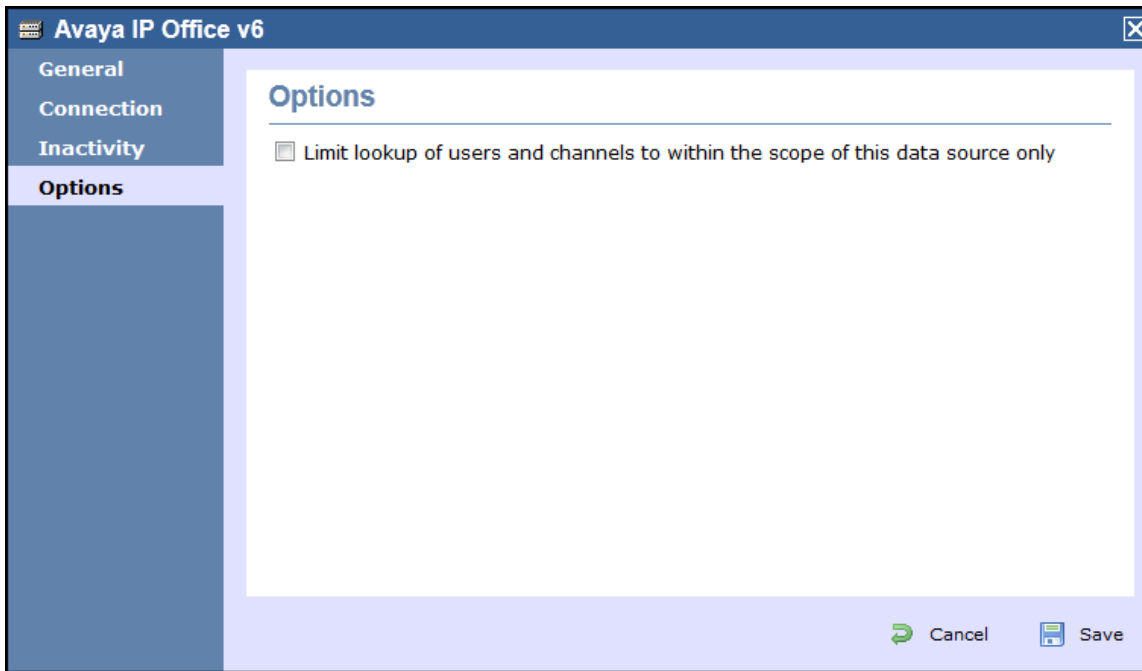
TIM Enterprise can reset the network connection to your telephone system when an inactivity alert is sent, in order to cause the telephone system to restart its connection.

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.

Options

The **Options** tab allows you to restrict the lookup of users outside the selected PBX object. This will allow you to log users with the same extension number across different sites.



This option is turned off by default and it is recommended that you check with our [Technical Support team](#) whether it needs to be enabled on our system.

User

User

- What is a user?
- Adding a user
- Configuring a user

What is a user?

Users represent the people in your organisation who make use of devices such as telephone extensions, fax machines, etc. When you first configure TIM Enterprise, 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.


f **Alex Gustoli**


General
 Features

User properties

Name	<input type="text" value="Alex Gustoli"/>
Job title	<input type="text" value="Operations Manager"/>
Extension	<input type="text" value="11065"/>
Email	<input type="text" value="agustoli@example.com"/>
Mobile	<input type="text" value="07828123456"/>
DDI	<input type="text" value="020726511065"/>
Fax	<input type="text"/>
Pager	<input type="text"/>
IP phone	<input type="text"/>
Alternative ext	<input type="text" value="11064"/>


User details





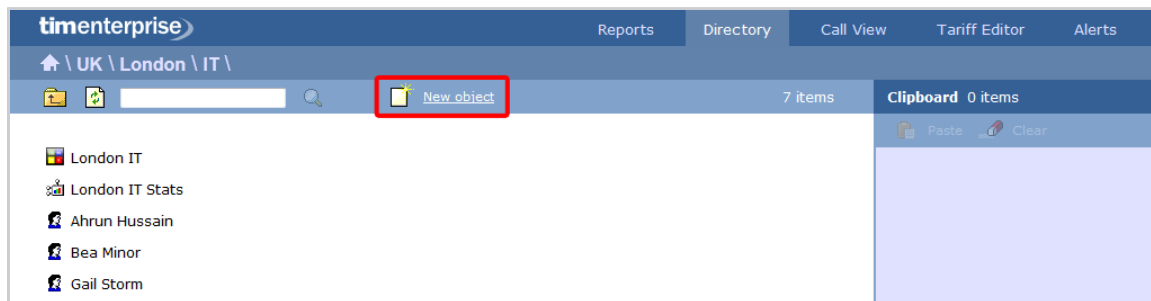
Address

9-10 Telfords Yard
 The Highway
 London
 E1W 2BS

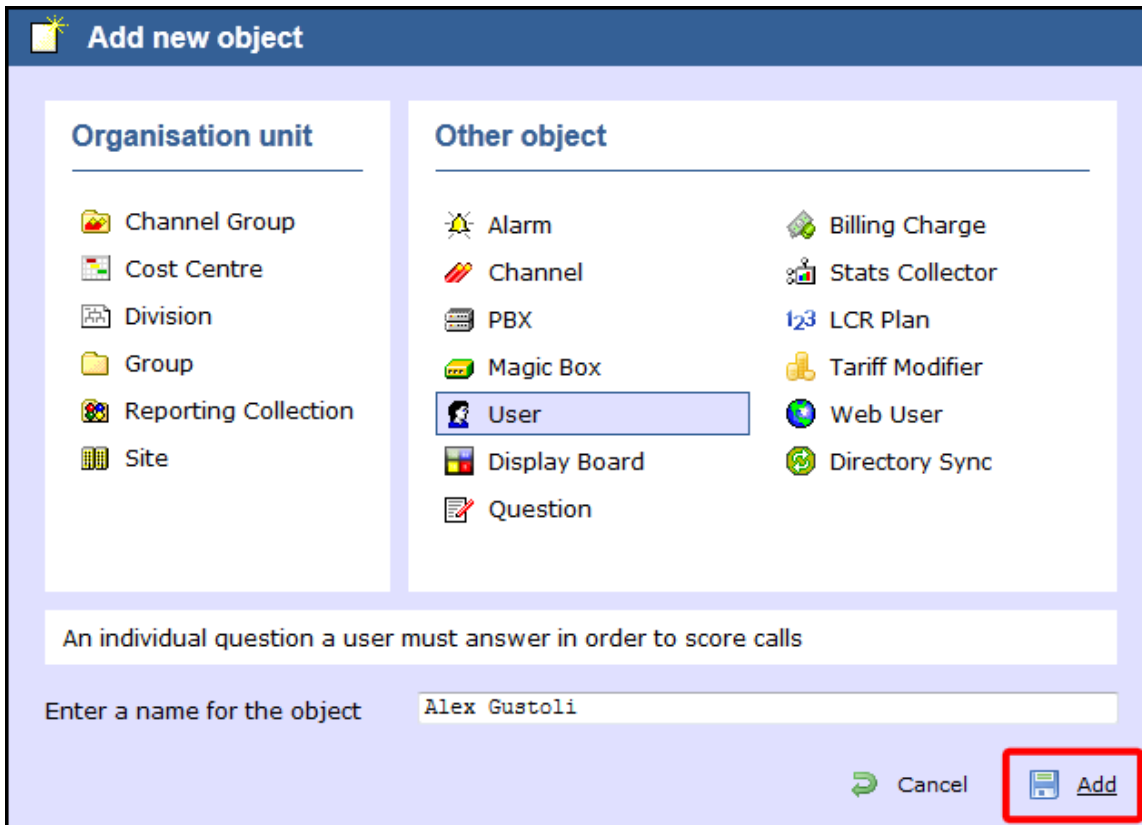
Cancel  Save

Adding a user

To manually add a user to the system, drill-down to the Directory level where you want to add the user and click on the **New object** tab, as shown below:

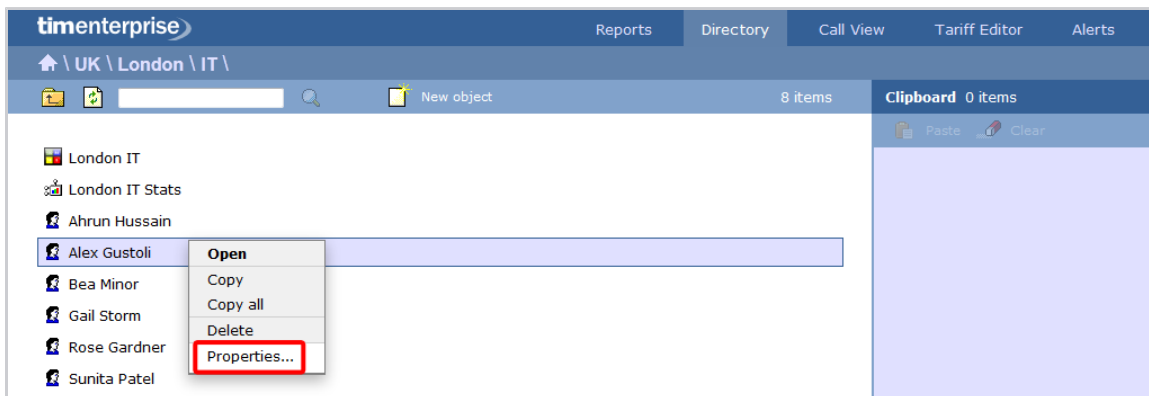


In the new window that opens, select the **User** object from the **Other** object list, enter a relevant name and click on the **Add** button, as shown below:



Configuring a user

To configure a user, locate the object in the Directory, click on it and select **Properties** from the drop-down list, as shown below:



A new window will open, allowing you to configure the properties of your user object, as shown below:

General


f **Alex Gustoli**

General
Features

User properties

Name	<input type="text" value="Alex Gustoli"/>
Job title	<input type="text" value="Operations Manager"/>
Extension	<input type="text" value="11065"/>
Email	<input type="text" value="agustoli@example.com"/>
Mobile	<input type="text" value="07828123456"/>
DDI	<input type="text" value="020726511065"/>
Fax	<input type="text"/>
Pager	<input type="text"/>
IP phone	<input type="text"/>
Alternative ext	<input type="text" value="11064"/>

User details



Address

9-10 Telfords Yard
 The Highway
 London
 E1W 2BS

↶ Cancel 💾 Save

Field	Description
Name	The name of the user. If no name is entered, the extension number will show instead
Job title	The job title of the user
Extension	The extension number of the user
Email	The e-mail address of the user
Mobile	The mobile number of the user
DDI	The DDI number of the user
Fax	The fax number of the user
IP Phone	The IP phone number of the user
Alt extension	The alternative extension number(s) or the DDI digits of the user, if applicable

Features

Field	Description				
Email details of missed calls	Tick this box if you would like this user to receive e-mail notifications every time they have a missed call				
Licensed personal call manager	This feature is no longer in use				
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				
Call barring	<p>This feature is not available on the majority of telephone systems as it requires tight integration with the PBX. If available it will allow you to:</p> <table border="1"> <tbody> <tr> <td>Bar user from making calls</td> <td>Prevents the user making calls. i.e. set a block on the PBX to prevent outbound calls from this user.</td> </tr> <tr> <td>Partially Bar calls</td> <td>Bar calls to specific numbers or calls that exceed a specific pre-allocated amount.</td> </tr> </tbody> </table>	Bar user from making calls	Prevents the user making calls. i.e. set a block on the PBX to prevent outbound calls from this user.	Partially Bar calls	Bar calls to specific numbers or calls that exceed a specific pre-allocated amount.
Bar user from making calls	Prevents the user making calls. i.e. set a block on the PBX to prevent outbound calls from this user.				
Partially Bar calls	Bar calls to specific numbers or calls that exceed a specific pre-allocated amount.				

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

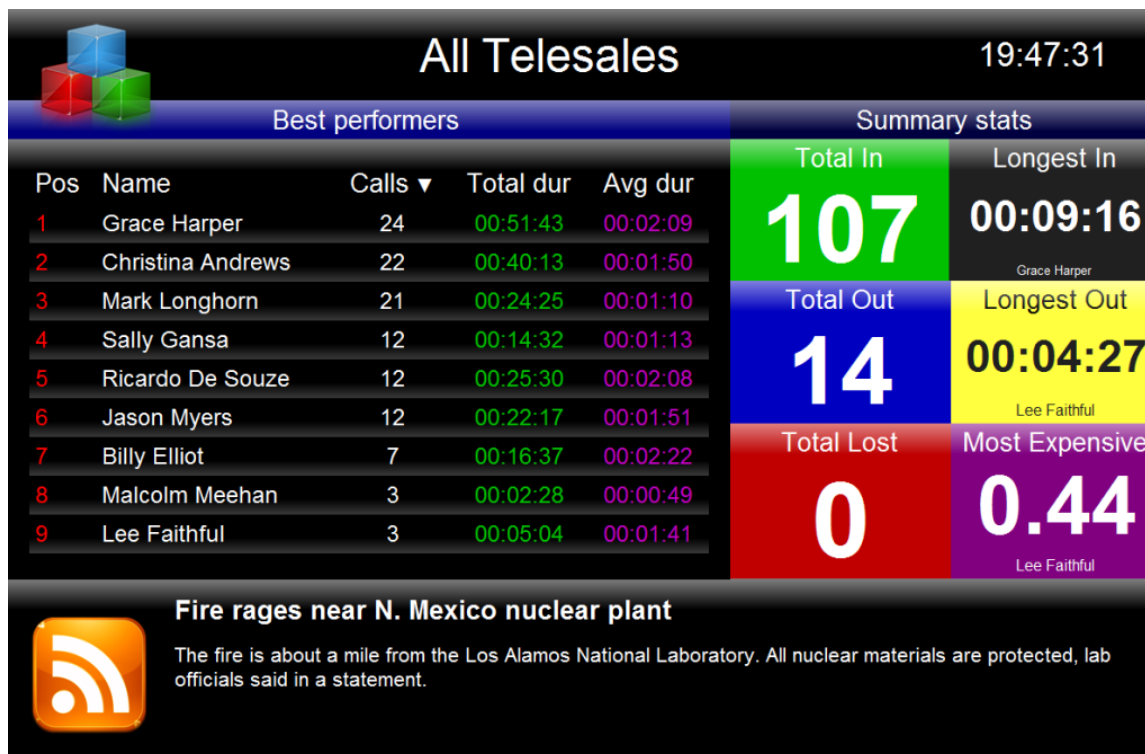


RSS panel



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.

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 collectors" 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.

London Daily Stats

General

Name: London Daily Stats

Subject

- User
- User group
- Site
- Cost centre
- Division
- PBX
- Dialed number
- CLI
- Chargeband
- Destination
- Half hour time slot

Reset frequency

Every: 1

- Minutes
- Hours
- Days
- Weekdays
- Weeks
- Months

Next reset

Time: 00:00:00

Day: 06

Month: Apr

Year: 2012

Use data from the last reset period

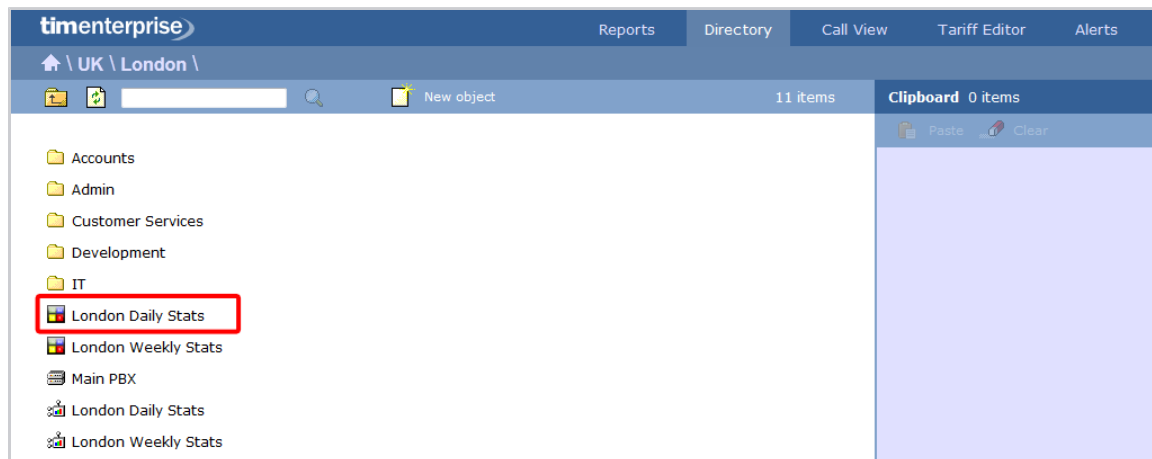
For more information about stats points and how to create them, refer to the [Stats collector](#) section.



In order to create a display board containing call information, at least one stats collection point must be defined first.

Accessing a display board

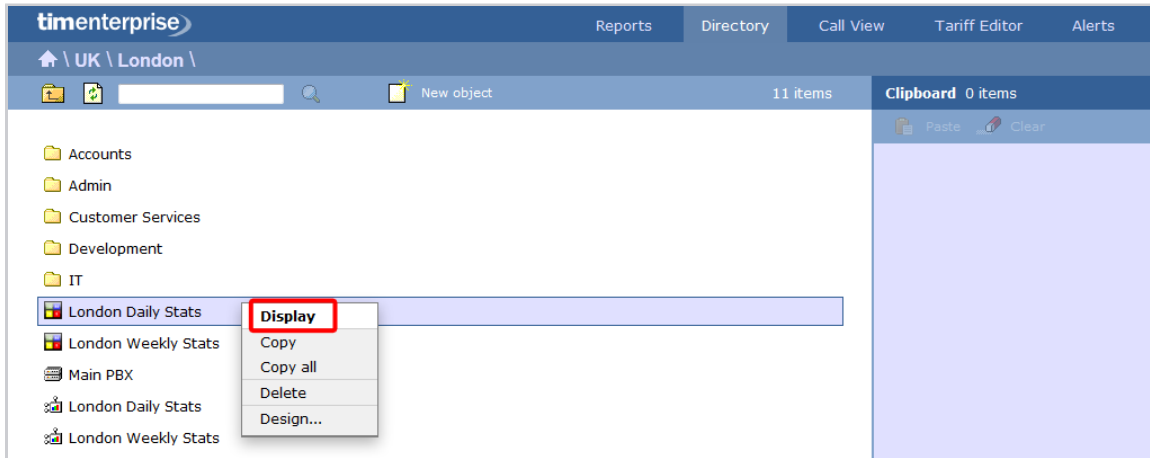
To access a display board, drill-down to the point in your Directory where your display board object is located.



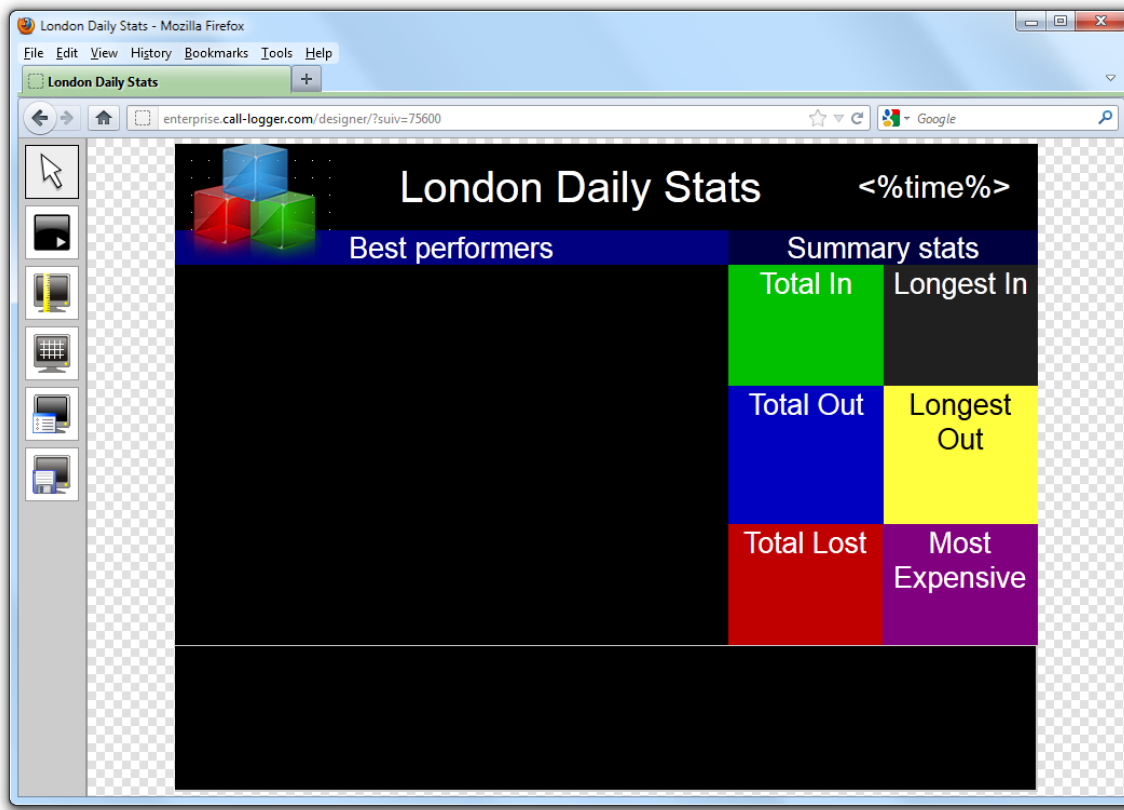


The list of display boards you are allowed to see depends on the place of your login account in the Directory. To be able to see additional display boards, contact your system administrator.

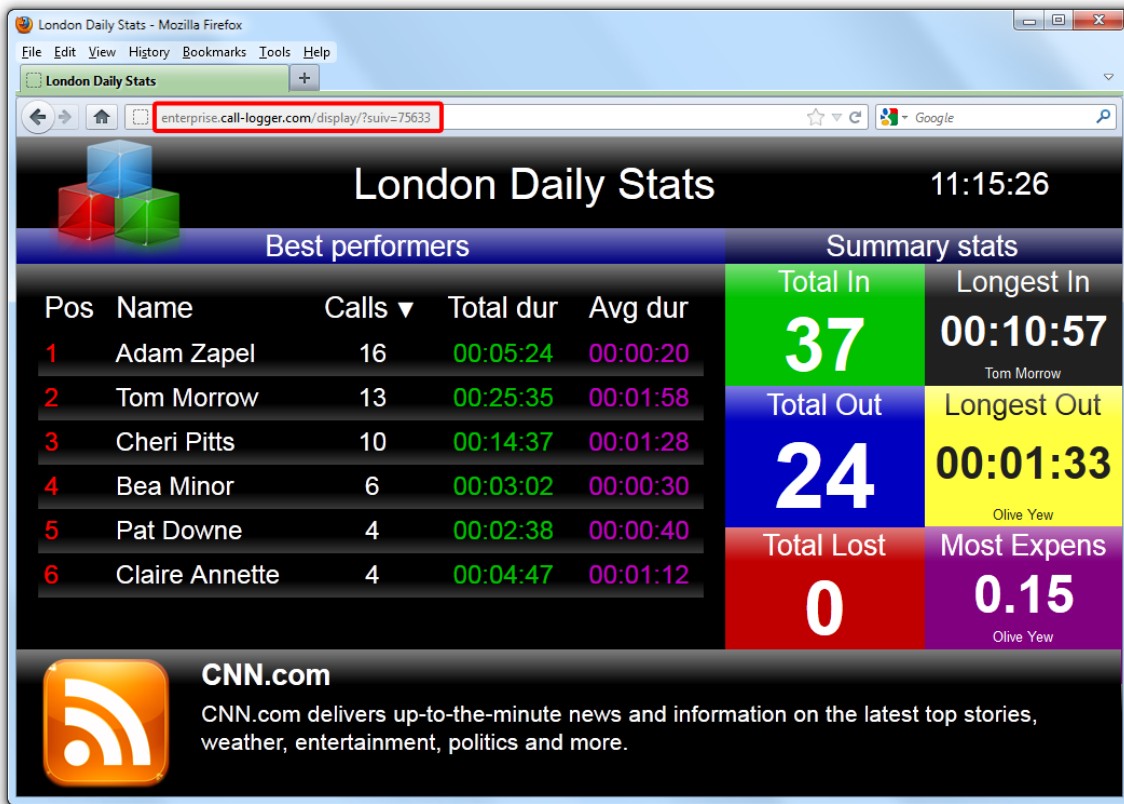
To view the display board, click on it to expand the drop-down list and select **Display**, as shown below:



To design or edit a display board, select **Design** from the drop-down list. 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.

Creating a display board

Creating a display board

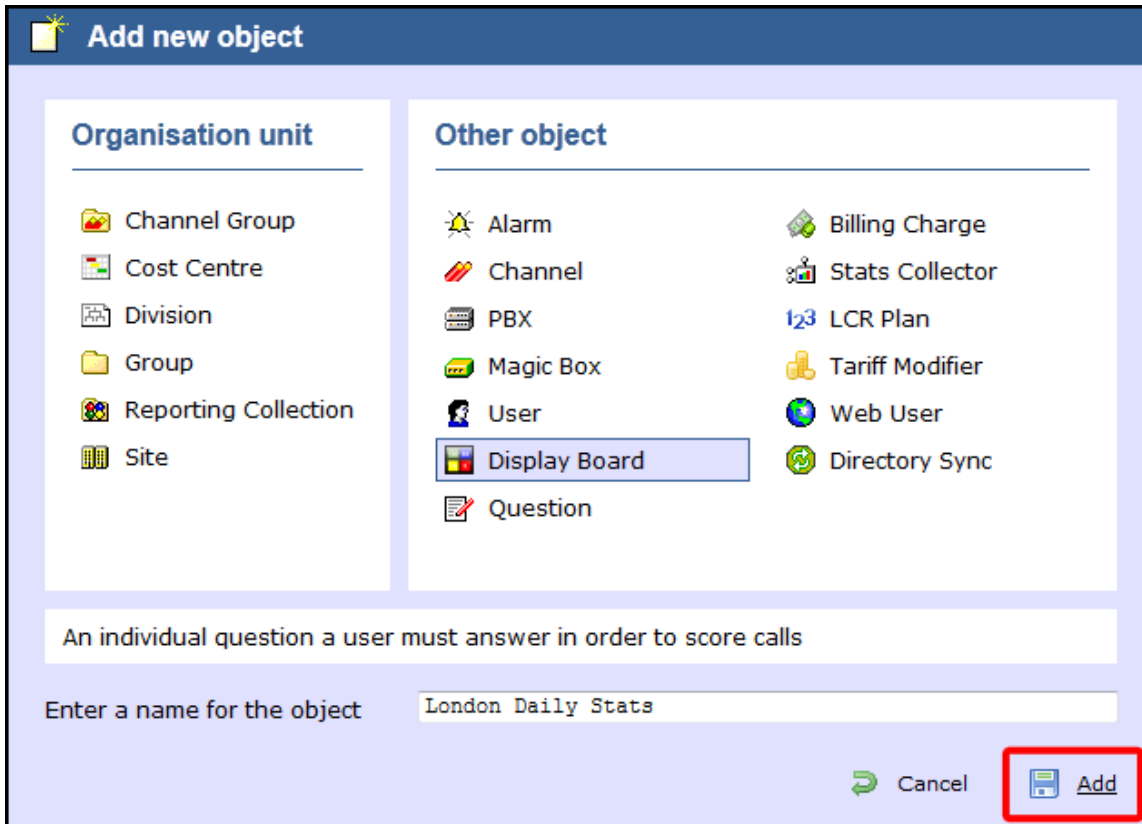
- Adding a display board
- Create blank
- Create from a template
- Create from an existing display board

Adding a display board

To add a display board object to the system, drill-down to the Directory level where you want to add the display board and click on the **New object** tab, as shown below:

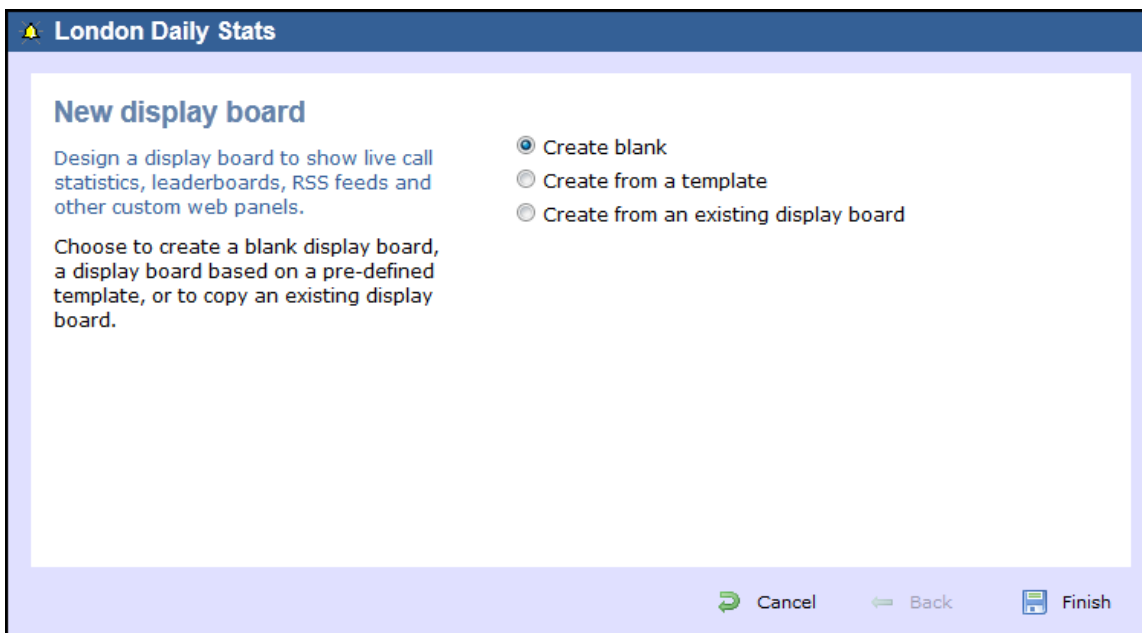


In the new window that opens, select the `Display board` object from the `Other object` list, enter a relevant name and click on the `Add` button, as shown below:



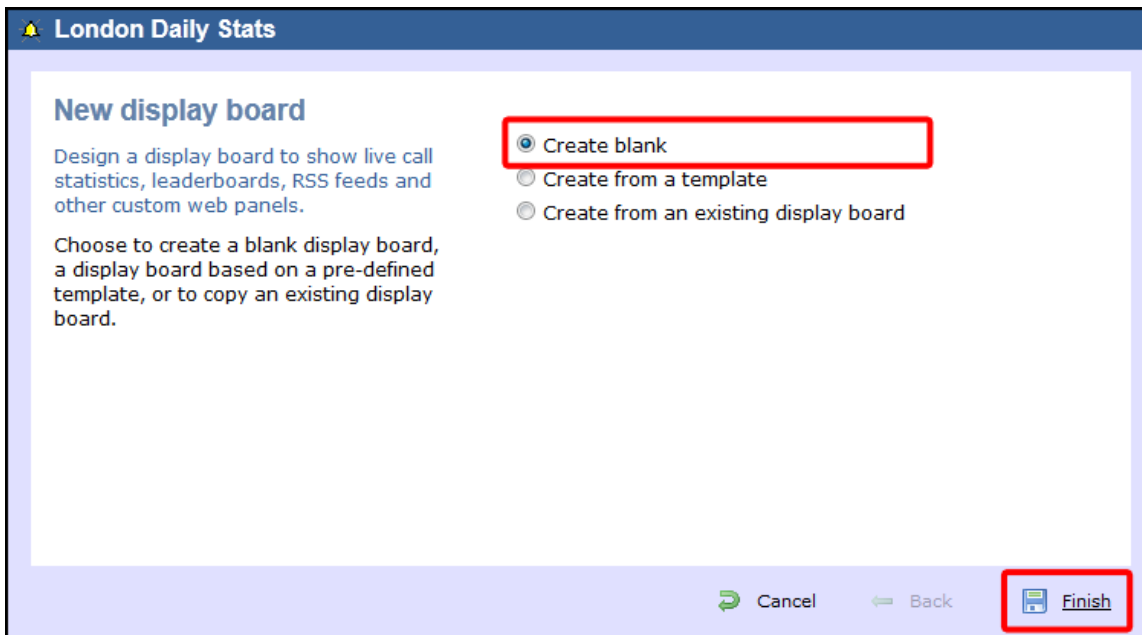
A new window will open, allowing you to select one of the following three options:

- **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

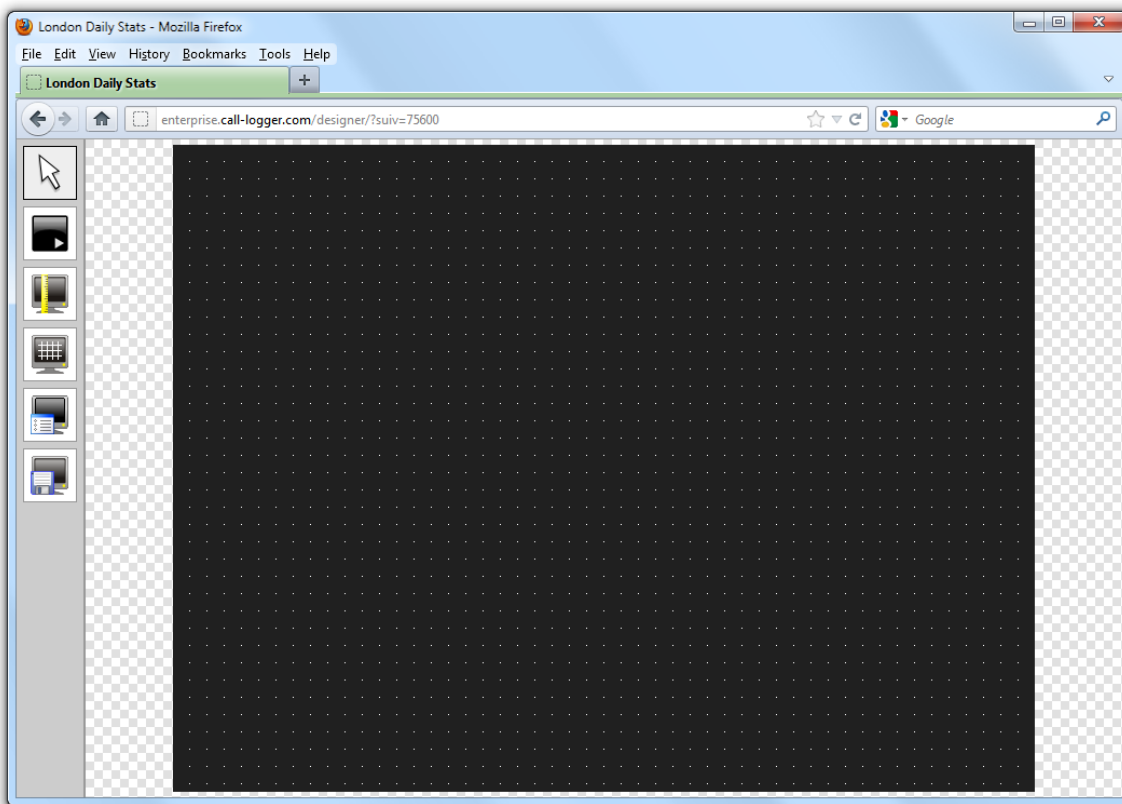


Create blank

To design your own display board from scratch, select the **Create blank** option and click on the **Finish** button, as shown below:



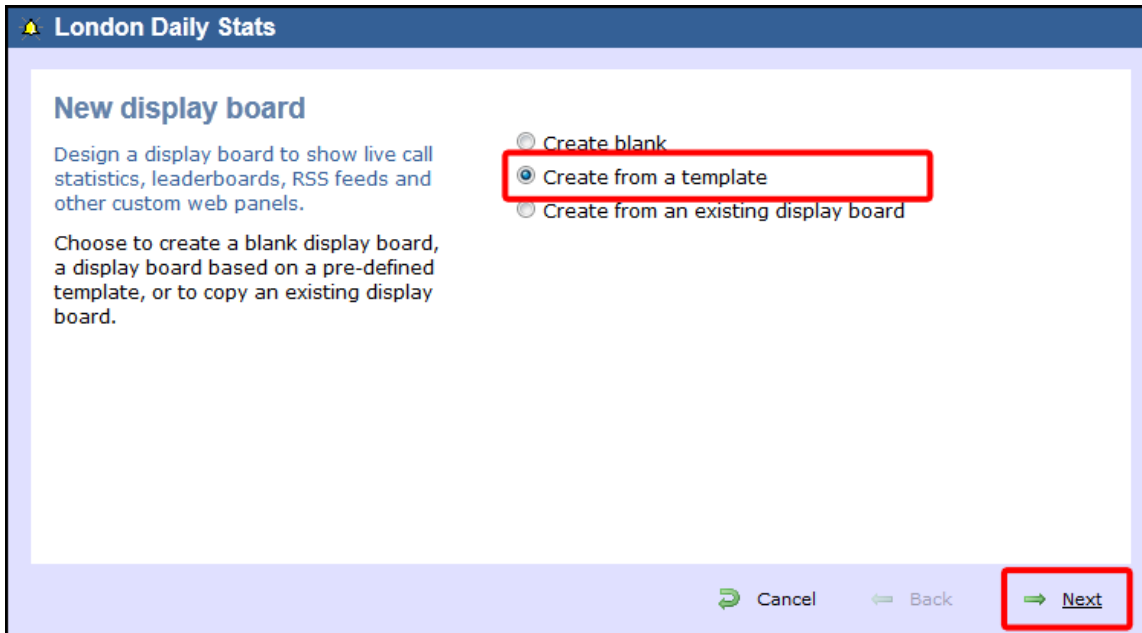
A new window will open, showing the design mode of your display board, as shown below:



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 a template** option and click on the **Next** button, as shown below:



London Daily Stats

New display board

Design a display board to show live call statistics, leaderboards, RSS feeds and other custom web panels.

Choose to create a blank display board, a display board based on a pre-defined template, or to copy an existing display board.

- Create blank
- Create from a template
- Create from an existing display board

Cancel Back **Next**

You can now select from a series of predefined templates, by clicking on its associated number, then click on the **Next** button.



London Daily Stats

Best performers

Provides a leader board to show who's spent most time on calls. For each user, the total and average call durations are also shown.

Summary panels highlight the longest and most expensive calls as well as showing a summary of inbound, outbound and lost calls for the group you select.

An RSS feed also provides rolling news and current affairs headlines.

← Prev **1** 2 3 4 5 6 7 8 9 Next →

Telesales Stats 17:53:27

Best performers				Summary stats	
Pos	Name	Calls	Total dur	Avg dur	Total In
1	Mark Longhorn	21	00:26:48	00:01:17	76
2	Grace Harper	19	00:42:20	00:02:14	00:03:30
3	Ricardo De Souza	16	00:29:19	00:01:38	Total Out
4	Sally Gansa	10	00:16:41	00:01:40	6
5	Jason Myers	6	00:05:37	00:00:56	00:17:14
6	Nimesh Shah	4	00:03:52	00:00:58	Total Lost
7	Gillian Doyle	4	00:21:12	00:05:18	0
8	Sandra Clooney	2	00:01:48	00:00:54	0.58
9	Lisa Bennett	2	00:01:48	00:00:54	

CNN.com
CNN.com delivers up-to-the-minute news and information on the latest top stories, weather, entertainment, politics and more.

Cancel Back **Next**

At this stage, you are asked to select a stats collection point or skip to the next section.

🔔 London Daily Stats

Choose an existing stats collection point that each panel of the display board should reference.

Alternatively, add references to stats collection points later on from inside the designer.

Don't select a stats collection point
 Select an existing stats collection point

↻ Cancel ← Back 📄 Finish

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 Directory. 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 collector](#) section.

🔔 London Daily Stats

Choose an existing stats collection point that each panel of the display board should reference.

Alternatively, add references to stats collection points later on from inside the designer.

Don't select a stats collection point
 Select an existing stats collection point

↻ Cancel ← Back 📄 Finish

i The display board will be blank until a stats collection 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:

London Daily Stats

Choose an existing stats collection point that each panel of the display board should reference.

Alternatively, add references to stats collection points later on from inside the designer.

Don't select a stats collection point
 Select an existing stats collection point

Name ▲	Subject	Covering period
Leeds Stats	User	1 day
Lines	Channel group	1 week
Lines	Channel group	1 day
London Daily	User	1 day
London Daily St...	User	1 day
London IT Stats	User	1 day
London Weekly S...	User	1 week
Manchester Acco...	User	1 day
Manchester Acco...	User	1 day
Manchester Chan...	Channel group	1 week
Manchester Sales	User	1 day

Select the relevant stats point from the list and click on the **Finish** button to add the new display board to the Directory.

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.

London Daily Stats

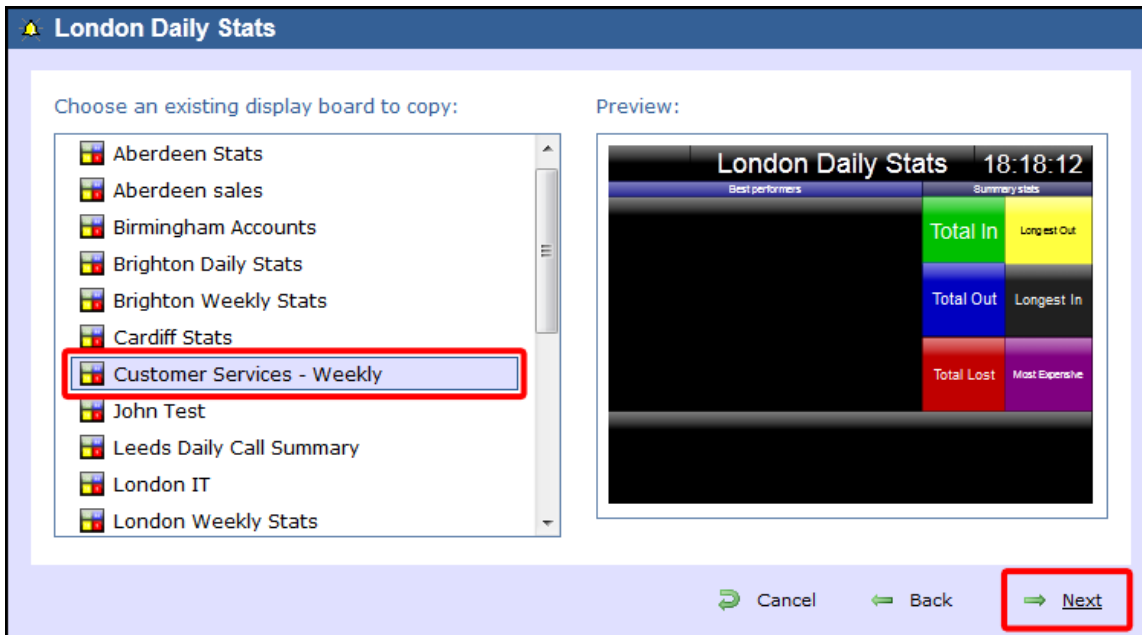
New display board

Design a display board to show live call statistics, leaderboards, RSS feeds and other custom web panels.

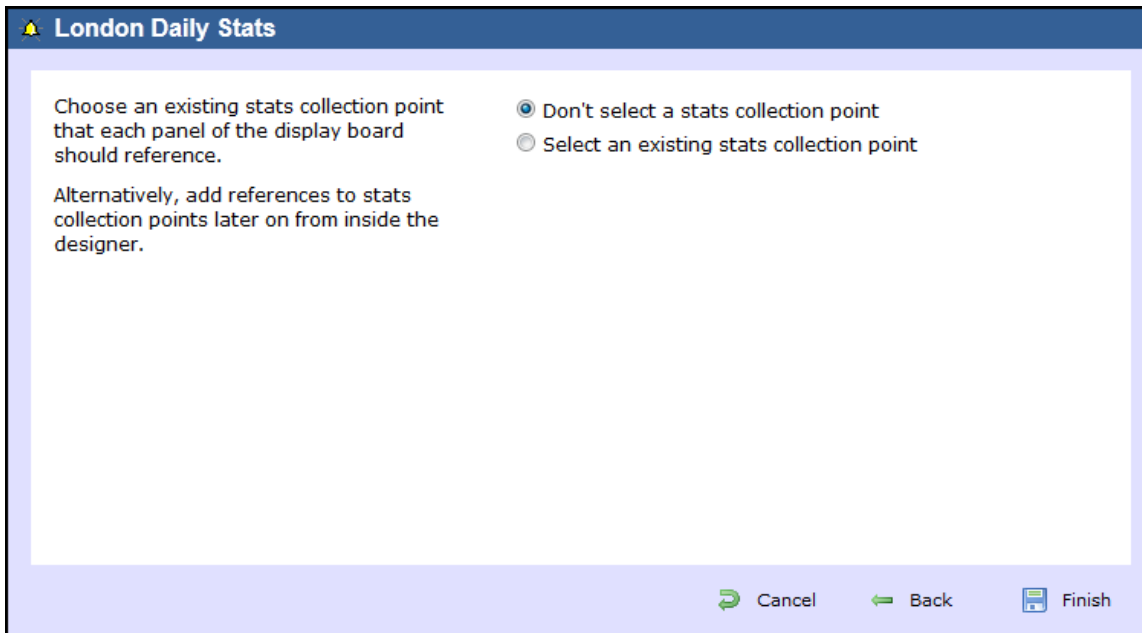
Choose to create a blank display board, a display board based on a pre-defined template, or to copy an existing display board.

Create blank
 Create from a template
 Create from an existing display board

A list with the currently-available display boards will be shown. Select the one you want to copy, 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** to add the display boards to the Directory. A stats collection 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 collector](#) section.

London Daily Stats

Choose an existing stats collection point that each panel of the display board should reference.

Alternatively, add references to stats collection points later on from inside the designer.

Don't select a stats collection point
 Select an existing stats collection point

i The display board will be blank until a stats collection 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:

London Daily Stats

Choose an existing stats collection point that each panel of the display board should reference.

Alternatively, add references to stats collection points later on from inside the designer.

Don't select a stats collection point
 Select an existing stats collection point

Name ▲	Subject	Covering period
Leeds Stats	User	1 day
Lines	Channel group	1 week
Lines	Channel group	1 day
London Daily	User	1 day
London Daily St...	User	1 day
London IT Stats	User	1 day
London Weekly S...	User	1 week
Manchester Acco...	User	1 day
Manchester Acco...	User	1 day
Manchester Chan...	Channel group	1 week
Manchester Sales	User	1 day

Select the relevant stats point from the list and click on the **Finish** button to add the new display board to the Directory.

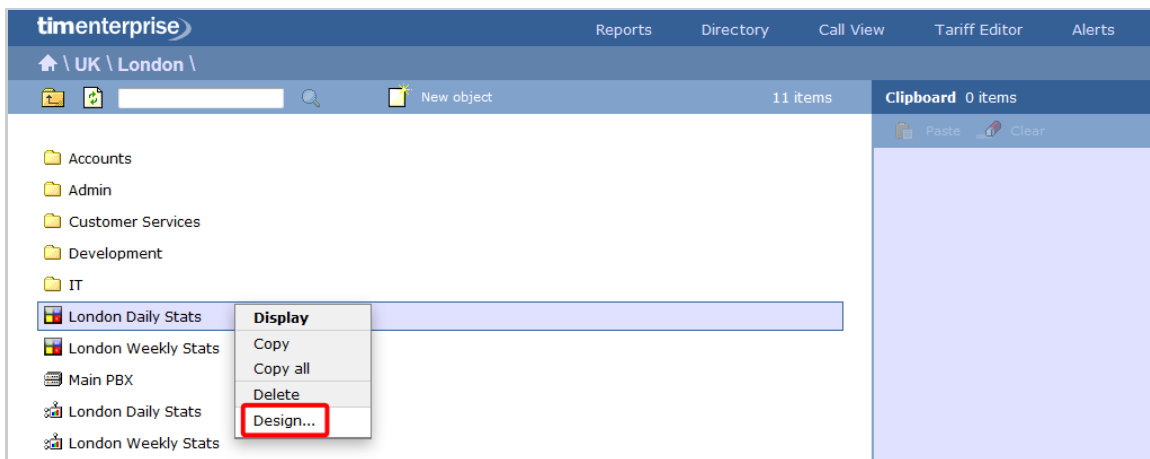
Designing a display board

Designing a display board video

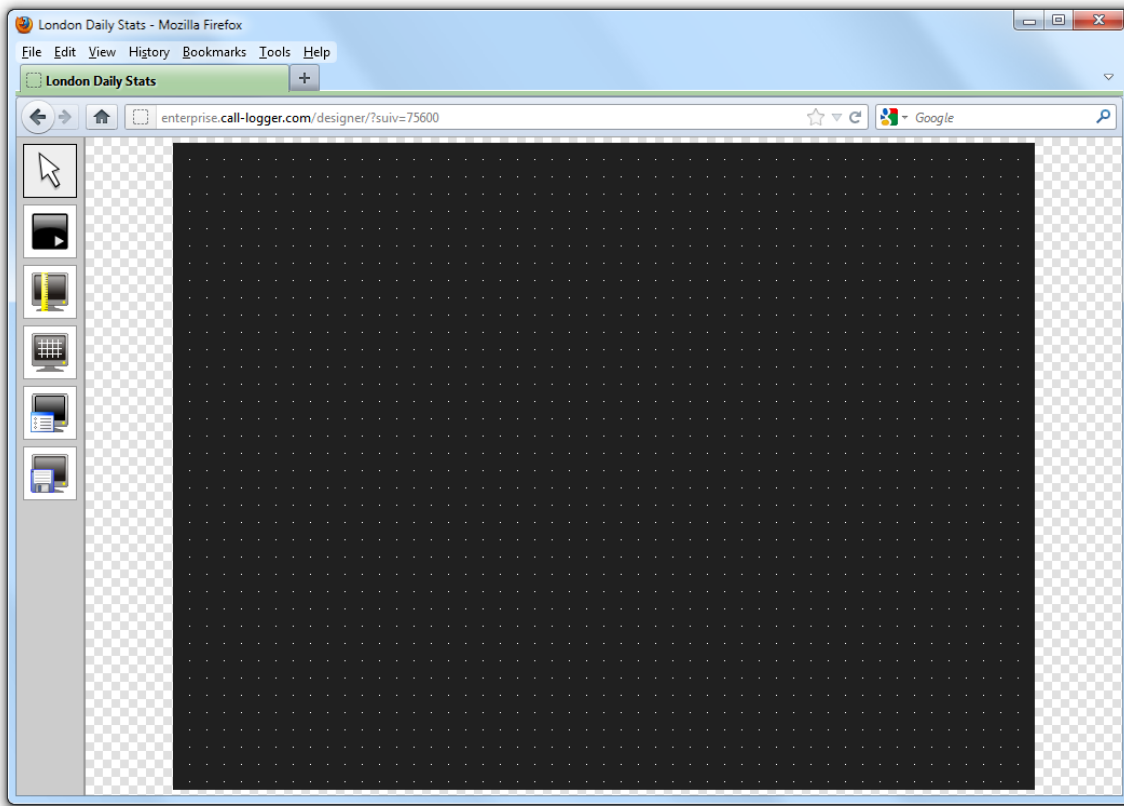


How to design a display board

To design a display board, locate the object in the Directory, click on it and select **Design** from the drop-down list, 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:

Text style 16pt ▼ Arial ▼

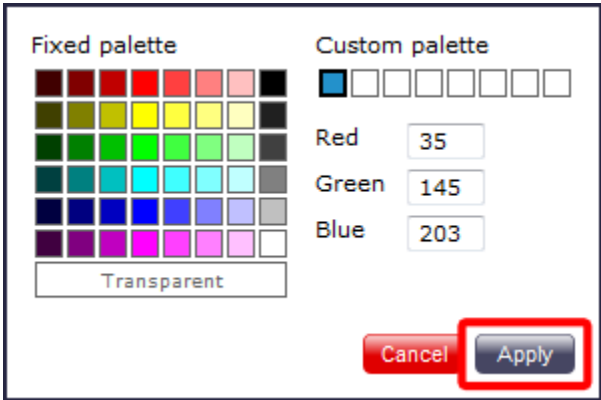
Colour picker

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:



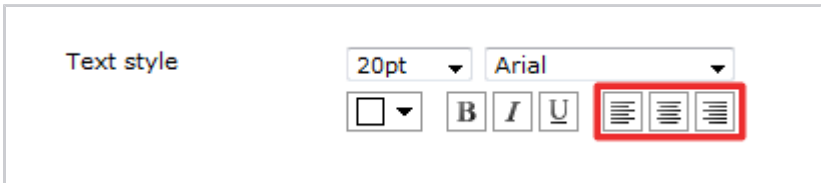
Formatting buttons

If you would like the text in your display board to appear as bold, italic or underlined, click on the relevant **B I U** button, as shown below:



Text position

To determine the position of your text, click on the relevant button, as shown below:



Label panel

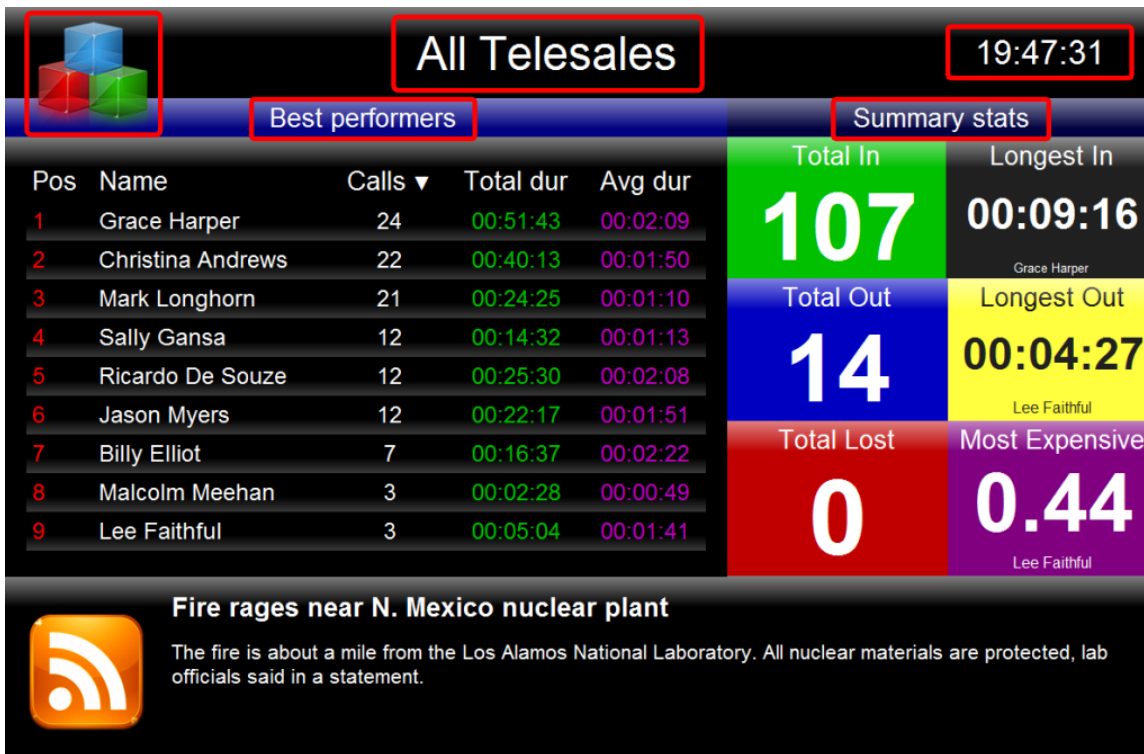
Label panel

- What is a label panel?
- Adding a label panel
- Customising a label panel
- Label panel - overview video

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.

