

iPECS

CCS Report

User Manual

iPECS is an Ericsson-LG Brand

Please read this manual carefully before operating your set. Retain it for future reference.



Revision History

ISSUE	DATE	DESCRIPTION OF CHANGES
1.8	2014-02-28	Applied new BI

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1. IPECS CCS REPORT

1.1 Pre-Installation Requirements

The requirements for CCS Report are divided into two parts:

1.1.1 System Requirements

1.1.2 SMDR Configuration Requirements (applicable only when CCS Desk is not available)

1.1.1 System Requirements

The **Server and the Client workstations** must meet the following minimum specifications.

CCS Report Server Recommended Hardware			
Install Scope	Up to 500 Calls Per Day	Up to 1000 Calls Per Day	More than 1000 Calls per day
Dedicated Server Required	Yes	Yes	Yes
Dedicated SQL Server Required	No	Yes	Yes
Virtual Server Possible	Yes	Yes	Yes
Operating System	Windows 7 Professional or Windows Server 2008 R2	Windows 7 Professional or Windows Server 2008 R2	Windows 7 Professional or Windows Server 2008 R2
CPU	I3 2120 3.3GHz	I3 2120 3.3GHz	I3 2120 3.3GHz
RAM	4 GB	6 GB	8 GB
Disk Space	40 GB	100 GB	200 GB
Additional Requirements:	SMTP Server for report delivery via email SMDR enabled on the PBX		

CCS Report Client Recommended Hardware		
Install Scope	Without Dashboard and Reporting Manager	With Dashboard and Reporting Manager
Operating System	Windows 7 Professional	Windows 7 Professional
CPU	Core 2 Duo 1.6GHz	I3 2120 3.3GHz
RAM	1 GB	2 GB
Disk Space	10 GB	10 GB
Additional Requirements:	Internet Explorer 8 or higher Adobe Reader 9 or higher	

1.1.2 SMDR Configuration Requirements

NOTE: SMDR is not required when CCS Desk is available.

→ When using SMDR data source, the following options must be configured on the iPECS – SMDR attributes PGM 177.

[SMDR Attributes]		
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
	1 0	Max 2 digits

Long Distance Code	2	<input type="text"/>	Max 2 digits
	3	<input type="text"/>	Max 2 digits
	4	<input type="text"/>	Max 2 digits
	5	<input type="text"/>	Max 2 digits
SMDR Ring/CLI/CPN Service-I		CLI	
SMDR Ring/CLI/CPN Service-II		CPN	
Print MSN		OFF	
Print Serial No		ON	
SMDR Interface Service		OFF	
SMDR ICM Save		OFF	
SMDR ICM Print		OFF	
SMDR Disconnect Cause		OFF	
Long Time Call		0 (*10min)	000-144
SMDR Output Limit from any CO to NET Call		OFF	
Transferred Call Charge Rate		Individual Station	
Attendant Transfer Charge Rate		Individual Charging	

→ The **On-Line SMDR Print** in PGM 175 must be configured to a TCP port.

[Serial Port Selections]

Attribute	Value	TCP PORT
Off-line SMDR/Statistics Print	NULL	8005
ADMIN Data Print	Serial Port 1	NULL
Traffic Print	Serial Port 1	NULL
SMDI Print	Serial Port 1	NULL
Call Information Print	NULL	8005
On-line SMDR Print	NULL	8005
Trace Print	Serial Port 1	NULL
Debug Print	Serial Port 1	NULL
ACD Package Print	Serial Port 1	NULL
SMDR Interface Data Print	NULL	NULL
<input type="button" value="Save"/>		

1.2 Installation