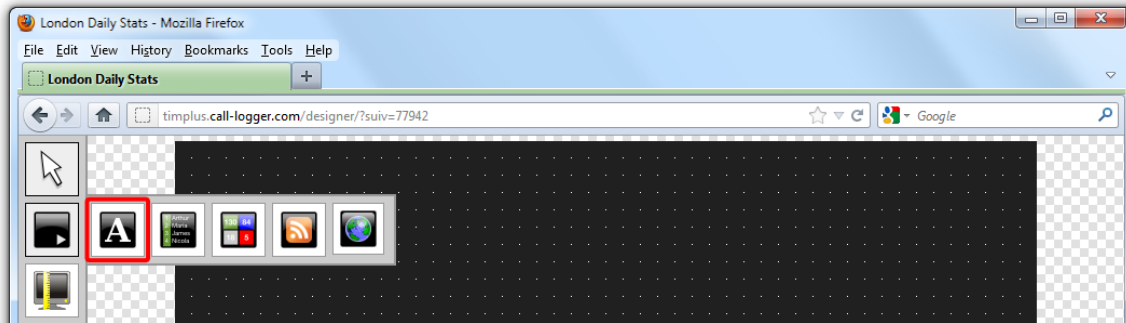
Adding a label panel



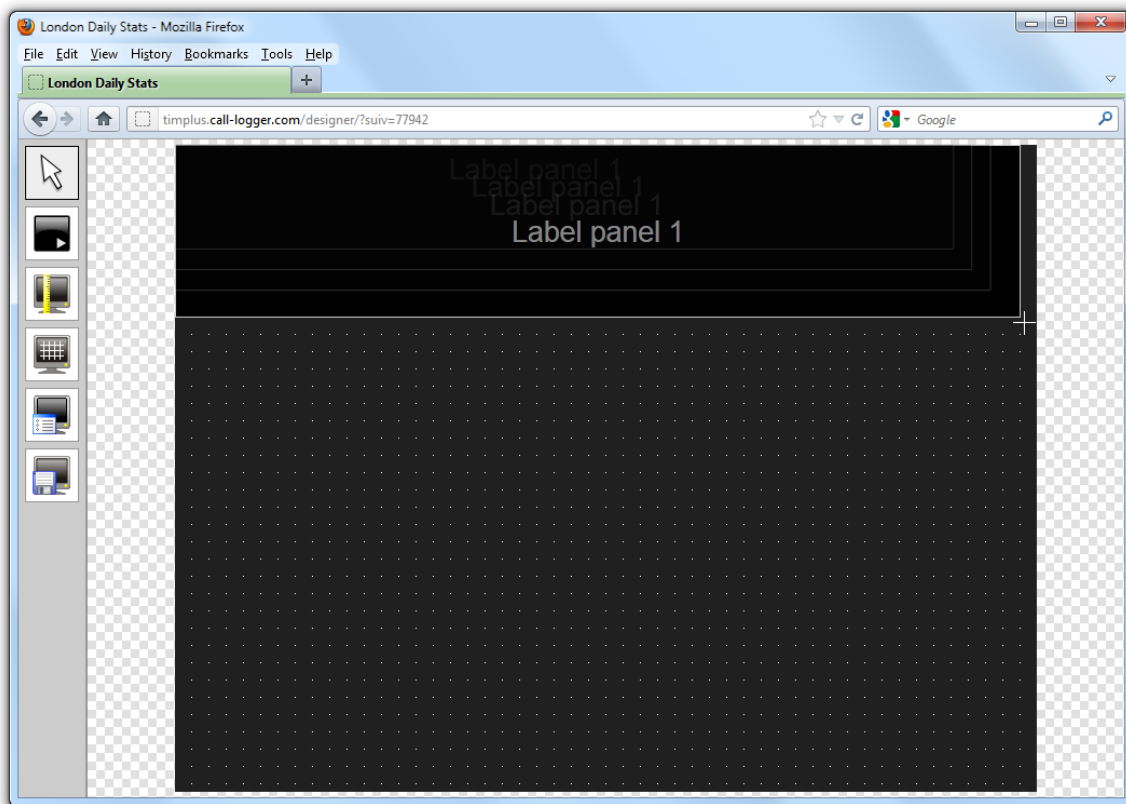
To add a label panel, click on the  toolbar button to expand the list of panel types and choose the  button, as



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



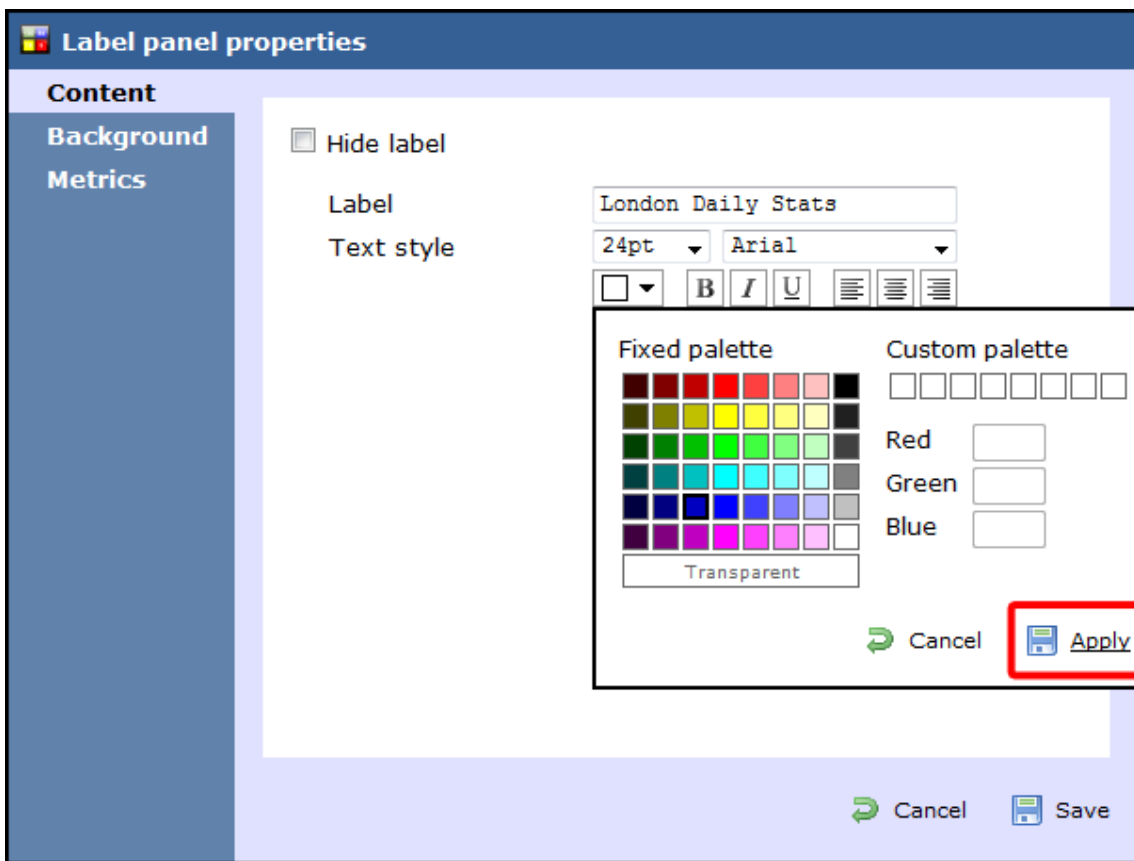
To customise a label panel, click on the  toolbar button to switch to panel selection mode. Hover your mouse pointer over the label panel you want to customise and click on the  icon, when it appears towards the top-right corner of the panel, as shown below:



The Label panel properties window will open, containing the following tabs:

Content

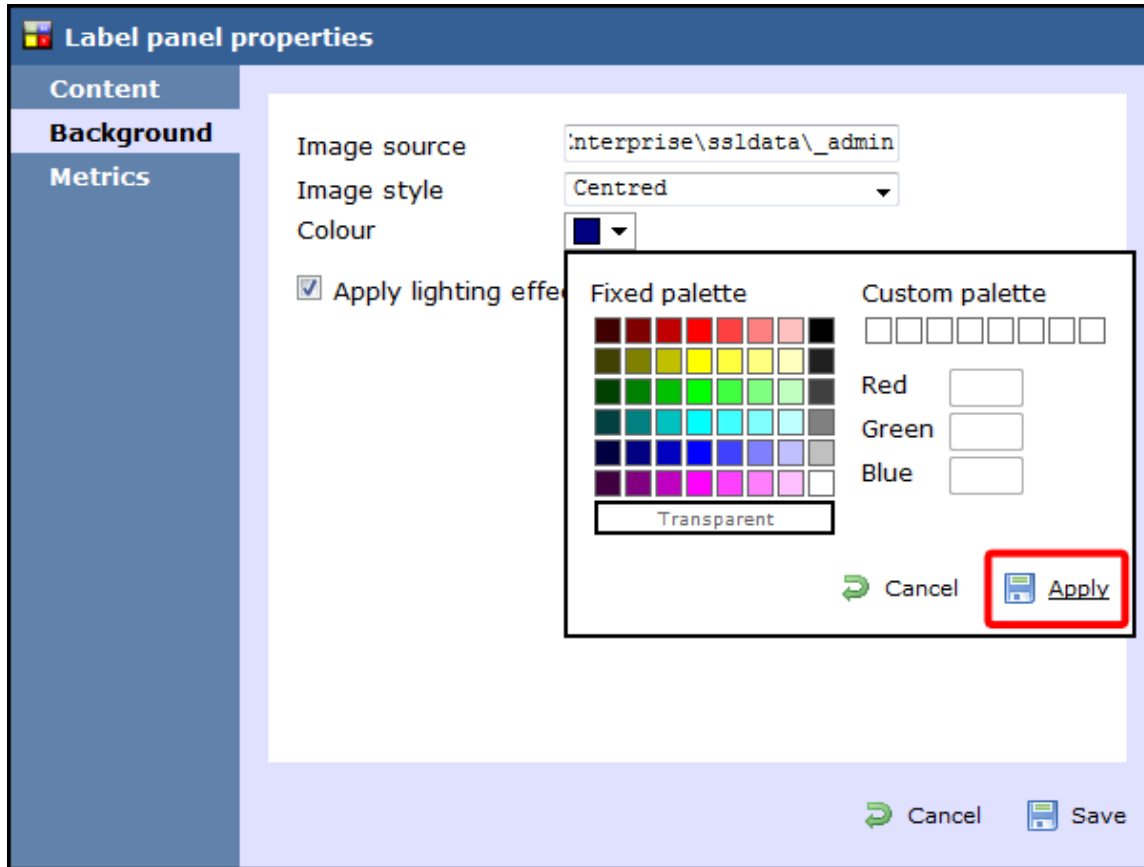
This tab allows you to enter the name you want to appear on the label panel and apply any styling properties, such as font size, font style, text colour, etc.



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

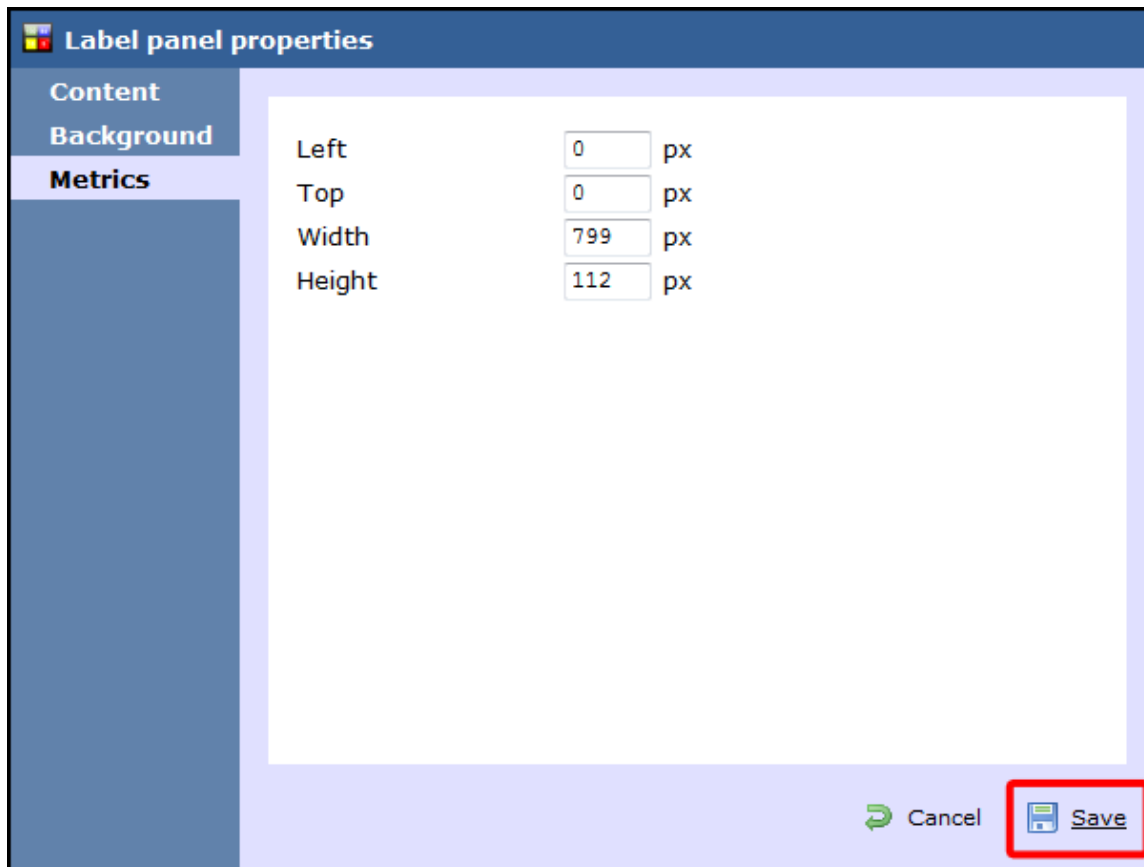
This tab allows you to configure the background properties of your label panel.



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 Enterprise\ssldata_admin. 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

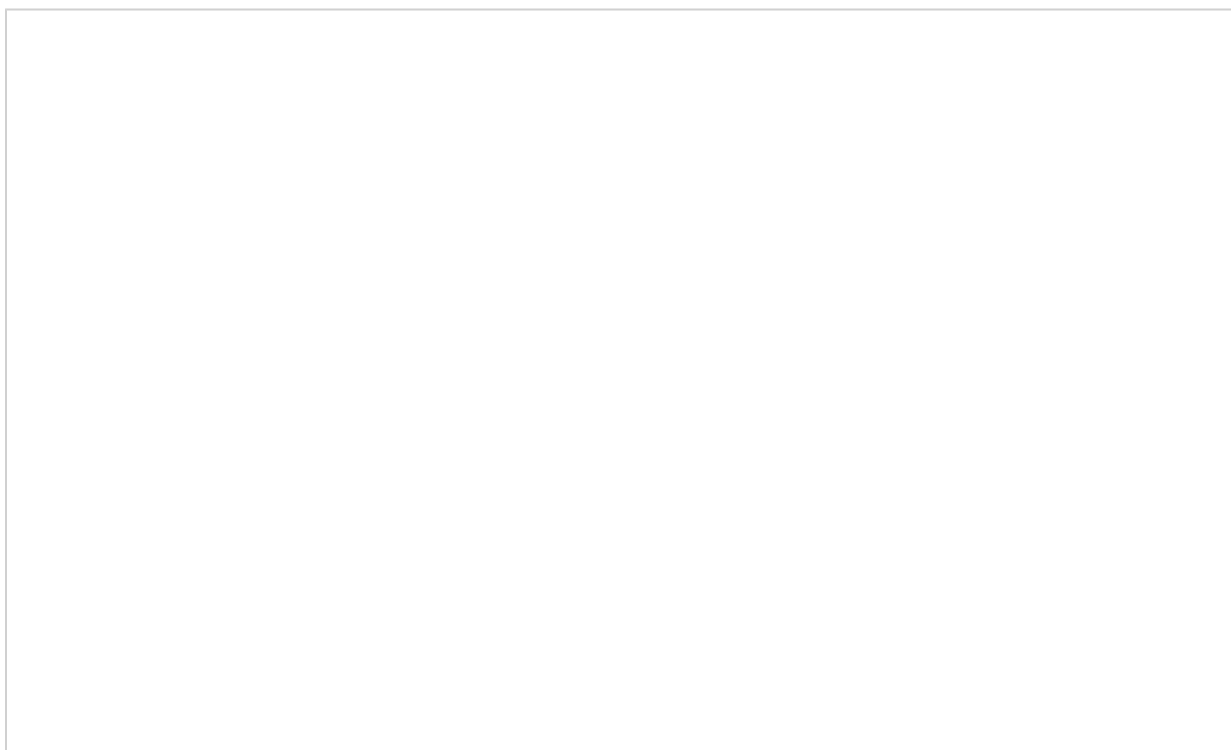
This tab allows you to define the shape of the panel, by entering values for its position and size.



When you have configured the properties of your Label panel, click on the **Save** button to apply the 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?
- Adding a leaderboard panel
- Customising a leaderboard panel
- Leaderboard panel - overview video


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:





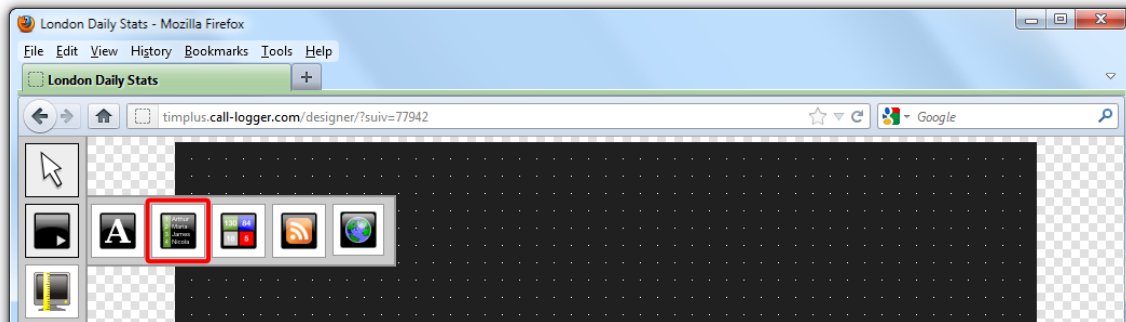
Paris Weekly IT Team

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

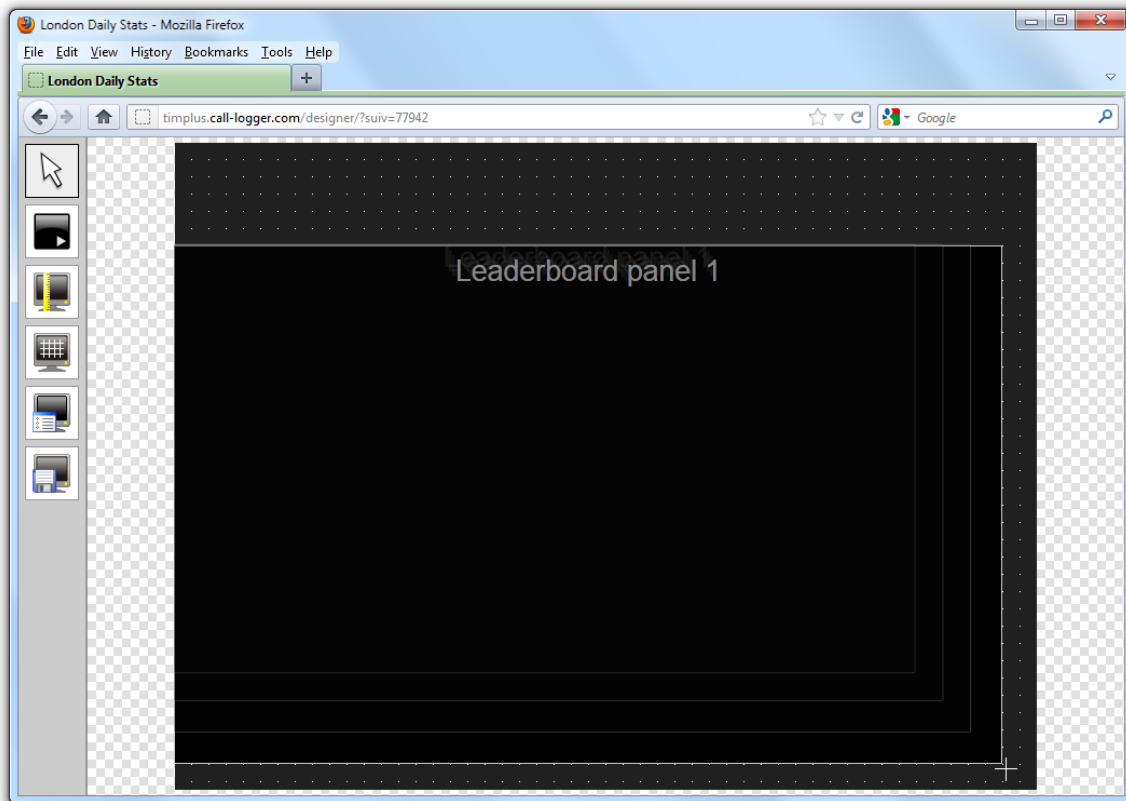
Adding a leaderboard panel



To add a leaderboard panel, click on the  toolbar button to expand the list of panel types and choose the  button, as shown below:





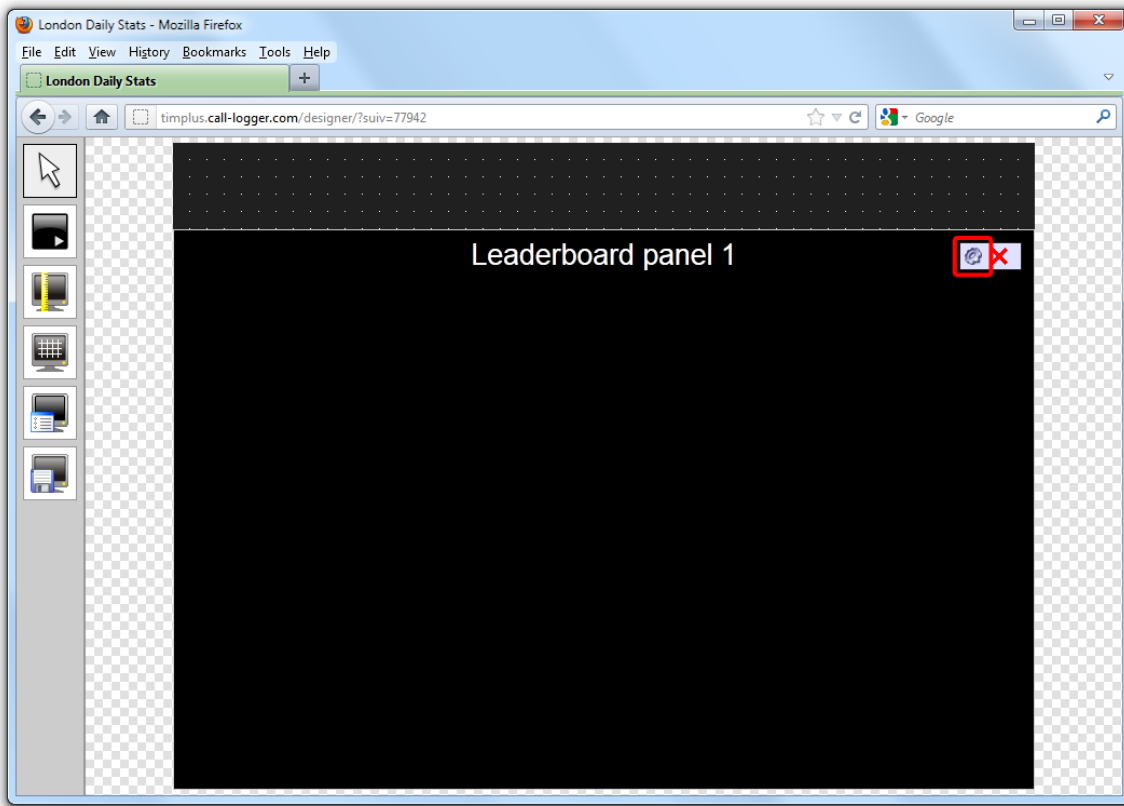
After selecting the leaderboard panel button, the mouse pointer changes into a white crosshair pointer, indicating that the designer is ready to draw your panel. Click and hold your left mouse button, starting at the point defining the upper-left corner of your new panel. Whilst still holding down the 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:

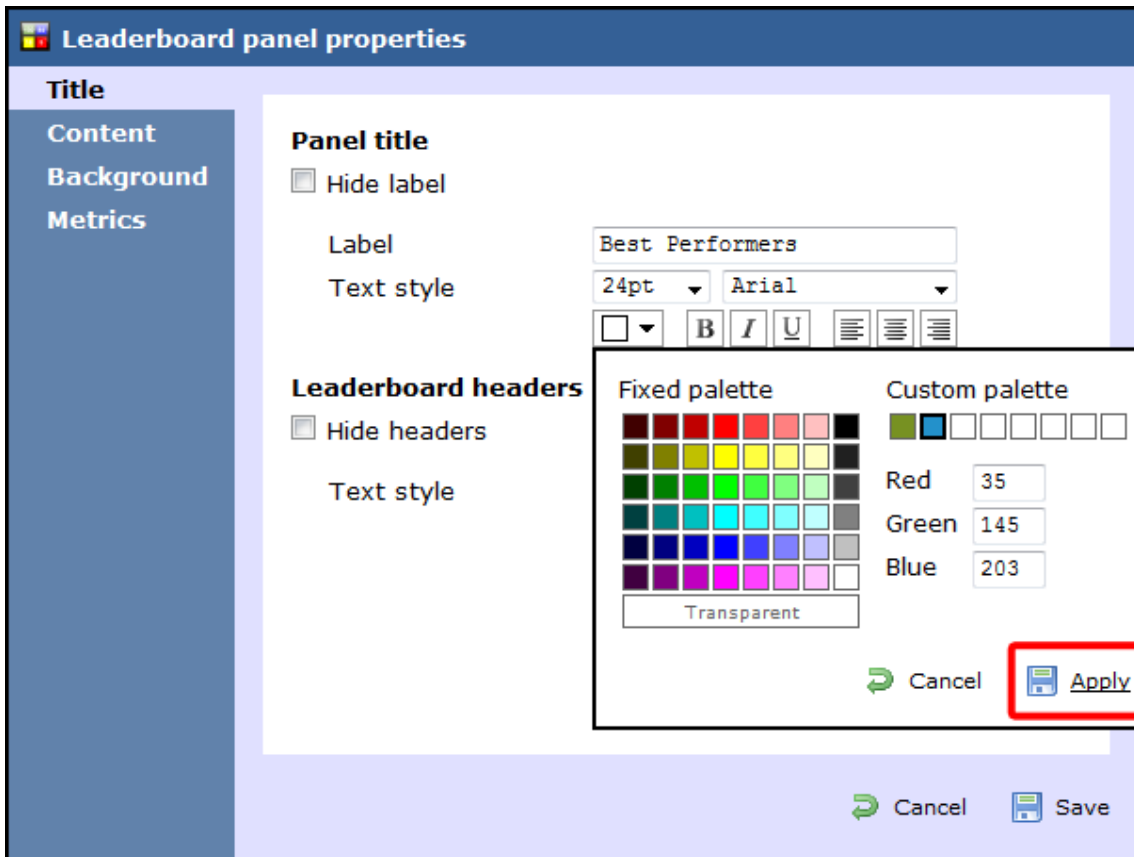
Title

The `Title` tab allows you to configure the properties of the panel title and of the leaderboard headers:

Panel title
Leaderboard headers

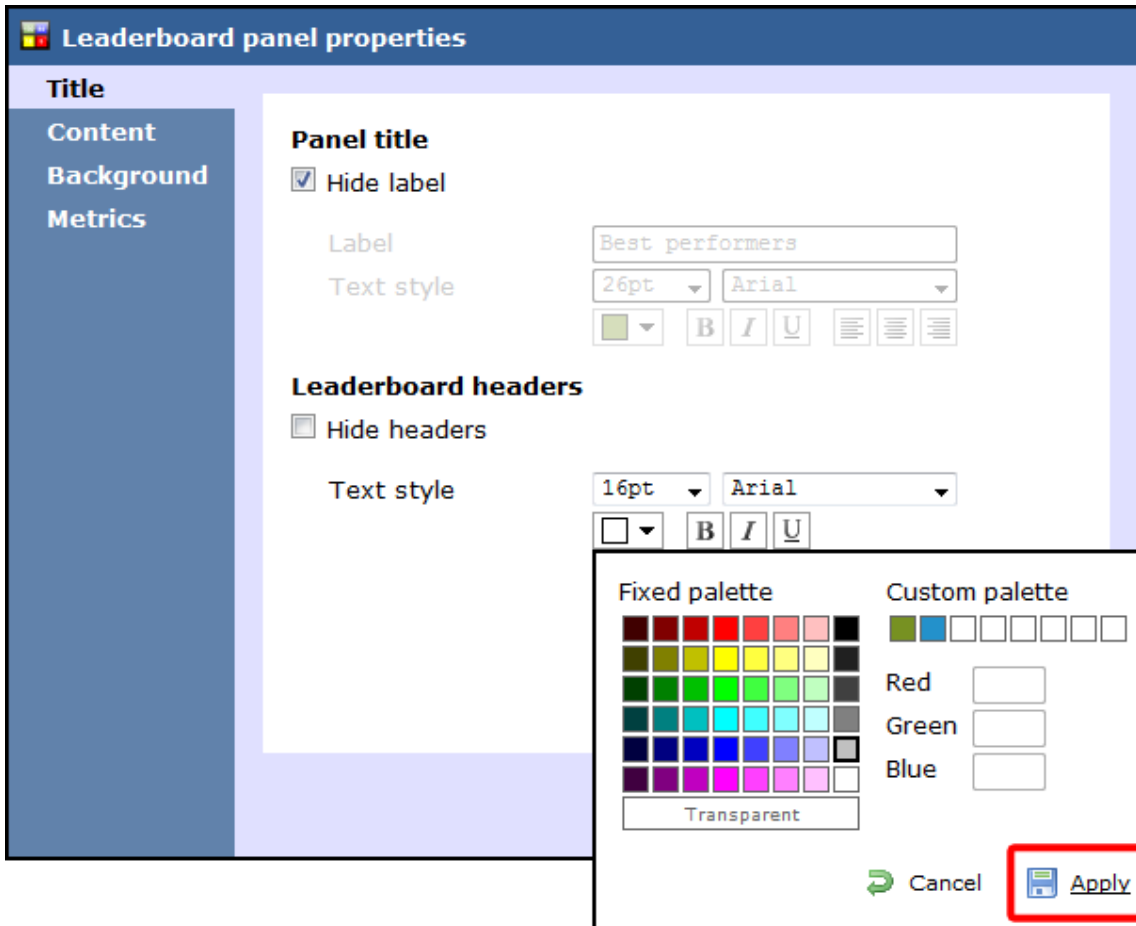
Best performers						
Pos	Name	Total ▼	In	Out	Lost	Duration In
1	Adam Zapel	16	1	15	0	00:00:46
2	Tom Morrow	12	12	0	0	00:03:08
3	Cheri Pitts	10	10	0	0	00:01:15
4	Bea Minor	10	9	1	0	00:00:28

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.

To add a column to your leaderboard panel, perform the steps below:

Select a stats point



To populate a leaderboard with call logging information, you first need to [configure a stats collector object](#) 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 **Select** button, as shown below:


Leaderboard panel properties

Title


Content

Background

Metrics



Statistics point  **Select**


Call type

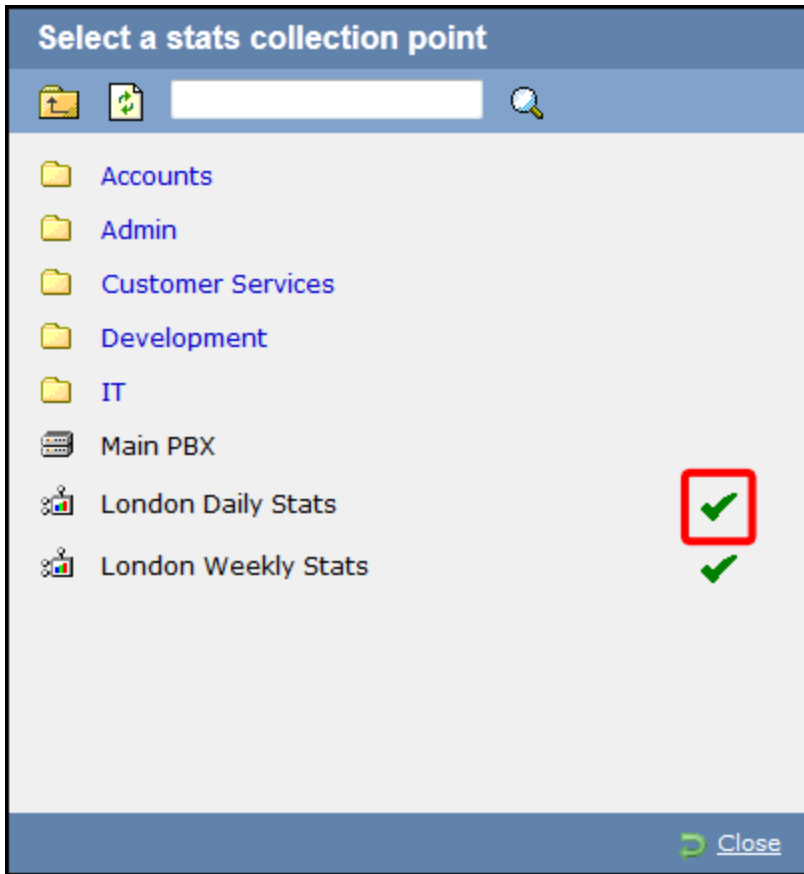
Column  Add column

Column

Do not use contacts list to mask known numbers

 Cancel  Save

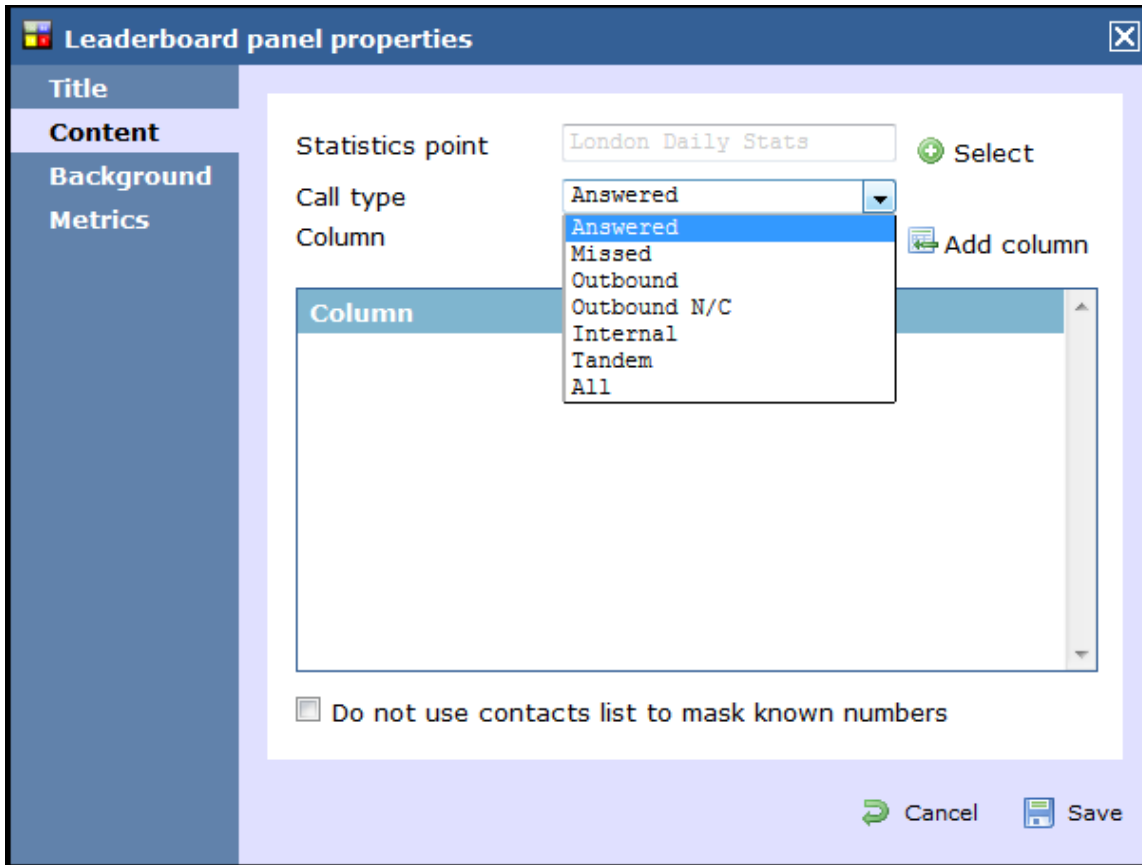
A new window will open, allowing you to drill-down to the Directory level where the stats point you want to add resides. To select the stats point, click on the  icon alongside it.



The selected stats point will automatically feed all columns in the leadearboard, but each individual column can be set afterwards to use a different stats point.

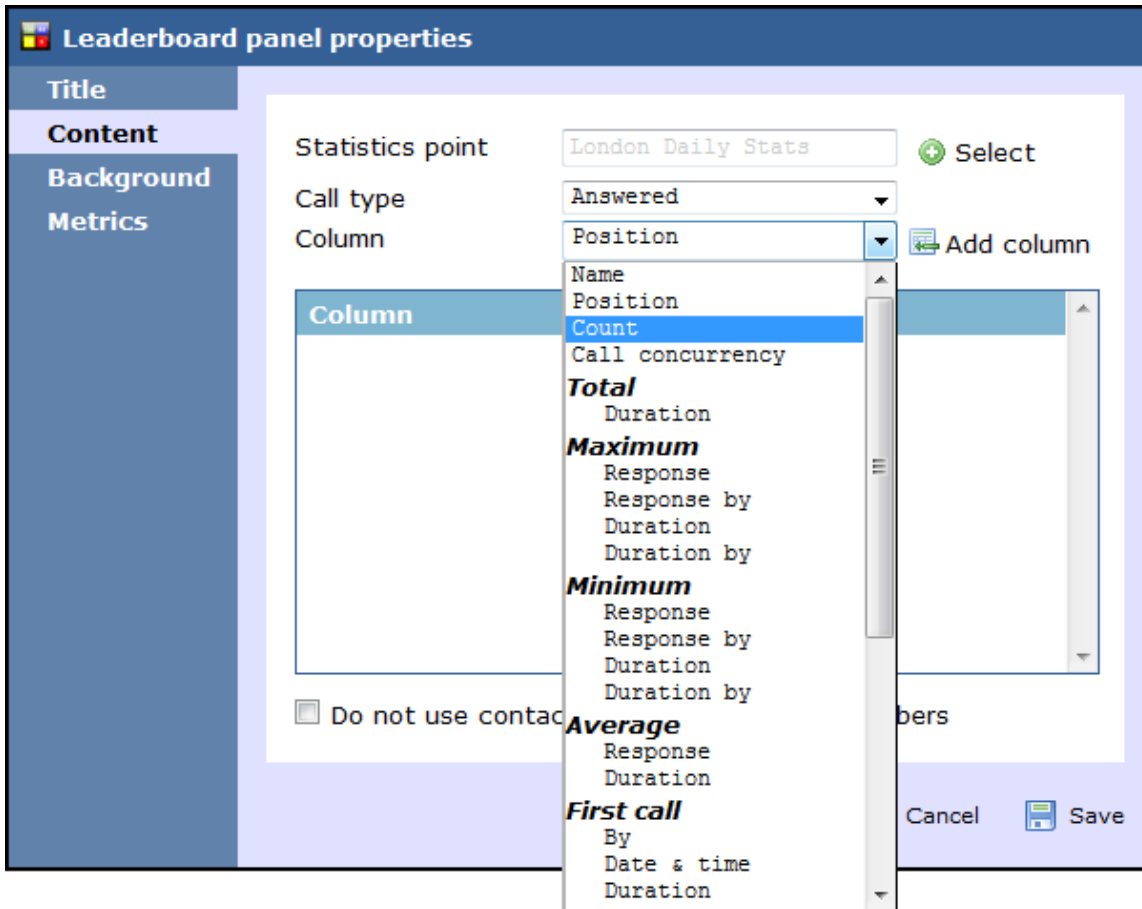
Select a call type

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 the column information

To select the type of call information you want to display in each 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 column** button to add the column to the list and repeat the process if you need to add another column to your leaderboard panel.

Leaderboard panel properties

Title

Content

Background

Metrics

Statistics point: London Daily Stats + Select

Call type: Answered

Column: Count + Add column

Column	
↑ ↓ Pos	↓
↑ ↓ Name	
↑ ↓ Total	

Do not use contacts list to mask known numbers

↶ Cancel 💾 Save

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:

Leaderboard panel properties

Title

Content

Background

Metrics

Statistics point: London Daily Stats + Select

Call type: Answered

Column: Name + Add column

Column	
↑ ↓ Pos	
↑ ↓ Name	
↑ ↓ Total	↓
↑ ↓ In	
↑ ↓ Out	
↑ ↓ Lost	
↑ ↓ Duration In	

Do not use contacts list to mask known numbers

↶ Cancel 💾 Save

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.

Leaderboard panel properties

Title

Content

Background

Metrics

Statistics point: London Daily Stats ➕ Select

Call type: Answered

Column: Count ➕ Add column

Column

- ↑ ↓ Pos
- ↑ ↓ Name
- ↑ ↓ Total
- ↑ ↓ Count (Ans)
- ↑ ↓ Out
- ↑ ↓ Lost
- ↑ ↓ Duration In

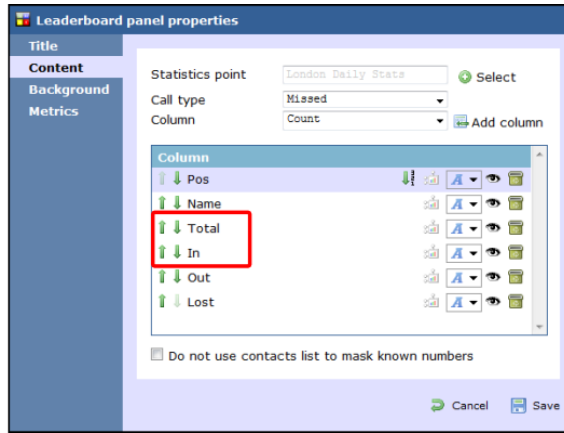
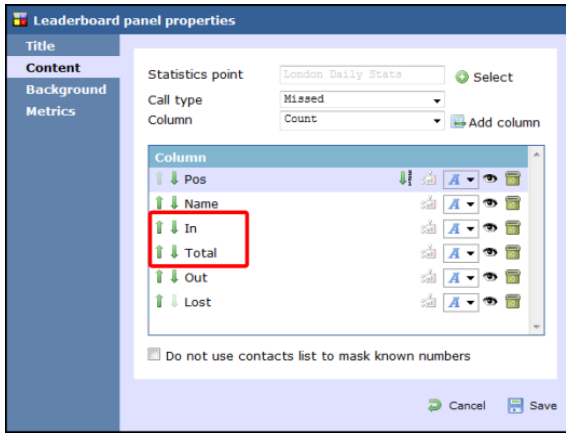
Do not use contacts list to mask known numbers

↶ Cancel 💾 Save


Rearranging columns


To rearrange the columns in a different order, click on the **↑ ↓** icons 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.

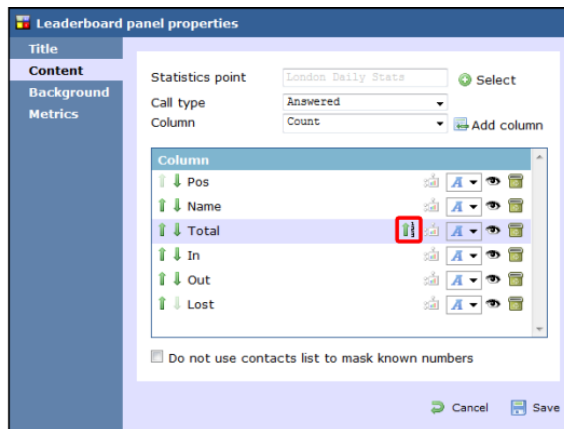
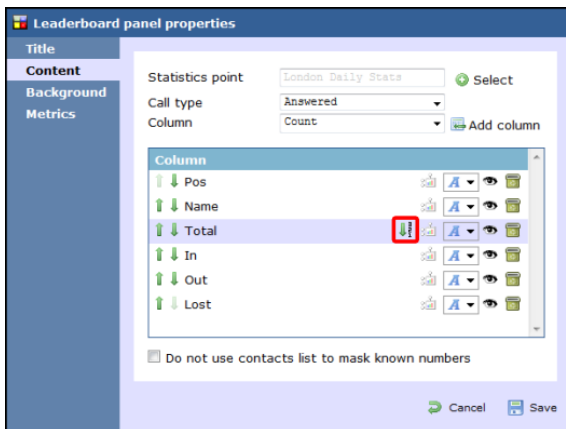
In the example below, we rearrange the **In** and **Total** columns. By clicking on the **↑** icon next to the **Total** column, we move it one level up.




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:

Leaderboard panel properties

- Title
- Content**
- Background
- Metrics

Statistics point ➕ Select

Call type

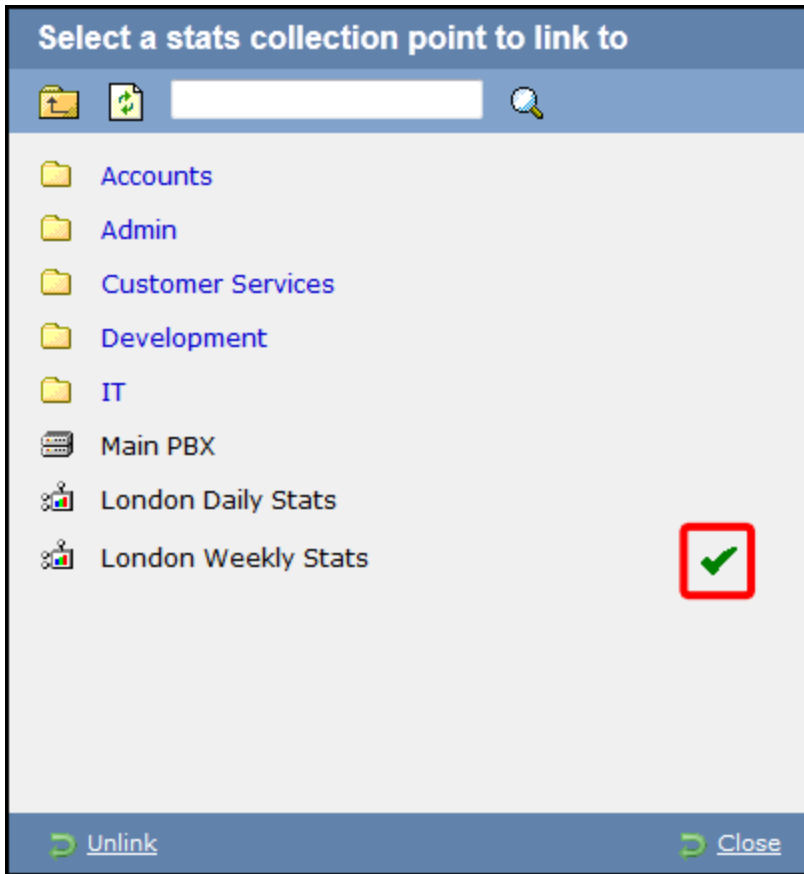
Column ➕ Add column



Column	
↑ ↓ Pos	<input type="text" value="A"/>
↑ ↓ Name	<input type="text" value="A"/>
↑ ↓ Total	<input type="text" value="A"/>
↑ ↓ In	<input type="text" value="A"/>
↑ ↓ Out	<input type="text" value="A"/>
↑ ↓ Lost	<input type="text" value="A"/>

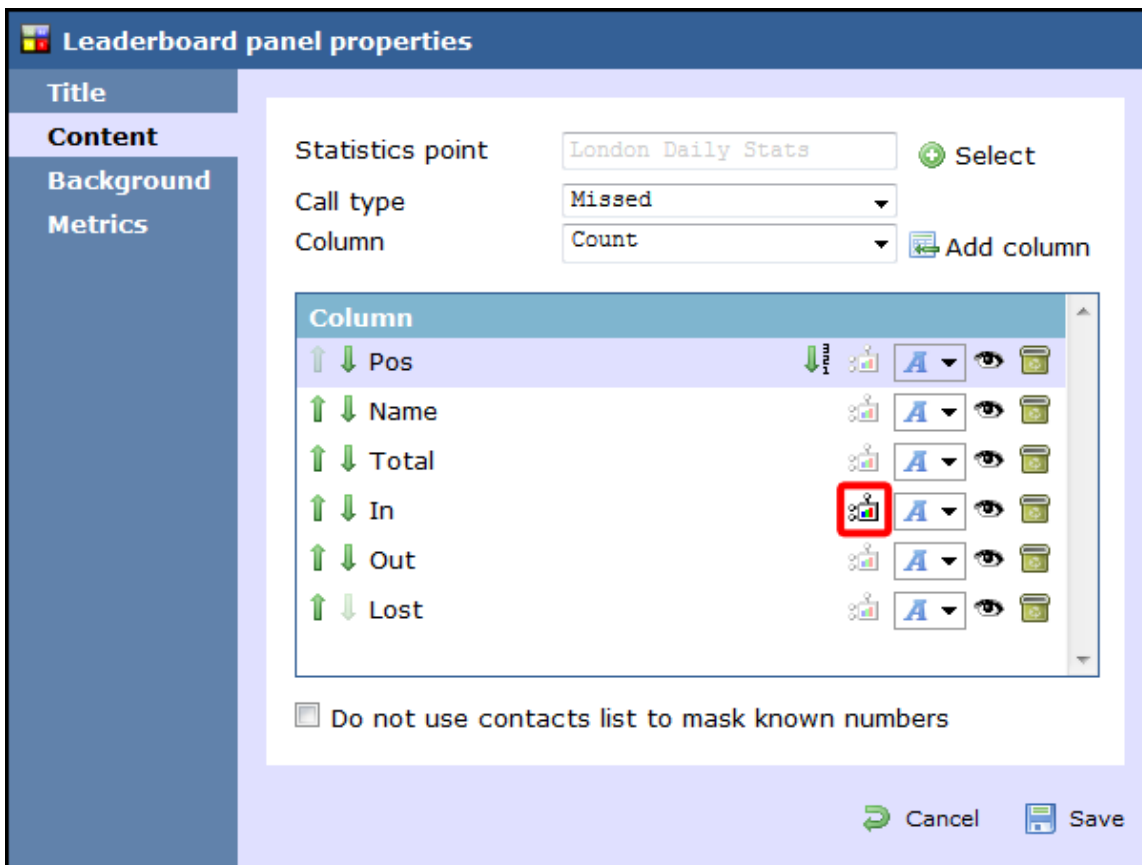
Do not use contacts list to mask known numbers

↶ Cancel 💾 Save


A new window will open, allowing you to drill-down to the Directory level where the stats point you want to add resides. To select the stats point, click on the icon alongside it.

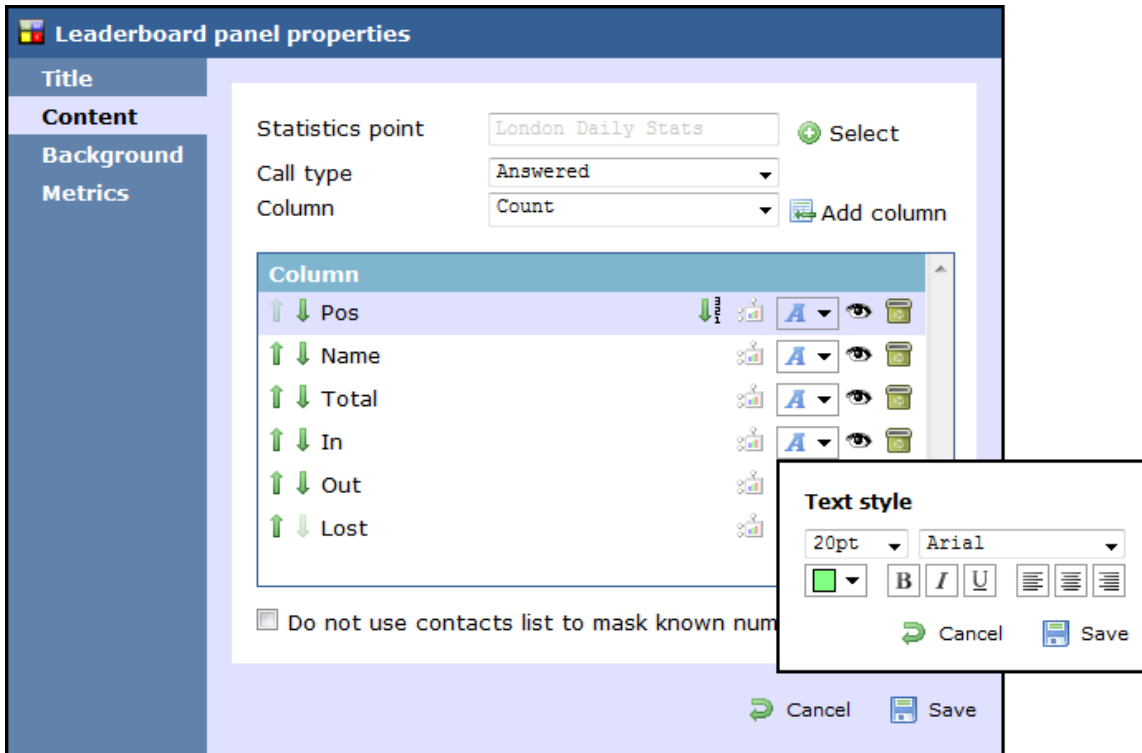


After selecting the new stats point, the  icon will automatically turn into , to highlight that the current column is using a different stats collection point.





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.

Leaderboard panel properties

Title

Content

Background

Metrics

Statistics point: London Daily Stats ➕ Select



Call type: Missed

Column: Count ➕ Add column


Column	Sort	Visibility	Delete
↑ ↓ Pos	↓	👁️	🗑️
↑ ↓ Name		👁️	🗑️
↑ ↓ Total		👁️	🗑️
↑ ↓ In		👁️	🗑️
↑ ↓ Out		👁️	🗑️
↑ ↓ Lost		👁️❌	🗑️

Do not use contacts list to mask known numbers

↶ Cancel 💾 Save

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:

Leaderboard panel properties

Title

Content

Background

Metrics

Statistics point: London Daily Stats ➕ Select

Call type: Missed

Column: Count ➕ Add column

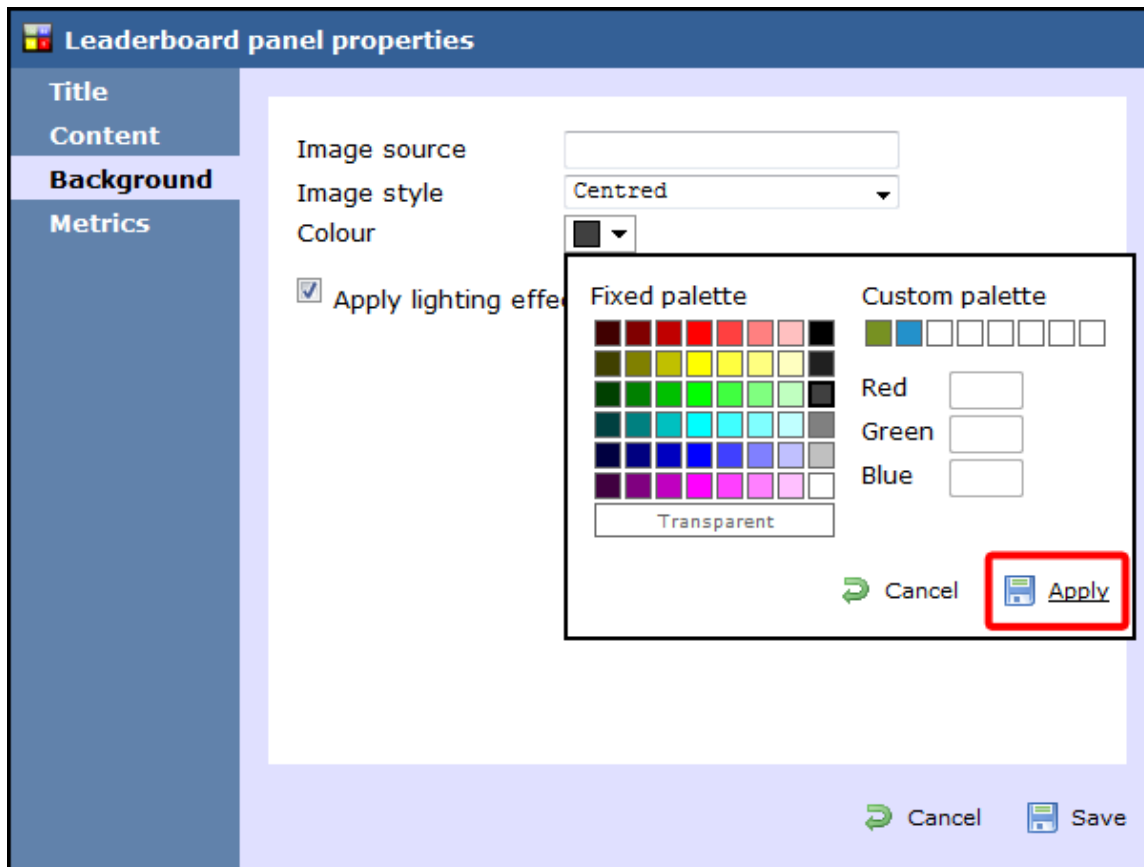
Column	Sort	Chart	Font	Visibility	Remove
↑ ↓ Pos	↓	📊	A	👁️	🗑️
↑ ↓ Name	↑	📊	A	👁️	🗑️
↑ ↓ Total	↑	📊	A	👁️	🗑️
↑ ↓ In	↑	📊	A	👁️	🗑️
↑ ↓ Out	↑	📊	A	👁️	🗑️
↑ ↓ Lost	↑	📊	A	👁️	🗑️

Do not use contacts list to mask known numbers

↶ Cancel 💾 Save

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.

Leaderboard panel properties

Metrics

Left px

Top px

Width px

Height px

Paging

Use automatic paging

Page size

Show the first page only

Page speed seconds

Cancel Save

Panel size

To define the shape of the panel, enter the values for its position and size.

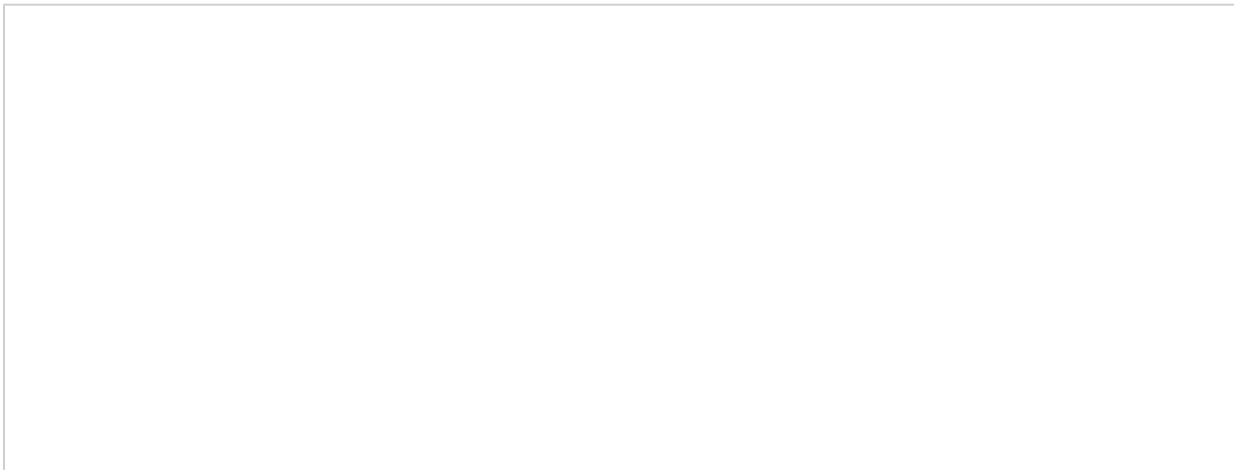
Paging

If you want to use automatic paging, select the box provided. Alternatively, you can determine 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 the pages should 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

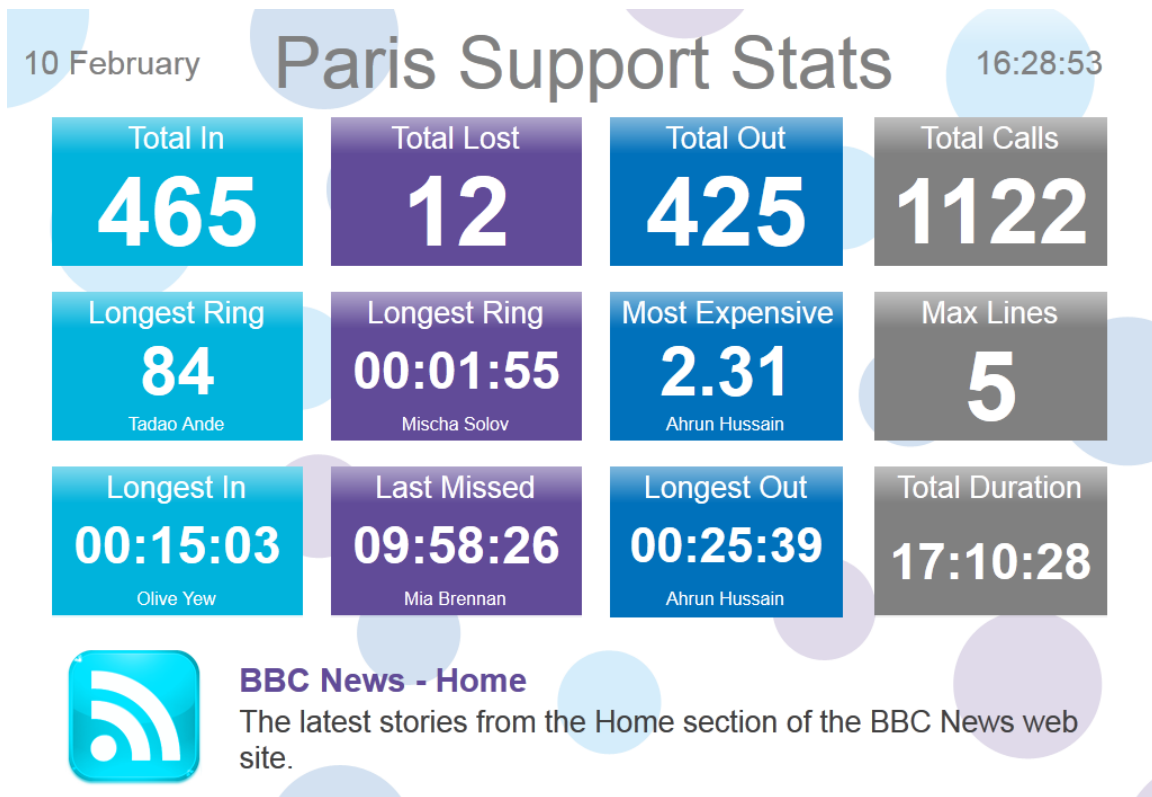
Summary panel

- 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.

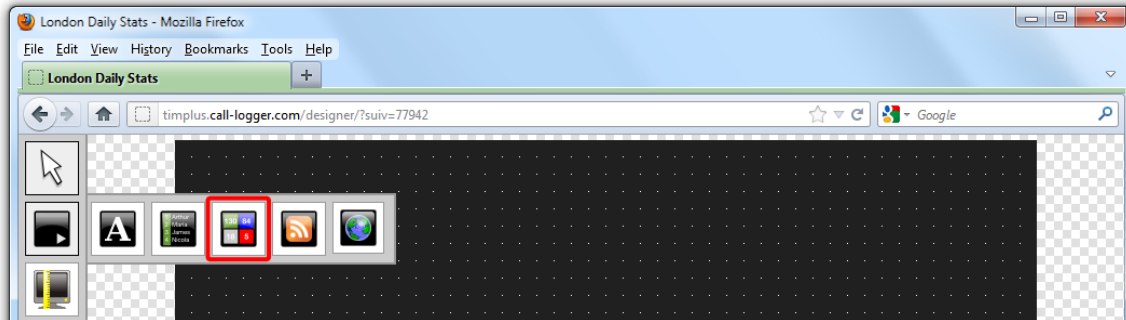
The display board in the screenshot below displays several summary panels, each of them showing call information grouped by different criteria



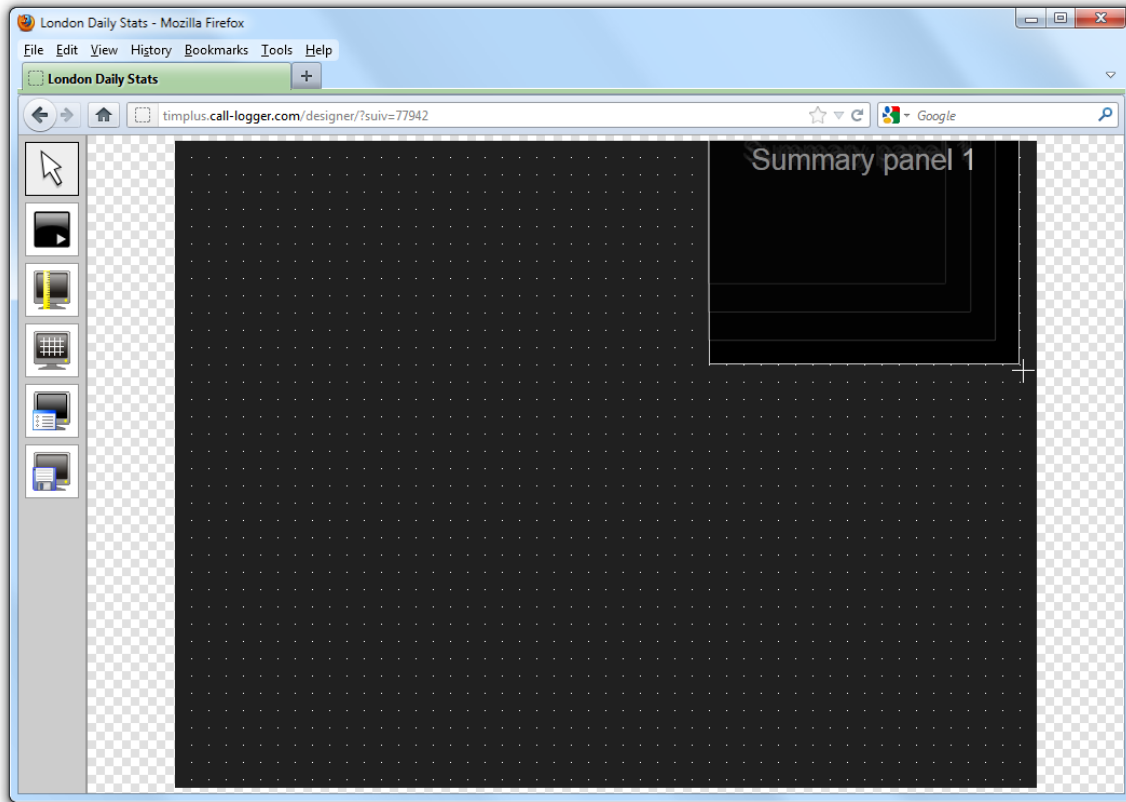
Adding a summary panel



To add a summary panel, click on the  toolbar button to expand the list of panel types and choose the  button, as shown below:





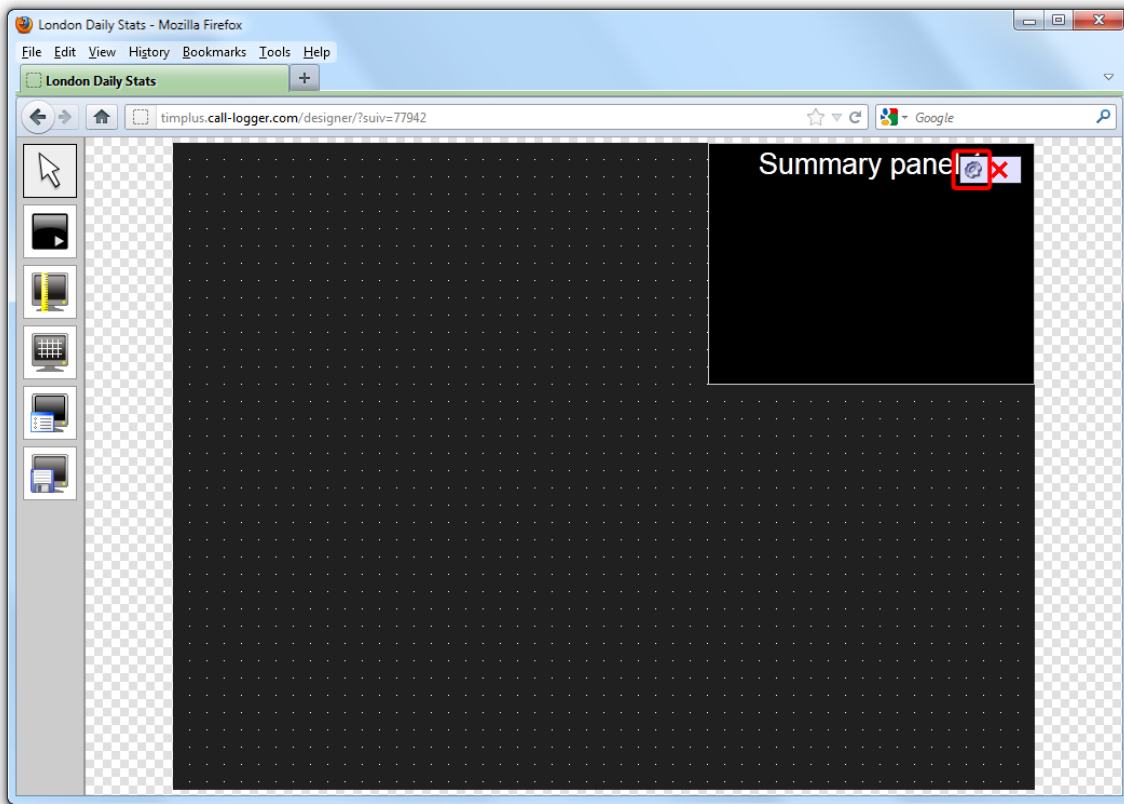
After selecting the summary panel button, the mouse pointer changes into a white crosshair pointer, indicating that the designer is ready to draw your panel. Click and hold your left mouse button, starting at the point defining the upper-left corner of your new panel. Whilst still holding down the left mouse button, drag the marquee that will appear to the point that will define the lower-right corner of your panel, as shown below:



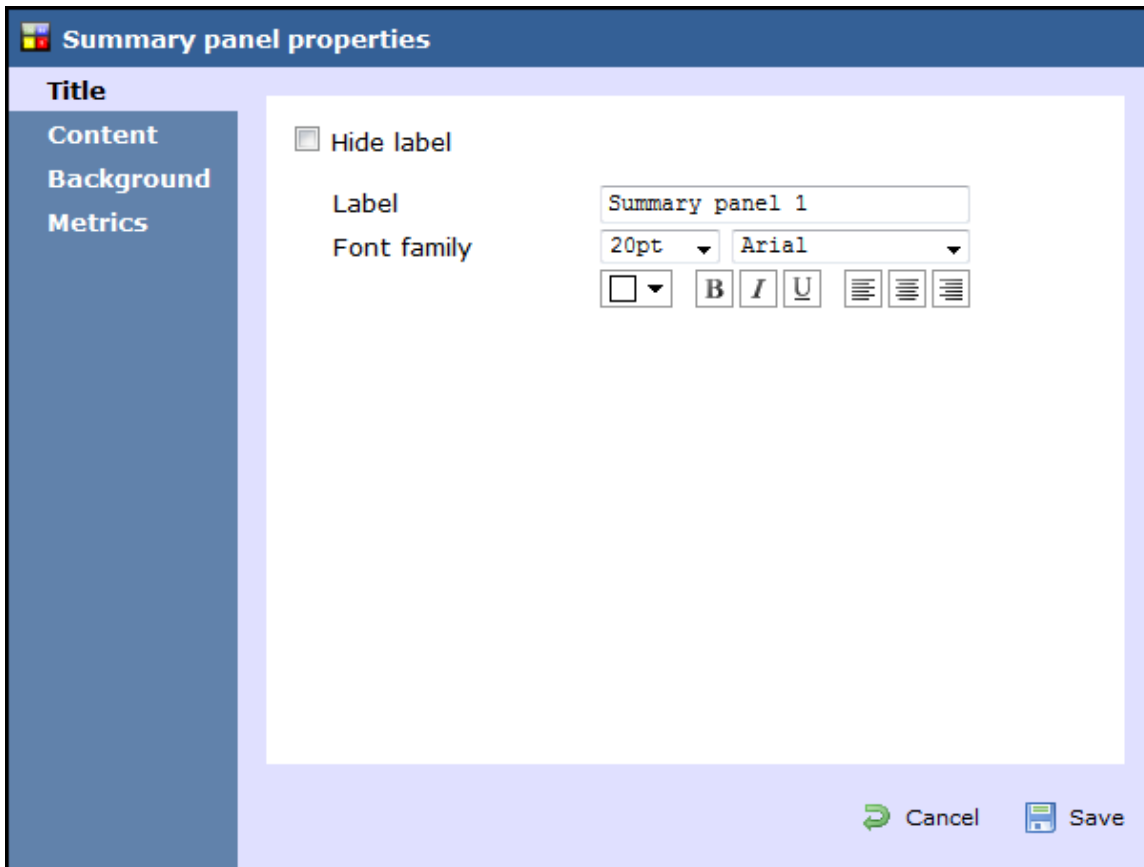
Customising a summary panel



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 pane 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 **Select** button.


Summary panel properties

Title

Content

Background

Metrics

Statistics point  **Select**




Call type

Column

Show summary value

Summary value




Font family



B *I* U   


Show the name of the user responsible for this figure

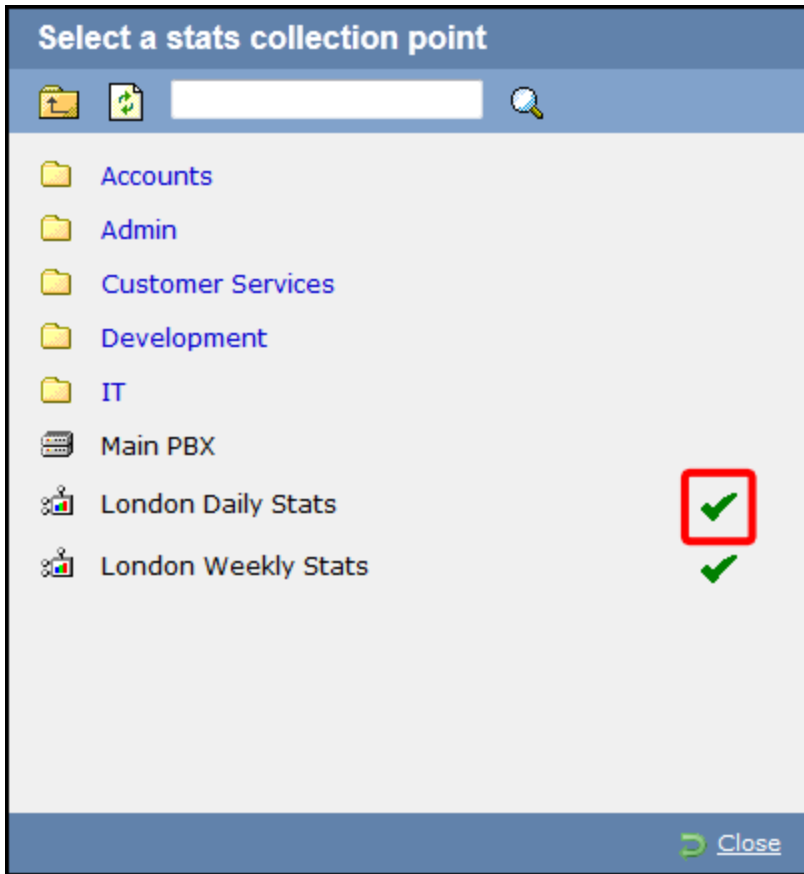
Summary value by

Font family

B *I* U   

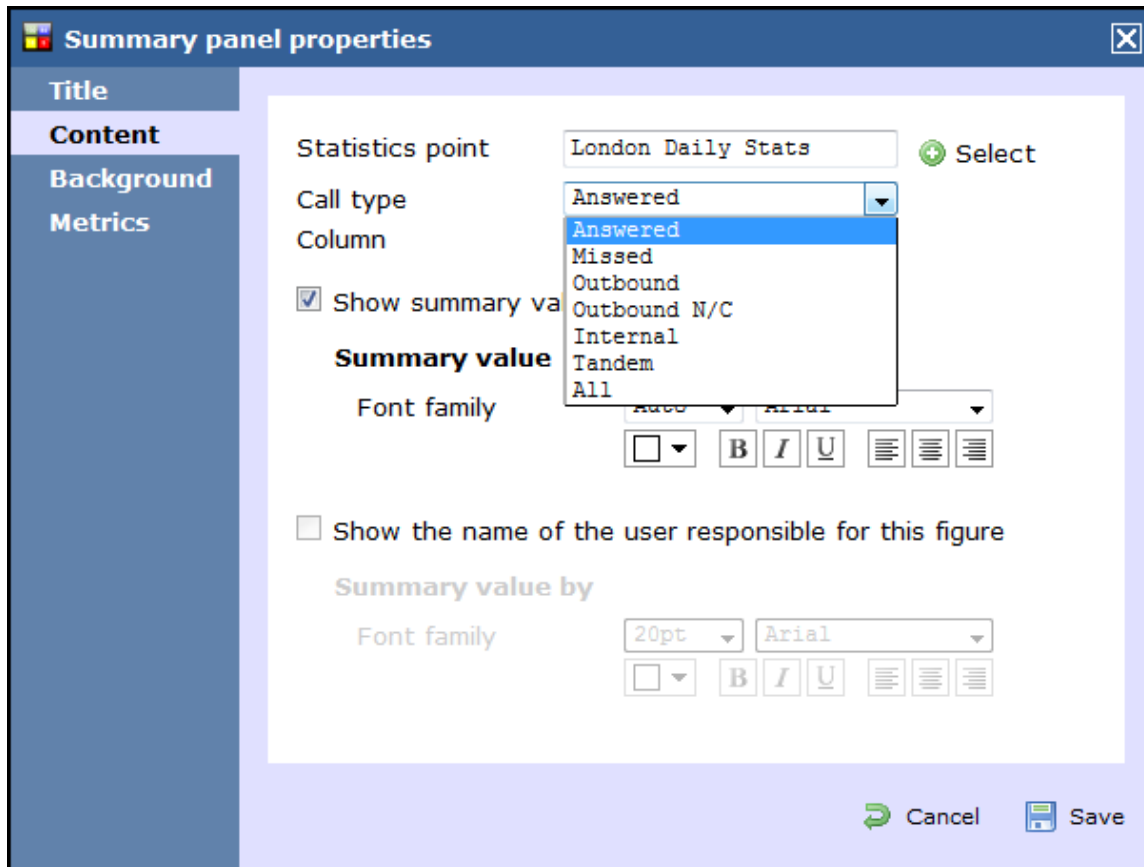
 Cancel  Save

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.



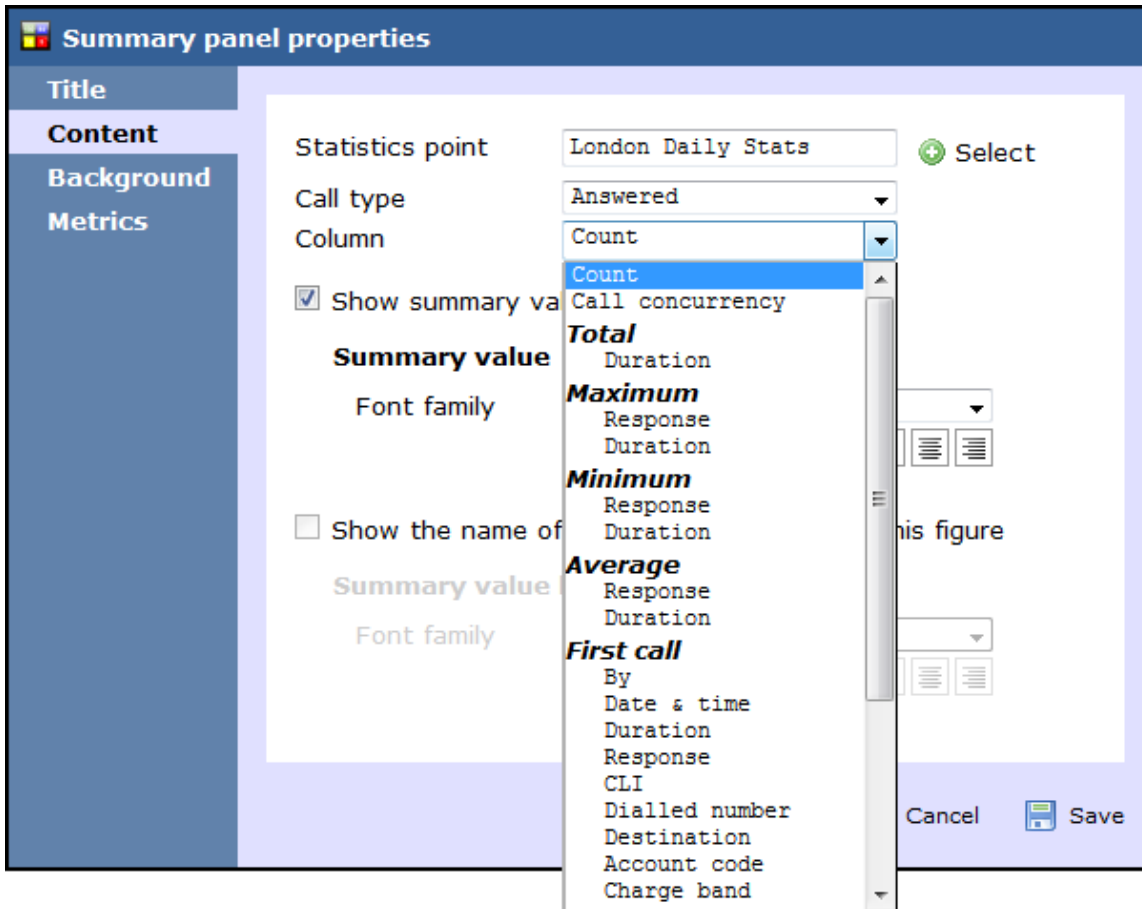
Selecting the call type

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:



Selecting the column information

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.

Summary panel properties

Title

Content

Background

Metrics

Statistics point: London Daily Stats Select

Call type: Answered

Column: Count

Show summary value

Summary value

Font family: 22pt Arial

Show the name of the user

Summary value by: Font family

Fixed palette

Custom palette

Red

Green

Blue

Transparent

Cancel Apply

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.

Summary panel properties

Title

Content

Background

Metrics

Statistics point: London Daily Stats ⊕ Select

Call type: Outbound

Column: Duration

Show summary value

Summary value

Font family: Auto | Arial

B ***I*** **U**

Show the name of the user responsible for this figure

Summary value by

Font family: 20pt | Arial

B ***I*** **U**

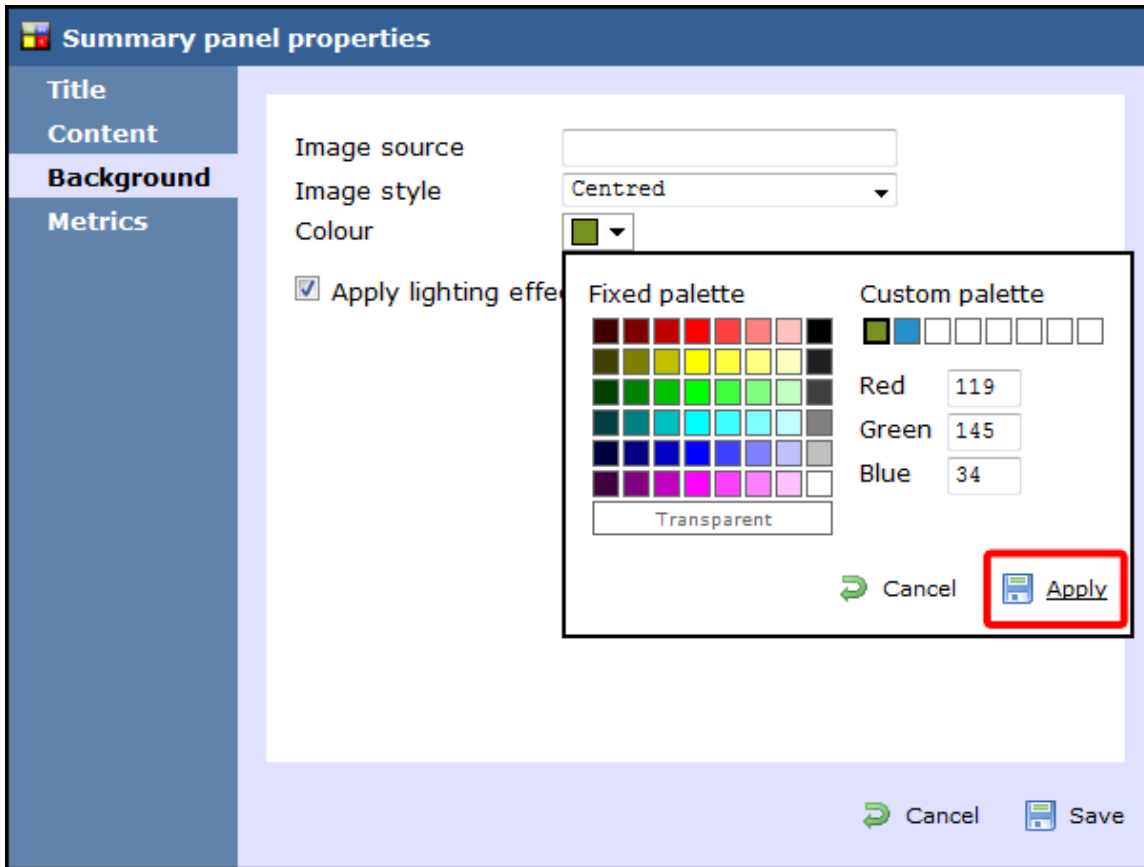
↶ Cancel 💾 Save

The summary panel of this last example will display as shown below:



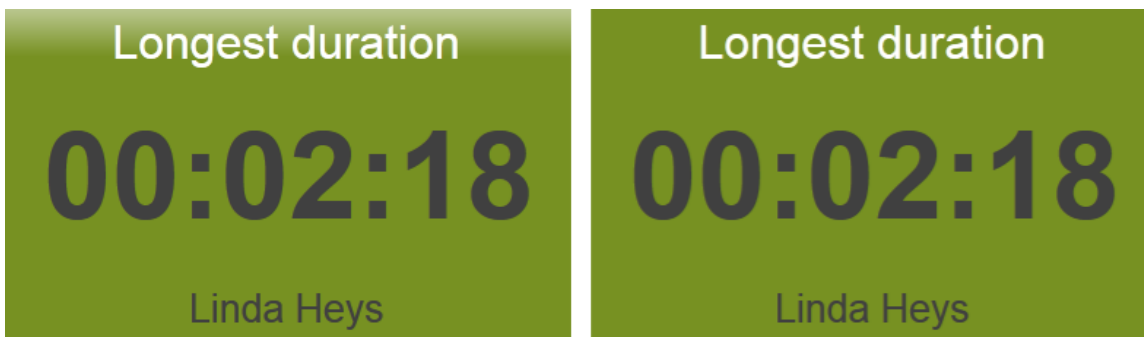
Background

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

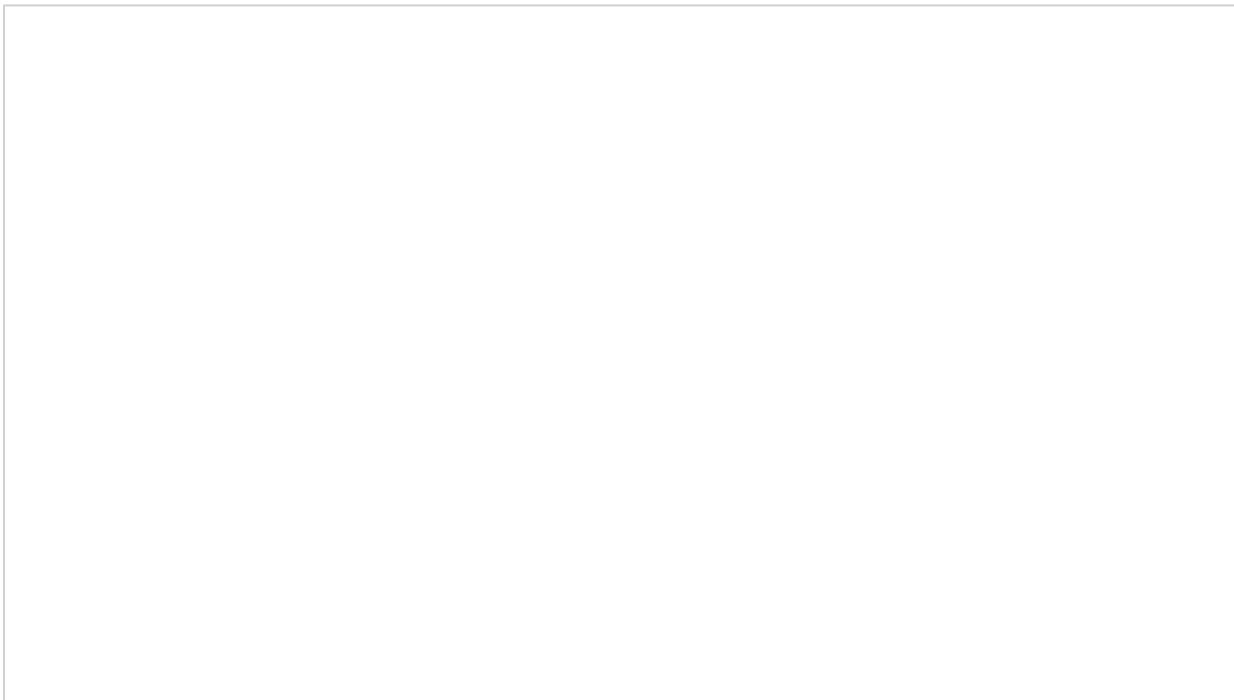
The **Metrics** tab allows you to define the shape of the panel, by entering values for its position and size.

The screenshot shows a dialog box titled "Summary panel properties" with a dark blue header. On the left is a vertical sidebar with four tabs: "Title", "Content", "Background", and "Metrics". The "Metrics" tab is selected and highlighted in light blue. The main area of the dialog is white and contains four rows of labels and input fields: "Left" with a text box containing "496" and "px" to its right; "Top" with a text box containing "0" and "px" to its right; "Width" with a text box containing "300" and "px" to its right; and "Height" with a text box containing "224" and "px" to its right. At the bottom right of the dialog, there are two buttons: "Cancel" with a green arrow icon and "Save" with a blue floppy disk icon. The "Save" button is highlighted with a red rectangular border.

When you have finished configuring the properties of your Summary panel, click on the **Save** button to apply the changes.

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?
- Adding an RSS panel
- Customising an RSS panel
- RSS panel - overview video

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.



All Telesales

19:47:31



Best performers					Summary stats	
Pos	Name	Calls ▼	Total dur	Avg dur	Total In	Longest In
1	Grace Harper	24	00:51:43	00:02:09	107	00:09:16
2	Christina Andrews	22	00:40:13	00:01:50		Grace Harper
3	Mark Longhorn	21	00:24:25	00:01:10	14	00:04:27
4	Sally Gansa	12	00:14:32	00:01:13		Lee Faithful
5	Ricardo De Souza	12	00:25:30	00:02:08	0	0.44
6	Jason Myers	12	00:22:17	00:01:51		Lee Faithful
7	Billy Elliot	7	00:16:37	00:02:22		
8	Malcolm Meehan	3	00:02:28	00:00:49		
9	Lee Faithful	3	00:05:04	00:01:41		

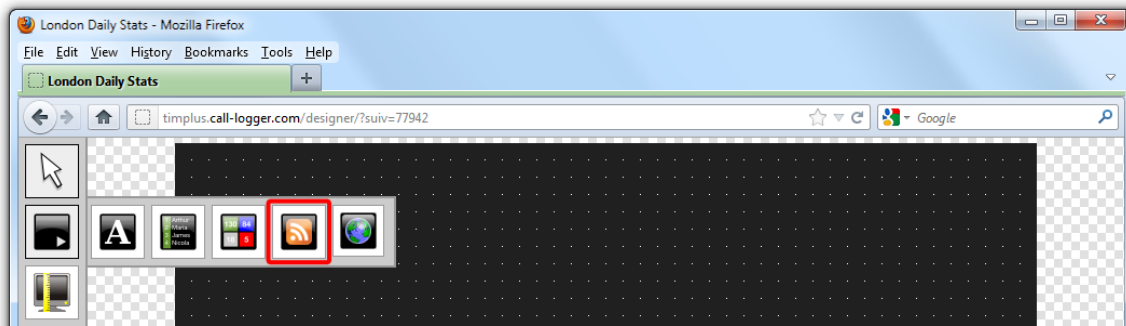


Fire rages near N. Mexico nuclear plant
 The fire is about a mile from the Los Alamos National Laboratory. All nuclear materials are protected, lab officials said in a statement.

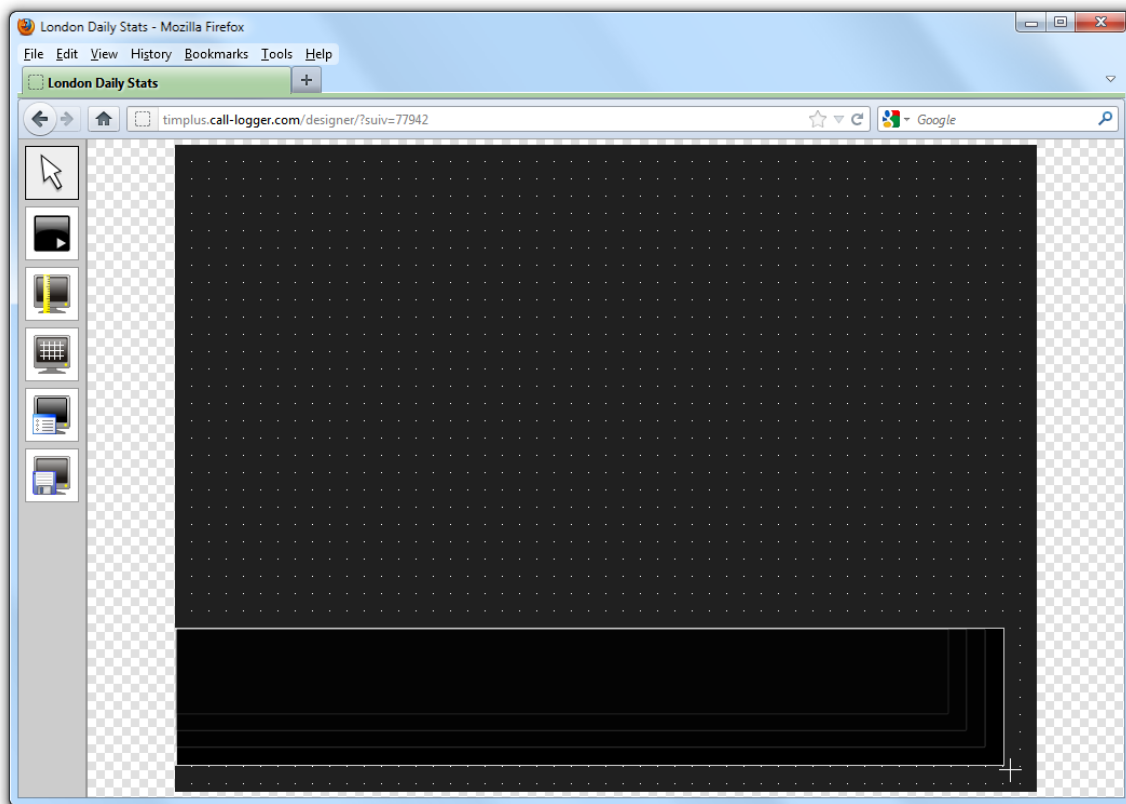
Adding an RSS panel



To add an RSS panel, click on the  toolbar button to expand the list of panel types and choose the  button, as shown below:





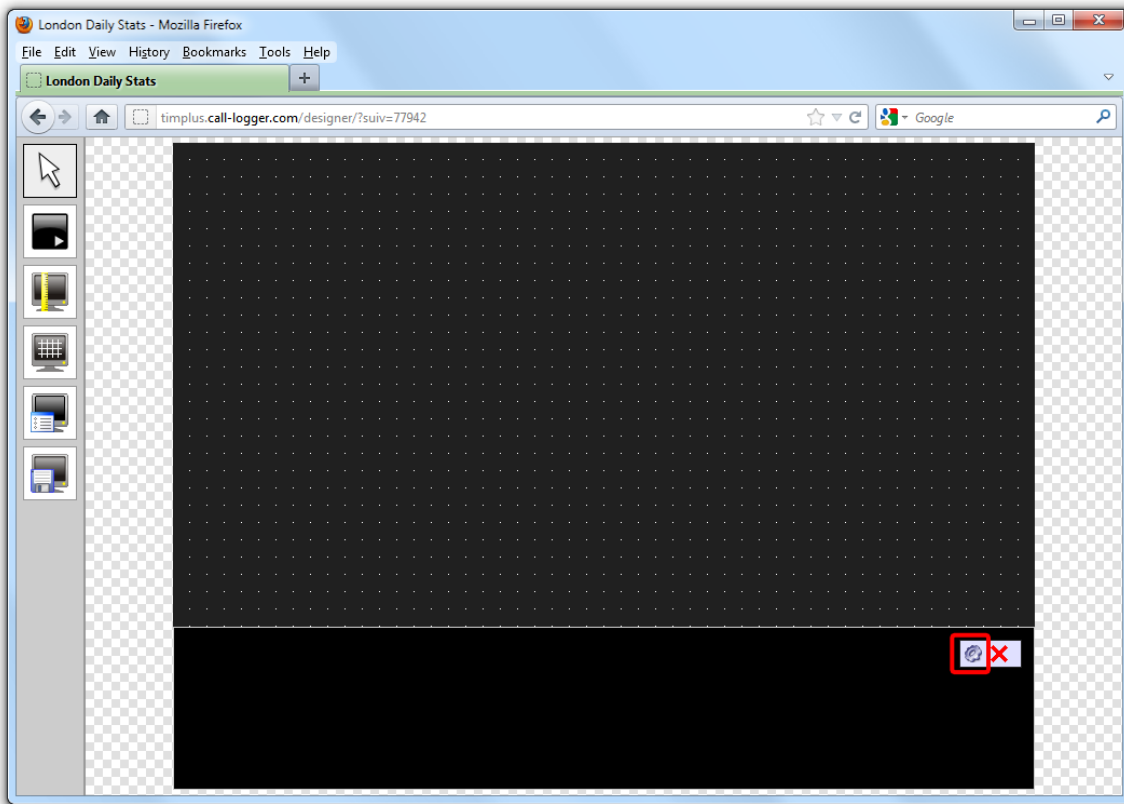
After selecting the RSS panel button, the mouse pointer changes into a white crosshair pointer, indicating that the designer is ready to draw your panel. Click and hold your left mouse button, starting at the point defining the upper-left corner of your new panel. Whilst still holding down the left mouse 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 feed` button.

RSS panel properties

Content



Appearance
Background
Metrics

RSS URL  Check feed

RSS title  Add feed

Title

RSS feeds consist of text only


 Cancel  Save


If the entry is valid, the title of the RSS feed will appear in the `RSS title` field. Click on the `Add feed` button to add this feed to your RSS panel, as shown below:

RSS panel properties

Content



Appearance
Background
Metrics

RSS URL  Check feed

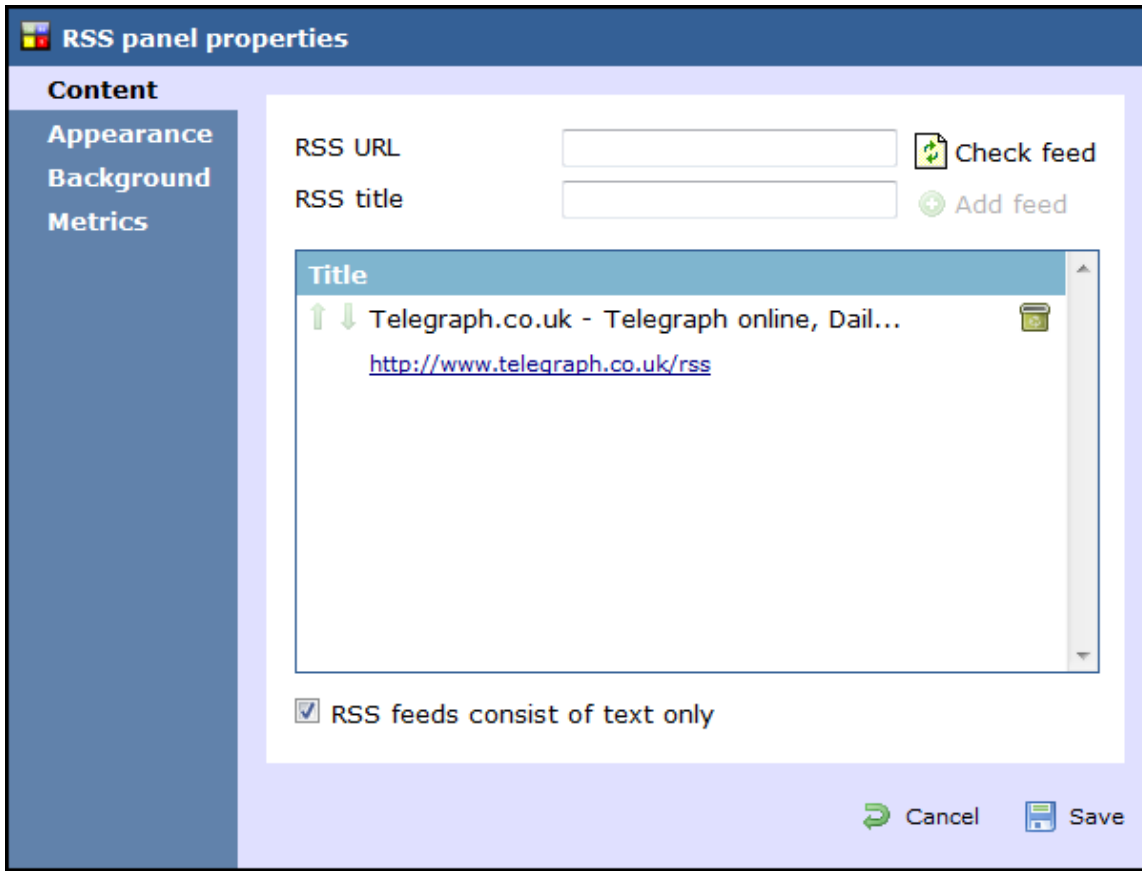
RSS title  Add feed

Title

RSS feeds consist of text only



 Cancel  Save

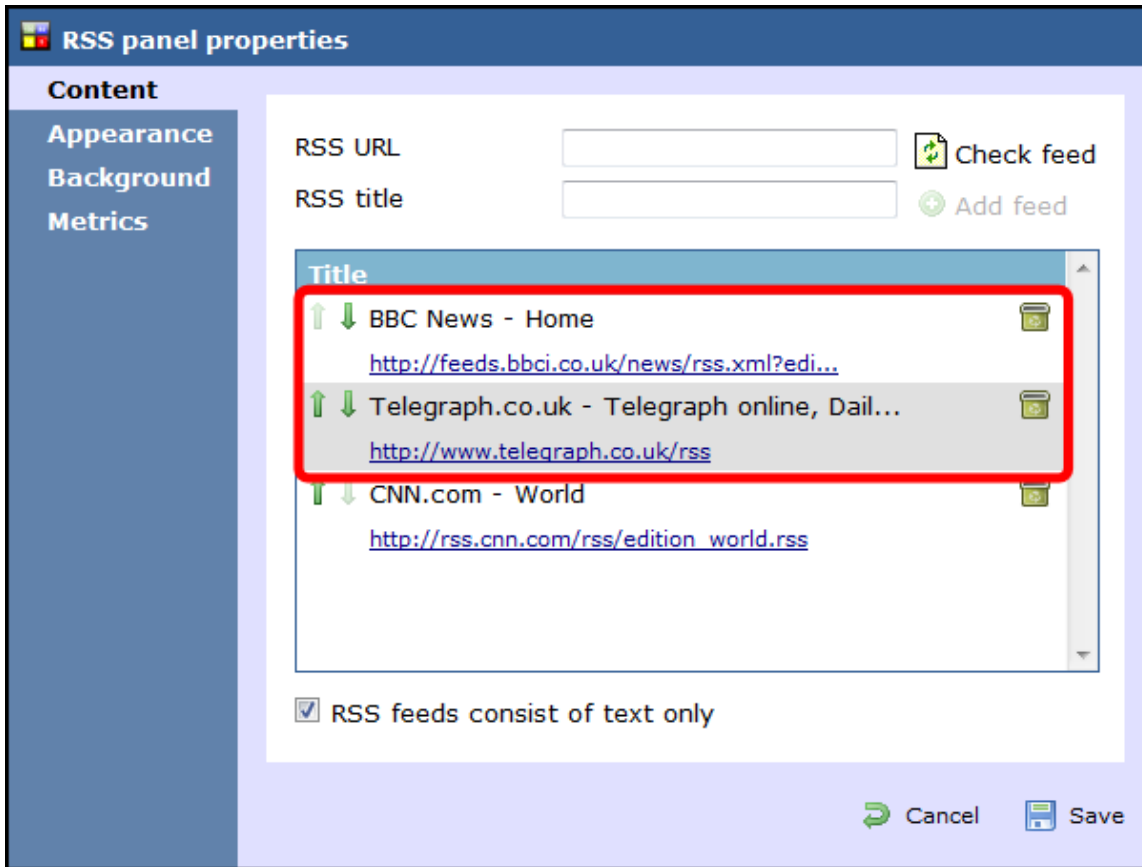
By default, this will appear in your RSS panel as shown below:



To add another RSS feed to your panel, follow the same procedure as described above.

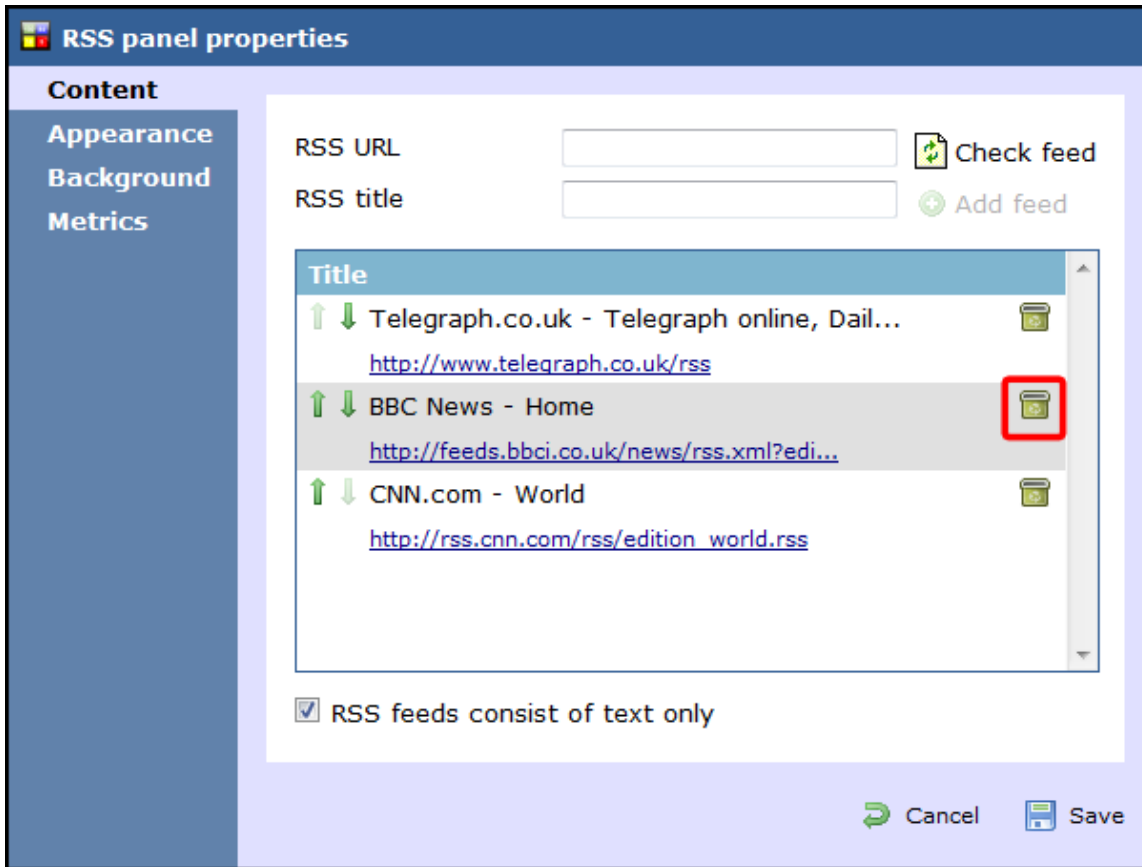
Reordering RSS feeds

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

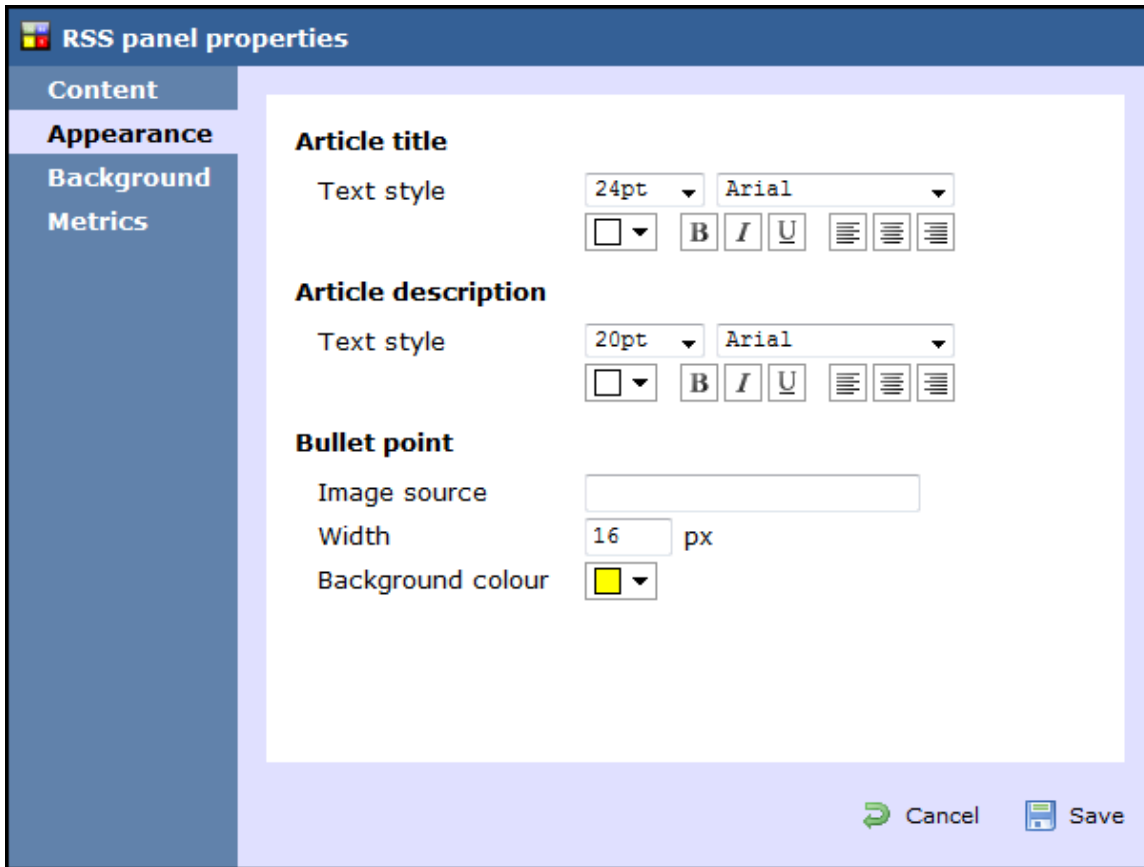
The **Appearance** tab allows you change the look of your RSS feed, by amending one or more of the following properties: the article title, the article description and the bullet point, as shown below:

Bullet point

Article Title



Article description



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

Bullet point

Image source

Width px

Background colour

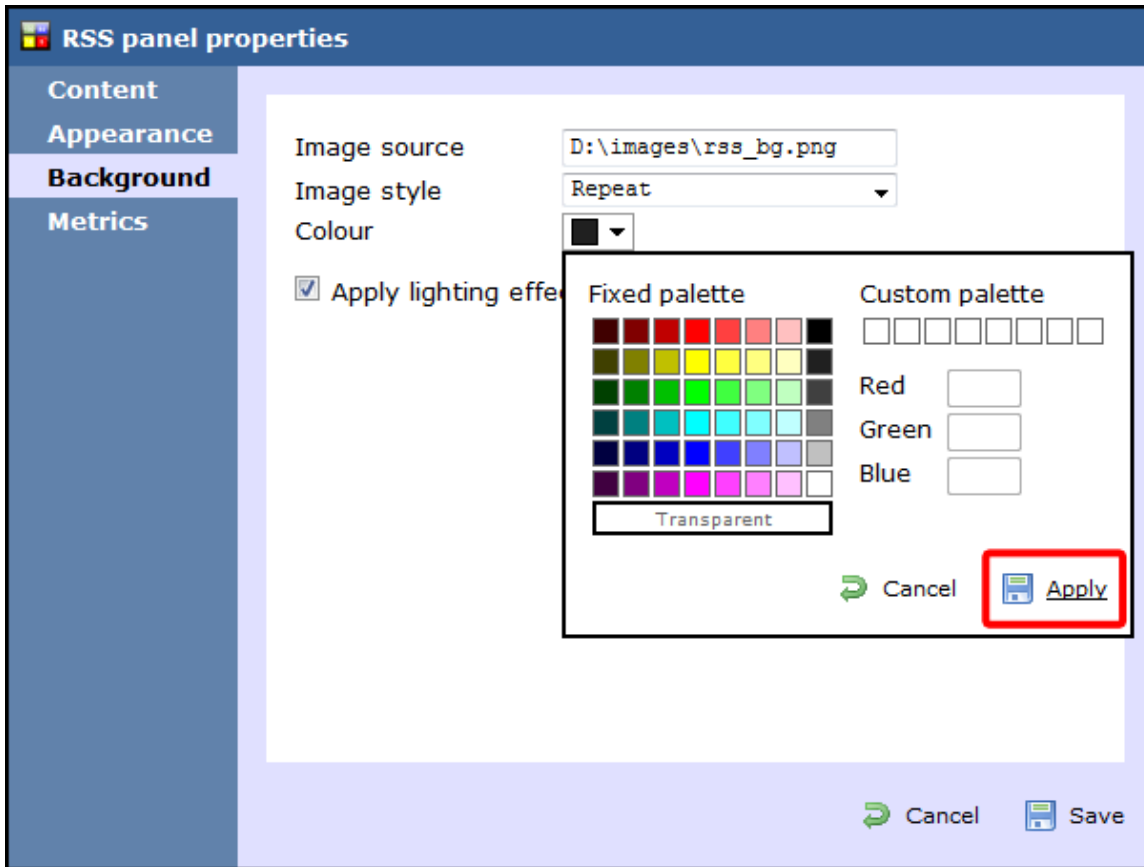
Field	Description
Image source	To use an image rather than a plain colour as your bullet point, enter its source here; the path is relative to the folder on disk from which the web content is served, and is different for each class of web user; the background colour should be set as Transparent , so 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.



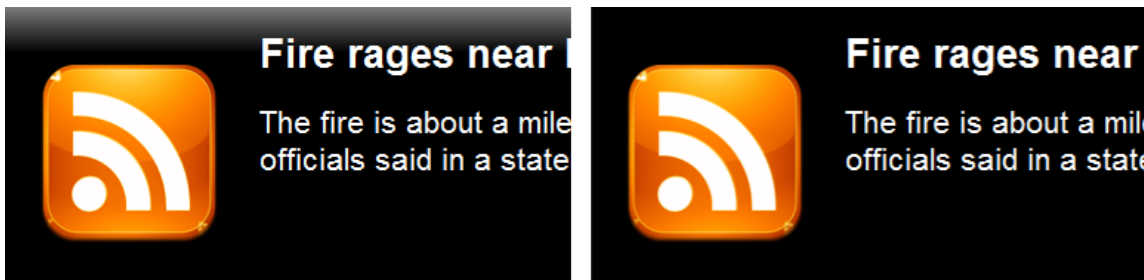
Background

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 highlight 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

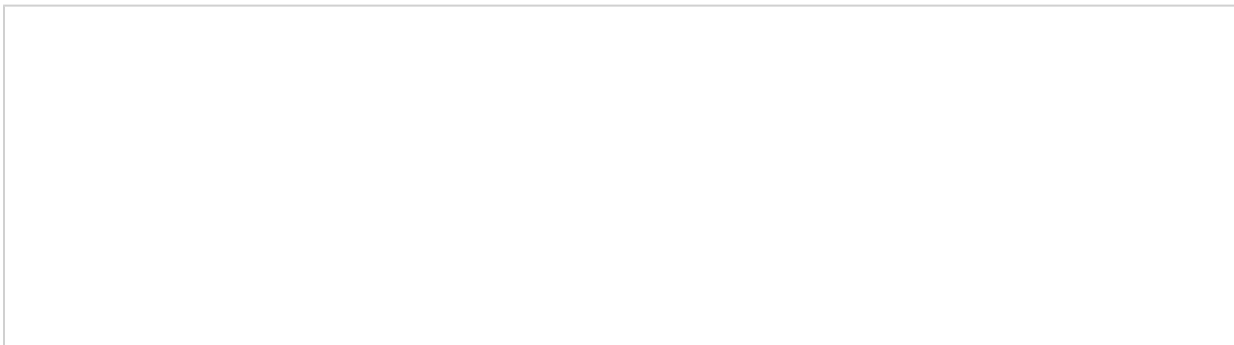
The **Metrics** tab allows you to define the shape of the panel, by entering values for its position and size. You are also given the option to determine the refresh frequency of the page, by entering a value in the **Article refresh** box.

Property	Value	Unit
Left	0	px
Top	448	px
Width	799	px
Height	151	px
Article refresh	4	seconds

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?
- Adding a web panel
- Customising a web panel
- Web panel - overview video

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.

12 April
London Daily Stats
13:25:47

Pos	Name	▼ Total	Total Duration	In	Lost	Out
1	Adam Zapel	18	00:06:41	0	0	17
2	Tom Morrow	16	00:28:09	14	0	1
3	Bea Minor	11	00:03:05	6	0	5
4	Cheri Pitts	10	00:14:40	9	0	0
5	Claire Annette	6	00:12:55	5	0	0
6	Jo Sargeant	5	00:02:02	0	0	4
7	Pat Downe	4	00:03:05	1	0	1
8	Olive Yew	4	00:03:54	1	0	2
9	Gail Storm	3	00:01:30	3	0	0

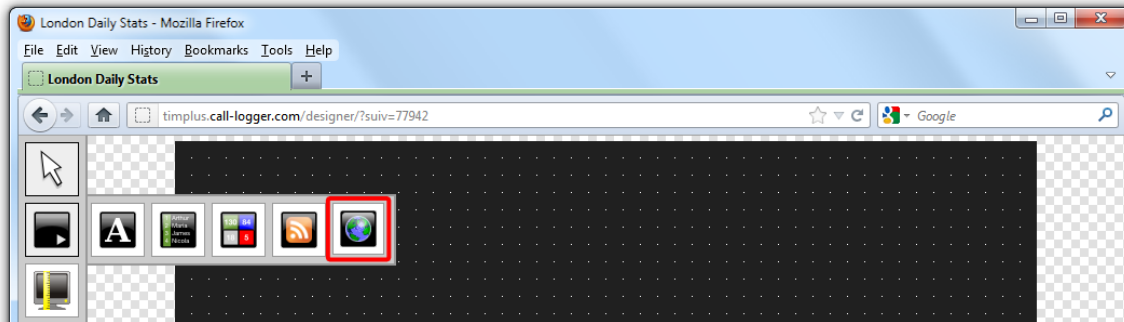
Adding a web panel



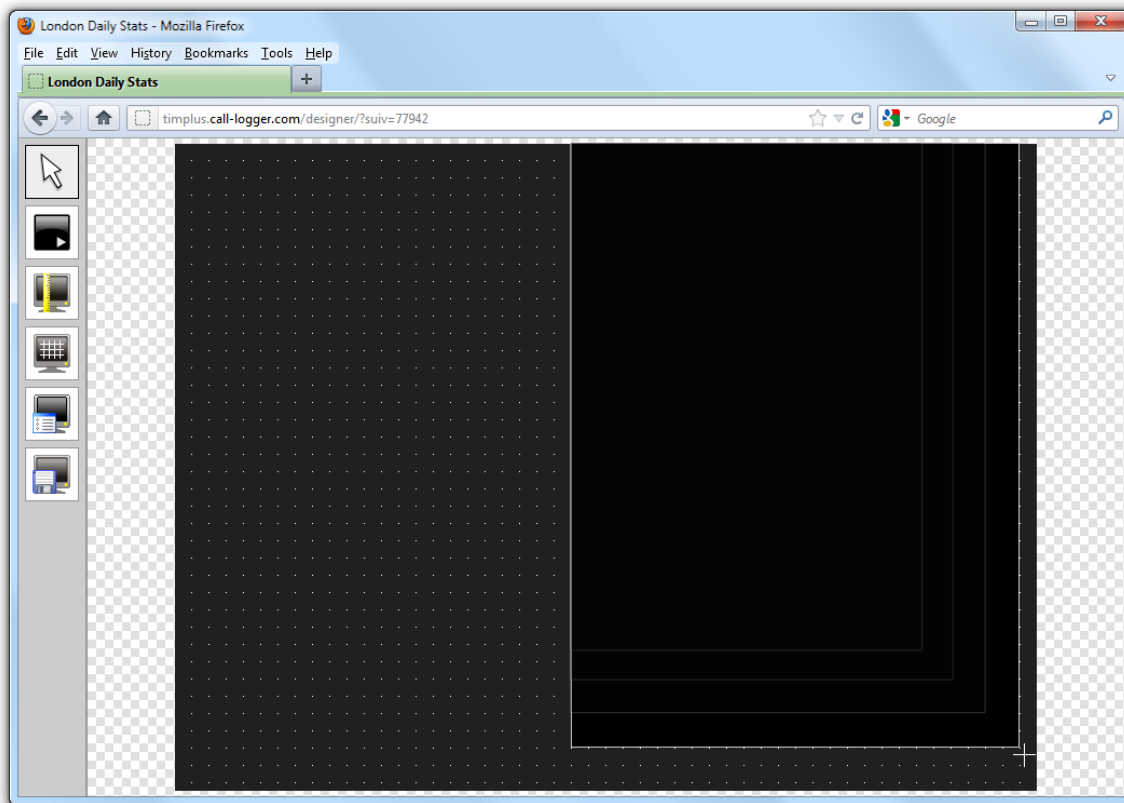
To add a web panel, click on the



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:




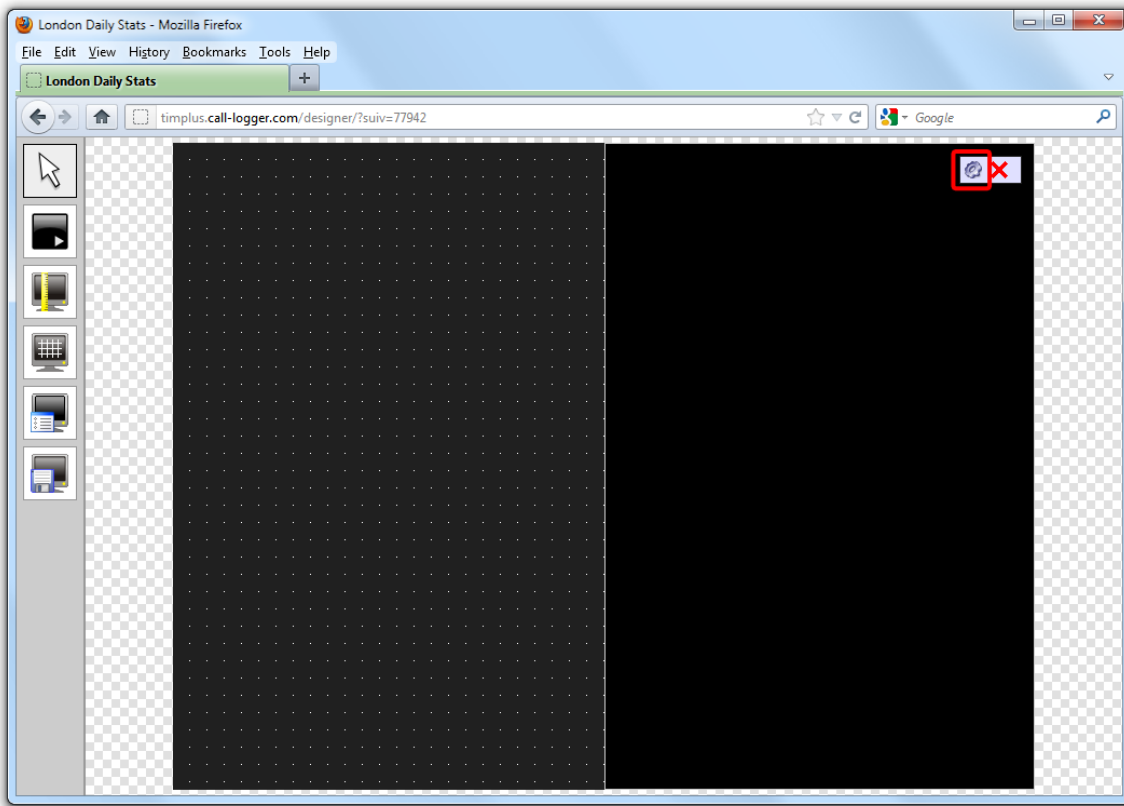
Customising a Web panel



To customize a web panel, click on the

toolbar button to switch to panel selection mode. Hover your mouse pointer over

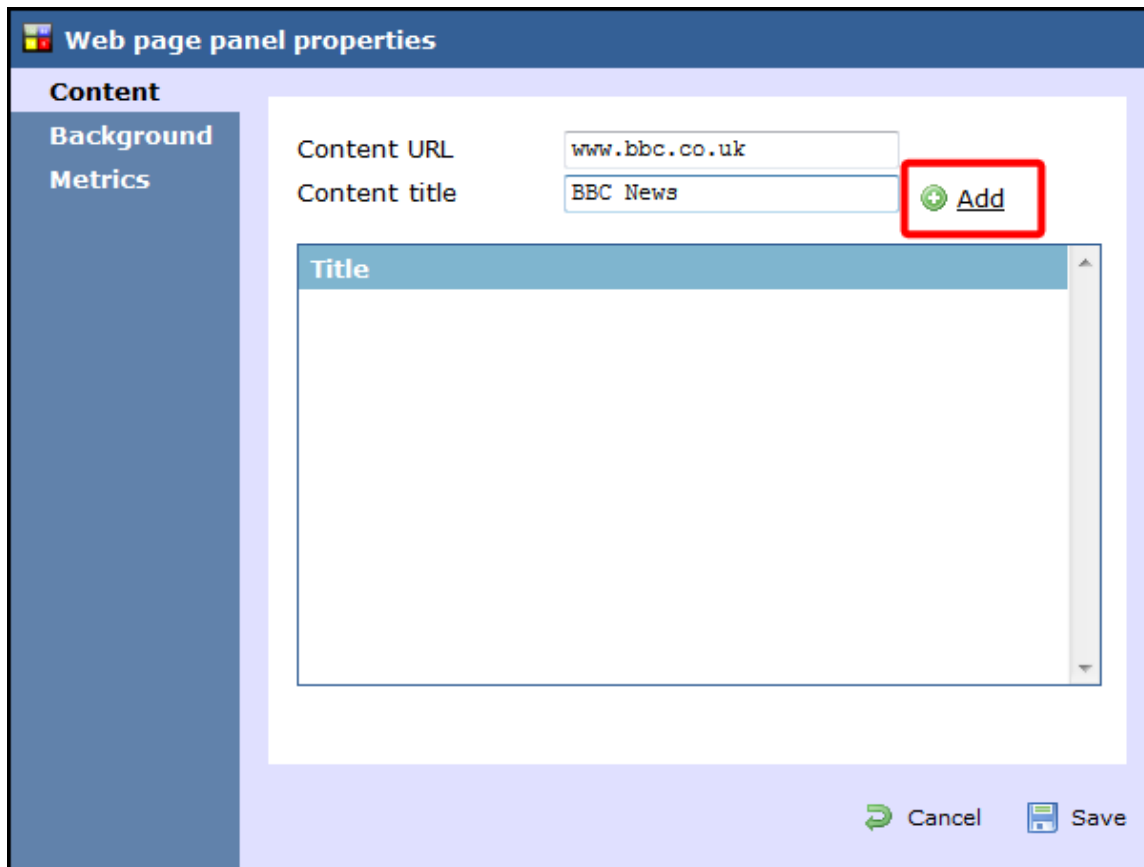
the label panel you want to customise and click on the  icon, when it appears towards the top-right corner of the panel, as shown below:



The **Web page panel properties** window will open, containing the following tabs:

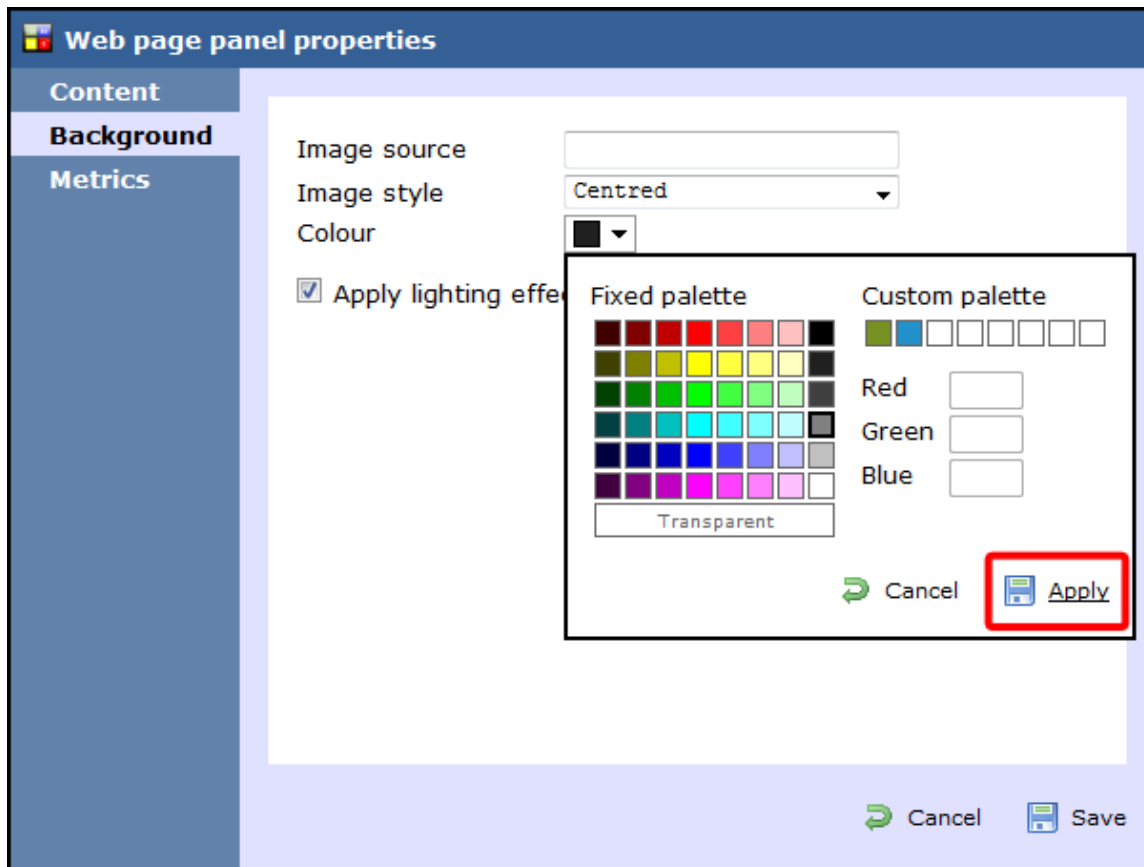
Content

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

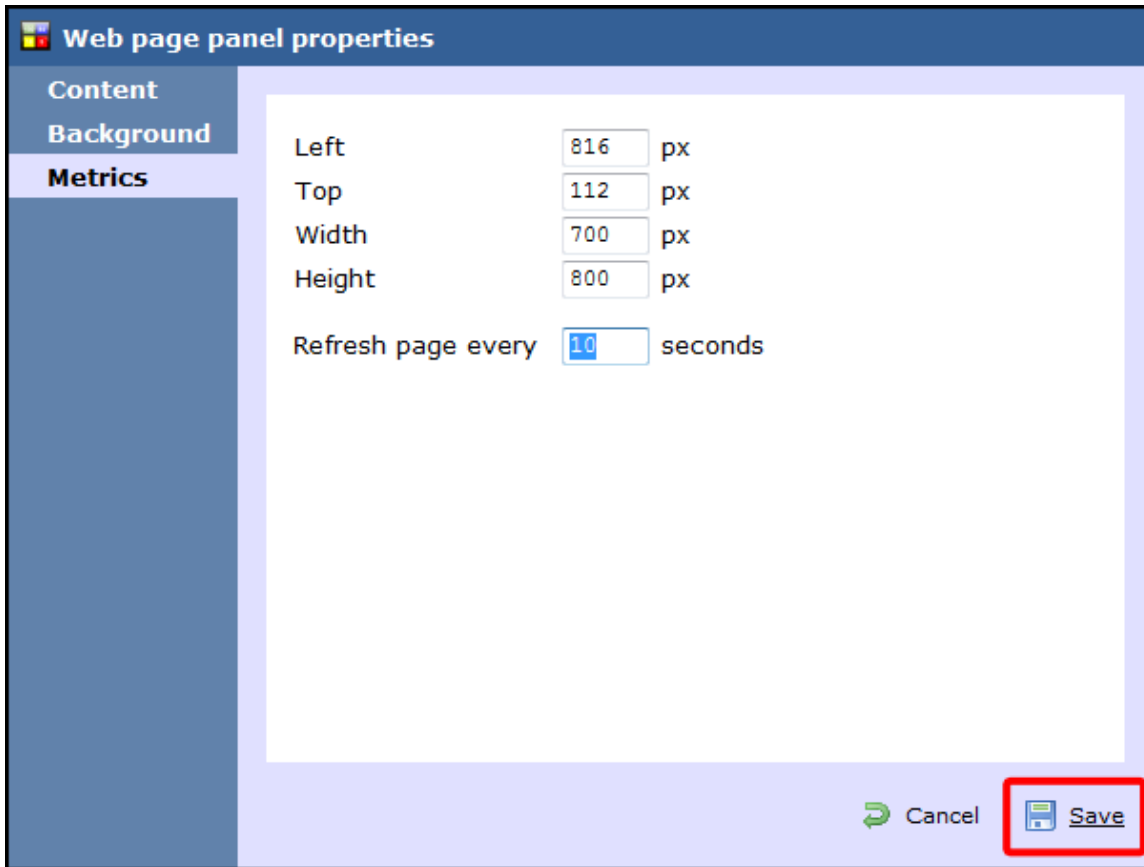
The **Background** tab allows you to configure the background properties of your web panel.



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

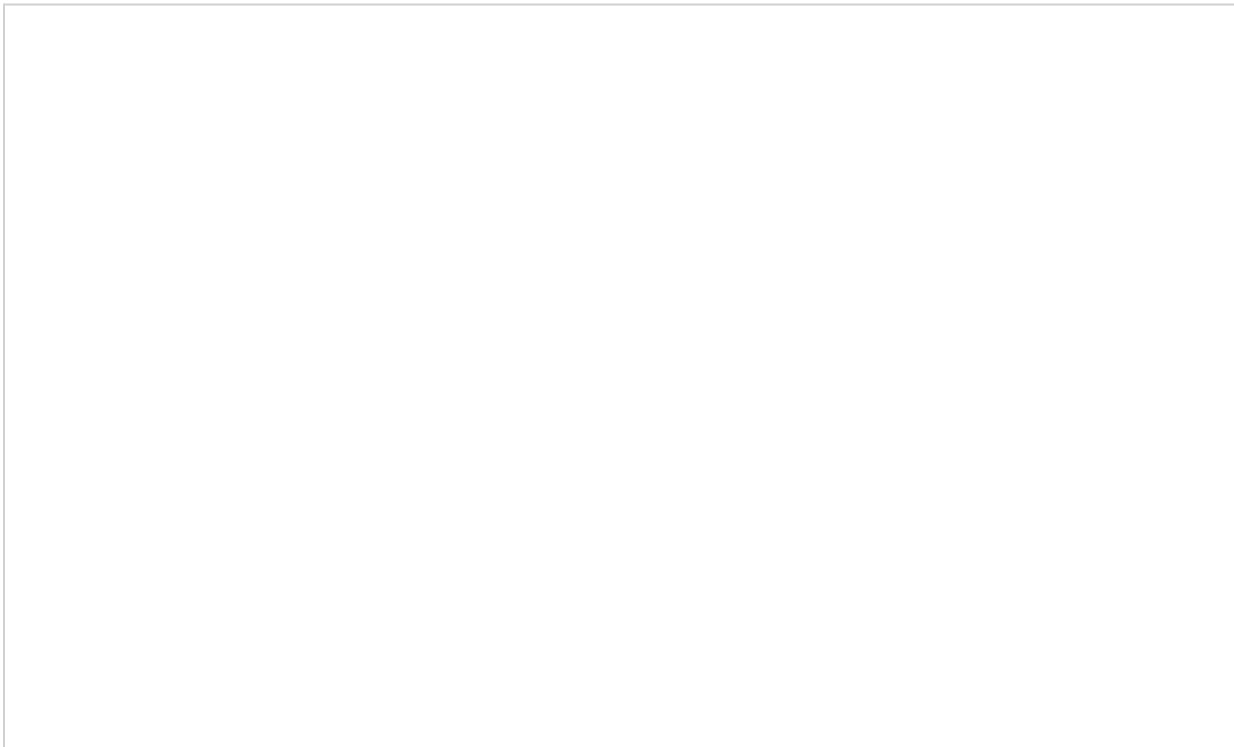
The **Metrics** tab allows you to define the shape of the panel, by entering values for its position and size. You are also given the option to determine the refresh frequency of the page, by entering a value in the **Refresh page** box, as shown below:



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:



Question

Question

- Overview
- Adding a question
- Editing a question
- Using the score cards

Overview

TIM Enterprise allows you to create your own score cards in order to rate calls for evaluation purposes. The score cards are based on a list of questions that you can define in the directory and which must be completed afterwards for each call that you want to score.

A score card containing a list of possible questions is presented below:

Inbound call from UNAVAILABLE to Barry Cade - 01 June 2012 10:50:43

Audio Audit trail **Scoring** Notes Related calls Call info

Rate the agent overall

- Excellent
- Very good
- Good
- Average
- Below average
- Bad

Was the agent friendly and helpful? Yes No

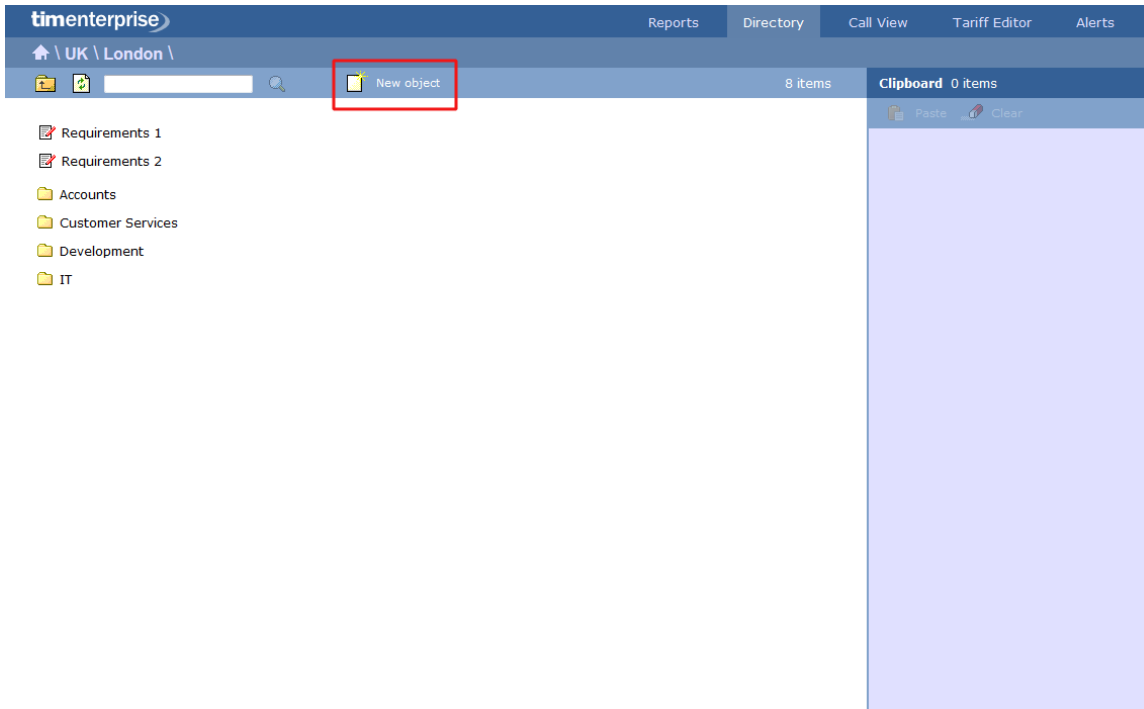
Was the call answered quickly? Yes No

Save

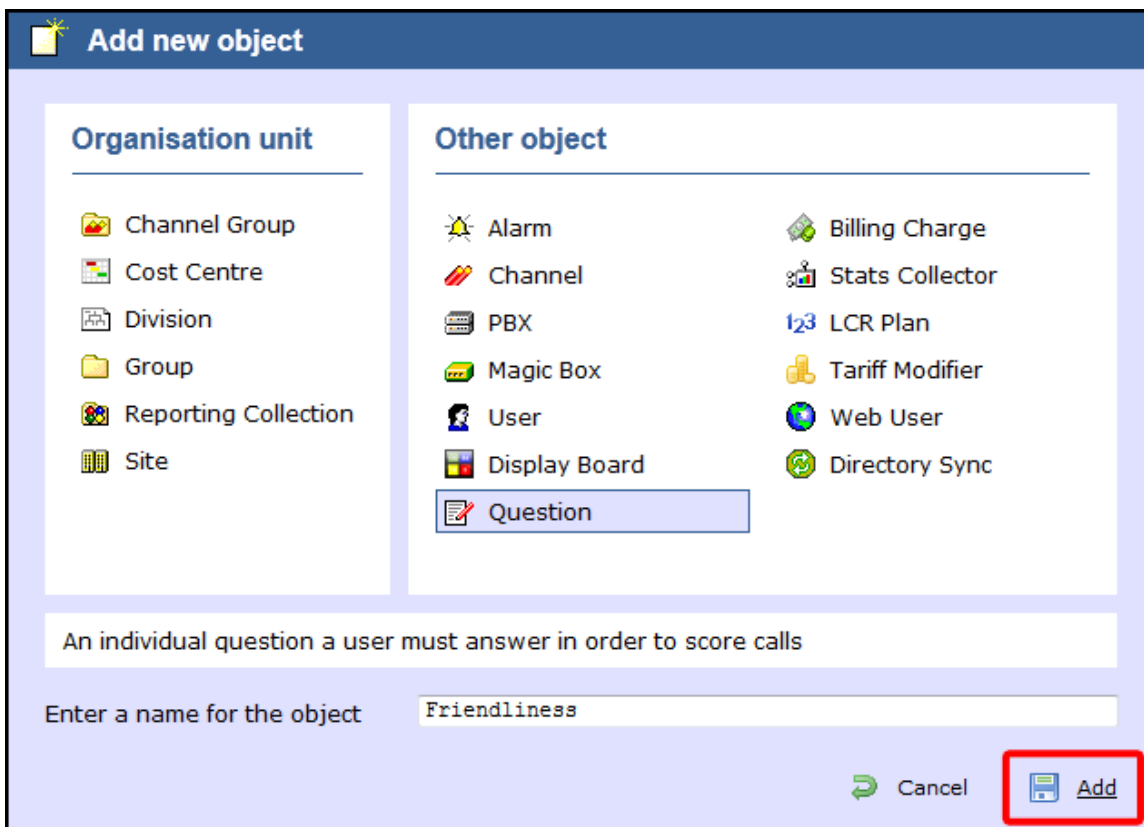
00:00:00 / 00:00:23

Adding a question

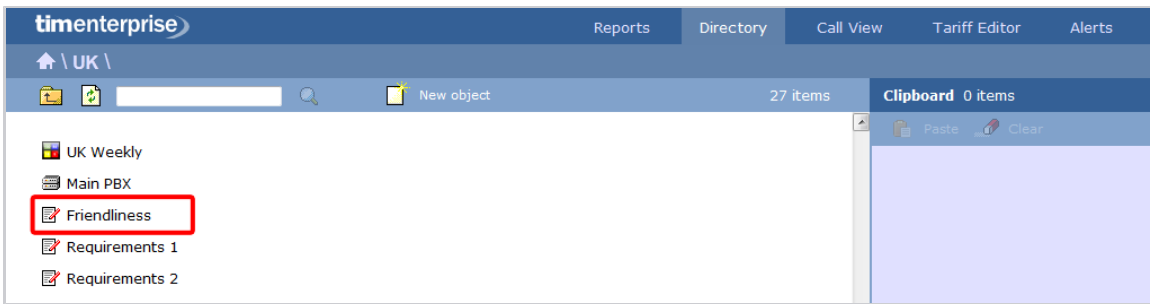
To add a `Question` object to the system, drill-down to the Directory level where you want to add the question and click on the `New` object tab, as shown below:



In the new window that opens, select the `Question` object from the `Other` object list, enter a relevant name and click on the `Add` button, as shown below:

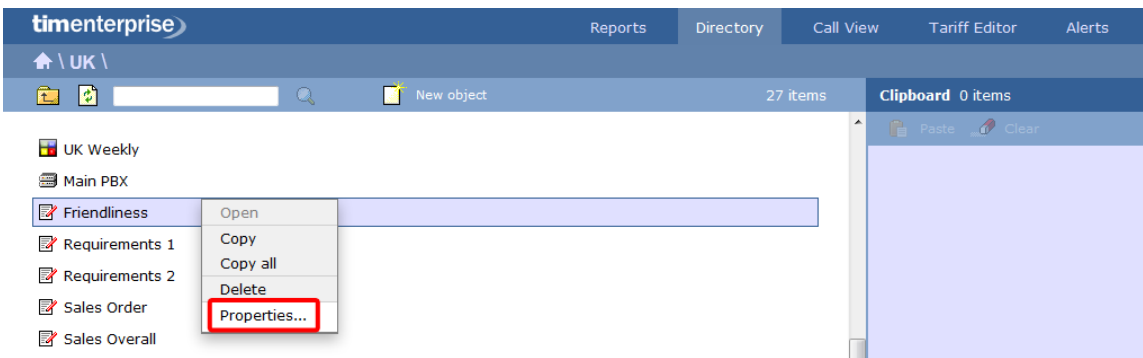


The `Question` object will appear in the Directory as follows:



Editing a question

To edit a question, locate the object in the Directory, click on it and select **Properties** from the drop-down list, as shown below:



A new window will open, where you can edit the properties of the selected question. 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?

Question options

Name

Question text

Type Yes / No Range Choice

Range answers

Calls will be rated based on a defined range of values, e.g. How well did the agent understand the caller's requirements, on a scale of 1 to 10?

Question options

Name

Question text

Type Yes / No Range Choice

Values

Min	<input type="text" value="0"/>
Max	<input type="text" value="10"/>

Multiple choice answers

Calls will be rated according to a fixed set of pre-defined answers, e.g. excellent, good, average, below average, bad.

Question options

Name

Question text

Type Yes / No Range Choice

Choices

Excellent

Very good

Good

Average



▲

☰

▼

+


-

Click on the  or  icons, to add or remove an answer from the list.

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 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:

timenterprise									
Call View									
Date	Time	Duration	Cost	Destination	Source	Destination name	Source name	Tariff	
06 September 2013	11:46:18	00:02:06	0.21	London	Sandy Shore	125009	Sandy Shore	BT1	[Icons]
06 September 2013	11:45:31	00:00:41	0.00	Hazel Nutt	T-Mobile	Hazel Nutt	120012	BT1	[Icons]
06 September 2013	11:45:01	00:00:07	0.03	Vodafone	Adam Zapel	123006	Adam Zapel	BT1	[Icons]
06 September 2013	11:42:48	00:00:28	0.06	O2	Bea Minor	120095	Bea Minor	BT1	[Icons]
06 September 2013	11:42:48	00:02:30	0.33	T-Mobile	Adam Zapel	123010	Adam Zapel	BT1	[Icons]
06 September 2013	11:42:36	00:05:52	0.00	Marsha Mellow	London	Marsha Mellow	120045	BT1	[Icons]
06 September 2013	11:42:11	00:00:04	0.00	Jo King	Vodafone	Jo King	120056	BT1	[Icons]
06 September 2013	11:41:46	00:00:02	0.00	Seb Moore	London	Seb Moore	120062	BT1	[Icons]
06 September 2013	11:41:01	00:08:17	0.00	Ella Vader	120054	Ella Vader	120054	BT1	[Icons]
06 September 2013	11:40:41	00:01:31	0.00	Noah Lott	120027	Noah Lott	120027	BT1	[Icons]
06 September 2013	11:39:11	00:05:42	0.00	Mike Stand	London	Mike Stand	120035	BT1	[Icons]
06 September 2013	11:39:11	00:03:18	0.00	Earl E. Riser	London	Earl E. Riser	120015	BT1	[Icons]
06 September 2013	11:38:23	00:00:12	0.00	Will Power	Orange	Will Power	121002	BT1	[Icons]
06 September 2013	11:37:56	00:00:38	0.08	Hutchison 3G	Etienne Guillot	120055	Etienne Guillot	BT1	[Icons]
06 September 2013	11:37:03	00:00:20	0.00	Holly Day	London	Holly Day	120025	BT1	[Icons]
06 September 2013	11:37:01	00:00:01	0.00	Gail Storm	121003	Gail Storm	121003	BT1	[Icons]
06 September 2013	11:37:01	00:00:10	0.03	Hutchison 3G	Jean Richepin	125003	Jean Richepin	BT1	[Icons]
06 September 2013	11:37:01	00:00:00	0.00	Bill Bryson	121003	Bill Bryson	121003	BT1	[Icons]
06 September 2013	11:36:51	00:02:23	0.00	Claire Annette	London	Claire Annette	120002	BT1	[Icons]
06 September 2013	11:36:48	00:05:25	0.00	Craig Dale	Orange	Craig Dale	121004	BT1	[Icons]
06 September 2013	11:36:43	00:04:13	0.00	Jim Shorts	London	Jim Shorts	120013	BT1	[Icons]

06/09/2013 11:45:55 Logged in as 'Joe Bloggs'

A new window will open, where you can score the call using previously-created score cards. Click on the **Save** button to apply the changes.

Inbound call from 02076636000 to Sonny Day - 05 September 2013 00:03:51

Audio	Audit trail	Scoring	Notes	Related calls	Call info
<p>Rate the agent overall</p> <ul style="list-style-type: none"> <input type="radio"/> Excellent <input type="radio"/> Very good <input type="radio"/> Good <input type="radio"/> Average <input checked="" type="radio"/> Below average <input type="radio"/> Bad 					
<p>Was the agent friendly and helpful?</p> <p><input checked="" type="radio"/> Yes <input type="radio"/> No</p>					
<p>Was the call answered quickly?</p> <p><input type="radio"/> Yes <input checked="" type="radio"/> No</p>					
<div style="border: 2px solid red; padding: 2px; display: inline-block;"> Save </div>					

To score a call from an itemised report, click on it to display the call detail window, then select the **Scoring** tab to score the call.

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.

TIM Plus

Did the customer place an order? (3 scores)		Placed order	33%
		Booked demonstration	33%
		Requested more information	33%
		Not interested	-
<hr/>			
How well did the agent address customer needs? (3 scores)	Min	Average	Max
	5	8.33	10
Based on 3 scores			
<hr/>			
How well did the agent understand customer's requirements? (3 scores)	Min	Average	Max
	4	8	10
Based on 3 scores			
<hr/>			
Rate the agent overall (3 scores)		Excellent	100%
		Very good	-
		Good	-
		Average	-
		Below average	-
<hr/>			
Was the agent friendly and helpful? (3 scores)		Yes	67%
		No	33%
<hr/>			
Was the call answered quickly? (3 scores)		Yes	100%
		No	-
<hr/>			
6 questions			

Billing Charge

Billing Charge

- What is billing charge?
- Adding a billing charge
- Configuring a billing charge

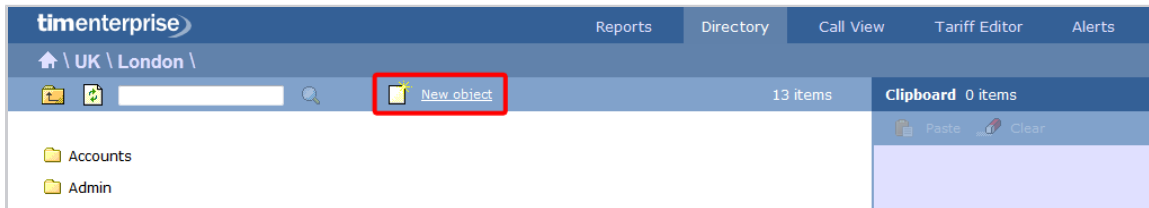
What is a billing charge?

A **Billing Charge** is a monetary amount that can be appended to a Phone Bill report, in addition to standard call charges and it can be a percentage or a fixed charge. There is no limit to the number of billing charges that can be added to the Directory and the priority of each one can be specified to determine the order in which they appear on the final report.

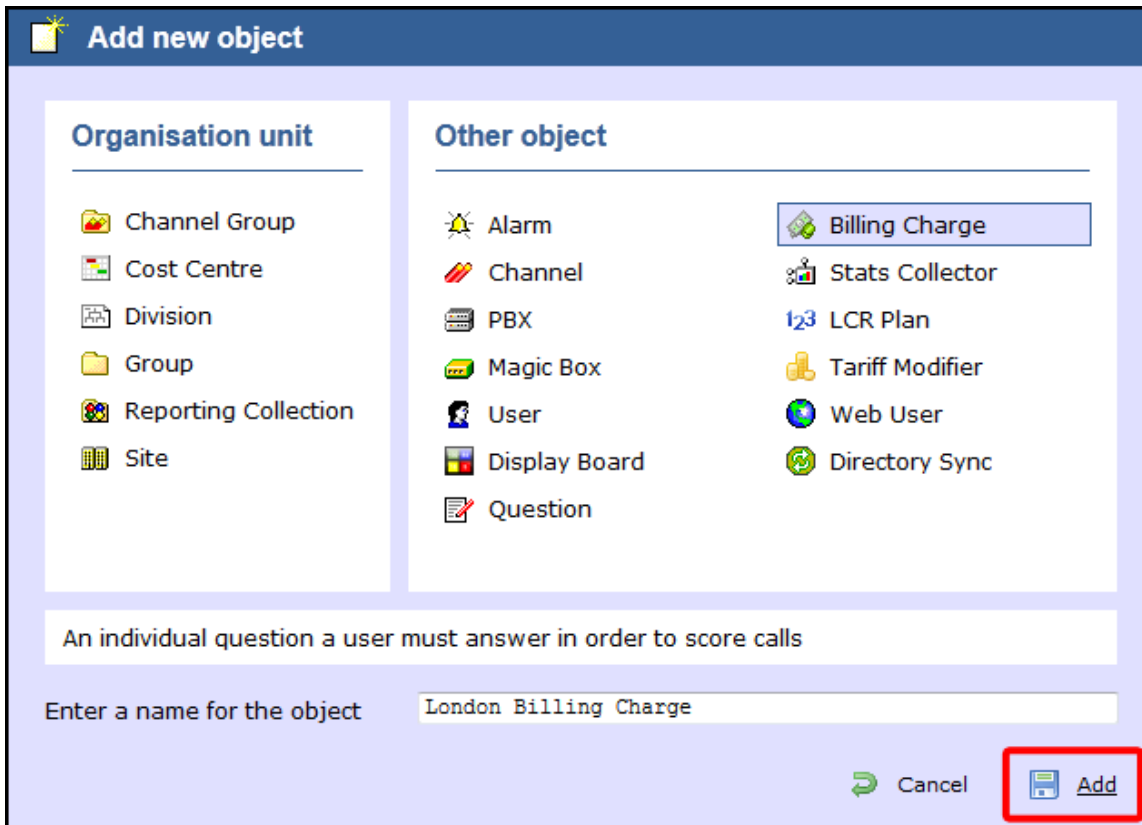
The billing charge can be applied to an entire bill, to each call or to a user's subtotal.

Adding a billing charge

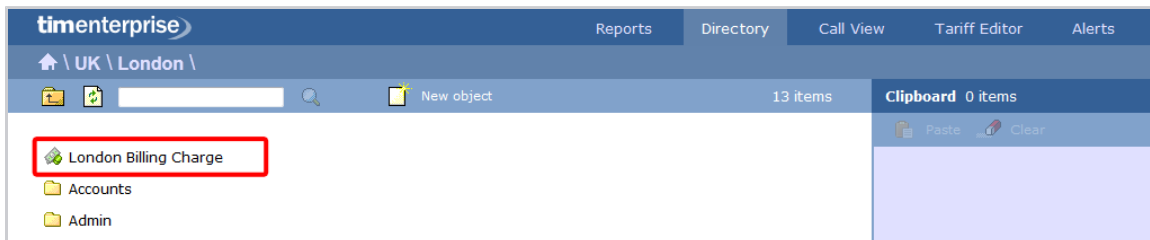
To add a billing charge object to the system, drill-down to the Directory level where you want to place the charge and click on the **New object** tab, as shown below:



In the new window that opens, select the **Billing Charge** object from the **Other object** list, enter a relevant name and click on the **Add** button, as shown below:

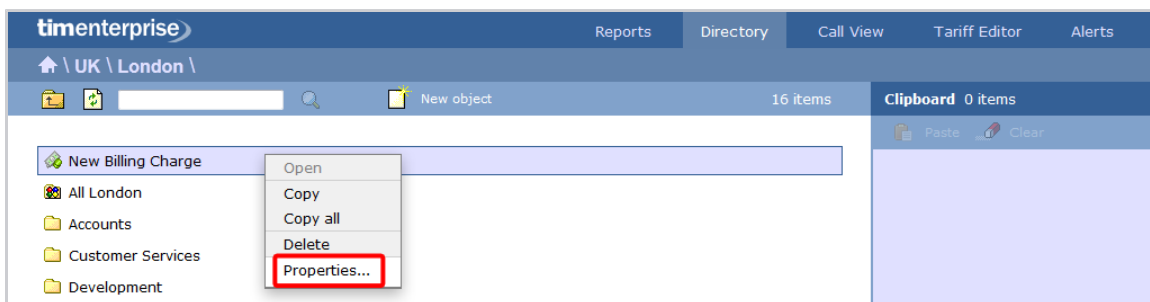


The billing charge object will appear in the Directory, as shown below:



Configuring an billing charge

To configure a billing charge, locate the object in the Directory, click on it and select **Properties** from the drop-down list, as shown below:



A new window will open, allowing you to configure the properties of your billing charge object.

London Billing Charge
✕

Name

Priority

How much?

Fixed charge

Percentage

How often?

Just this bill

Daily

Weekly

Monthly

Quarterly

Yearly

Who for?

The whole bill

For each user

Each call

Apply this charge for each quarter covered by the bill

Propagate this charge down directory hierarchy

↶ Cancel

💾 Save

Field	Description
Name	The name of the billing charge object
Priority	This option allows you allocate a priority to each charge you want to add to your bill, in order to determine the order in which each charge will be applied to your bill
How much	This option allows you apply the marked up charge as either a fixed charge or as percentage
How often	This option allows you determine how often the charge should be added to your bill, e.g. daily, monthly etc.
Who for	This option allows you to select the entity you want the charge to be applied to, e.g. the whole bill, an user or each call
Propagate this charge down the directory hierarchy	Enable this option if you want the billing charge to propagate down the directory hierarchy.

Stats Collector

What is a stats collector?

A statistics collection point (stats collector) 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. Additionally, when configuring a stats collection 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.

🏠 **London Daily Stats**

General

Exclusions

Contents

Name

Subject

- User
- User group
- Site
- Cost centre
- Division
- PBX
- Dialed number
- CLI
- Chargeband
- Destination
- Half hour time slot

Reset frequency

Every

- Minutes
- Hours
- Days
- Weekdays
- Weeks
- Months

Next reset

Time

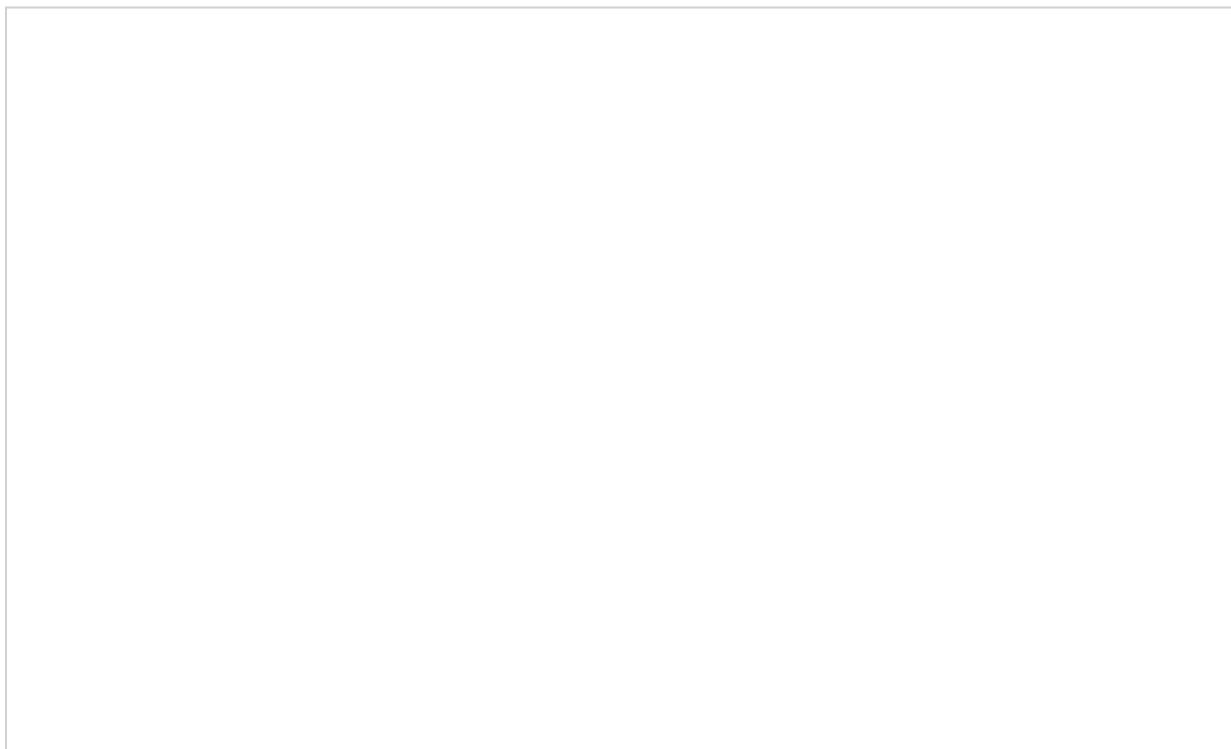
Day

Month

Year

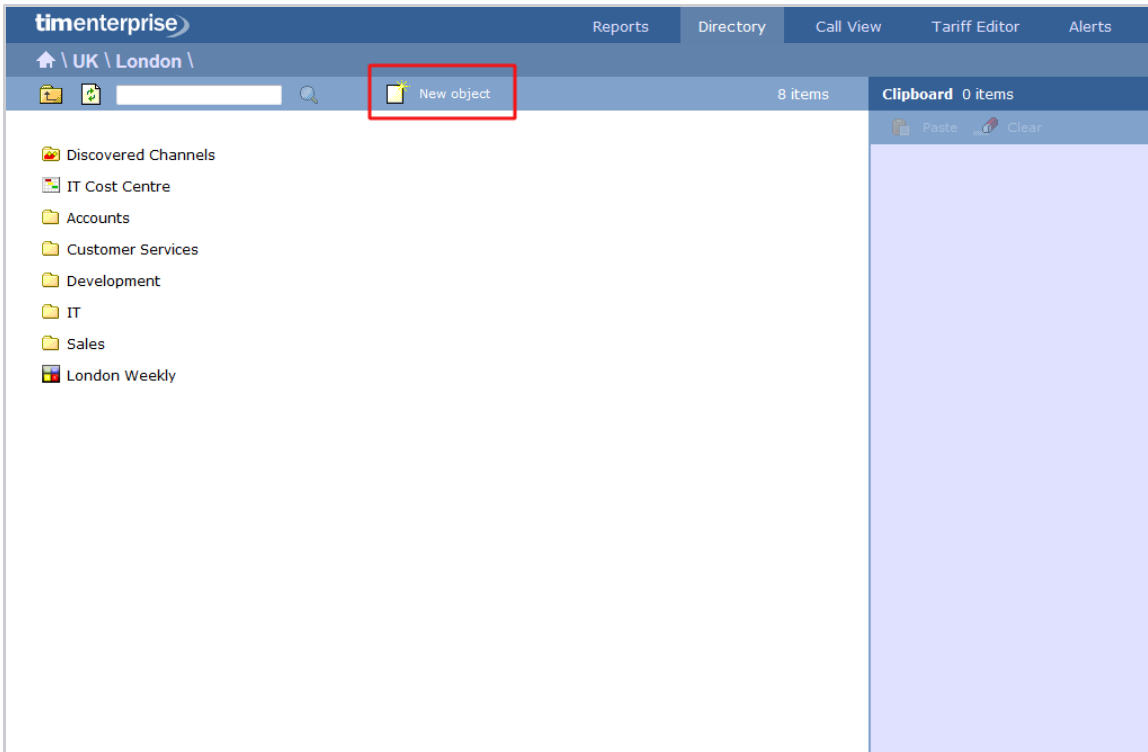
Use data from the last reset period

[Stats collector - overview video](#)

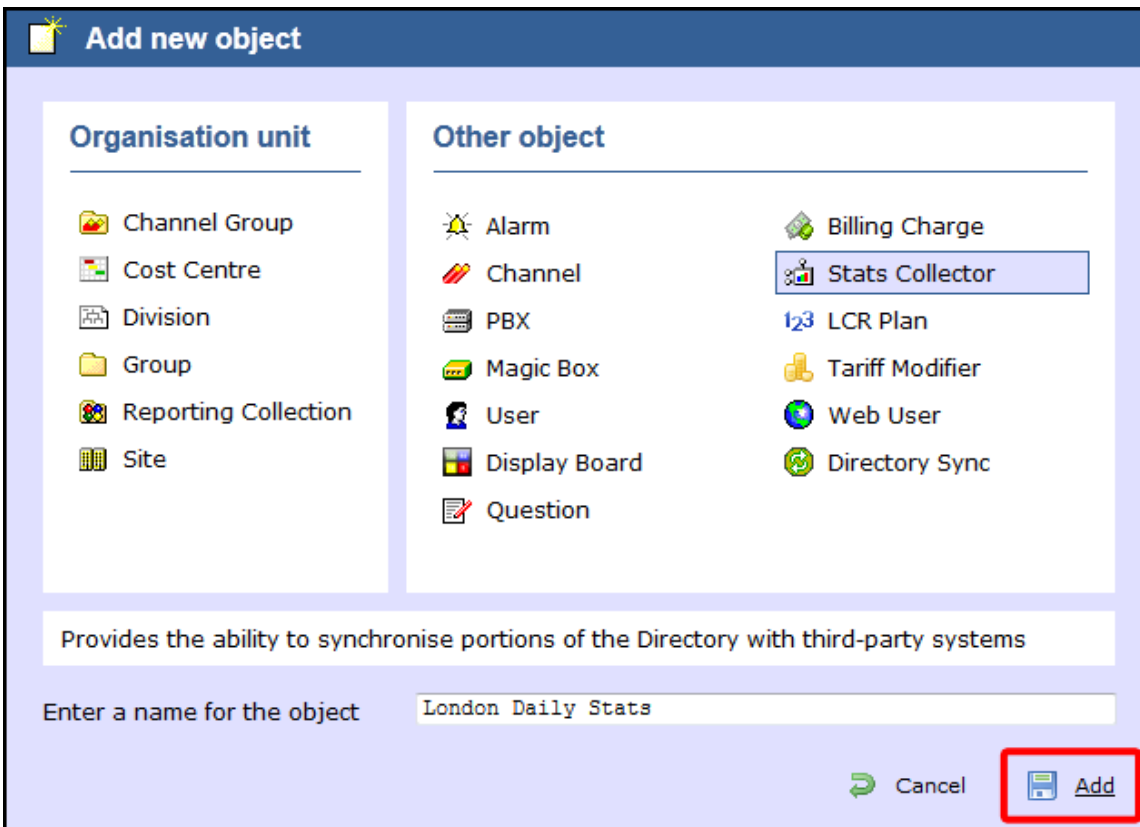


Adding a stats collector

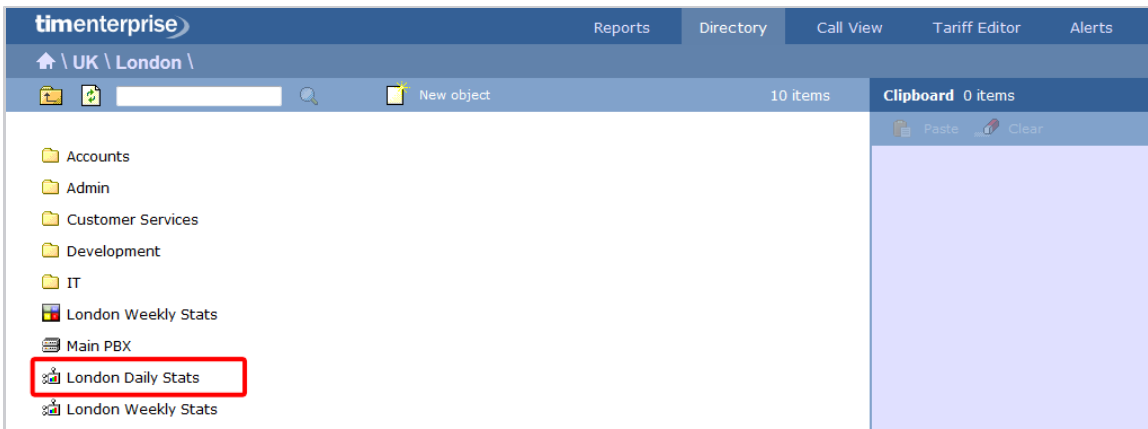
To add a stats collector object to the system, drill-down to the Directory level where you want to add the stats point and click on the `New object` tab, as shown below:



In the new window that opens, select the `Stats Collector` object from the `Other object` list, enter a relevant name and click on the `Add` button, as shown below:



The stats collector object will appear in the Directory as shown below:



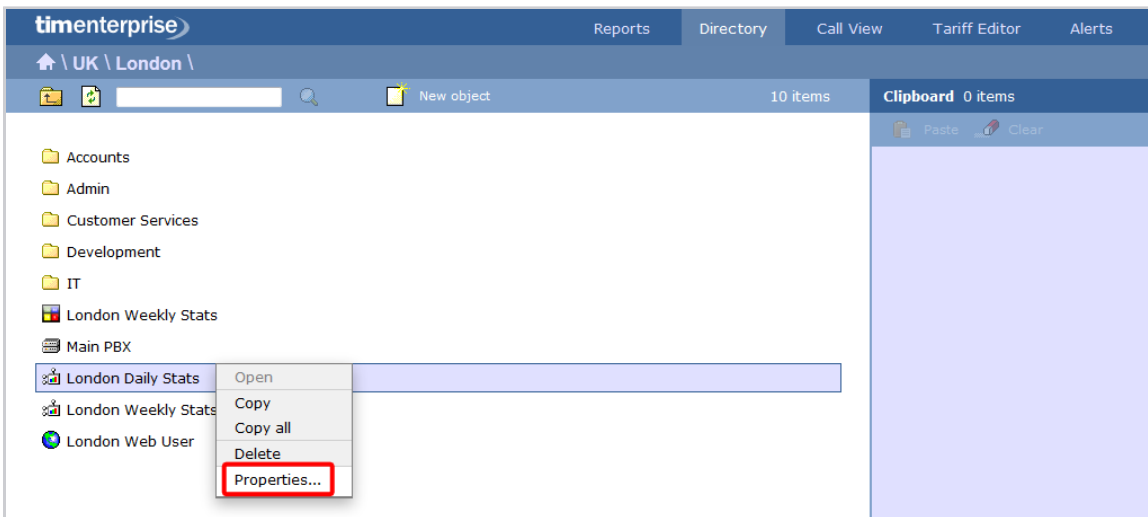
Configuring a stats collector

Configuring a stats collector

- Overview
- General properties
- Exclusions
- Contents

Overview

To configure a stats collector, locate the object in the Directory, click on it and select **Properties** from the drop-down list, as shown below:



A new window will open, allowing you to configure the properties of the stats collector object.

General properties

London Daily Stats

General
 Exclusions
 Contents

Name

Subject

- User
- User group
- Site
- Cost centre
- Division
- PBX
- Dialed number
- CLI
- Chargeband
- Destination
- Half hour time slot

Reset frequency

 Every

- Minutes
- Hours
- Days
- Weekdays
- Weeks
- Months

Next reset

 Time
 Day
 Month
 Year


Use data from the last reset period

Field	Description
Subject	The stats points can be configured to group the collected calls by a particular subject, such as users, channels, dialed number, half-hour time slot etc. The available subjects are described in the table below:

Subject	Description
User	The stats will group its collated calls by user. Select this option if you want to compare call stats for a number of different users.
User group	The stats will group its collated calls by user group. Select this option if you want to compare call stats for different groups of users.
Site	The stats will group its collated calls by site. Select this option if you want to compare the call traffic between two or more sites.
Cost centre	The stats will group its collated calls by cost centre. Select this option if you want to compare the call traffic between two or more cost centres.
Division	The stats will group its collated calls by division. Select this option if you want to compare the call traffic between two or more divisions.
PBX	The stats will group its collated calls by PBX. Select this option if you want to compare the call traffic between two or more PBXs.
Dialled number	The stats will group its collated calls by dialled number. Select this option if you want to monitor the most frequent dialled numbers.
CLI	The stats will group its collated calls by CLI. Select this option if you want to monitor the most frequent CLI numbers.
Chargeband	The stats will group its collated calls by chargeband. Select this option if you want to identify the most frequently used chargebands.
Destination	The stats will group its collated calls by destination. Select this option if you want to identify the most frequently dialled destinations.
Half hour time slot	The stats will group its collated calls by half hour time slot. Select this option if you want to identify peak times during the day.
Account code	The stats will group its collated calls by account code. Select this option if you want to identify the most frequently used account codes.
Channel	The stats will group its collated calls by channel. Select this option if you want to compare the call traffic between two or more channels.
Channel group	The stats will group its collated calls by channel group. Select this option if you want to compare the call traffic between two or more channel groups.

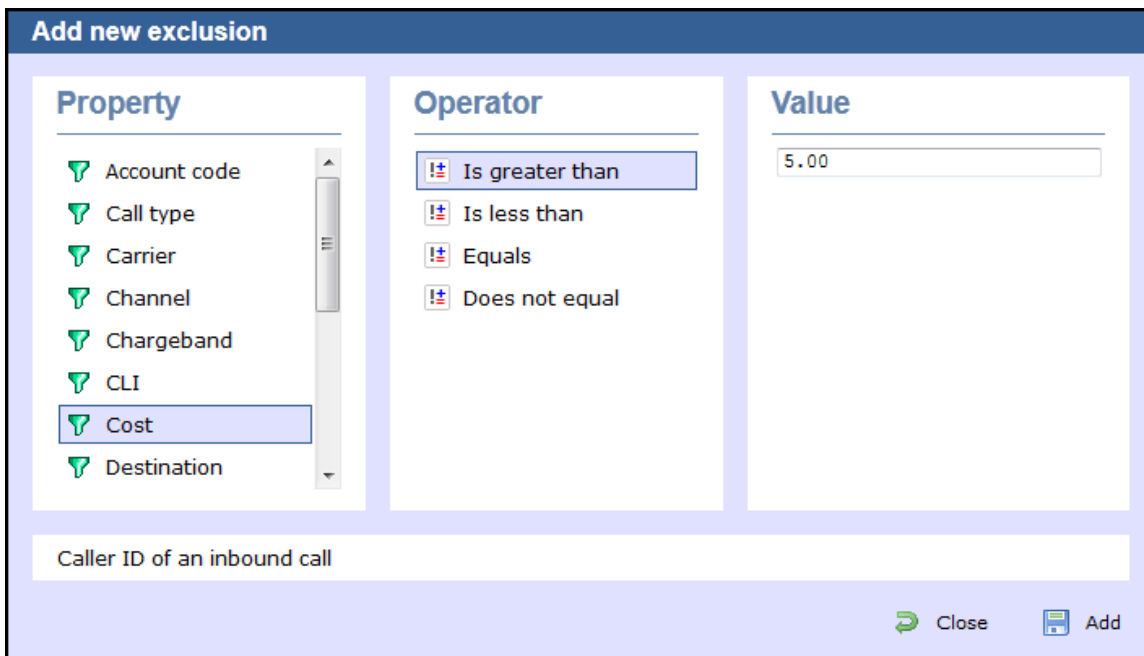
Reset frequency	Choose the reset frequency of the stats point, by selecting a predefined period from the drop-down list.
Next reset	Choose the next reset period, by entering a date and time.

Exclusions

TIM Enterprise allows you to exclude certain calls from your live stats, giving you the option to define the criteria the calls should meet in order to be excluded. To add your criteria, click on the  button, as shown below:





The Add new exclusion window will appear, allowing you to define which calls you want to exclude from the stats, by choosing a call property, an operator and a relevant value.





Account code

To set up an exclusion based on account codes, enter the relevant code in the box provided and select the appropriate operator. In the example below, the stats collector will exclude calls whose account code is **4518**.

 Account code	 equals	4518
--	--	------



Call type

To set up an exclusion based on the call type, select the relevant type of call from the list provided and choose the appropriate operator. In the example below, the stats collector will exclude all types of calls, except internal calls.


 Call type	 Does not equal	Internal
---	--	----------

Carrier

To set up an exclusion based on the carrier (tariff table) used to cost the calls, choose a carrier from the list provided and select the appropriate operator. In the example below, the stats collector will exclude all calls that are not routed over a **BT** carrier.

 Carrier	 Does not equal	BT
---	--	----

Channel

To set up an exclusion based on the call traffic going over your telephone lines, click on the  icon to locate the relevant channel in the Directory; select the channel and choose the appropriate operator. In the example below, the stats collector will collate only calls going through **T234** channel.

 Channel	 Equals	T234
---	--	------



Chargeband

To set up an exclusion based on the chargeband used to cost calls, enter the name of the chargeband in the box provided and select the appropriate operator. In the example below, the stats collector will exclude calls whose chargeband's name contains the characters **Mob**.

 Chargeband	 Contains	Mob
--	--	-----



CLI

To set up an exclusion based on CLI of the caller, enter the relevant CLI in the box provided and select the appropriate operator. In the example below, the stats collector will exclude calls whose CLI contains the digits **2652626**.

 CLI	 Does not contain	2652626
---	--	---------

Cost

To set up an exclusion based on the cost of calls, enter the relevant value in the box provided and select the appropriate operator. In the example below, the stats collector will exclude calls whose cost is greater than **10**.

 Cost	 Is greater than	10
--	---	----

Destination

To set up an exclusion based on the destination of the call, enter the name of the destination in the box provided and select the appropriate operator. In the example below, the stats collector will exclude calls whose the destination is **France**.

 Destination	 Equals	France
---	--	--------



Dialled number

To set up an exclusion based on the number that was dialled, enter the dialled number in the box provided and select the appropriate operator. In the example below, the stats collector will exclude calls whose dialled number begins with **074**.

 Dialled number	 Begins with	074
--	---	-----

Duration

To set up an exclusion based on the duration of a call, enter the relevant value in the box provided and select the appropriate operator. In the example below, the stats collector will exclude calls whose duration is greater than **3600** seconds.

 Duration	 Is greater than	3600
--	---	------

LCR code

To set up an exclusion based on Least Cost Routing (LCR) codes, enter the relevant code in the box provided and select the appropriate operator. In the example below, the stats collector will exclude calls whose LCR code ends with **680**.

 LCR code	 Ends with	680
--	---	-----

Response time

To set up an exclusion based on response time, enter the relevant value in the box provided and select the appropriate operator. In the example below, the stats collector will exclude calls whose response time is less than **5** seconds.

 Response time	 Is less than	5
---	--	---

Start time

To set up an exclusion based on the time a call started, enter the start time in **hh:mm:ss** format in the box provided and select the appropriate operator. In the example below, the stats collector will exclude calls who started before **09:00:00**.


 Start time	 Is less than	09:00:00
--	--	----------



Trunk access code

If your telephone system uses trunk access codes to connect calls using specific channels, you can set up an exclusion based on calls made using these codes. To set up an exclusion, enter the trunk access code in the box provided and select the appropriate operator. In the example below, the stats collector will exclude calls whose trunk access code is **5480**.

 Trunk access code	 Equals	5480
---	--	------

User

To exclude a particular user from the stats collection point, click on the  icon to locate the user in the Directory; select the user and choose the appropriate operator. In the example below, the stats collector will exclude calls for **John Smith**.

 User	 Equals	John Smith
--	--	------------

Weekday

To exclude calls for a particular day of the week from the stats collection point, choose the relevant weekday from the list provided and select the appropriate operator. In the example below, the stats collector will exclude calls made on a Sunday.

Contents

The **Contents** tab allows you to check whether call stats are being collected by TIM Enterprise and it is generally used for troubleshooting purposes.

London Daily Stats

General
Exclusions
Contents

Contents Refresh

Iterator

	x	o	a	m	i	n	t
a	288	93	135	6	54		
b	15501	4533	8766	280	1922		
c	1	1	1	15	1		
d	Polly Ester	Anna Recksiek	Polly Ester	Mischa Solov	Jo Sargeant		
e	997	997	732	95	132		
f	Ahrun Hussain	Ahrun Hussain	Tom Morrow	Mischa Solov	Lance Boyle		
g	735		735				
h	1		1				
i	Bea Minor		Bea Minor				
j	81		81				
k	Tadao Ande	Adam Zapel	Tadao Ande	Mischa Solov	Dan D. Lyons		
l	9.3373	9.3373					

Cancel Save

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.

LCR Plan

LCR Plan

- What is an LCR plan?
- Adding an LCR plan
- Configuring an LCR plan

What is an LCR plan?

The **LCR Plan** object allows you to administer any least cost routing (LCR) codes you may use to route calls via different carriers.

LCR Route

Name

Least Cost Routing

Number

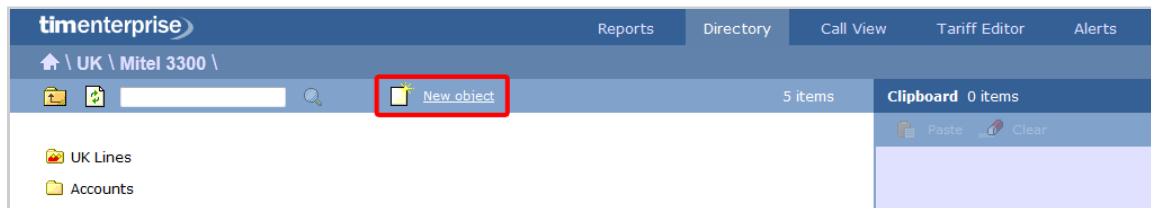
Routes to ⊖ ⊕

Number	Routes to
121	(Ignore)
141	(Ignore)
1470	(Ignore)
1620	(Ignore)
1620141	(Ignore)
16201470	(Ignore)
1623	(Ignore)

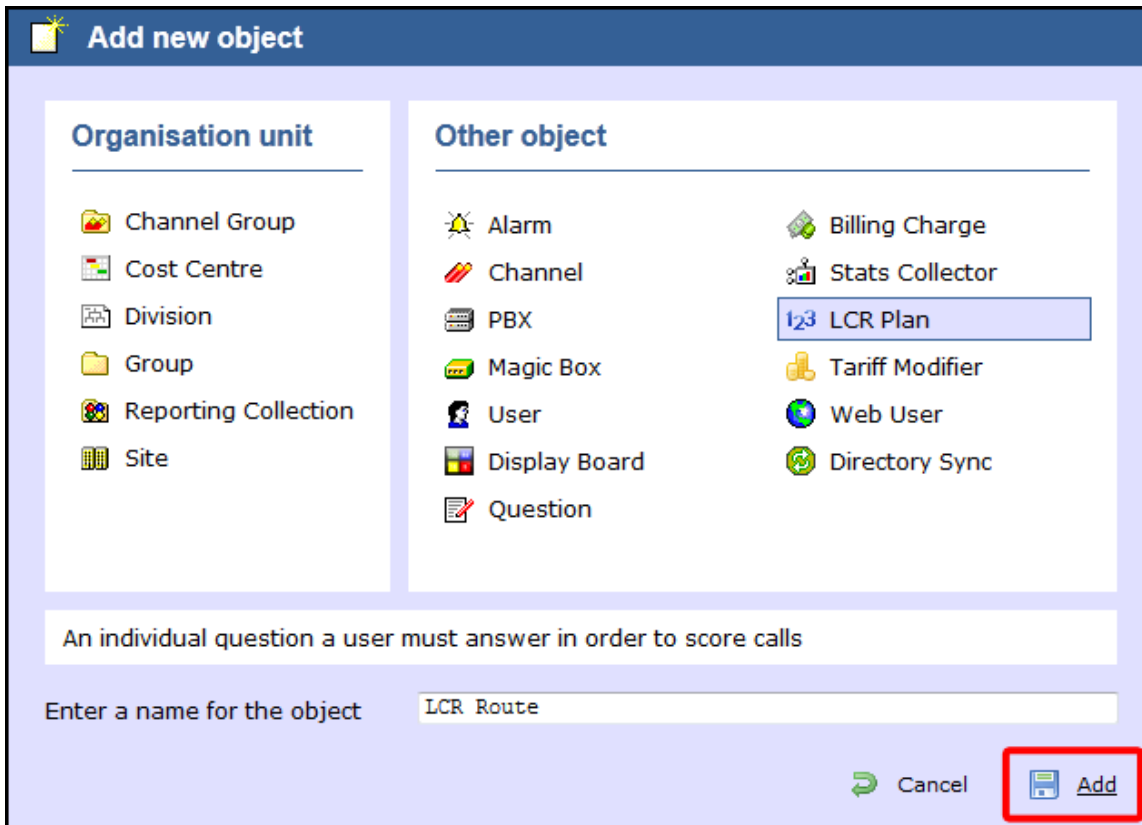
↶ Cancel
💾 Save

Adding an LCR plan

To add an LCR object to the system, drill-down to the Directory level where you want to add the LCR plan and click on the **New object** tab, as shown below:

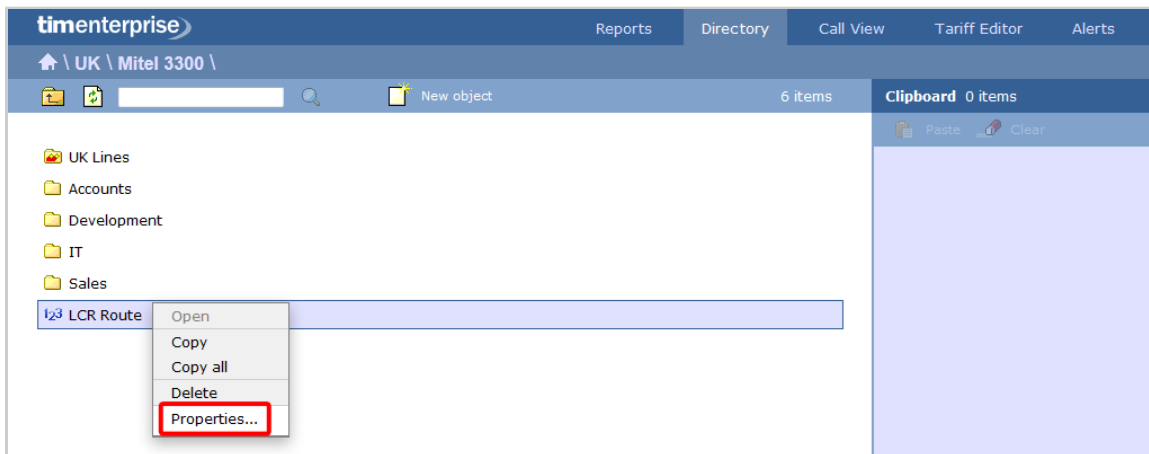


In the new window that opens, select the **LCR plan** object from the **Other object** list, enter a relevant name and click on the **Add** button, as shown below:



Configuring an LCR plan

To configure an LCR plan, locate the object in the Directory, click on it and select *Properties* from the drop-down list, as shown below:



A new window will open, allowing you to configure the properties of your LCR plan object, as shown below:

New LCR Plan
✕

Name

Least Cost Routing

Number

Routes to (Ignore) - +

Number ▲	Routes to

↶ Cancel
 💾 Save

To add an LCR code, enter the code in the `Number` field and select its associated tariff table from the drop-down list, as shown below:

LCR Route

Name

Least Cost Routing

Number

Routes to Default - +

Default
ABC-Tariff
 Default

Number ▲	Routes to
121	(Ignore)
141	(Ignore)
1470	(Ignore)
1620	(Ignore)
1620141	(Ignore)
16201470	(Ignore)
1623	(Ignore)

↶ Cancel
 💾 Save

Tariff Modifier

Tariff Modifier

- What is a tariff modifier?
- Adding a tariff modifier
- Configuring a tariff modifier

What is a tariff modifier?

The `Tariff modifier` object allows you to apply different rates to any particular section of your Directory, e.g. site, group, user etc. This feature can be useful if you have several sites spanning multiple countries that use different currencies.

UK Tariff Modifier

Any user or channel at the same level or below, relative to this tariff modifier object, will use the selected tariff.

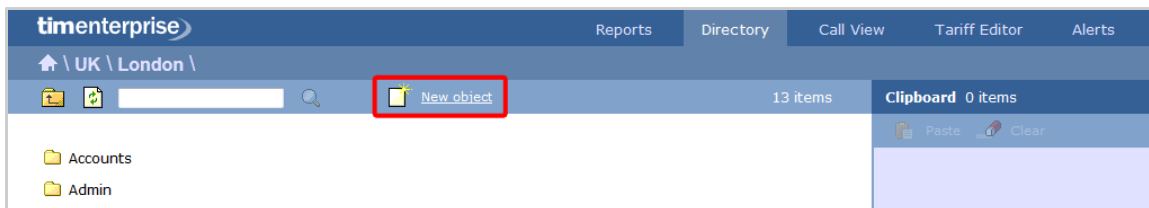
Name: UK Tariff Modifier

Tariff: BT

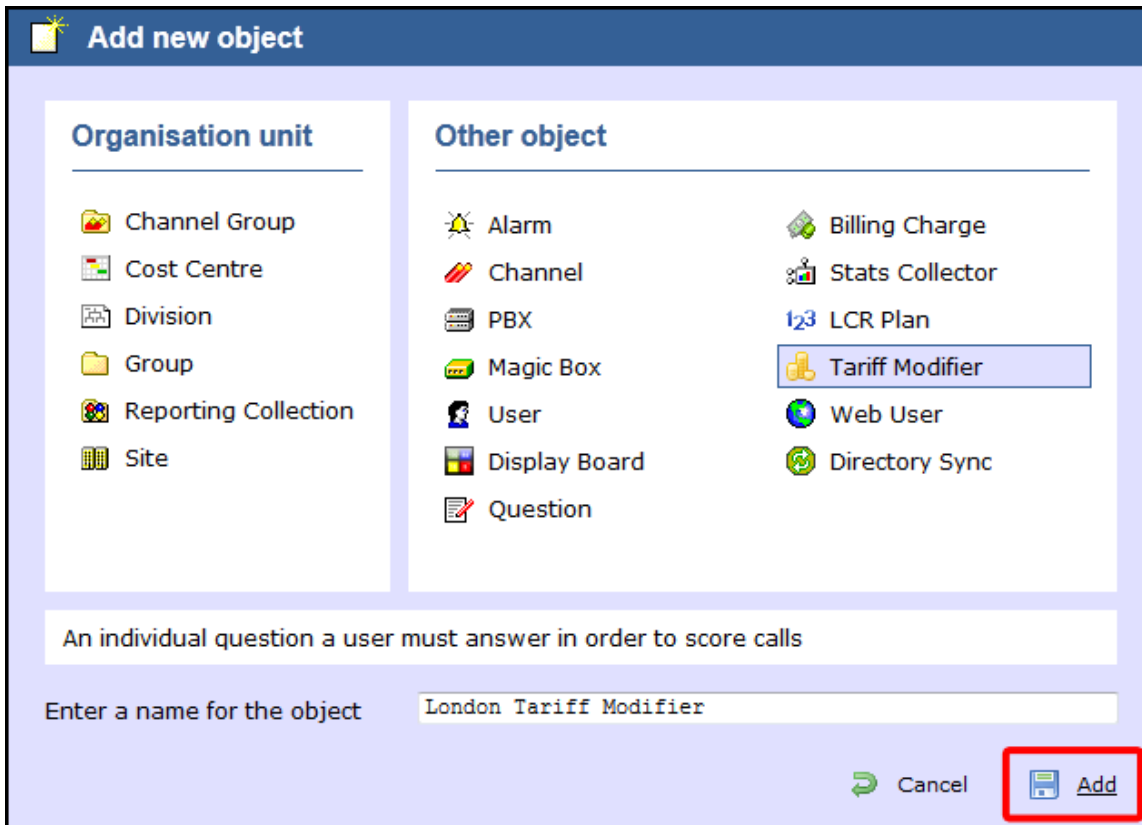
Cancel Save

Adding a tariff modifier

To add a tariff modifier to the system, drill-down to the Directory level where you want to add the object and click on the `New object` tab, as shown below:

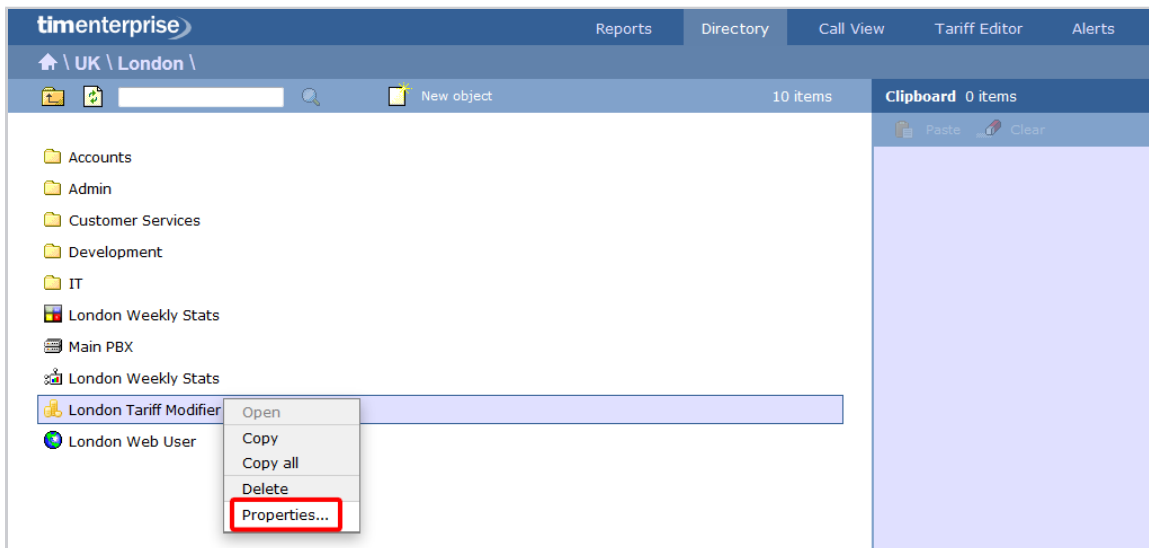


In the new window that opens, select the `Tariff Modifier` object from the `Other` object list, enter a relevant name and click on the `Add` button, as shown below:

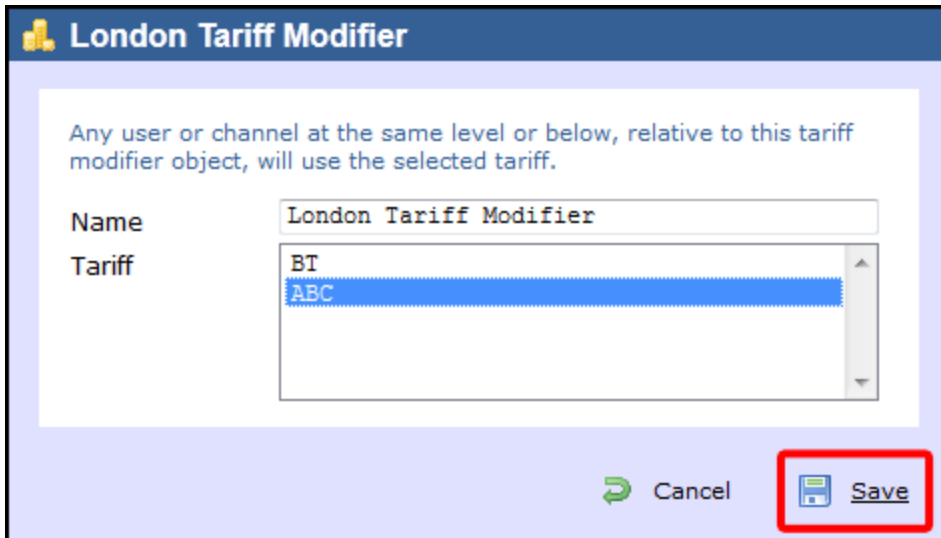


Configuring a tariff modifier

To configure a tariff modifier, locate the object in the Directory, click on it and select **Properties** from the drop-down list, as shown below:



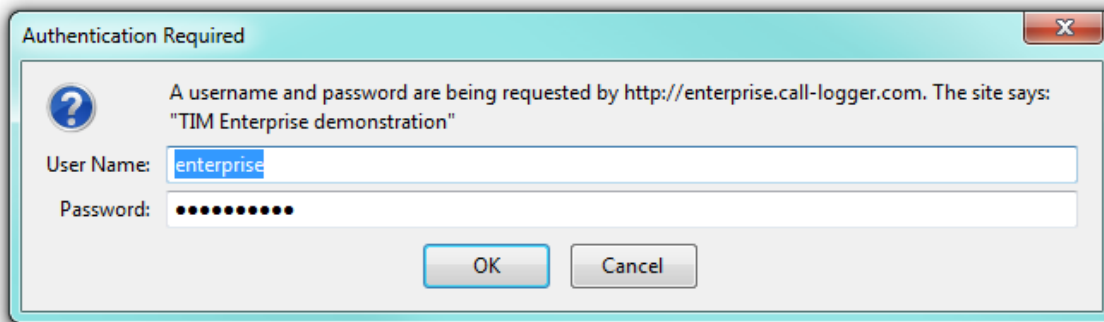
A new window will open, allowing you to name the object and select the relevant tariff from the drop-down list. After you have made your selection, click on the **Save** button, as shown below:



Web User

What is a web user?

When accessing TIM Enterprise you are required to enter a username and password in the web browser, which form a login credential known as `Web User`.



The placement in the directory structure of the web user object will determine the part of the Directory they are allowed to access. Virtual groups can also be set up to allow web users to report across the directory structure.

A web user is given a `Web class` to determine which features they can access. By default, there are two web classes:

Web class	Function
Administrator	An administrator can make changes to the Directory and access all of the system's functions.
Standard User	A standard users can only consume information from the system, e.g. run reports, show display boards, etc.

London Web User

General

My numbers

Account

Display name: London Web User

Username: LondonUser

Password: [Set password](#)

Email address: london.user@example.com

Disable web user

[Cancel](#) [Save](#)

Web class

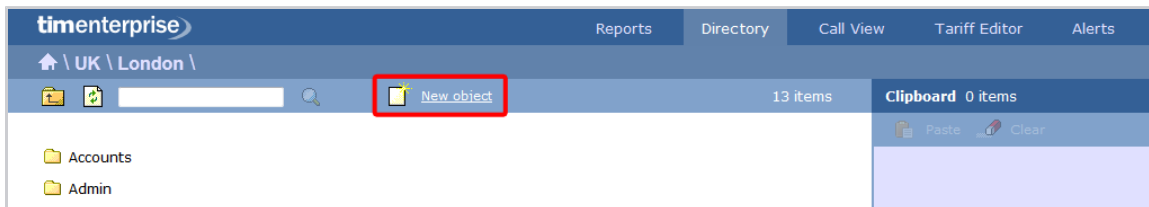
Administrator

Standard user

i There are no limits to the number of web users you can add to the Directory.

Adding a web user

To add a `web User` object to the system, drill-down to the Directory level where you want to add the user and click on the `New object` tab, as shown below:



In the new window that opens, select the `web User` object from the `Other object` list, enter a relevant name and click on the `Add` button, as shown below:

Add new object

Organisation unit

- Channel Group
- Cost Centre
- Division
- Group
- Reporting Collection
- Site

Other object

Alarm	Billing Charge
Channel	Stats Collector
PBX	LCR Plan
Magic Box	Tariff Modifier
User	Web User
Display Board	Directory Sync
Question	

Provides the ability to synchronise portions of the Directory with third-party systems

Enter a name for the object

Cancel
 Add

The web user will appear in the Directory as follows:

timenterprise

[Reports](#)
[Directory](#)
[Call View](#)
[Tariff Editor](#)
[Alerts](#)

\ UK \ London \

New object
9 items

Clipboard 0 items

- Accounts
- Admin
- Customer Services
- Development
- IT
- London Weekly Stats
- Main PBX
- London Weekly Stats
- London Web User

Paste
Clear

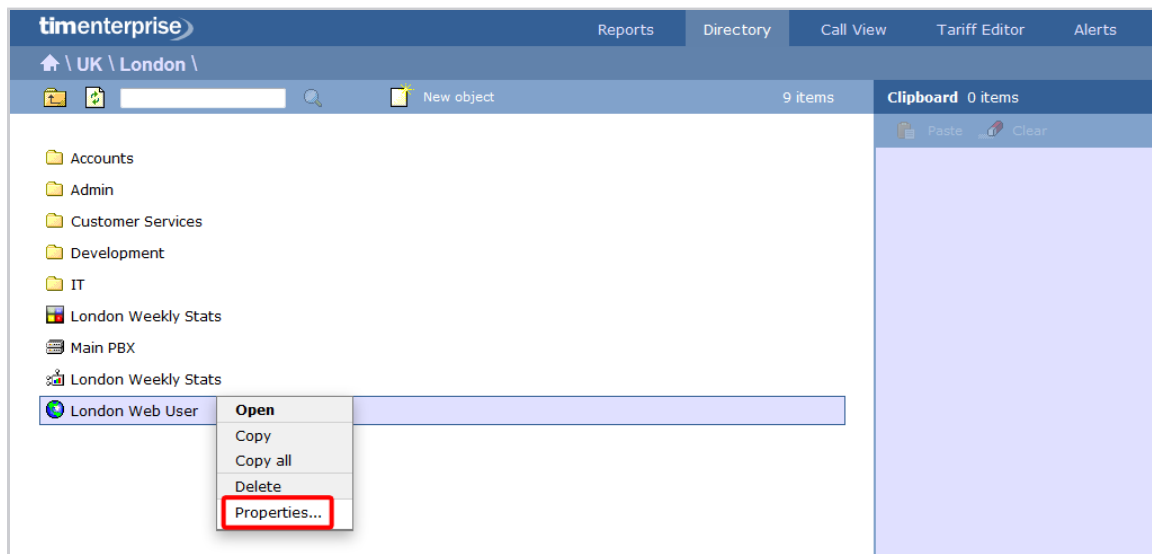
Configuring a web user

Configuring a web user

- Overview
- General properties
- Adding contacts manually
- Importing contacts

Overview

To configure a web user, locate the object in the Directory, click on it and select **Properties** from the drop-down list, as shown below:



A new window will open, allowing you to configure the properties of your web user.


General properties

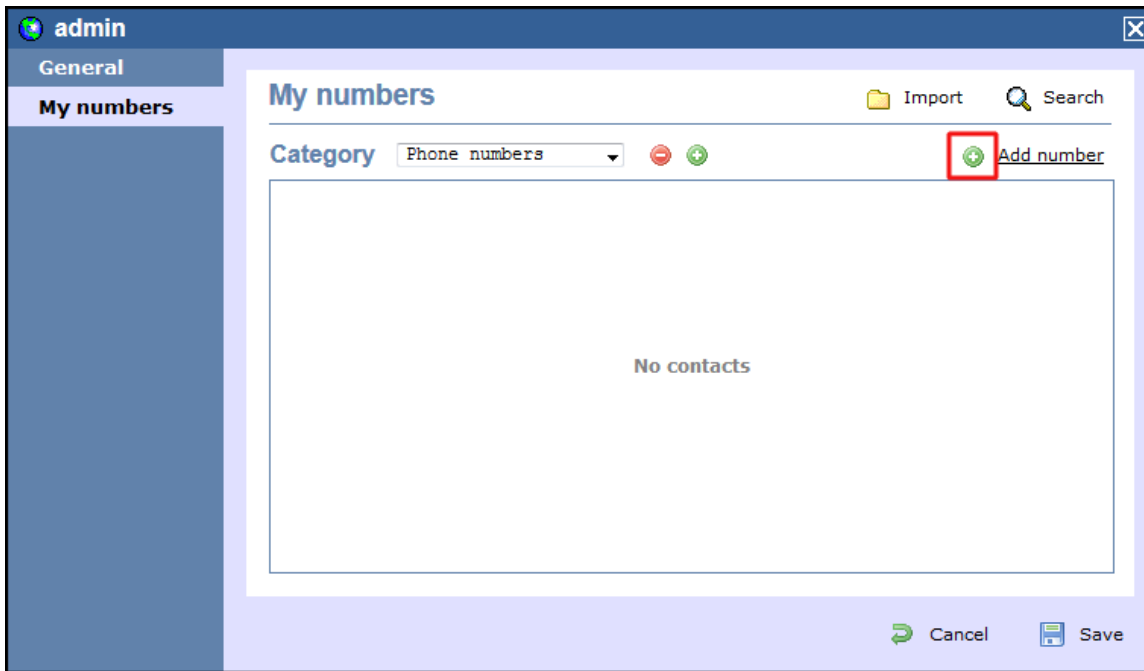
Field	Description
Display name	The name you want the web user to be identified in the reports
Username	The username the web user will use to log in with
Password	The password the web user will use to log in with
Email address	The email address of the web user; this can also be used when scheduling reports
Web class	Select the administrative privileges of the web user

My numbers

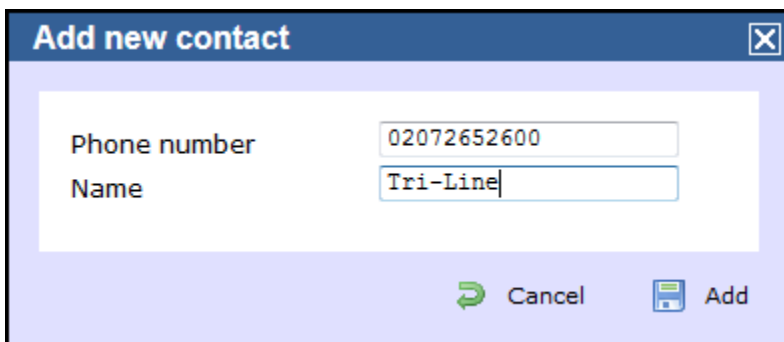
The **My numbers** tab allows you to manually add or import a list of contacts to the current web user, replacing phone numbers or account codes with friendly names wherever they feature throughout the system, e.g. in reports, display boards, etc.

Adding contacts manually

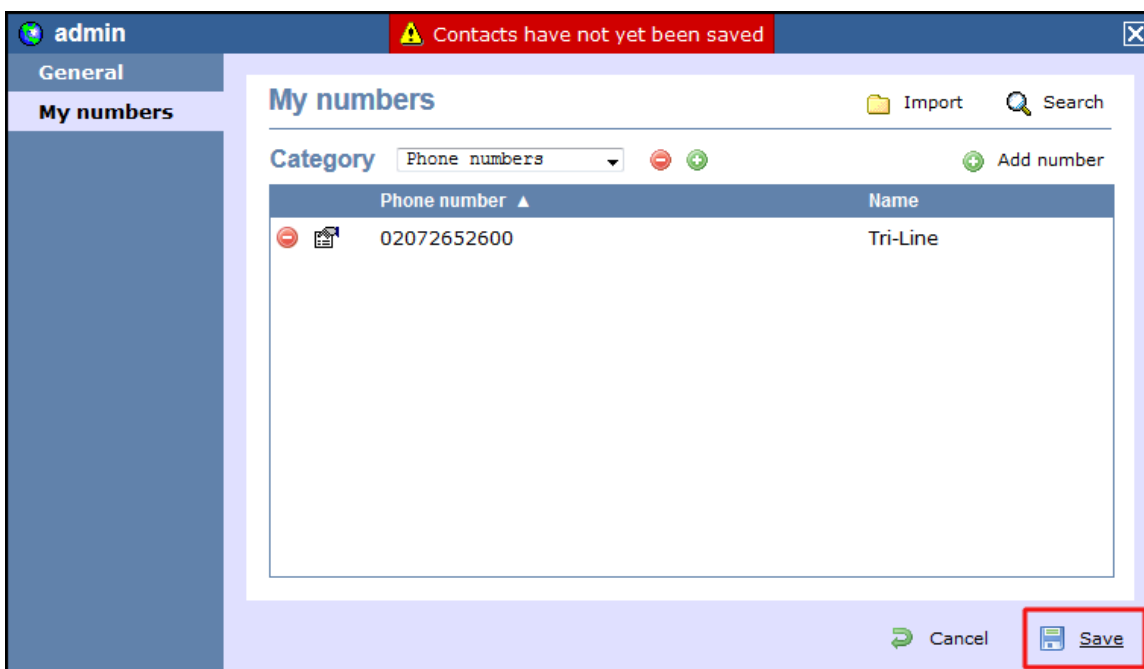
To manually add a contact to the currently-selected web user, choose the type of contact you want to add from the **Category** drop-down list and click on the  icon, as shown below:



A new window will open, allowing you to enter the telephone number and the name you want to associate with it.



To add another number, follow the same procedure, then click on the **Save** button to apply the changes.



Importing contacts

TIM Enterprise allows you to automatically import contacts in the system from an existing CSV list. The columns in the list should be separated using a common delimiter, such as comma, dash, semicolon, tab or space.

To import a list of contacts, click on the **Import** button. A new window will open, allowing you to configure the contact list for the selected web user. Each step of the process is presented in the table below:

Option	Description
Import contacts	<p>This section allows to choose the source you want to import the contacts from, e.g. a CSV list, another web user account;</p> <div style="border: 1px solid #add8e6; padding: 10px;"><h3 style="margin: 0;">Import contacts</h3><hr/><p>Where do you want to import contact information from?</p><ul style="list-style-type: none"><input checked="" type="radio"/> Import from CSV data<input type="radio"/> Copy contacts from another web user</div>

Contact type

This section allows you to select the type of contact you want to import, e.g. account code, phone number.

Contact type

Select the type of contacts you want to import.

Phone number

Account code

Import options

This section allows you to select in which category you want the contacts to be included and how to handle duplicated entries or other conflicts with the existing contacts.

Import options

Which category should new contacts be placed in?

- Defined by a column in the data
- Existing category:
- New category:

How do you want to handle duplicates in the imported data?

- Always prefer the first occurrence
- Always prefer the last occurrence
- Let me choose manually

How do you want to handle conflicts with existing contacts?

- Replace each category's entire contents
- Override existing contacts
- Keep existing contacts
- Ask me when a conflict occurs

Data entry

This section allows you to paste the CSV list in the box provided.

Data entry

Paste your CSV data into the box below.

```
02072652626, Tri-line  
07737983718, Joe Bloggs Mobile  
02076441422, Joe Bloggs|
```

**Import
preview**

This section gives you a preview of the imported contacts and allows you to select the delimiter you want to use to separate the two columns.

Import preview

Define the format of your data using the options below.

The first row is a header

Select the delimiter used to separate each column of data.

Comma Tab Space Semicolon Other

Column 1	Column 2
02072652626	Tri-line
07737983718	Joe Bloggs Mobile
02076441422	Joe Bloggs

Contact category

This section allows you to select or define the column(s) that will make up each category.

Contact category

Choose the column(s) that will make up each category's name.

Column 1	Column 2
02072652626	Tri-line
07737983718	Joe Bloggs Mobile
02076441422	Joe Bloggs

Or define a manual expression in the box below.

Contact category
<Phone numbers>
<Phone numbers>
<Phone numbers>

**Contact
phone
number**

This section allows you to select or define the column(s) that will make up each phone number.

Contact phone number

Choose the column(s) that will make up each phone number.

Column 1	Column 2
02072652626	Tri-line
07737983718	Joe Bloggs Mobile
02076441422	Joe Bloggs

Or define a manual expression in the box below.

<Column 1>

Contact phone number
02072652626
07737983718
02076441422

Contact name

This section allows you to select or define the column(s) that will make up each name.

Contact name

Choose the column(s) that will make up each name.

Column 1	Column 2
02072652626	Tri-line
07737983718	Joe Bloggs Mobile
02076441422	Joe Bloggs

Or define a manual expression in the box below.

Contact name
Tri-line
Joe Bloggs Mobile
Joe Bloggs

Ready to import

This section notifies you how many records are valid and ready to be imported.

Ready to import

Your data has been analysed and the following information has been determined:




 **3** valid records ready for importing

Click the **Import** button to start processing your data.

 Cancel

 Back
  Import



The contacts will be added to the list, as shown in the screenshot below. Click on the **Save** button to apply the changes.




 admin
 Contacts have not yet been saved








General



My numbers

My numbers

 Import
 Search

Category <Phone numbers>
 
 Add number

		Phone number ▲	Name
		02072652626	Tri-line
		02076441422	Joe Bloggs
		07737983718	Joe Bloggs Mobile

 Cancel
 Save

Directory Sync

Directory Sync

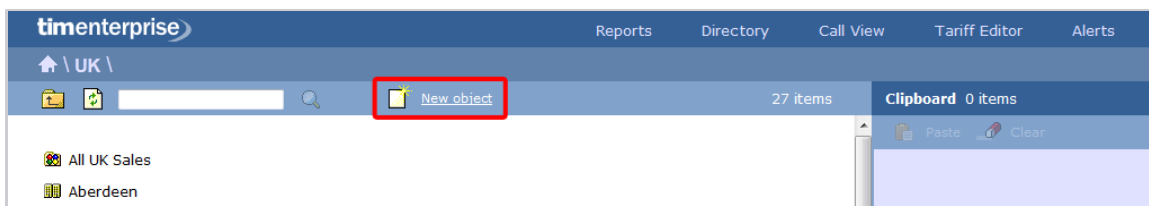
- What is directory sync?
- Adding directory sync
- Configuring directory sync

What is directory sync?

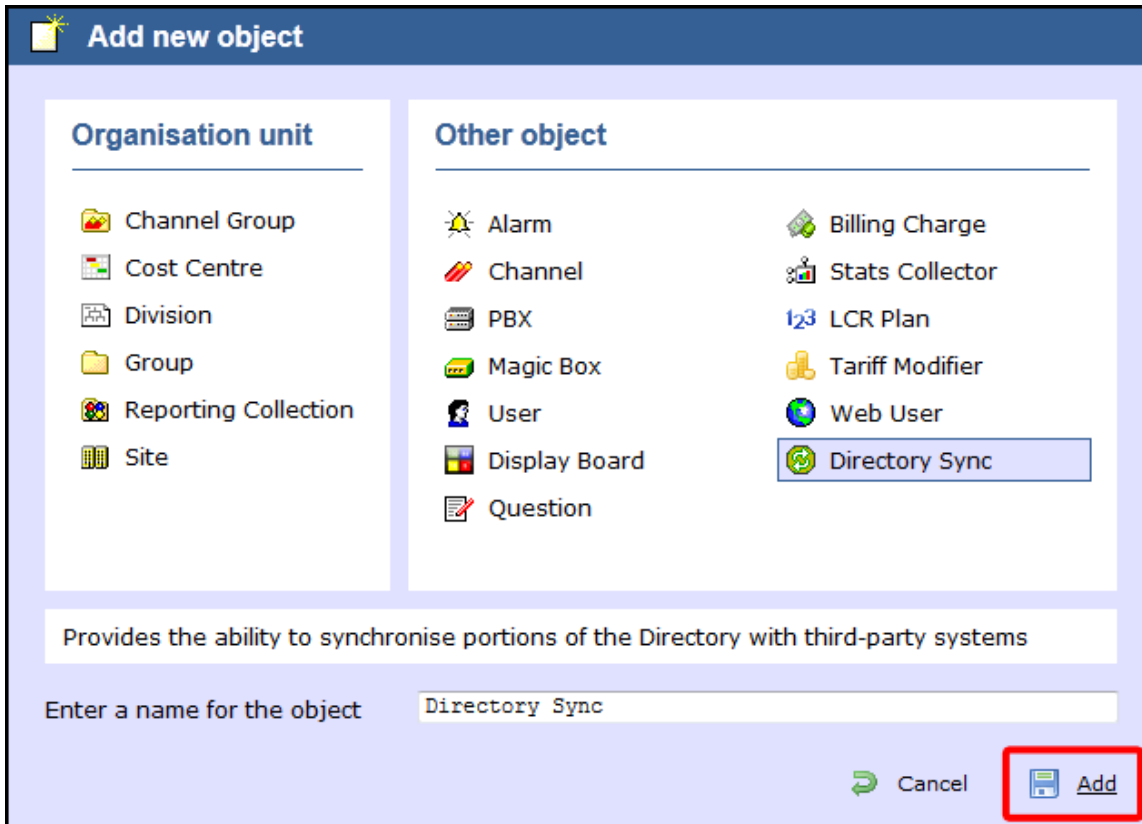
The `Directory Sync` object in TIM Enterprise allows you to sync any partition of TIM Enterprise with a third-party directory, such as Active Directory or Cisco AXL.

Adding directory sync

To add a directory sync object to the system, drill-down to the Directory level where you want to perform the synchronisation and click on the `New object` tab, as shown below:

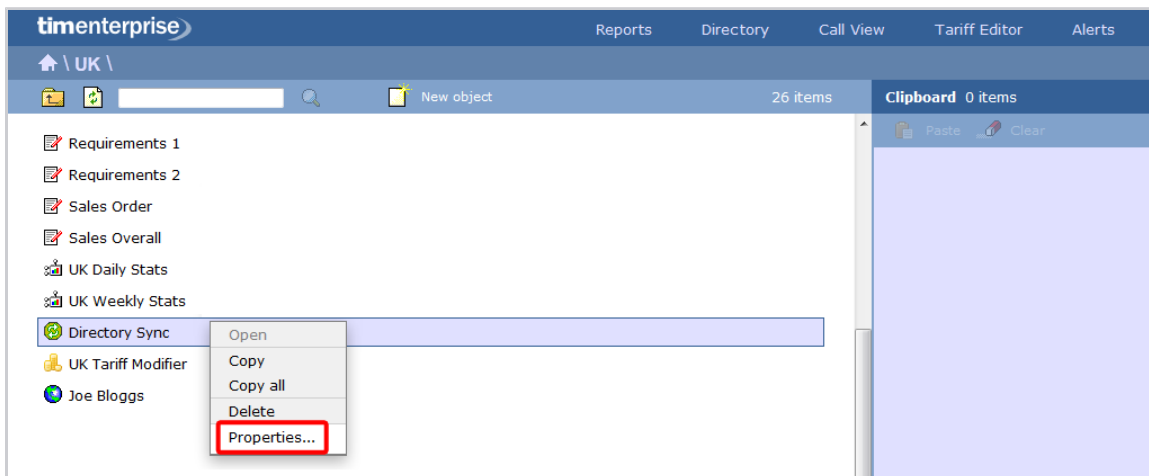


In the new window that opens, select the `Directory Sync` object from the `Other object` list, enter a relevant name and click on the `Add` button, as shown below:



Configuring directory sync

To configure the directory sync, locate the object in the Directory, click on it and select `Properties` from the drop-down list, as shown below:



A new window will open, allowing you to configure the properties of your `Directory Sync` object, as shown below:

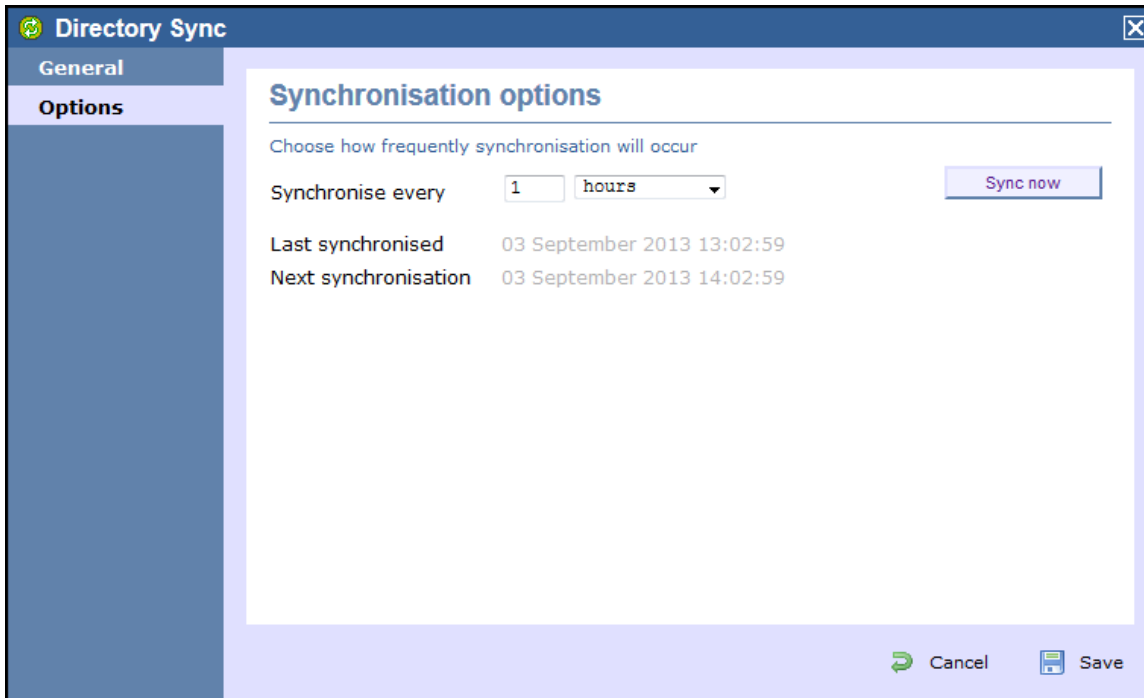
The screenshot shows a window titled "Directory Sync" with a close button in the top right corner. On the left, there is a sidebar with two tabs: "General" (selected) and "Options". The main area is titled "General settings" and contains two fields: "Name" with a text input field containing "Directory Sync", and "Directory type" with a dropdown menu. At the bottom right, there are "Cancel" and "Save" buttons.

General settings

Field	Description
Name	The name of the directory sync object.
Directory type	Select the type of sync you want to perform, e.g. Active directory, UCME or UCM, and enter the required details for each type of directory.

Options

The **Options** tab allows you to determine how often the synchronisation process should be performed. To set up the frequency, select a preset period from the available drop-down list, as shown below:



To perform a manual directory sync, click on the **Sync now** button.

[Active Directory Sync Video](#)

[Cisco Directory Sync Video](#)

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 Enterprise. The call list is arranged so that the most recent calls are at the top of the list.

timesterprise									
Call View									
Date	Time	Source	Route	Destination	Response	Duration	Cost	Datasource	
29 June 2011	20:35:43	London	02075848185	Lee Brinwood	3	00:00:26	0.00	Main PBX	
29 June 2011	20:35:13	London	02088525205	Ella Vader	1	00:00:36	0.00	Main PBX	
29 June 2011	20:29:18	London	02072087208	Rose Bush	2	00:00:53	0.00	Main PBX	
29 June 2011	20:25:16	Miranda Rogers	3026	Mica Balik	1	00:00:14	0.00	Main PBX	
29 June 2011	20:23:23	Orange	07980546959	Brandon Cattel	25	00:02:02	0.00	Main PBX	
29 June 2011	20:22:43	Anna Sasin	07782026551	Hutchison 3G	35	00:00:03	0.03	Main PBX	
29 June 2011	20:21:41	O2	07720811726	Constance Noring	10	00:00:26	0.00	Main PBX	
29 June 2011	20:21:16	Vodafone	07747688610	Craig Cade	22	00:01:29	0.00	Main PBX	
29 June 2011	20:20:01	120022	UNAVAILABLE	Martin Pagnell	2	00:00:09	0.00	Main PBX	
29 June 2011	20:19:56	Vodafone	07775852163	Brandon Cattel	3	00:00:09	0.00	Main PBX	
29 June 2011	20:19:46	Anna Sasin	07877751586	Hutchison 3G	8	00:00:11	0.03	Main PBX	
29 June 2011	20:18:46	Vodafone	07990555295	Earl E. Riser	3	00:01:27	0.00	Main PBX	
29 June 2011	20:18:41	120002	UNAVAILABLE	Dinah Soares	5	00:00:02	0.00	Main PBX	
29 June 2011	20:18:11	Vodafone	07768054946	Craig Cade	4	00:00:17	0.00	Main PBX	
29 June 2011	20:16:18	20001	UNAVAILABLE	Craig Cade	2	00:00:16	0.00	Main PBX	
29 June 2011	20:15:03	T-Mobile	07940574922	Ajith Tarasinghe	8	00:04:46	0.00	Main PBX	

30/03/2012 13:20:20 Logged in as 'Joe Bloggs'

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 Dialed 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 **Headers** tab, which will display the following panel:

The screenshot shows the 'Call View' screen in the TIM Enterprise application. A 'Headers' menu is open, allowing users to select which columns to display in the call list. The menu includes a 'Save' button at the bottom right. The background shows a list of call records with columns for Date, Time, Source, and Response.

Include a column header in the list by ticking the box alongside each one. Click on the **Save** button to apply your changes.

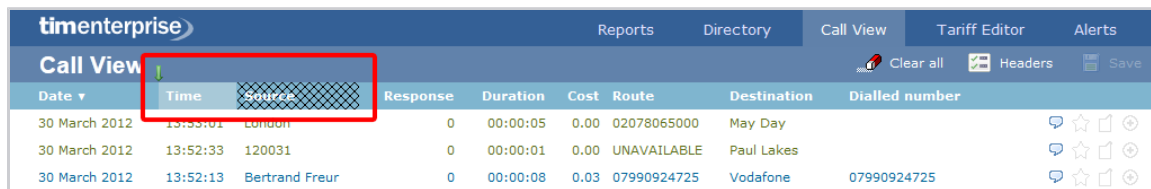
Each column header displayed in the Call view screen is described in the table below:

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: <ul style="list-style-type: none"> for incoming calls, this shows the CLI of the caller for incoming internal calls, this shows either the caller's username or extension number for outgoing calls, this shows the dialled number
Destination	The information displayed in this field is determined by the type of call: <ul style="list-style-type: none"> for incoming calls, this shows the name of the user whose extension answered the call, or the extension number if not available for outgoing calls, this shows the geographical location that was dialled, or an alias if defined in your contacts list 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	<p>Any flags associated with a call, as described below:</p> <ul style="list-style-type: none"> ▪ The call has no associated voice recording ▪ The call has an associated voice recording; click on the icon to listen to the call ▪ The call has not been scored; click on the icon to score the call ▪ The call has been scored; click on the icon to review scoring information for the call ▪ The call has not been annotated; click on the icon to add a note to the call ▪ The call has one or more associated notes; click on the icon to review the note(s) ▪ The call has no related transfer legs ▪ 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:



Date	Time	Source	Response	Duration	Cost	Route	Destination	Dialed number
30 March 2012	13:53:01	London	0	00:00:05	0.00	02078065000	May Day	
30 March 2012	13:52:33	120031	0	00:00:01	0.00	UNAVAILABLE	Paul Lakes	
30 March 2012	13:52:13	Bertrand Freur	0	00:00:08	0.03	07990924725	Vodafone	07990924725

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.

Tariff Editor

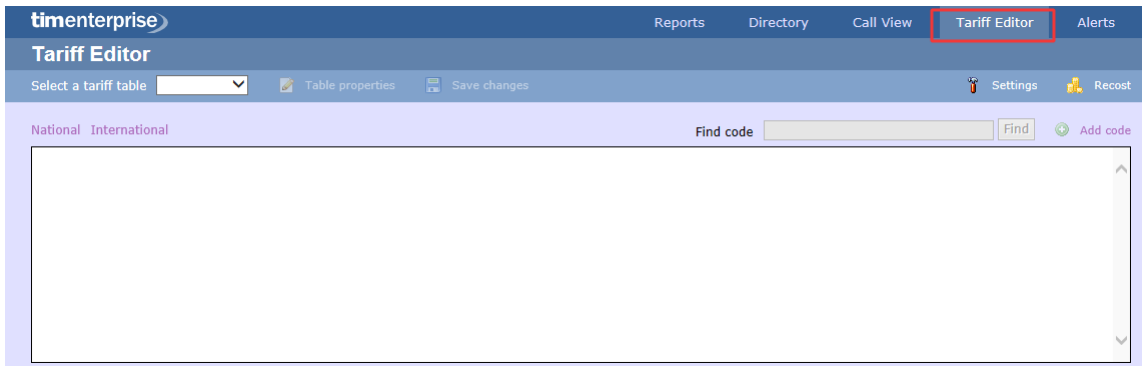
General properties

General properties

- Accessing the tariff editor
- Selecting a tariff table
- Tariff properties
- Recosting calls
- Tariff settings

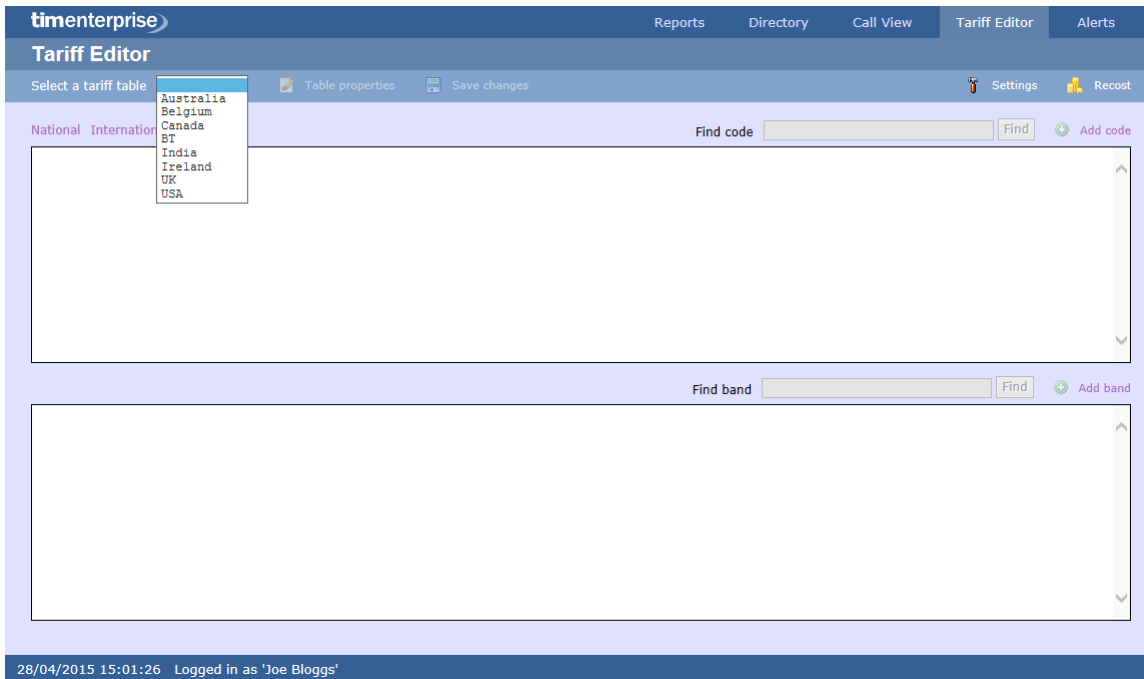
Accessing the tariff editor

To access the tariff table, click on the **Tariff editor** tab from the menu bar, as shown below:

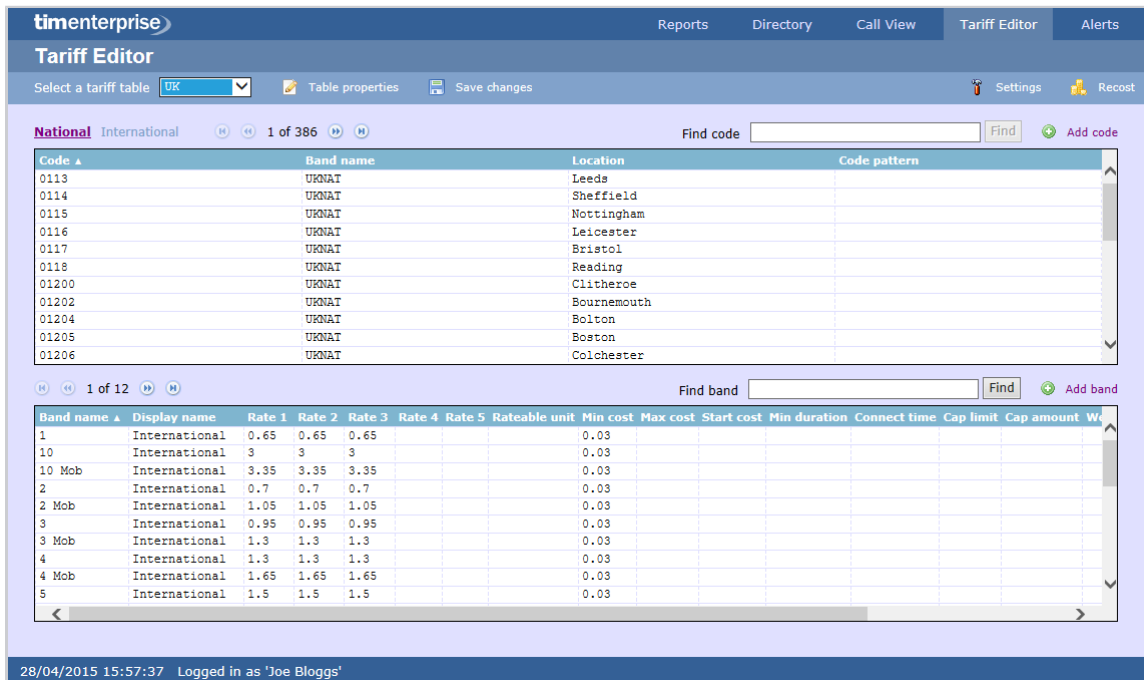


Selecting a tariff table

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:

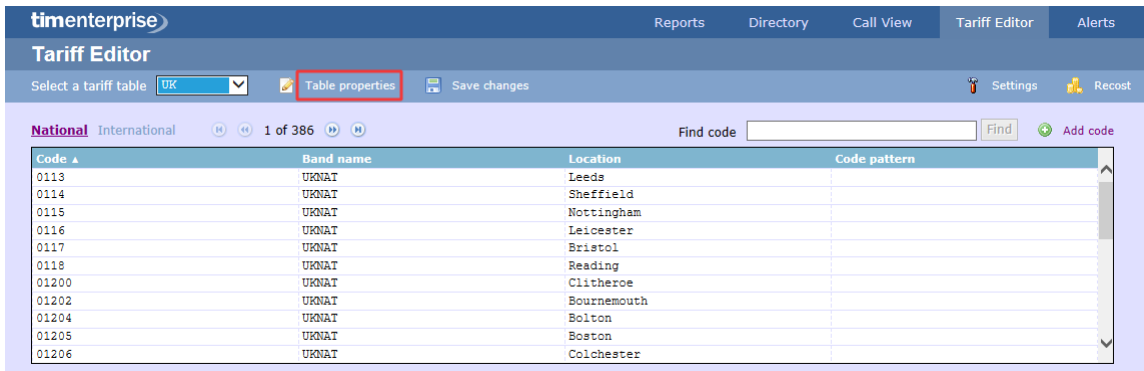


Once a tariff has been selected, the following screen will be displayed:

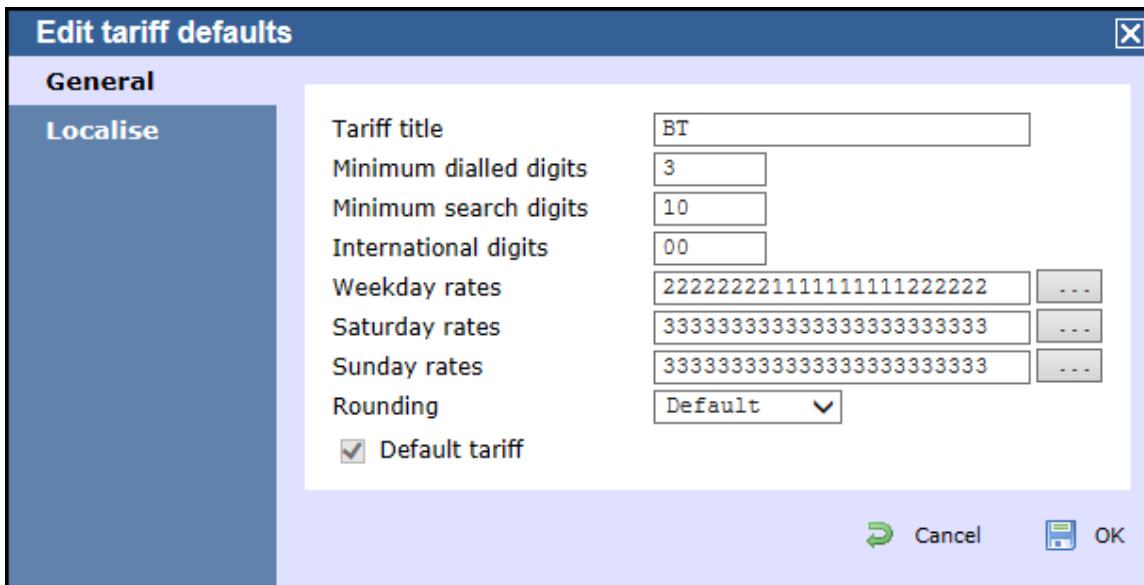


Tariff properties

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 Enterprise 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

Weekday rates

To see the rates in more detail, click on the button to expand, as shown below:

Edit rate times ✕

00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
2	2	2	2	2	2	2	2	1	1	1	1	1	1	1	1	1	1	2	2	2	2	2	2

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

Saturday rates

To see the rates in more detail, click on the button to expand, as shown below:

Edit rate times ✕

00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3

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

Sunday rates

To see the rates in more detail, click on the button to expand, as shown below:

Edit rate times ✕

00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3

Rounding	<p>This option allows you to select whether you want to round decimal places up or down</p> <p>Rounding</p> <div style="border: 1px solid black; padding: 2px;"> Default ▼ Default Up Down </div>
-----------------	--

Localising the tariff table

To inform TIM Enterprise which calls should be treated as local by your tariff table, click on the **Localise** tab, as shown below:

Edit tariff defaults ✕

General

Localise

Tariff title

Minimum dialled digits

Minimum search digits

International digits

Weekday rates ...

Saturday rates ...

Sunday rates ...

Rounding ▼

Default tariff

↶ Cancel OK

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.

Edit tariff defaults ✕

General

Localise

Area code 🔍 Check

Local area codes for LONDON

020	01322	01372	01689	01707
01708	01727	01737	01753	01784
01883	01895	01923	01932	01959
01992				

🗺️ Localise

↶ Cancel OK

Recosting calls

TIM Enterprise 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:

The screenshot shows the 'Tariff Editor' interface. At the top, there are navigation tabs: Reports, Directory, Call View, Tariff Editor, and Alerts. Below the tabs, there's a header for 'Tariff Editor' with a dropdown menu for 'Select a tariff table' set to 'UK'. To the right of this are buttons for 'Table properties', 'Save changes', 'Settings', and 'Recost'. The 'Recost' button is highlighted with a red box. Below the header, there's a section for 'National' with a search bar and a 'Find' button. A table of call codes is displayed below, with columns for Code, Band name, Location, and Code pattern. The table lists various call codes and their corresponding locations.


Code	Band name	Location	Code pattern
0113	URNAT	Leeds	
0114	URNAT	Sheffield	
0115	URNAT	Nottingham	
0116	URNAT	Leicester	
0117	URNAT	Bristol	
0118	URNAT	Reading	
01200	URNAT	Clitheroe	
01202	URNAT	Bournemouth	
01204	URNAT	Bolton	
01205	URNAT	Boston	
01206	URNAT	Colchester	

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 screenshot shows a 'Call recosting' dialog box. It has a title bar with a close button. The main content area contains the following options:

- Select which tariff model to use:**
 - Use current tariff regime
 - Use **Australia** tariff
- Select the period of calls to recost:**
 - All calls
 - Selected period only:
 - Start date: 20 Jan 2013
 - End date: 19 May 2015

At the bottom right of the dialog, there is a 'Recost' button highlighted with a red box, and a 'Close' button at the bottom center.

 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.

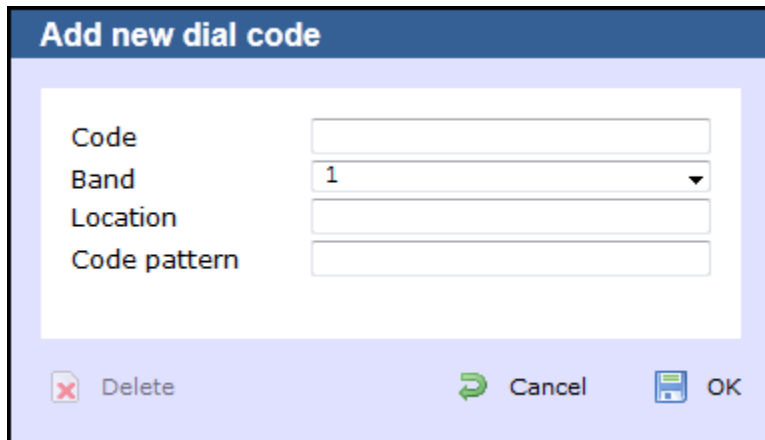
Title	Last updated	Status	Call count
Australia	2014-09-24	Update	0
BT	2014-11-12	Up-to-date	3412
Belgium	2014-11-18	Update	0
Canada	2014-11-18	Update	0
India	2014-07-29	Update	0
Ireland	2014-08-12	Update	0
UK	2014-11-12	Update	35652
USA	2014-11-12	Update	0
Afghanistan	Not installed	Download	-
Albania	Not installed	Download	-
Algeria	Not installed	Download	-
American Samoa	Not installed	Download	-
Andorra	Not installed	Download	-
Angola	Not installed	Download	-
Anguilla	Not installed	Download	-
Antigua	Not installed	Download	-
Antilles	Not installed	Download	-
Argentina	Not installed	Download	-

The `Call count` column will show the current number of calls that have been processed under the selected tariff.

Adding a code

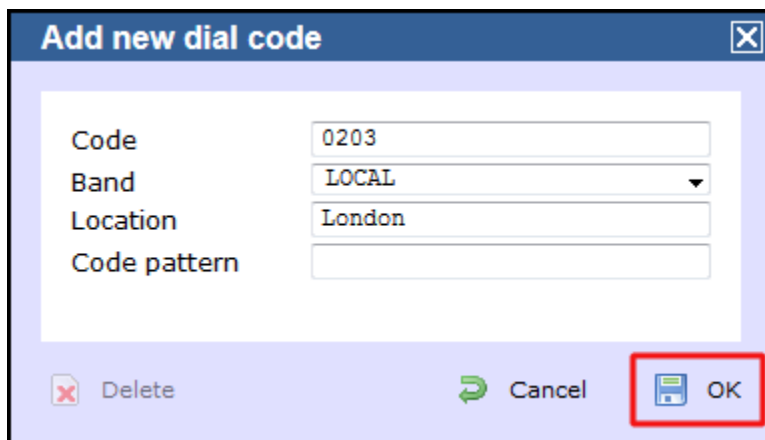
To add a code to your tariff table, click on the `Add code` button at the top-right corner of the screen, as shown below:

A new window will appear, where you can edit the properties of your dial code:



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 <code>020#####*</code> 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 **OK** button to apply the changes.



Finding a code

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 screenshot shows the 'Tariff Editor' window with the 'National' tab selected. A search box labeled 'Find code' contains the value '0161', and a 'Find' button is next to it. Below the search box, a table lists tariff entries:

Code	Band name	Location	Code pattern
0113	UKNAT	Leeds	
0114	UKNAT	Sheffield	
0115	UKNAT	Nottingham	

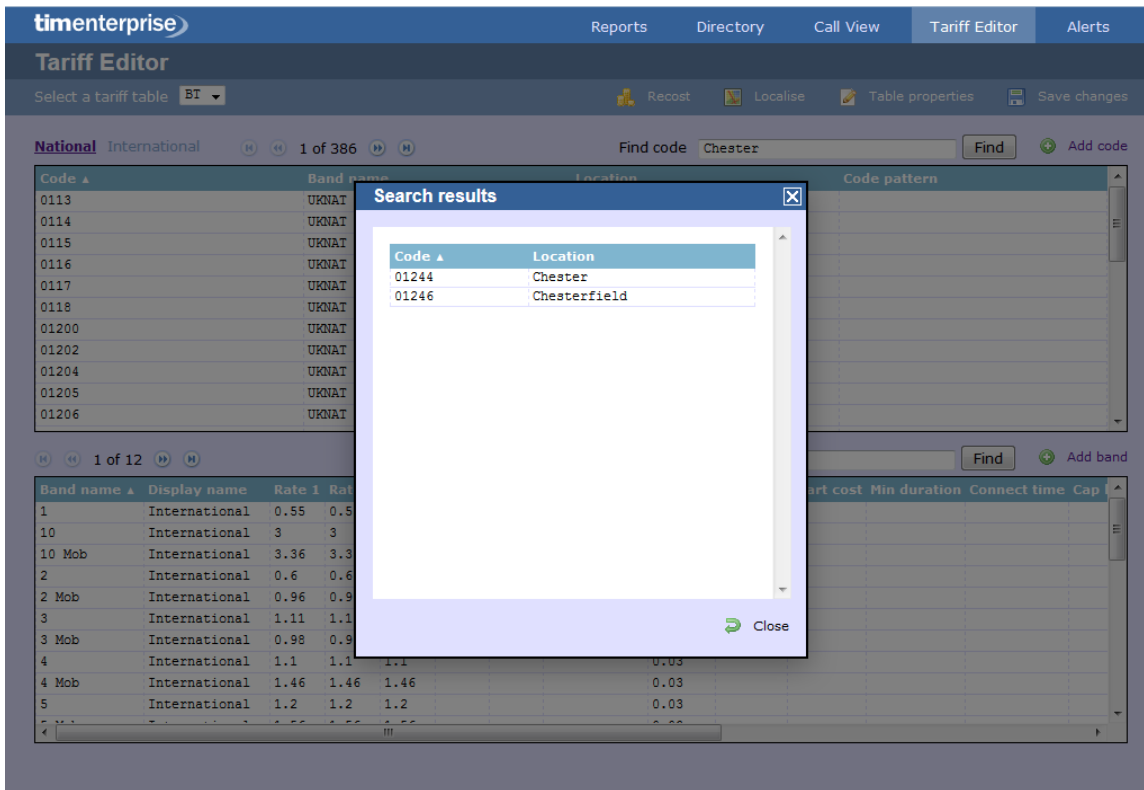
The dial code and its matching destination will appear highlighted in the list, as shown below:

The screenshot shows the search results for '0161'. The row for '0161' is highlighted in black. Below this, there is a 'Find band' section with a table of tariff bands:

Band name	Display name	Rate 1	Rate 2	Rate 3	Rate 4	Rate 5	Rateable unit	Min cost	Max cost	Start cost	Min duration	Connect time	Cap
1	International	0.4	0.4	0.4				0.03					
1 Mob	International	0.7	0.7	0.7				0.03					
10	International	3	3	3				0.03					
10 Mob	International	3.3	3.3	3.3				0.03					
2	International	0.45	0.45	0.45				0.03					
2 Mob	International	0.75	0.75	0.75				0.03					
3	International	0.6	0.6	0.6				0.03					
3 Mob	International	0.9	0.9	0.9				0.03					

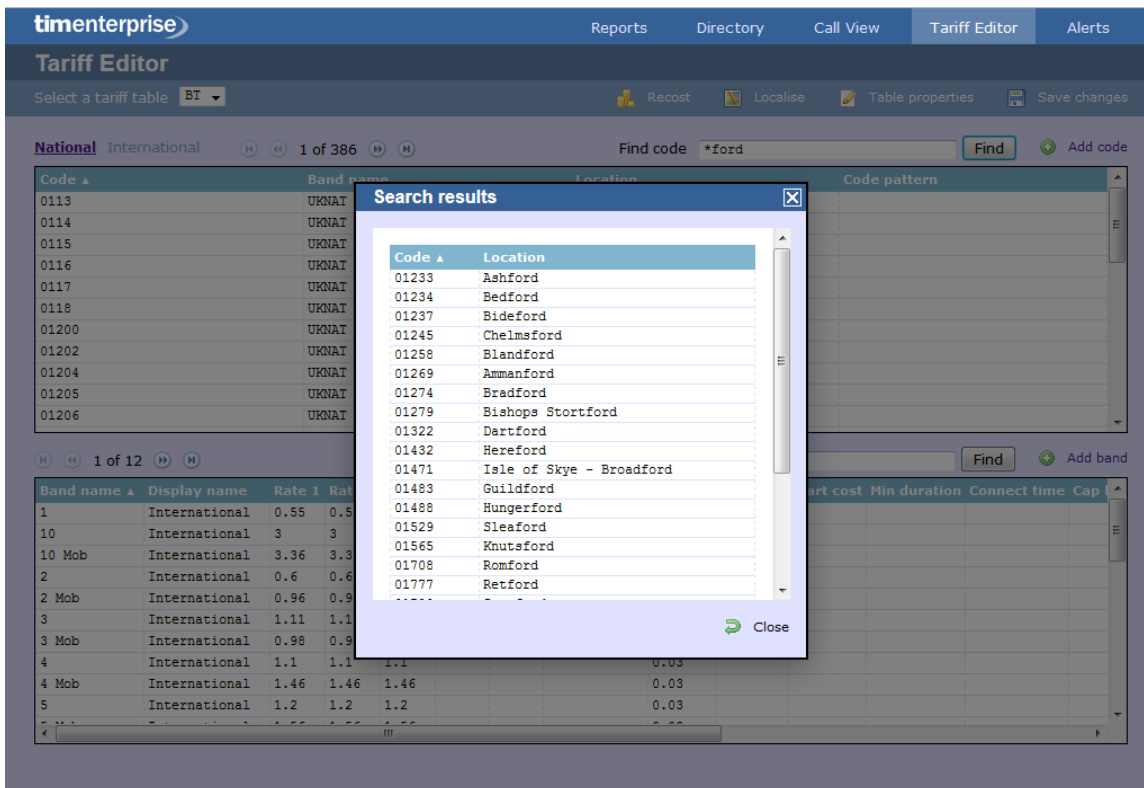
Search for a location

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, we searched for the word **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 tariff table, click on the **Add band** tab, as shown below:

The screenshot shows the 'Tariff Editor' interface. The top navigation bar includes 'Reports', 'Directory', 'Call View', 'Tariff Editor', and 'Alerts'. The main header shows 'tariffterprise' and 'Tariff Editor'. Below this, there are options to 'Select a tariff table' (BT) and buttons for 'Recost', 'Localise', 'Table properties', and 'Save changes'. The main content area is divided into two sections. The top section is for 'National' bands, showing a table with columns: Code, Band name, Location, and Code pattern. The bottom section is for 'International' bands, showing a table with columns: Band name, Display name, Rate 1, Rate 2, Rate 3, Rate 4, Rate 5, Rateable unit, Min cost, Max cost, Start cost, Min duration, Connect time, and Cap. In the bottom right corner of the International bands table, there is a red box highlighting a green plus icon and the text 'Add band'.

Code	Band name	Location	Code pattern
0113	UKNAT	Leeds	
0114	UKNAT	Sheffield	
0115	UKNAT	Nottingham	
0116	UKNAT	Leicester	
0117	UKNAT	Bristol	
0118	UKNAT	Reading	
01200	UKNAT	Clitheroe	
01202	UKNAT	Bournemouth	
01204	UKNAT	Bolton	

Band name	Display name	Rate 1	Rate 2	Rate 3	Rate 4	Rate 5	Rateable unit	Min cost	Max cost	Start cost	Min duration	Connect time	Cap
1	International	0.4	0.4	0.4				0.03					
1 Mob	International	0.7	0.7	0.7				0.03					
10	International	3	3	3				0.03					
10 Mob	International	3.3	3.3	3.3				0.03					
2	International	0.45	0.45	0.45				0.03					
2 Mob	International	0.75	0.75	0.75				0.03					
3	International	0.6	0.6	0.6				0.03					
3 Mob	International	0.9	0.9	0.9				0.03					

The **Add new band** window will appear, where you can edit the properties of your band. Each field in this window is described below:

Add new band

Band name	<input type="text"/>										
Display name	<input type="text"/>										
Min cost	<input type="text"/>										
Max cost	<input type="text"/>										
Start cost	<input type="text"/>										
Min duration	<input type="text"/>										
Connect time	<input type="text"/>										
Weekday rates	<input type="text"/> <input style="float: right;" type="button" value="..."/>										
Saturday rates	<input type="text"/> <input style="float: right;" type="button" value="..."/>										
Sunday rates	<input type="text"/> <input style="float: right;" type="button" value="..."/>										
Cap limit	<input type="text"/>										
Cap amount	<input type="text"/>										
Rateable unit	<input type="text"/>										
<table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 20%;">Rate 1</td> <td style="width: 20%;">Rate 2</td> <td style="width: 20%;">Rate 3</td> <td style="width: 20%;">Rate 4</td> <td style="width: 20%;">Rate 5</td> </tr> <tr> <td><input type="text"/></td> <td><input type="text"/></td> <td><input type="text"/></td> <td><input type="text"/></td> <td><input type="text"/></td> </tr> </table>		Rate 1	Rate 2	Rate 3	Rate 4	Rate 5	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
Rate 1	Rate 2	Rate 3	Rate 4	Rate 5							
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>							

Delete
 Cancel
 OK

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 Enterprise 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 **OK** button to apply the changes.

Add new band ✕

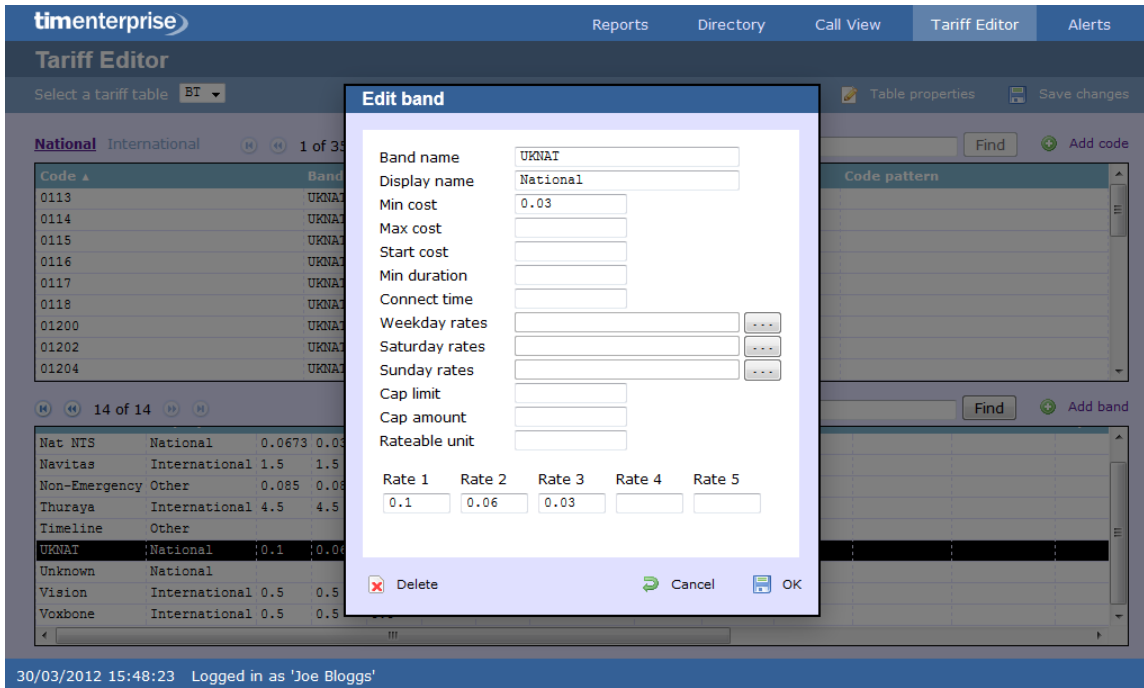
Band name	<input type="text" value="France Mobile"/>													
Display name	<input type="text" value="France"/>													
Min cost	<input type="text" value="0.05"/>													
Max cost	<input type="text"/>													
Start cost	<input type="text"/>													
Min duration	<input type="text"/>													
Connect time	<input type="text"/>													
Weekday rates	<input type="text"/>	<input type="button" value="..."/>												
Saturday rates	<input type="text"/>	<input type="button" value="..."/>												
Sunday rates	<input type="text"/>	<input type="button" value="..."/>												
Cap limit	<input type="text" value="3600"/>													
Cap amount	<input type="text"/>													
Rateable unit	<input type="text"/>													
<table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 20%;">Rate 1</td> <td style="width: 20%;">Rate 2</td> <td style="width: 20%;">Rate 3</td> <td style="width: 20%;">Rate 4</td> <td style="width: 20%;">Rate 5</td> </tr> <tr> <td><input type="text" value="1.0"/></td> <td><input type="text" value="1.0"/></td> <td><input type="text" value="1.0"/></td> <td><input type="text"/></td> <td><input type="text"/></td> </tr> </table>					Rate 1	Rate 2	Rate 3	Rate 4	Rate 5	<input type="text" value="1.0"/>	<input type="text" value="1.0"/>	<input type="text" value="1.0"/>	<input type="text"/>	<input type="text"/>
Rate 1	Rate 2	Rate 3	Rate 4	Rate 5										
<input type="text" value="1.0"/>	<input type="text" value="1.0"/>	<input type="text" value="1.0"/>	<input type="text"/>	<input type="text"/>										

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 appear highlighted in the list, 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 **OK** button, as shown below:

Alerts

The **Alerts** section notifies you when particular events occur on the system. The table below describes the type of alerts emitted from TIM Enterprise:

Alert	Description
Critical	Notifies you of any events that are detrimental to the system, e.g. database failure
Warning	Notifies you of any non-critical events that have occurred on the system, e.g. you have exceeded your license limit
Information	Notifies you of any general events that have occurred on the system, e.g. if the application service has been restarted
Voice activity	Provides details about the progress of call recording operations
Audit trail	Provides very detailed information about ongoing system events, primarily used for fault-finding

timententerprise								
Critical		Warning		Information	Voice activity	Audit trail	Clear all	
Count	First raised	Last raised	Description					
16	2013-09-10 13:47:35	2013-09-10 14:34:42	RTACallMatch: Checking relevancy of Magic Box [Magic Box]...					
16	2013-09-10 13:47:35	2013-09-10 14:34:42	RTACallMatch: Magic Box [Magic Box] is not relevant to this call.					
16	2013-09-10 13:47:35	2013-09-10 14:34:42	RTACallMatch: Checking relevancy of Magic Box [Optilogix Box]...					
3	2013-09-10 13:47:35	2013-09-10 14:34:42	Invoking RTACallMatch. There are 2 magic boxes installed.					
3	2013-09-10 13:47:35	2013-09-10 14:34:42	No voice match. Didn't bother checking voice removal.					
2	2013-09-10 14:23:04	2013-09-10 14:34:42	RTACallMatch: Magic Box [Optilogix Box] is not relevant to this call.					
1	2013-09-10 14:34:42	2013-09-10 14:34:42	RTACallMatch returned location [], filename [] for callreference [f7870a00-ed1f-2f12- acca-0007d90006b0].					
1	2013-09-10 14:34:42	2013-09-10 14:34:42	No voicereference returned. Call won't be updated. AEnd [8 - Modules.Tri-Line.PRI], BEnd [55 - 8002].					
1	2013-09-10 14:34:42	2013-09-10 14:34:42	Performed 0 voice updates.					
11	2013-09-10 14:13:03	2013-09-10 14:33:36	Performed 1 voice updates.					
12	2013-09-10 14:01:08	2013-09-10 14:33:35	RTACallMatch: Magic Box [Optilogix Box] mapped trunk [Modules.Tri-Line.PRI]\[Modules.Tri-Line.PRI] to box channel [1,2,3,4,5,6,7,8,9,10].					
11	2013-09-10 14:13:03	2013-09-10 14:33:35	CallMatch: Magic Box [Optilogix Box] using call match script [C:\Program Files\Tri-Line\TIM Enterprise\config\callmatch.js]					
5	2013-09-10 14:24:22	2013-09-10 14:33:35	RTACallMatch: Channel [Modules.Tri-Line.PRI] is relevant to this OUTBOUND call; will query Magic Box [Optilogix Box]...					
1	2013-09-10 14:33:35	2013-09-10 14:33:35	RTACallMatch: Magic Box [Optilogix Box] sending query [/call.match?offset=30&csid=1& start=2013-09-10%2014:33:00&channel=1,2,3,4,5,6,7,8,9,10&direction=2&stamp=100913143335]. Time lapse now [52415.859375]...					
1	2013-09-10 14:33:35	2013-09-10 14:33:35	RTACallMatch: Magic Box [Optilogix Box] query returned status [200][OK]. Time lapse now [52415.875]					
1	2013-09-10 14:33:35	2013-09-10 14:33:35	RTACallMatch: Magic Box [Optilogix Box] realtime authority returned match possibility data: [{" "matches": { "call1": { "callid": "tdm-4d66cdd5-2639-4d2a-98d1-83d4e2783a27", "direction": 2, "num_calling": "02072652600", "num_called": "189901242283900", "time_started": "1378819958678", "time_connected": "1378819963025", "time_ended": "1378819978772", "response": "4", "duration": "16" }, "call2": { "callid": "tdm-d0d208a2-6822-4746-91b8-dacc9510fa40", "direction": 2, "num_calling": "02072652600", "num_called": "189901242283900", "time_started": "1378819980427", "time_connected": "1378819982227", "time_ended": "1378820014106", "response": "2", "duration": "32" } }]					

Call obfuscation (PCI-DSS)

TIM Enterprise 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.

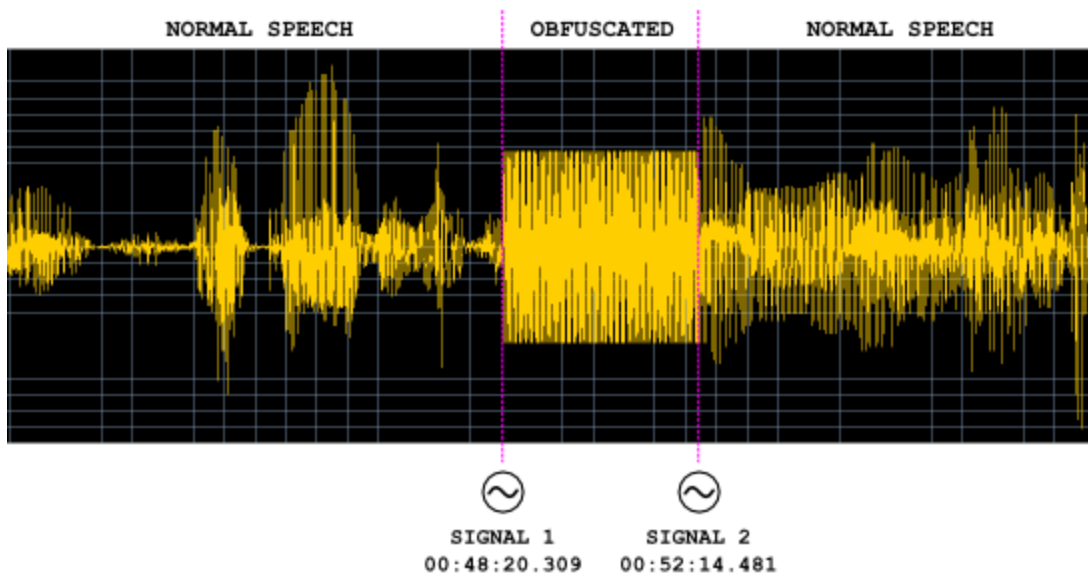
In this scenario, we'll assume that agents (employees that make or receive telephone calls) utilise an in-house or third-party data entry system into which credit card details are entered using a computer.

How it works

Considering TIM Enterprise (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 Enterprise, 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 Enterprise. Together, these two signals allow TIM Enterprise 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 Enterprise, 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 Enterprise, 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 Enterprise 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 Enterprise web server.

Every request to the web server requires authentication, so 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
<code>cat</code>	Signal category. For audio masking, this value is always <code>0x04</code>
<code>type</code>	The type of signal. Valid values for <code>0x04-category</code> signals are: <ul style="list-style-type: none"> ▪ <code>0x01 Mute On</code> ▪ <code>0x02 Mute Off</code>
<code>objtype</code>	The type of object that this signal relates to. This can be one of two values: <ul style="list-style-type: none"> ▪ <code>user</code> (a user object) ▪ <code>channel</code> (a channel object)
<code>objid</code>	The unique ID of the object type as specified by the <code>objtype</code> parameter (above). This is used to locate the object in the Directory The region of the Directory to search in is specified by the <code>key</code> parameter (below) and governed by the access implied by the placement of the web user whose credentials are used to effect the web request
<code>key</code>	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 <code>objtype</code> and <code>objid</code> 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: <ul style="list-style-type: none"> ▪ An invalid <code>type</code> parameter was specified. The <code>type</code> parameter is specific to the category specified by the <code>cat</code> parameter. Further, the <code>type</code> value (e.g. <code>0x01</code>) can be used in multiple categories ▪ The <code>objid</code> was missing. Specify the ID of the object you want the signal to relate to ▪ The <code>cat</code> and <code>type</code> parameters - category and signal type, respectively - must be specified and cannot be zero ▪ The version of TIM Enterprise you are running does not understand the <code>signal.js</code> script
404	The object specified by the combination of the <code>objtype</code> and <code>objid</code> parameters - and optionally the <code>key</code> parameter - could not be found
500	<code>Internal Server Error</code> prevented the signal from being stored successfully. This may be due to a badly-configured database, or the lack of a <code>signals</code> table in the TIM Enterprise 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}\ProgramData\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).

```
<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.

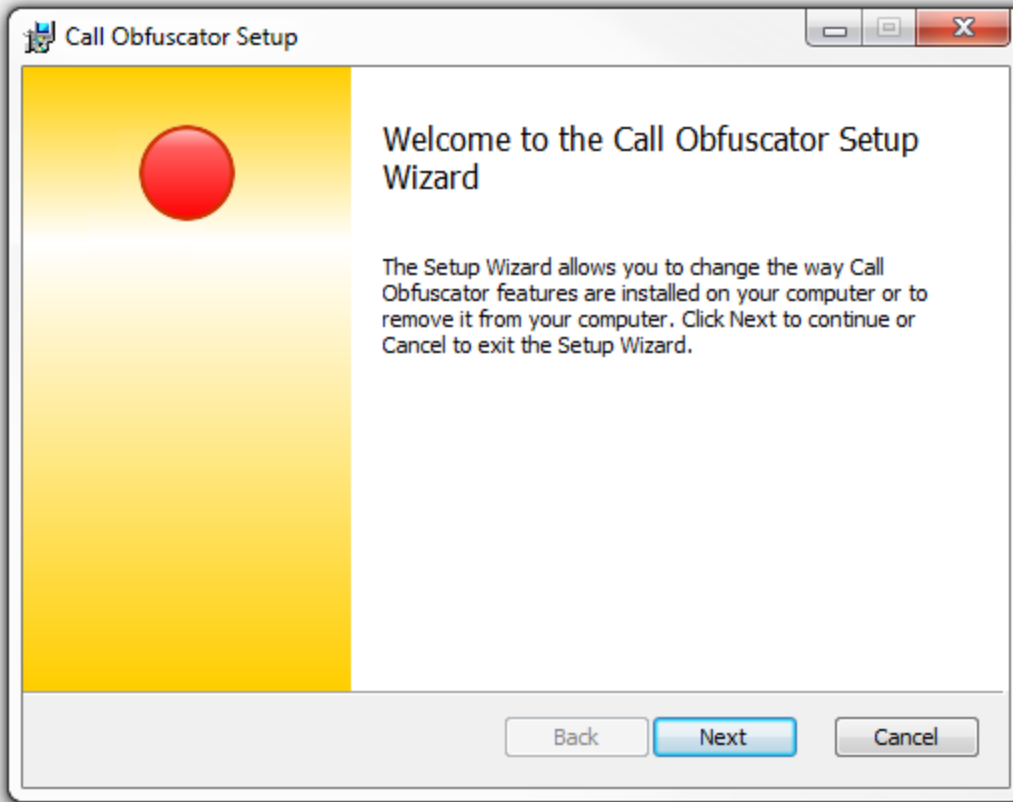
Call obfuscator




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:

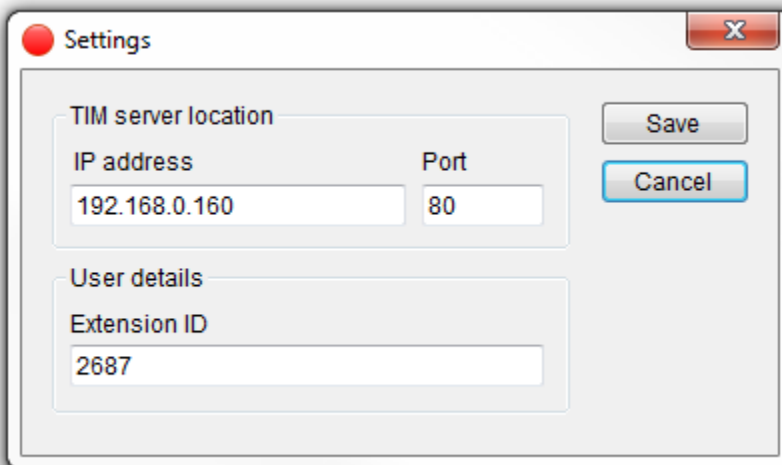
1. Double-click on the setup package and follow the wizard in order to complete the installation.



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 Enterprise, 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 Enterprise database for the call you want to retrieve.
- Request a security token from TIM Enterprise, by authenticating using an authorised web user's login credentials
- Request the call from the `RTA 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 Enterprise.

C# Example Source

This is a very simple example of some C# code to request a call's voice recording from TIM Enterprise. 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 Enterprise, 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 `RTA Service`.

Simple call retrieval example

```
using System;
using System.Net;
using System.Text;

private class GetAudioFile
{
    string dataSource = "\\3\\";
    string voiceFilename =
"NCS00000000EA39883596CC41E799B4630006CF2D56";
    string voiceLocation = "4";
    string rtaUrl = "";
    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);

        rtaUrl = Encoding.UTF8.GetString(responseBody);
    }

    if (!string.IsNullOrEmpty(rtaUrl))
    {
        // Use another WebClient object to query the URL provided in
"rtaUrl" 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.

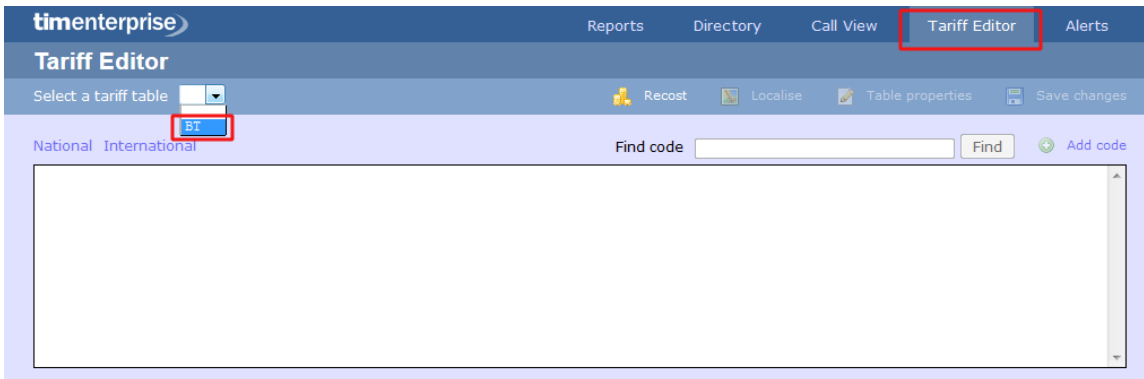
The security token URL is valid for one minute (60 seconds).

Knowledgebase

Amending call charges

To modify call charges for a specific dial code or destination, follow the steps below:

1. Log in to TIM Enterprise, 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 call charges, by entering the code in the search box provided.



3. The matching dial code will be highlighted in the list, showing its associated charge band and destination name.

tarifenterprise Reports Directory Call View **Tariff Editor** Alerts

Select a tariff table **BT** Recost Localise Table properties Save changes

National International 13 of 352 Find code Find Add code

01609	UKNAT	Northallerton
0161	UKNAT	Manchester
01620	UKNAT	North Berwick
01621	UKNAT	Maldon
01622	UKNAT	Maidstone
01623	UKNAT	Mansfield
01624	UKNAT	Isle of Man
01625	UKNAT	Macclesfield
01626	UKNAT	Newton Abbot
01628	UKNAT	Maidenhead

1 of 14 Find band Find Add band

Band name	Display name	Rate 1	Rate 2	Rate 3	Rate 4	Rate 5	Rateable unit	Min cost	Max cost	Start cost	Min duration	Connect time	Cap
1	International	0.4	0.4	0.4				0.03					
1 Mob	International	0.7	0.7	0.7				0.03					
10	International	3	3	3				0.03					
10 Mob	International	3.3	3.3	3.3				0.03					
2	International	0.45	0.45	0.45				0.03					
2 Mob	International	0.75	0.75	0.75				0.03					
3	International	0.6	0.6	0.6				0.03					
3 Mob	International	0.9	0.9	0.9				0.03					

30/03/2012 15:07:27 Logged in as 'Joe Bloggs'

4. Enter the name of the charge band in the Find band search box, as shown below:

tarifenterprise Reports Directory Call View **Tariff Editor** Alerts

Select a tariff table **BT** Recost Localise Table properties Save changes

National International 1 of 352 Find code Find Add code

Code	Band name	Location	Code pattern
0113	UKNAT	Leeds	
0114	UKNAT	Sheffield	
0115	UKNAT	Nottingham	
0116	UKNAT	Leicester	
0117	UKNAT	Bristol	
0118	UKNAT	Reading	
01200	UKNAT	Clitheroe	
01202	UKNAT	Bournemouth	
01204	UKNAT	Bolton	

1 of 14 Find band **UKNAT** Find Add band

Band name	Display name	Rate 1	Rate 2	Rate 3	Rate 4	Rate 5	Rateable unit	Min cost	Max cost	Start cost	Min duration	Connect time	Cap
1	International	0.4	0.4	0.4				0.03					
1 Mob	International	0.7	0.7	0.7				0.03					
10	International	3	3	3				0.03					
10 Mob	International	3.3	3.3	3.3				0.03					
2	International	0.45	0.45	0.45				0.03					
2 Mob	International	0.75	0.75	0.75				0.03					
3	International	0.6	0.6	0.6				0.03					
3 Mob	International	0.9	0.9	0.9				0.03					

30/03/2012 15:37:16 Logged in as 'Joe Bloggs'

5. The matching band will be highlighted in the list, as shown below:

14 of 14 Find band Find Add band

Nat NIS	National	0.0673	0.0336	0.0127			0.03	
Navitas	International	1.5	1.5	1.5				
Non-Emergency	Other	0.085	0.085	0.085			0.03	
Thuraya	International	4.5	4.5	4.5			1.5	
Timeline	Other						0.425	0.425
UKNAT	National	0.1	0.06	0.03			0.03	
Unknown	National							
Vision	International	0.5	0.5	0.5				
Voxbone	International	0.5	0.5	0.5				

6. To configure the properties of the selected band, click on it to open the **Edit band** window.

timenterprise Reports Directory Call View **Tariff Editor** Alerts

Tariff Editor Select a tariff table BI

National International 1 of 35

Code	Band			
0113	UKNAT			
0114	UKNAT			
0115	UKNAT			
0116	UKNAT			
0117	UKNAT			
0118	UKNAT			
01200	UKNAT			
01202	UKNAT			
01204	UKNAT			

14 of 14

Nat NIS	National	0.0673	0.0336	0.0127			0.03	
Navitas	International	1.5	1.5	1.5				
Non-Emergency	Other	0.085	0.085	0.085			0.03	
Thuraya	International	4.5	4.5	4.5			1.5	
Timeline	Other						0.425	0.425
UKNAT	National	0.1	0.06	0.03			0.03	
Unknown	National							
Vision	International	0.5	0.5	0.5				
Voxbone	International	0.5	0.5	0.5				

Edit band

Band name: UKNAT

Display name: National

Min cost: 0.03

Max cost:

Start cost:

Min duration:

Connect time:

Weekday rates: ...

Saturday rates: ...

Sunday rates: ...

Cap limit:

Cap amount:

Rateable unit:

Rate 1	Rate 2	Rate 3	Rate 4	Rate 5
0.1	0.06	0.03	<input type="text"/>	<input type="text"/>

30/03/2012 15:48:23 Logged in as 'Joe Bloggs'

7. To change the existing charges for any of the rates, e.g. **Rate 1**, **Rate 2**, etc, enter the preferred values in the field provided.

Edit band

Band name: UKNAT

Display name: National

Min cost: 0.03

Max cost:

Start cost:

Min duration:

Connect time:

Weekday rates: ...

Saturday rates: ...

Sunday rates: ...

Cap limit:

Cap amount:

Rateable unit:

Rate 1	Rate 2	Rate 3	Rate 4	Rate 5
0.1	0.06	0.03	<input type="text"/>	<input type="text"/>

8. To see how each rate is applied, click on the button.

Weekday rates:

Saturday rates:

Sunday rates:

Cap limit:

Cap amount:

Rateable unit:

9. A new window will open, where you can edit the rate times. To apply any changes, click on the button.

Edit rate times

00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
2	2	2	2	2	2	2	2	1	1	1	1	1	1	1	1	1	1	2	2	2	2	2	2

Automatic web login

Background

All of the web pages and scripts that TIM Enterprise 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 the 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. Various, they range from complete prohibition of the practice 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 Enterprise directory that will be used solely for this purpose. Refer to the [Web user](#) 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_DISABLE
```

- for a 64-bit system:

```
HKEY_LOCAL_MACHINE\Software\Wow6432Node\Microsoft\Internet  
Explorer\Main\FeatureControl\FEATURE_HTTP_USERNAME_PASSWORD_DISABLE
```

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 Enterprise

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?
- Setting users to not log calls
- Merging a DDI with its extension

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 an **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					
Entire organisation \					2013-10-07 15:07:01
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

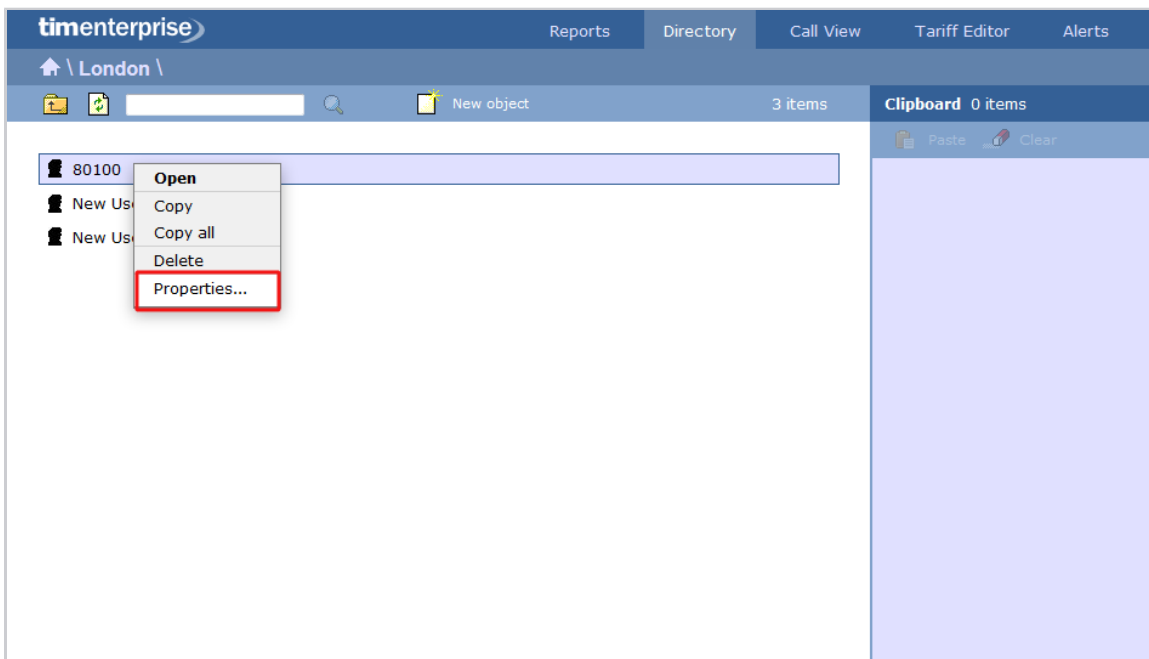
to not log calls

- you have old extensions that you don't wish to monitor, in which case you can set these extension to not log calls

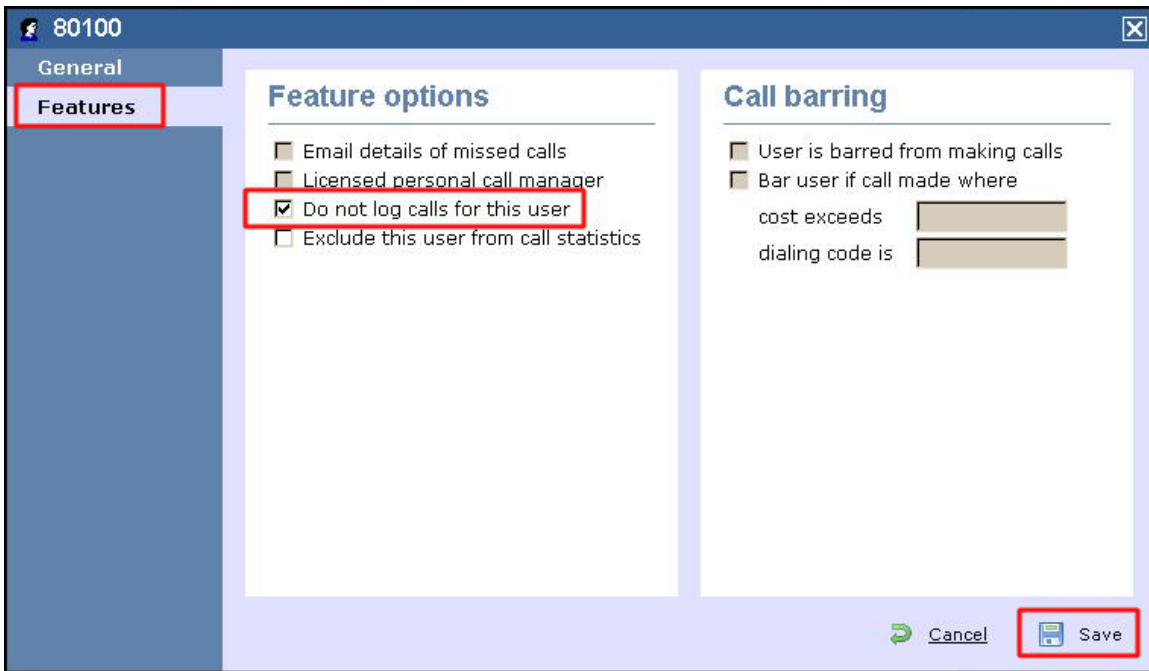
Setting users to not log calls

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, click on it and select **Properties**.



2. Click on the **Features** tab and tick the box **Do not log calls for this user**, as shown below:

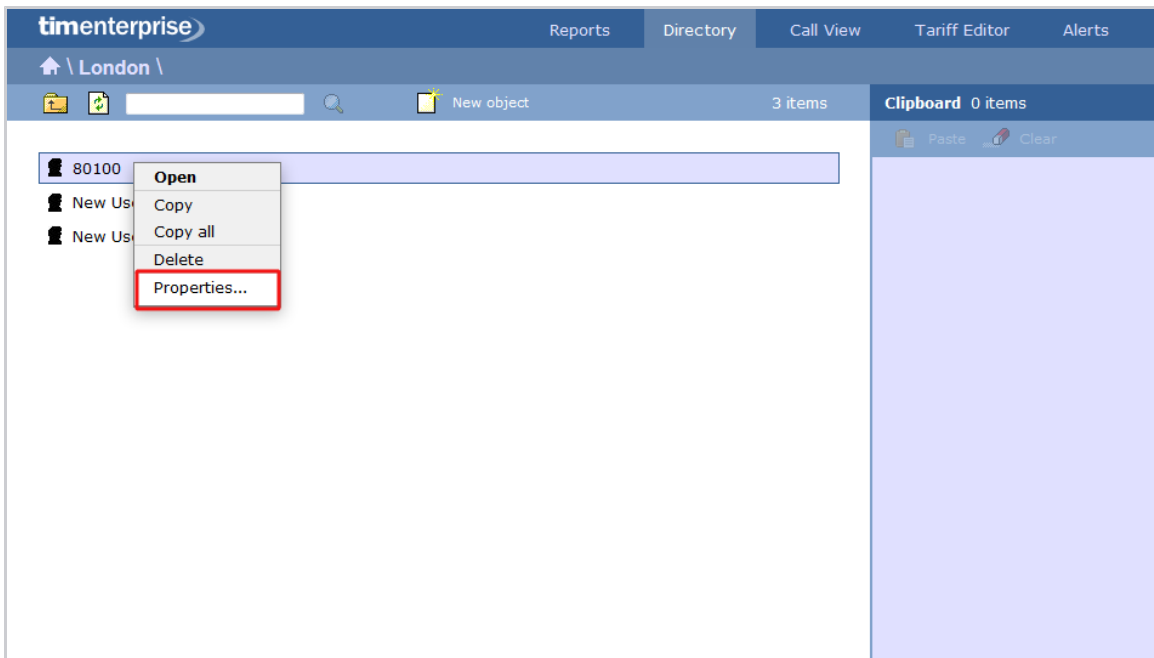


For the changes to take effect, you need to restart the TIM Enterprise service.

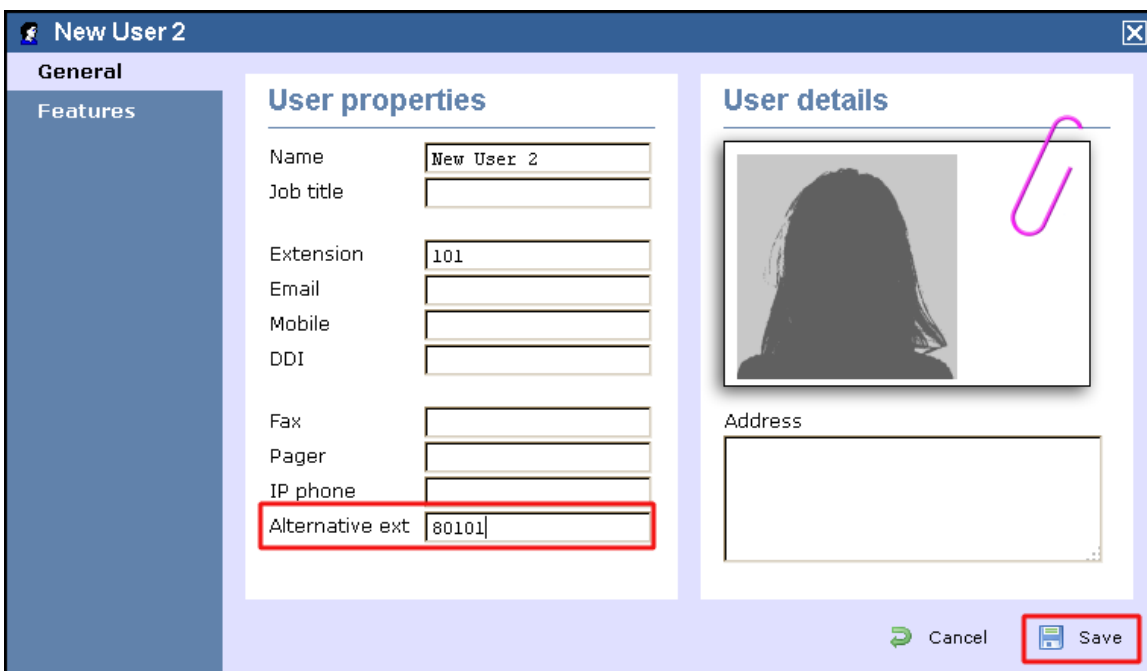
Merging a DDI with its extension

Follow the steps below merge a DDI with its extension in TIM Enterprise:

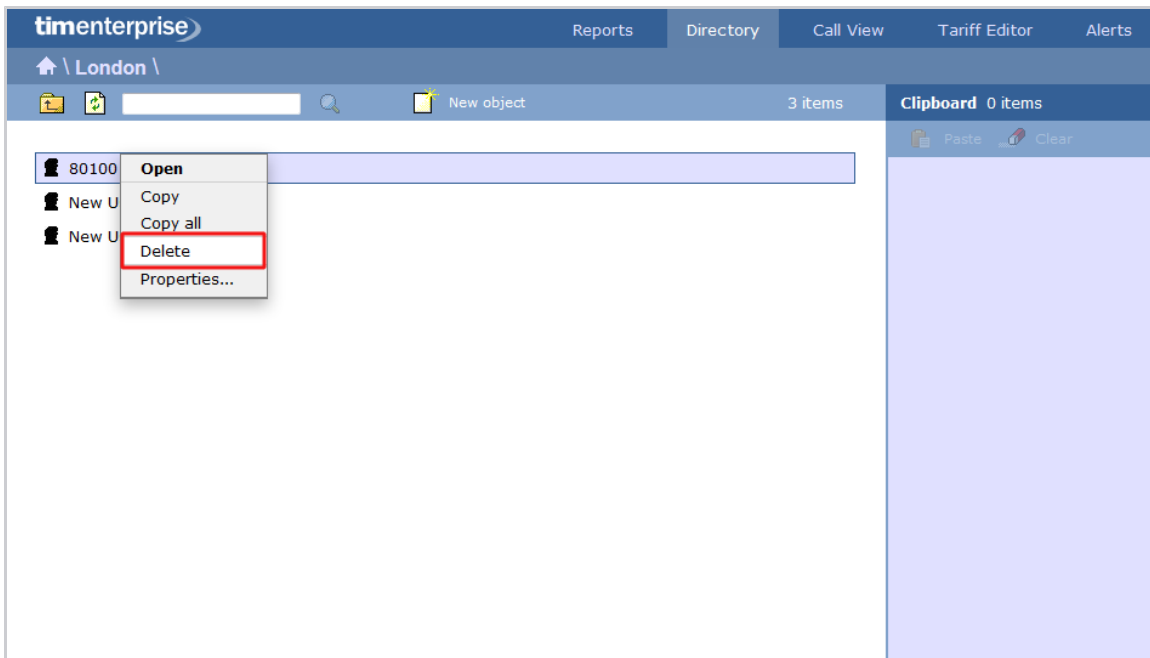
1. Locate in the Directory the extension number whose DDI you want to merge, click on it and select **Properties**.




2. A new window will open, displaying the general properties of the selected object. In the **Alternative ext** field, enter its DDI number and click on the **Save** button, as shown below:



3. Locate the user object created for the DDI number in the Directory, click on it and select **Delete** to remove the object from the Directory, as shown below:




 For the changes to take effect, you need to restart the TIM Enterprise 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)

<input type="radio"/>	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
<input type="radio"/>	Cisco CDR Repository Manager	Running	Wed May 15 19:42:05 2013	0 days 00:01:17
<input type="radio"/>	Cisco CDR Agent	Running	Wed May 15 19:42:49 2013	0 days 00:00:33
<input type="radio"/>	Cisco CAR Scheduler	Starting		
<input checked="" type="radio"/>	Cisco SOAP - CallRecord Service	Running	Wed Apr 3 14:26:51 2013	42 days 06:16:31
<input type="radio"/>	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
<input type="radio"/>	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, e.g. the machine running TIM Enterprise.

Importing historic data from Cisco UCM

Exporting CDR/CMR records

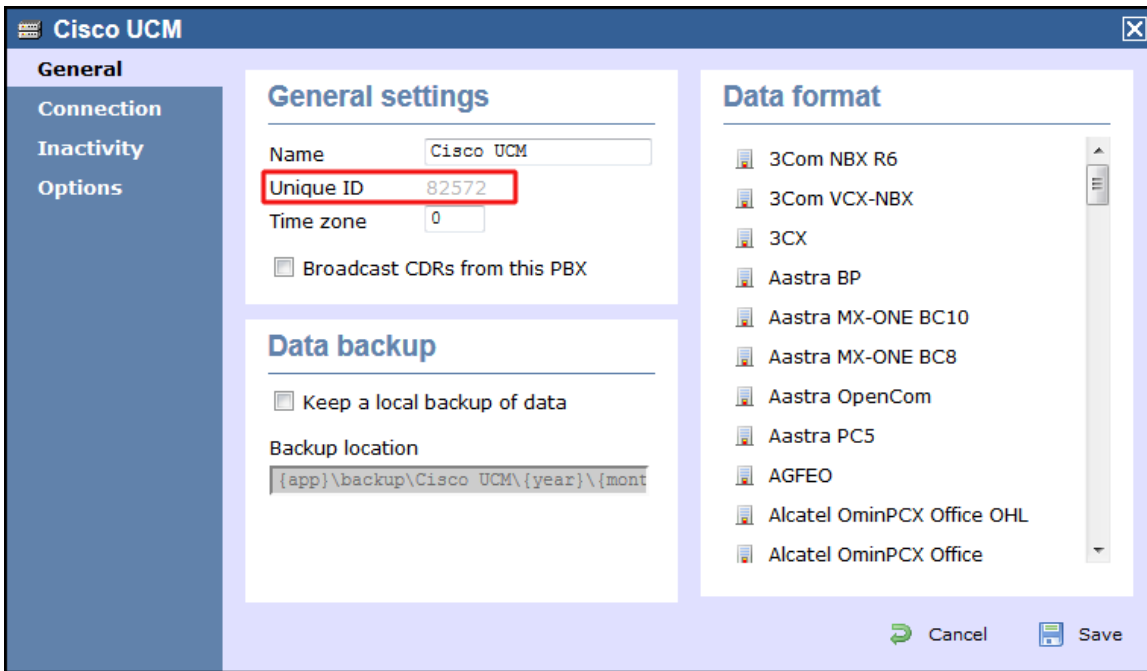
The following procedure describes how to export CDR/CMR into a dump file. This information was taken from [Export CDR/CMR Records Configuration](#) section of Cisco's documentation.

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 .

Re-running the data

To re-run the CDRs in TIM Enterprise, you need to rename the dump file extension from `.TXT` to the unique identifier of your PBX object in TIM Enterprise. To obtain the ID of your PBX, follow the steps below:

1. Log in to TIM Enterprise and locate the PBX object that collects the data from your UCM.
2. Click on the PBX object and select `Properties` from the drop-down list.
3. A new window will open, displaying the general properties of your PBX. The site ID is displayed in the `Unique ID` field, as shown below:



After renaming the file extension, copy it into the following location on the computer running TIM Enterprise: **C:\Program Files\Tri-Line\TIM Enterprise\spool\.**

TIM Enterprise will now process the data and it should be visible on the **Call** view screen.

RADIUS server retransmit

RADIUS server retransmission 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	<code>conf t</code>
2	<code>radius-server retransmit 0</code>
3	<code>exit</code>
4	<code>wr</code>

To change a specific RADIUS server settings, log in to the UCME CLI and enter the following commands:

Step	IOS Commands
1	<code>conf t</code>
2	<code>radius server SERVER_NAME</code>
3	<code>retransmit 3</code>

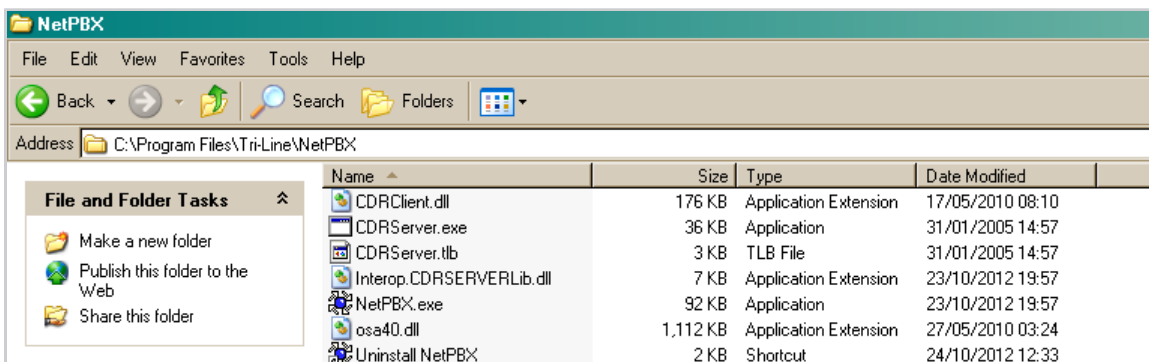
4	<code>exit</code>
5	<code>wr</code>

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.

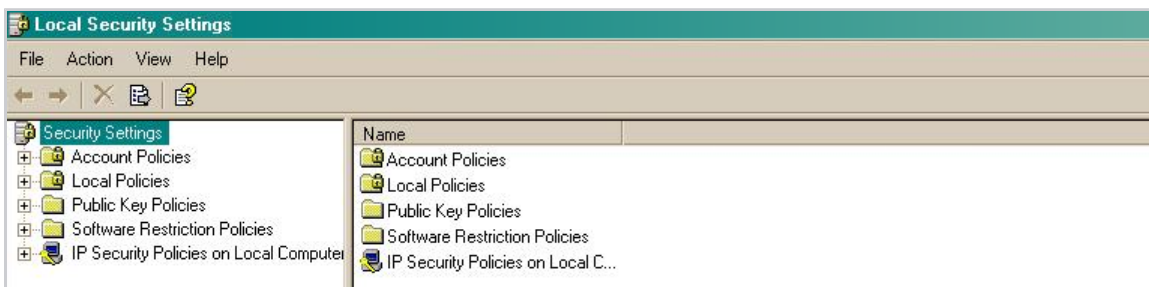
Connect BCM v3.7 or below with NetPBX

Follow the instructions below to connect a BCM v3.7 or below with NetPBX:

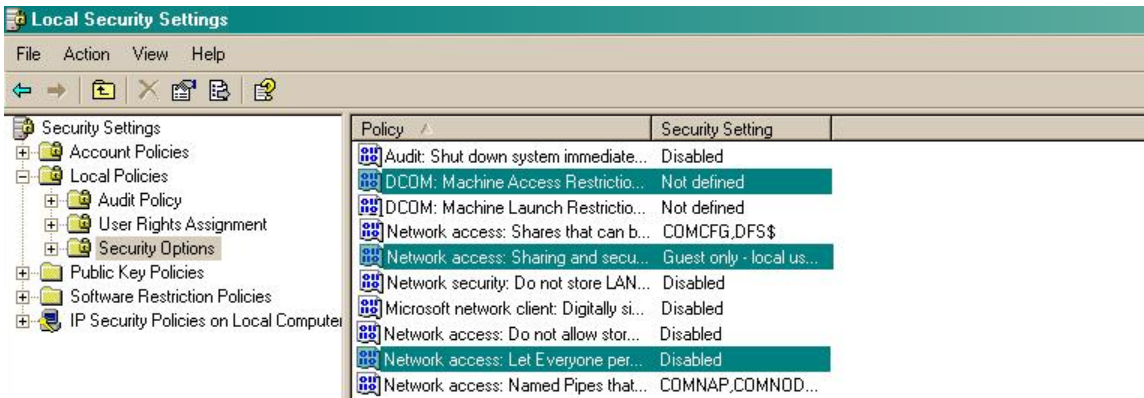
1. Make sure the `CDRServer.EXE` and `Interop.CDRSERVERLib.dll` files are placed in the same folder as `NetPBX.EXE`, usually located in `{pf}\Tri-Line\NetPBX`.



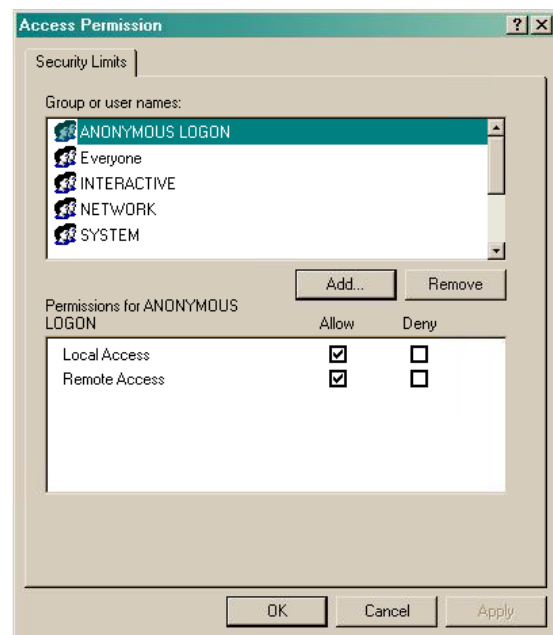
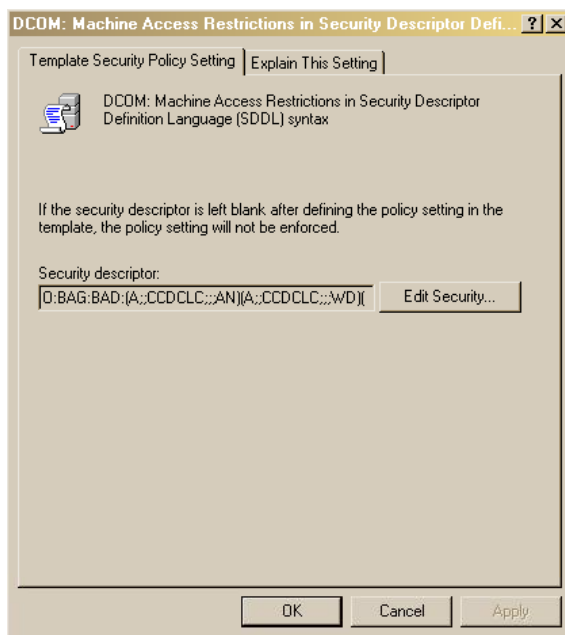
2. Register `CDRServer.EXE` by running the command line with administrator privileges and typing the following command under the directory path of the NetPBX folder: `CDRServer.EXE/regserver`.
3. Open the computer's local security policies: `Start -> Control Panel -> Administrative Tools -> Local Security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



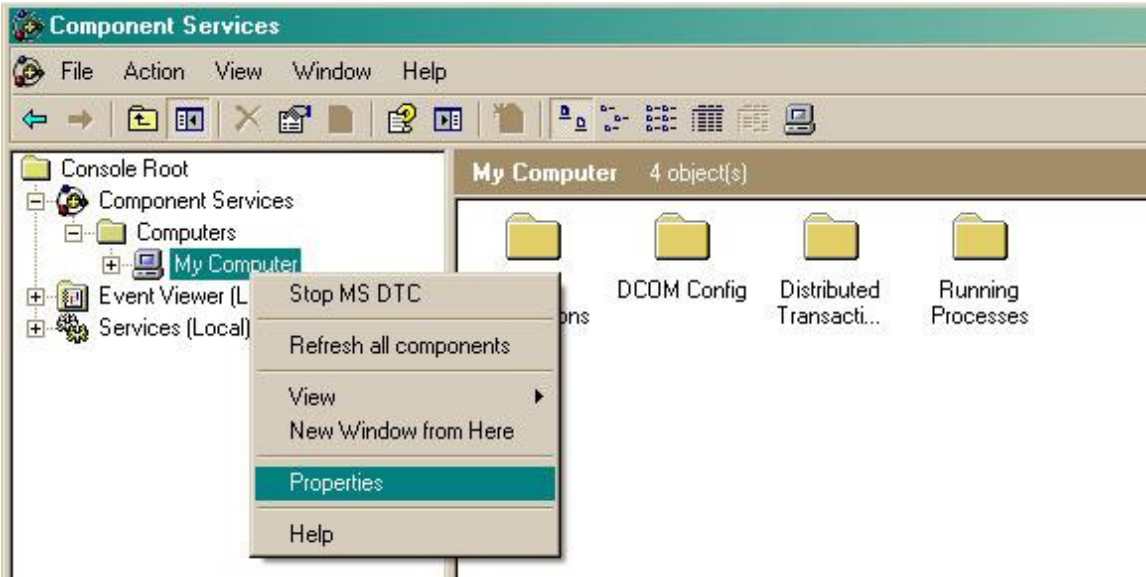
4. Within the `Security Settings\Local Policies\Security Options` tree, change the following items as highlighted in the screenshot below:



- 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`. Right-click on `My Computer` for **Properties** and amend or update the following options:

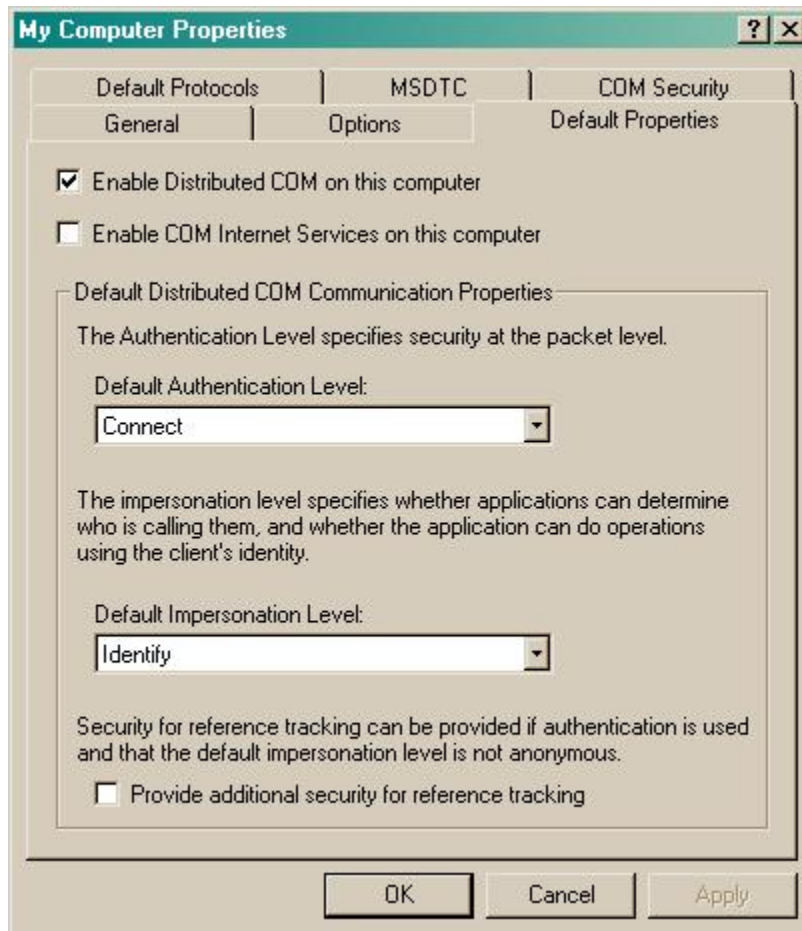


- a. On the **Default Properties** tab:

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

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

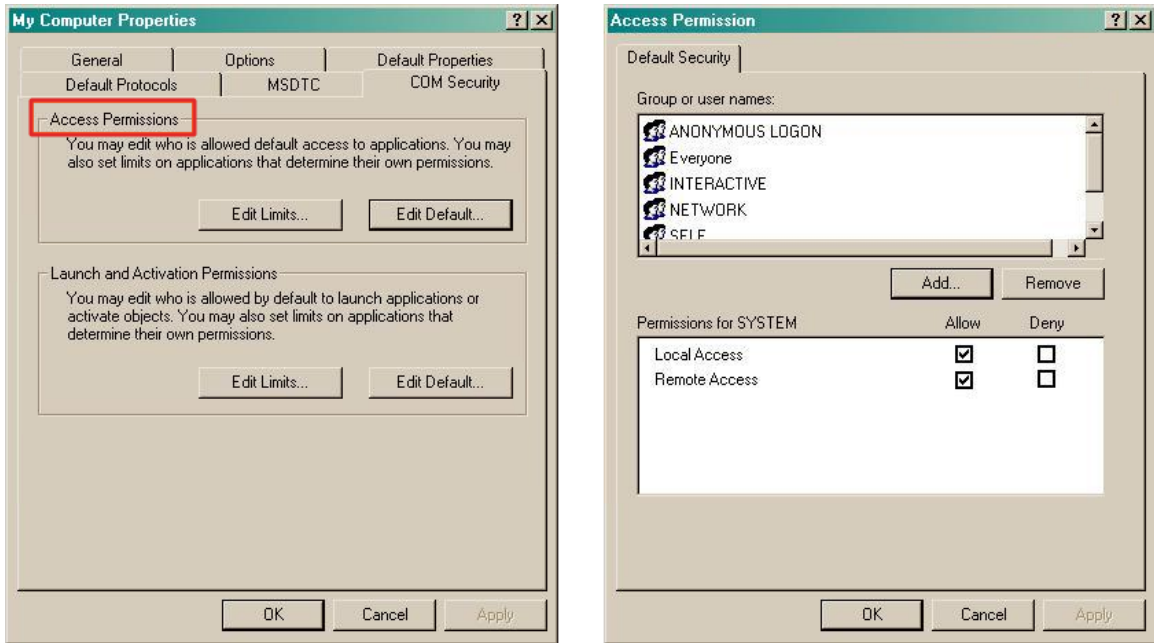
Default Impersonation Level: set this to **Identify**



b. On the **COM Security** tab:

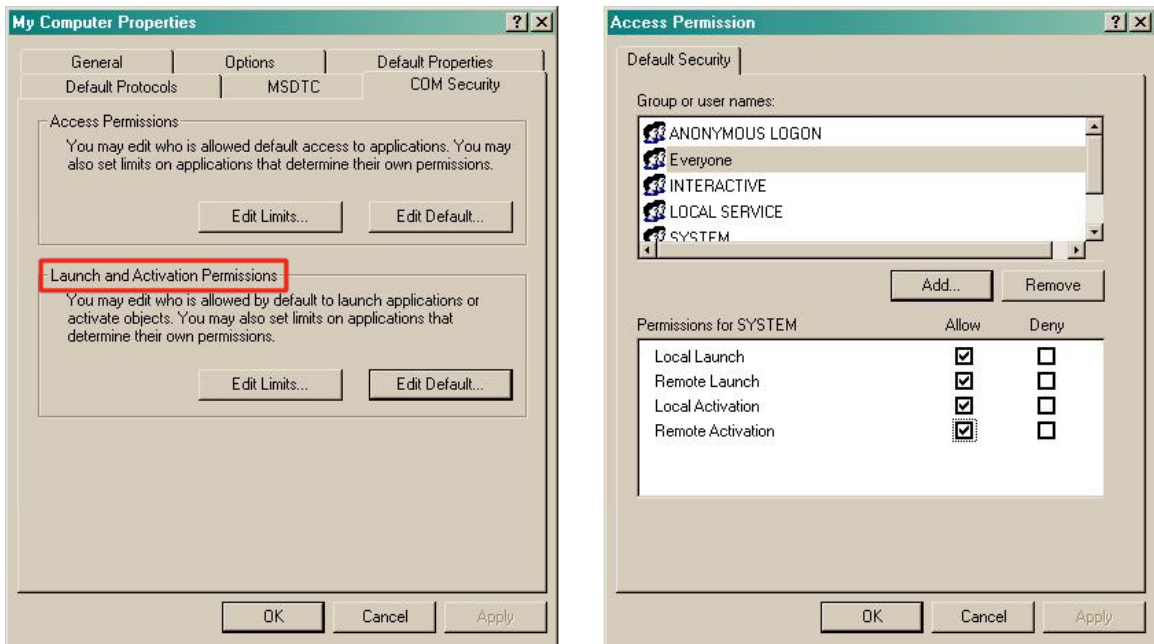
Go to the **Access Permissions** section and select **Edit default**.

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**.



Directory context menu

Directory context menu

- The problem
- The solution
- More information

The problem

Firefox 8, released in November 2011, has decided to make `contextMenu` a reserved word when creating HTML5-style context-sensitive menus. Unfortunately, TIM Enterprise already used this identifier before Firefox was changed, such that the Directory's pop-up menu no longer appears as expected. Therefore, we have changed the identifier in the product's content to use `dirContextMenu` instead of `contextMenu`. If you are using a version of TIM Enterprise earlier than 3.0.0.77 you will need to make some changes to your web content, located in the `{Program Files}\Tri-Line\TIM Enterprise\ssldata\` folder.

The solution

Upgrade to at least version 3.0.0.77 where this change has already been made to the default content. If you are unable to upgrade to TIM Enterprise 3.0.0.77 (for example, you have no maintenance contract) then it is recommended that you either temporarily use an alternative browser or change the following code within the `directory.js` files.

The `directory.js` files are located by default in the following locations:

- `C:\Program Files\Tri-Line\TIM Enterprise\ssldata_admin\furniture\js\directory.js`
- `C:\Program Files\Tri-Line\TIM Enterprise\ssldata_root\furniture\js\directory.js`

The following changes need to be made to these files:

```
Search for:
function contextMenu(strID, evt, fromFind) {
```

```
Replace with:
function dirContextMenu(strID, evt, fromFind) {
```

```
Search for:
strOut.append(" onclick=\"contextMenu('');
```

```
Replace with:
strOut.append(" onclick=\"dirContextMenu('');
```

```
Search for:
    strOut.append("'", event)\ " oncontextmenu=\ "contextMenu('");
```

```
Replace with:
    strOut.append("'", event)\ " oncontextmenu=\ "dirContextMenu('");
```

```
Search for:
    strOut.append("' onclick=\ "highLight =
this.id;contextMenu('");
```

```
Replace with:
    strOut.append("' onclick=\ "highLight =
this.id;dirContextMenu('");
```

```
Search for:
    strOut.append("'", event, true);\ " oncontextmenu=\ "highLight =
this.id;contextMenu('");
```

```
Replace with:
    strOut.append("'", event, true);\ " oncontextmenu=\ "highLight =
this.id;dirContextMenu('");
```

More information

Firefox 8 was publicly released on 8th November 2011. A new feature was introduced for integration with the browser's HTML5 context menu.

The related release note from Mozilla's documents is [Added support for HTML5 context menus](#). Full release notes for Firefox 8 are available [here](#).

Migrating TIM Enterprise

Migrating TIM Enterprise to a new machine involves the following actions:

On the old machine

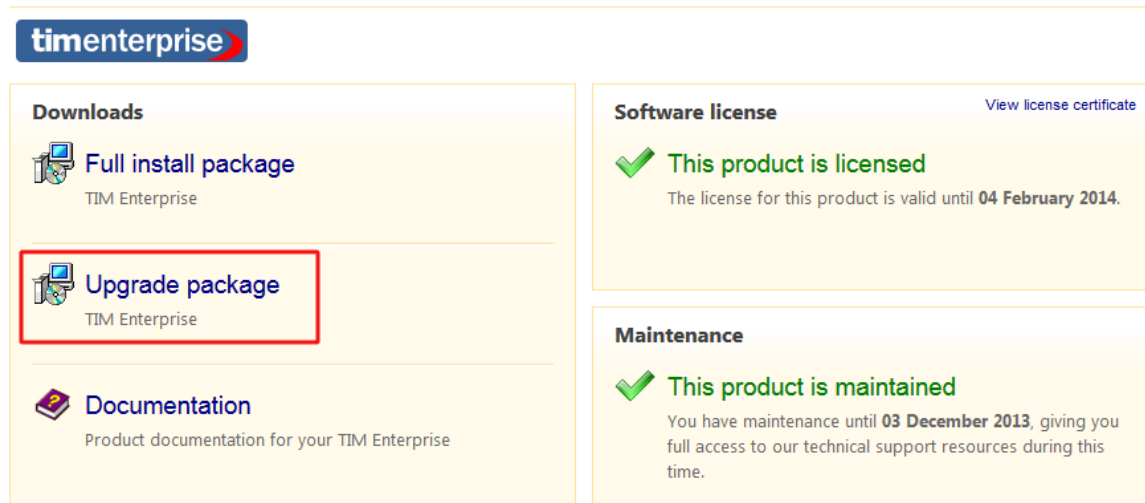
- Upgrading the old system to our latest version of software
- Back up the TIM Enterprise database

On the new machine

- Reinstall MySQL and restore the old database on the new system
- Reinstall TIM Enterprise on the new machine

Upgrading the TIM Enterprise to the latest version of software

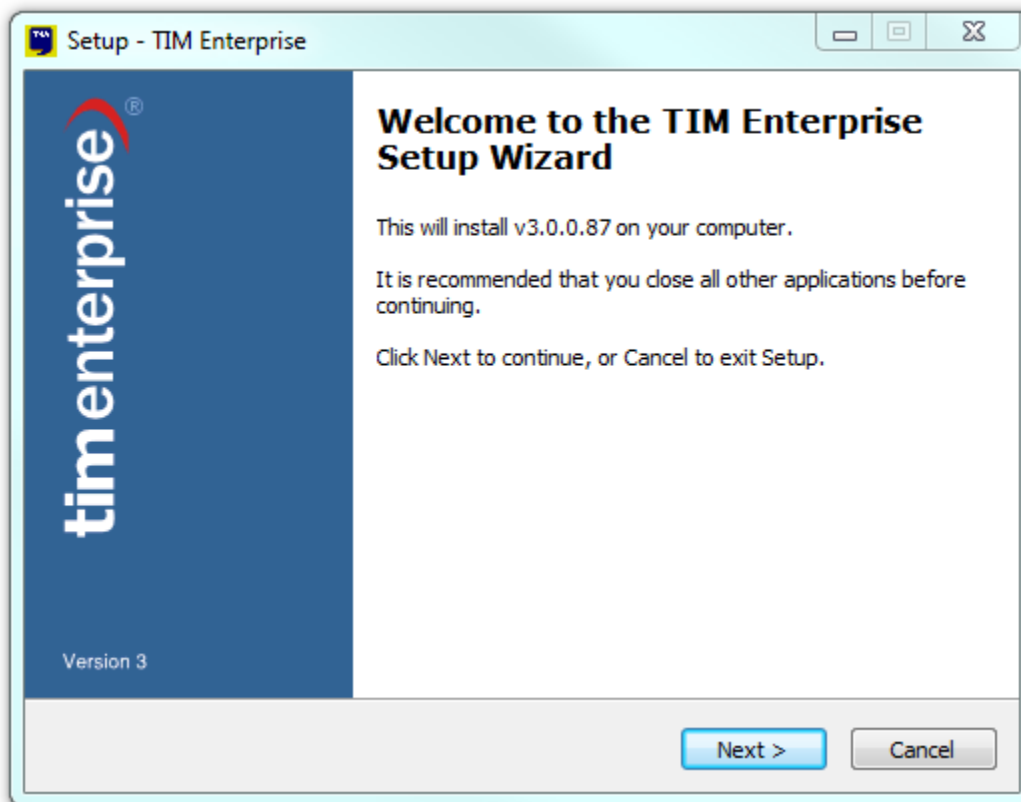
Log in to our Gateway and click on the TIM Enterprise product. Select the **Upgrade package** from the Downloads area and save the file on your computer.



The screenshot shows the TIM Enterprise product page. At the top left is the TIM Enterprise logo. Below it, there are three main sections:

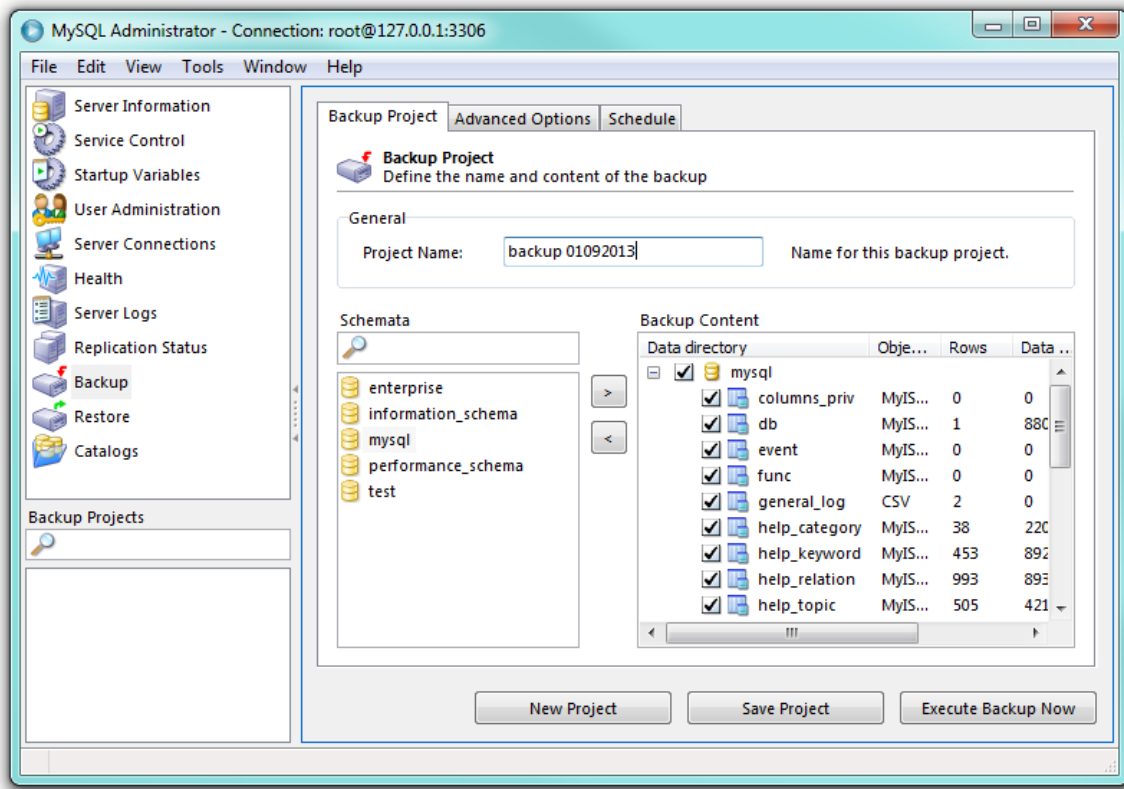
- Downloads:** Contains three items: "Full install package" (TIM Enterprise), "Upgrade package" (TIM Enterprise, highlighted with a red border), and "Documentation" (Product documentation for your TIM Enterprise).
- Software license:** Includes a link to "View license certificate" and a green checkmark indicating "This product is licensed". Below this, it states "The license for this product is valid until 04 February 2014."
- Maintenance:** Includes a green checkmark indicating "This product is maintained". Below this, it states "You have maintenance until 03 December 2013, giving you full access to our technical support resources during this time."

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



Backing up the TIM Enterprise database

Log in to MySQL Administrator and backup the TIM Enterprise database following the on-screen instructions.



When the backup procedure is completed, transfer the file on the machine you want to migrate the software.

Reinstall MySQL and restore the old database on the new system

MySQL installation

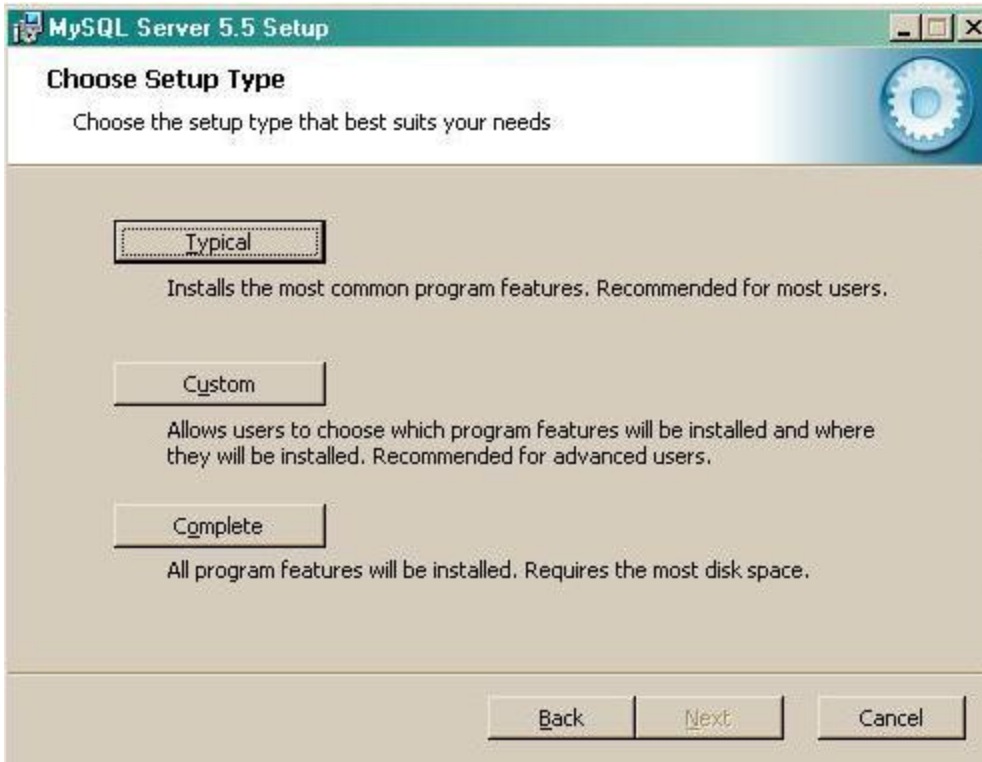
Visit <http://www.mysql.com> and download the following packages:

- `mysql-5.5.16-win32.msi`
- `mysql-connector-odbc-3.51.29-win32.msi`
- `mysql-gui-tools-5.0-r17-win32.msi`

Follow the setup instruction to install MySQL ODBC connector and MySQL GUI tools.

For the MySQL server installation, perform the steps below:

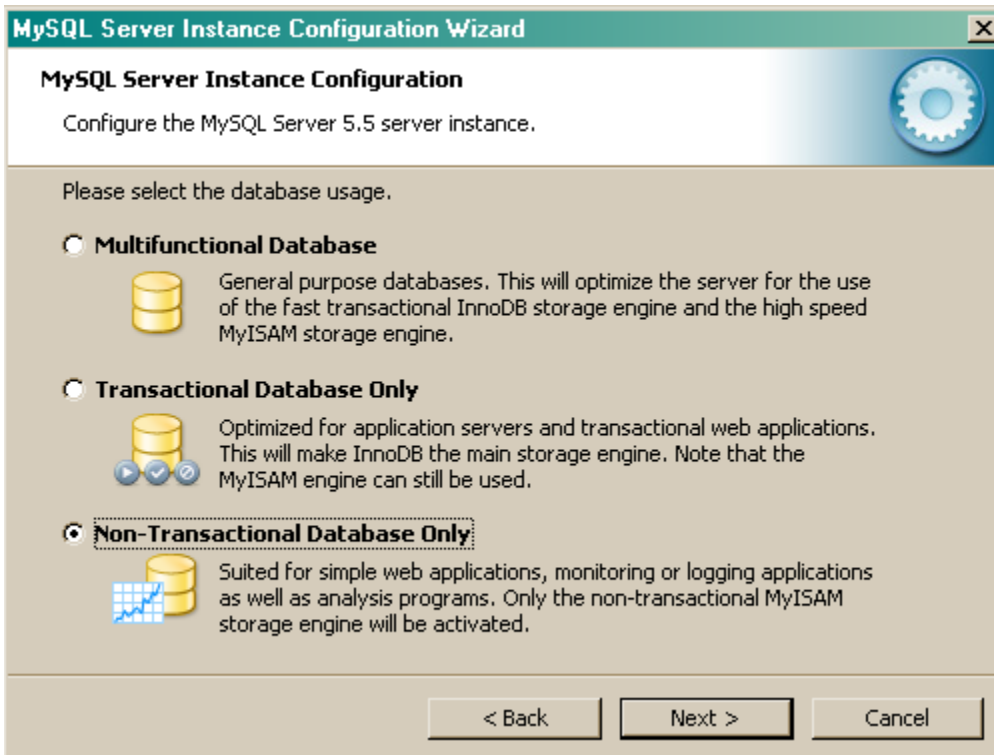
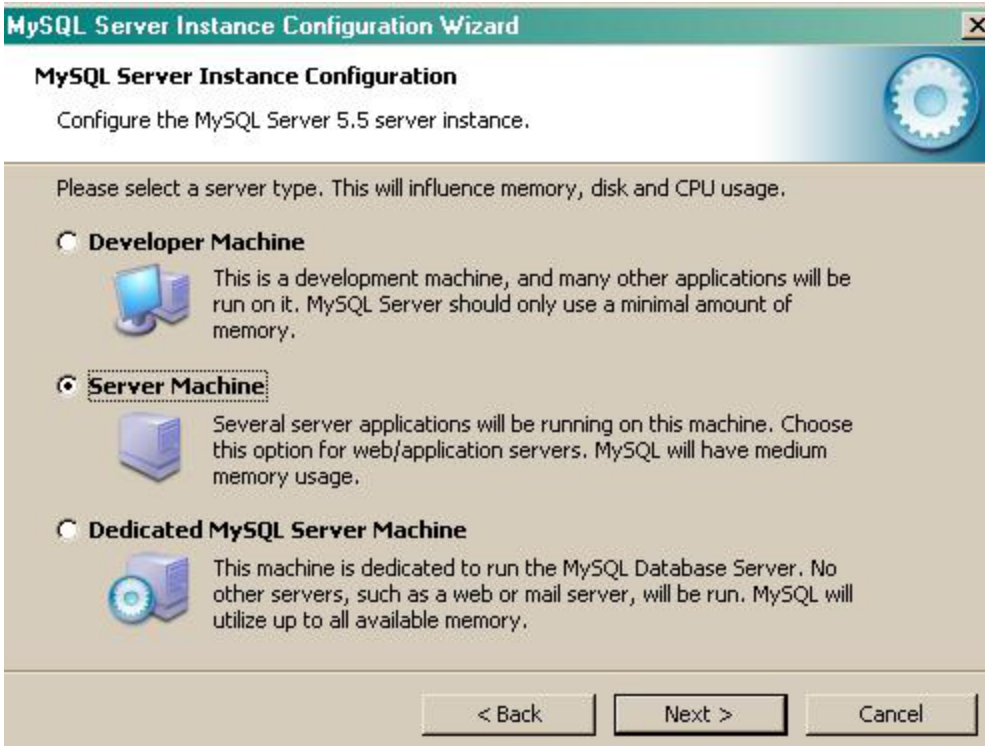
1. Click on the setup package and follow the on-screen instructions. When prompted to choose the type of setup, click on the **Typical** button, as shown below:



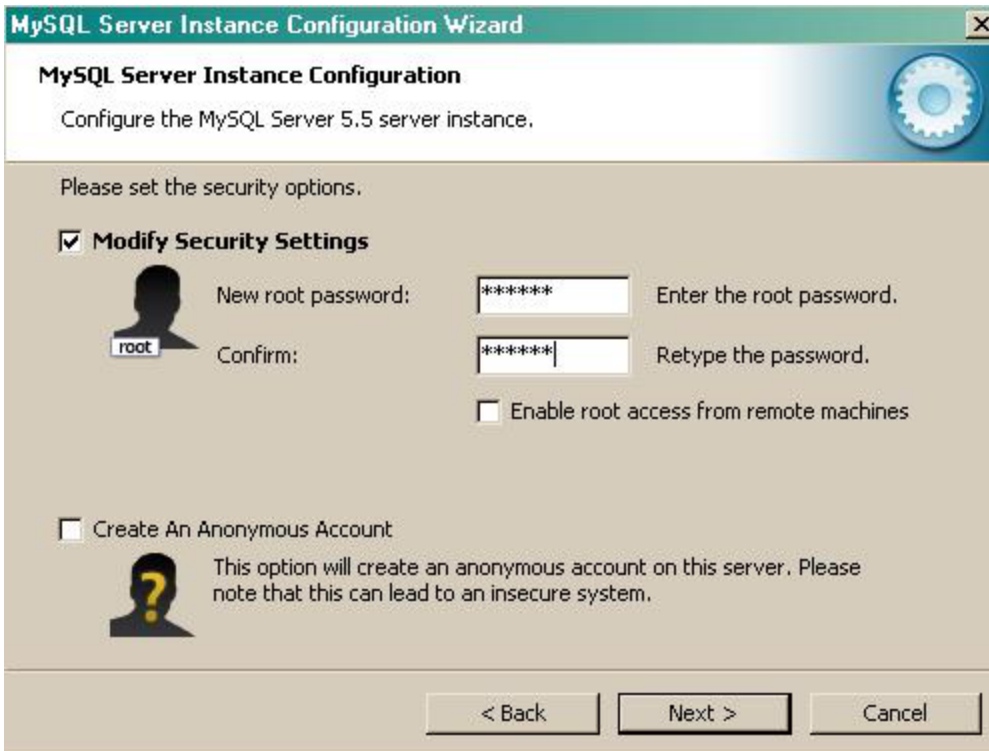
2. Continue to follow the wizard's steps and, when prompted, tick the **Launch the MySQL Instance Configuration Wizard** box. Click on the **Finish** button, as shown below;



3. The **MySQL** configuration setup wizard will start automatically. Configure the instance to run as a server machine and the database usage type must be set to **Non-Transactional Database only**.



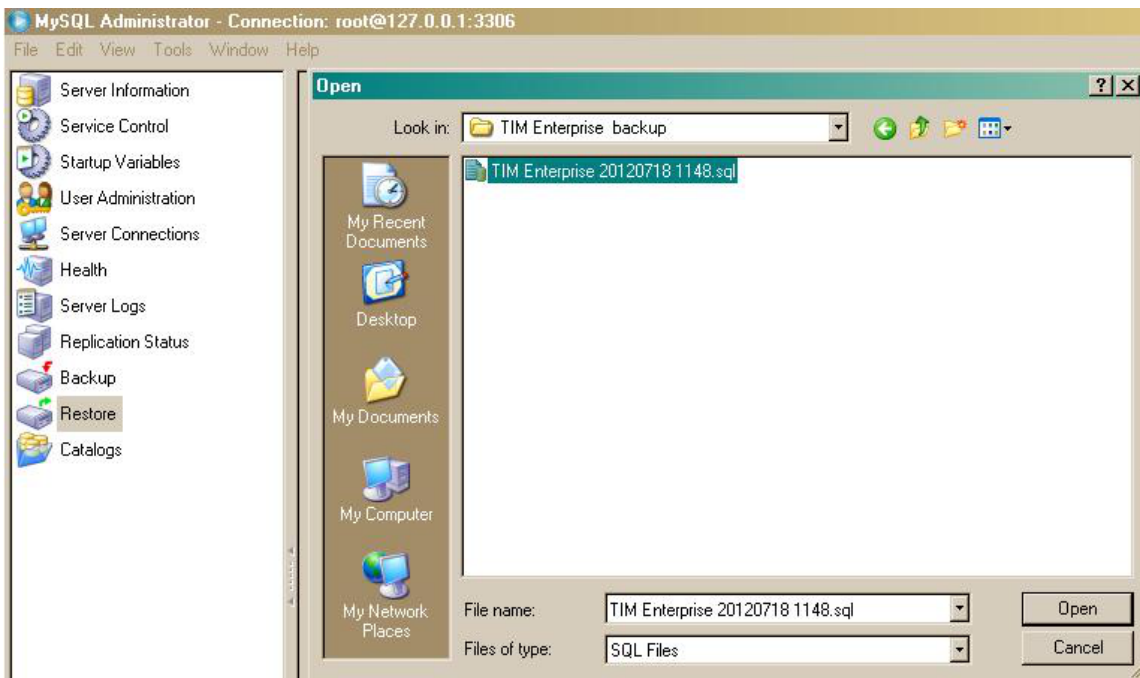
4. When prompted to create a password for the root account, enter `tntnet`.



5. Click on the **Next** button and follow the rest of the steps in order to finish the configuration setup.
6. Once the installation process is complete, log in to the **MySQL Administrator** application and create a new database user for the TIM Enterprise system.

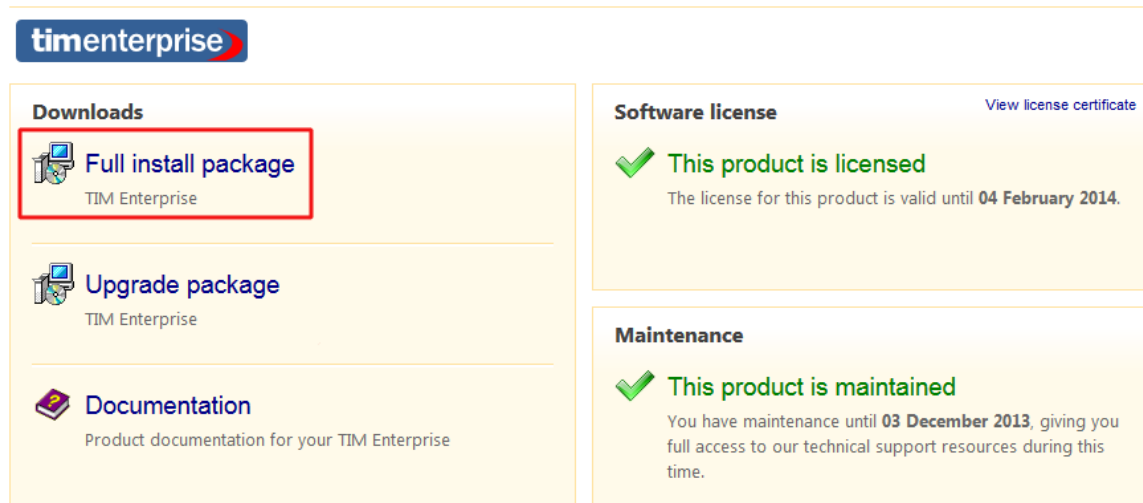
Restore the old database on the new system

To restore the old database, log in to **MySQL Administrator** and click on the **Restore** tab. Select the backup file you have transferred across from the old computer and follow the on-screen instructions to restore the file.



Reinstall TIM Enterprise on the new machine

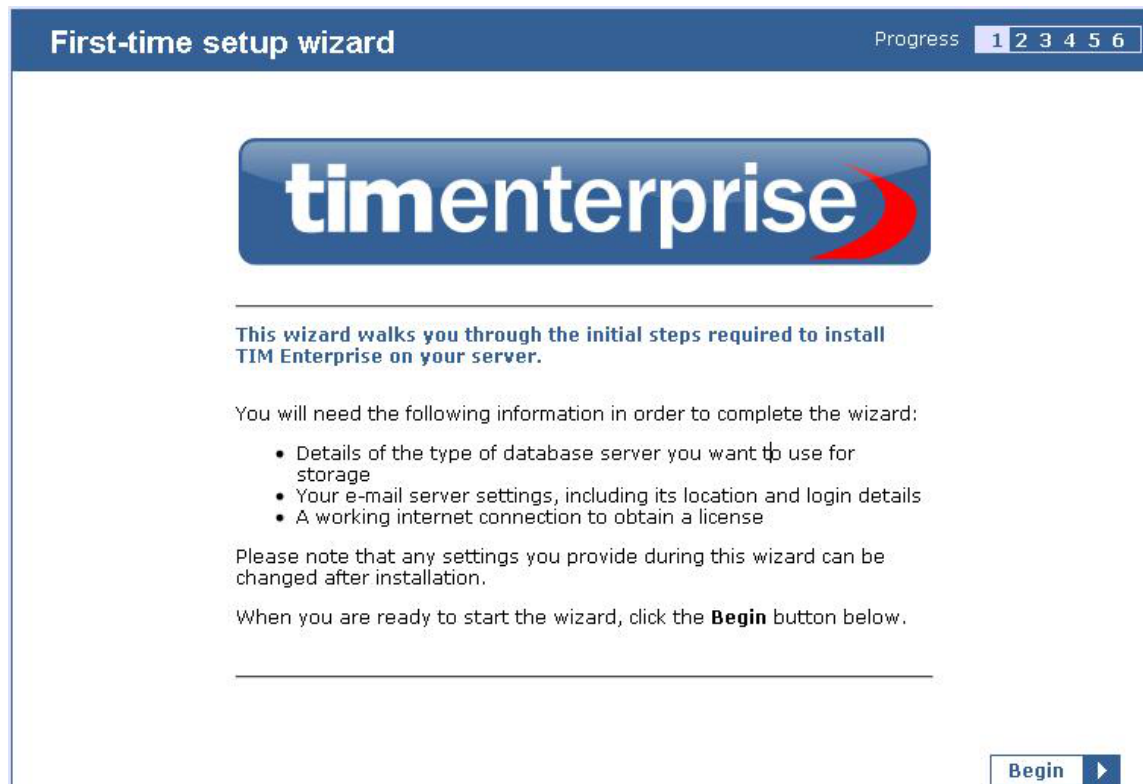
Log in to our [Gateway](#) and click on the TIM Enterprise product. Select the **Full install package** from the **Downloads** area and save the file on your computer.



The screenshot shows the TIM Enterprise product page. At the top left is the TIM Enterprise logo. Below it, there are three main sections:

- Downloads:** Contains three items:
 - Full install package:** TIM Enterprise (highlighted with a red box).
 - Upgrade package:** TIM Enterprise.
 - Documentation:** Product documentation for your TIM Enterprise.
- Software license:** Includes a link to "View license certificate" and a green checkmark indicating "This product is licensed". Below this, it states "The license for this product is valid until **04 February 2014**".
- Maintenance:** Includes a green checkmark indicating "This product is maintained". Below this, it states "You have maintenance until **03 December 2013**, giving you full access to our technical support resources during this time."

To install TIM Enterprise, double-click on the setup package and follow the on-screen instructions. After installation, the **First-time setup wizard** screen will open automatically in a new web browser window.



The screenshot shows the "First-time setup wizard" screen. At the top, there is a progress bar with steps 1 through 6, where step 1 is currently active. The main content area features the TIM Enterprise logo and the following text:

This wizard walks you through the initial steps required to install TIM Enterprise on your server.

You will need the following information in order to complete the wizard:

- Details of the type of database server you want to use for storage
- Your e-mail server settings, including its location and login details
- A working internet connection to obtain a license

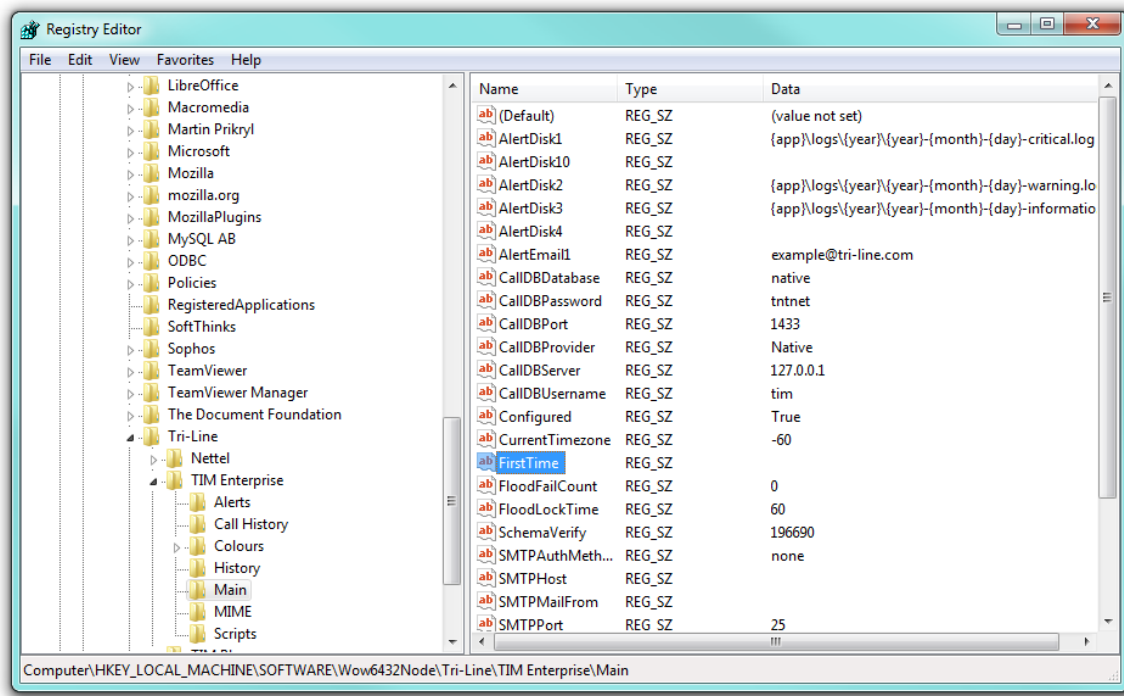
Please note that any settings you provide during this wizard can be changed after installation.

When you are ready to start the wizard, click the **Begin** button below.

At the bottom right, there is a "Begin" button with a right-pointing arrow.

Close the web page, access the Windows Services and restart the TIM Enterprise service. Using Windows Registry Editor (`start -> Run -> regedit.exe`) remove the **FirstTime** value from the following Registry key:

```
HKEY_LOCALMACHINE\Software\Tri-Line\Wow6432Node\TIM
Enterprise\Main
```

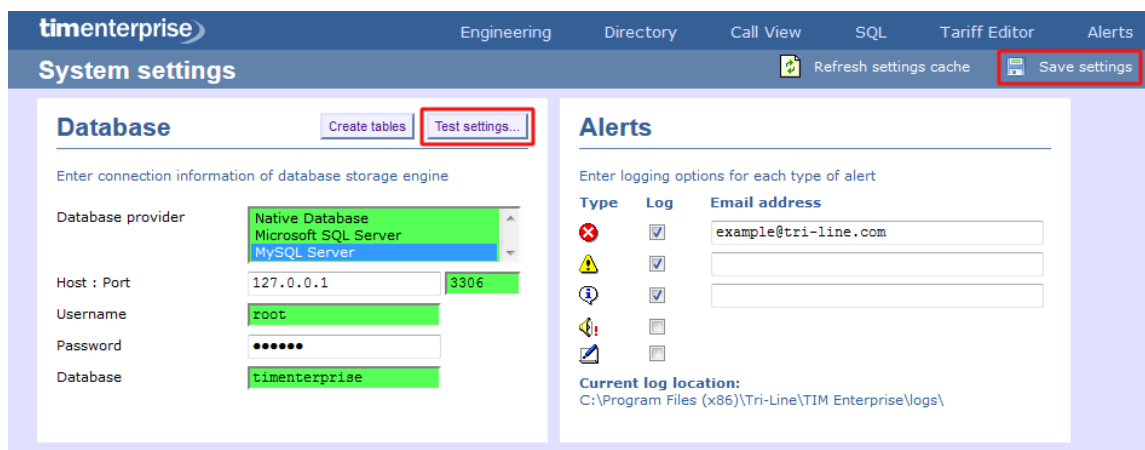


Start the TIM Enterprise service and log in to its web interface as a `root` user.



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.

When the license has been updated successfully, click on the TIM Enterprise logo to access the system settings and connect TIM Enterprise to the restored database, by entering the required details. Click on the **Test settings** button to verify the connection.



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

Re-running data

To re-run data in TIM Enterprise, follow the steps below:

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 Enterprise\backup
```

2. Log in to TIM Enterprise as a `root` user and click on the `SQL` tab.
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';
```

The screenshot shows the TIM Enterprise SQL interface. The top navigation bar includes 'Engineering', 'Directory', 'Call View', 'SQL', 'Tariff Editor', and 'Alerts'. The 'SQL' tab is active. Below the navigation bar, there are tabs for 'Query 1' and 'New'. A 'Run query' button is visible on the right. The query editor contains the following SQL query:

```
select name, fullkey from dir where type = 'pbx';
```

Below the query editor, a message states 'The query returned 2 rows'. The results are displayed in a table with two columns: 'Name' and 'FullKey'.

Name	FullKey
Avaya IP Office	\43\2\
DrayTek	\73\

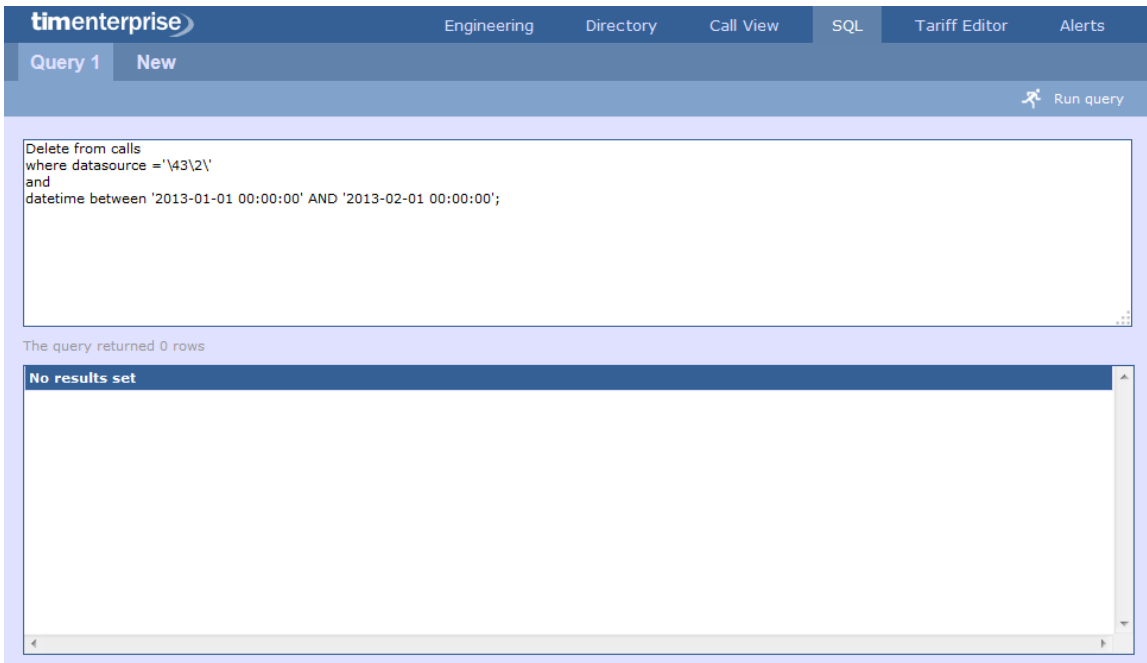
4. To delete calls for a specific PBX object and a specific time period, enter the following query:

```
Delete from calls
where datasource = '\43\2\'
and
datetime between '2013-01-01 00:00:00' AND '2013-02-01
00:00:00';
```



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.


- The query should return a **No results set** message, confirming the selected calls have been deleted.



- 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 Enterprise\spool
```

- Whilst 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 Enterprise over SSL (HTTPS)

To configure TIM Enterprise 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 Enterprise, follow the steps below:

- Place the certificate in the following location of the main TIM Enterprise installation folder: **{app}\Program Files (x86)\Tri-Line\TIM Enterprise\config**
- Access Windows Registry Editor (**start -> Run -> regedit.exe**) and go to the following Registry key:

```
HKEY_LOCALMACHINE\Software\Wow6432Node\Tri-Line\TIM  
Enterprise\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 Enterprise\config\certificate.pfx
SSLCertificate	{app}\Program Files\Tri-Line\TIM Enterprise\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	timenterprise
CallDBPassword	REG_SZ	tntnet
CallDBPort	REG_SZ	3306
CallDBProvider	REG_SZ	MySQL Server
CallDBServer	REG_SZ	127.0.0.1
CallDBUsername	REG_SZ	root
Configured	REG_SZ	True
CurrentTimezone	REG_SZ	-60
DisableDCs	REG_SZ	True
FirstTime	REG_SZ	
FloodFailCount	REG_SZ	0
FloodLockTime	REG_SZ	60
SchemaVerify	REG_SZ	196690
SMTTPort	REG_SZ	25
SSLCertificate	REG_SZ	{app}\Program Files\Tri-Line\TIM Enterprise\config\certificate.pfx
SSLCertificatePa...	REG_SZ	password
SSLKey	REG_SZ	{app}\Program Files\Tri-Line\TIM Enterprise\config\certificate.pfx
SSLKeyPassword	REG_SZ	password
WebContentCac...	REG_SZ	False
WWWServerPort	REG_SZ	443

5. Go to Windows services and restart the TIM Enterprise service.

Security hardening

Security hardening

- Introduction
- Blocking invalid login attempts
- Changing the default web server port
- Enabling High Security mode
- Web interface protocols
- Password complexity
- Automatic expiry of web user passwords

Introduction

The default security settings of TIM Enterprise allow for ease of installation and are suitable for the needs of most organisations. However, if your organisation's IT security policy demands it, or you plan to expose the system to an untrusted network such as the Internet, it is recommended you harden the security using the methods described below.



After changing any of the following settings, you will need to restart the TIM Enterprise service for the changes to take effect.

Blocking invalid login attempts

The system can blacklist the source IP address of a would-be attacker if a number of unsuccessful access attempts are made within a specified period of time. The following two Registry entries determine how many invalid login attempts are permissible before the source IP is blacklisted and, if so, for how long the blacklist will remain in place until further attempts are entertained:

Registry String data value	Description
<code>FloodFailCount = 0</code>	Number of attempts
<code>FloodLockTime = 60</code>	Lockout duration

All Registry keys for TIM Enterprise are located in the following hive:

```
HKEY_LOCAL_MACHINE\SOFTWARE\Tri-Line\TIM Enterprise
```

Changing the default web server port

If you would like to change the default port used for web traffic, you can edit the `WWWServerPort` Registry key.

Registry String data value	Description
<code>WWWServerPort = port number</code>	Port address for webserver to listen on (Default is 80, unless changed during setup)

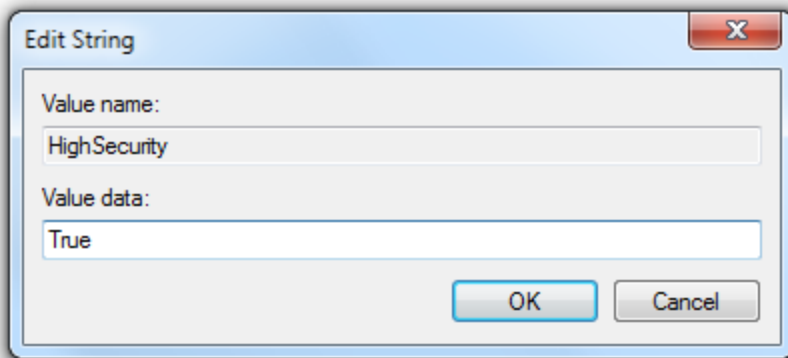
Enabling High Security mode

To enable High Security mode, add the following Registry String value:

```
HKEY_LOCAL_MACHINE\SOFTWARE\Tri-Line\TIM
Enterprise\Main\HighSecurity = "True"
```

Within the Windows Registry, right click and select **New -> String Value** and name it `HighSecurity`.

Next, double-click on it and enter the Value of `True`, as shown below:



When the **HighSecurity** Registry value is set to **True**, the following restrictions are imposed:

1. Ability to block individual web scripts by including them in a blacklist file:

```
"\ssldata\{class}\blacklist.____"
```

2. Enforce password complexity for web users (additional Registry entries required)
3. Forbid direct SQL queries through web interface
4. System alert messages are silently suppressed
5. System database connection tests forbidden
6. Ability to (re)create system database tables inhibited
7. Cannot change or test web (HTTP) port
8. Cannot send test emails
9. Debug information suppressed if a XSL translation error occurs

Web interface protocols

The default behaviour is to allow all protocols TLS1, SSL2 and SSL3.

You can change the type of connection that TIM will respond to, by adding the Registry String Value **WWWSSLProtocol**.

Note that this is a case-insensitive string value with one of the following data values:

Registry String data value	Description
noSSL	No SSL protocols, behave like a standard HTTP server
SSL23	SSL2 and SSL3 protocols only
SSL2	SSL2 protocol only
SSL3	SSL3 protocol only
tls1	TLS1 protocol only

Password complexity

You can configure TIM Enterprise web users with complex passwords to match your organisation's IT password policy.

To enable complex passwords, a Registry String Value `PasswordComplexity` must be added.

The use of the following data string values, allows you to configure how complex the passwords are:

```
"A"{0-9}+"a"{0-9}+"! "{0-9}+"#{0-9}
```

Each part of the complexity string is defined by a pair of characters, a single character denoting the type of policy, immediately followed by a numeric character (0-9) stipulating how many characters of that type are required to satisfy the password policy.

The Type characters are as follows:

- **A**: Upper- or lower-case characters
- **a**: Lower-case characters
- **!**: Symbol characters
- **#**: Numeric characters

For example, to impose a restriction of at least 6 characters with two numbers, the following Registry entry could be used:

```
HKEY_LOCAL_MACHINE\SOFTWARE\Tri-Line\TIM
Enterprise\Main>PasswordComplexity = "A6a0!0#2"
```



The value of `PasswordComplexity` must always be 8 characters, otherwise the policy will not be implemented. The order of each Type pair (Type character and amount character) is not important.

Automatic expiry of web user passwords

You can force Web users to change the password after a predetermined age has been set. Note that this is a system wide setting.

The server running TIM Enterprise will email the web user advising that a password change is required. The web user must have an email address configured, for notification to take place.

If the password is not changed by the expiry date, the account is automatically disabled.

Registry String data value	Description
<code>PasswordExpiryTimeUnits</code>	Determines the time units that the related expiry entries (below) will use. Valid values are m inutes , hours , days , weekdays
<code>PasswordExpiryReminder</code>	A value, in the units described by the <code>PasswordExpiryTimeUnits</code> entry, after which an email is sent to the web user to remind them to change their password.
<code>PasswordExpiryDisable</code>	A value, in the units described by the <code>PasswordExpiryTimeUnits</code> entry, which specifies how long after the reminder email (above) is sent, that a web user's account will be disabled if it hasn't been updated.

Default values for the above settings are as follows:

- `PasswordExpiryTimeUnits` = "days"
- `PasswordExpiryReminder` = "7"
- `PasswordExpiryDisable` = "7"

Therefore, using the default settings, a web user will receive an email reminder after 7 days and the account will be disabled after 14 days.

If the `PasswordExpiryReminder` value is zero then password reminder functionality is disabled and neither a reminder email will be sent, nor will a web user's account be disabled. Since this value has a default of "7", this value must be explicitly set to zero to disable password reminder functionality.

If the `PasswordExpiryDisable` value is explicitly set to zero, the disabling of a web user's account is skipped.

Registry String data value	Description
<code>PasswordReminderSubject</code>	"Password reset notification"
<code>PasswordReminderMessage</code>	"Your password to access the [%productname%] service will expire in <%expiryamount%> <%expiryunits%>. \r\n You should log in to the service before <%expirydate%> to reset your password, otherwise your account will be disabled"

The following <%%> variables are permissible in both the subject and the body text of the reminder email message:

<%%> variable	Description
<%product%>	The name of the product, e.g. TIM Enterprise
<%expiryunits%>	The value of <code>PasswordExpiryTimeUnits</code>
<%expirydate%>	A computed date of the above values relative to the date that the email was sent at, in local date/time format.

VAT rate adjustment

VAT rate adjustment

- Introduction
- Changing Web format
- Changing PDF format

Introduction

Every report in TIM Enterprise 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
Enterprise\ssldata\_admin\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
Enterprise\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.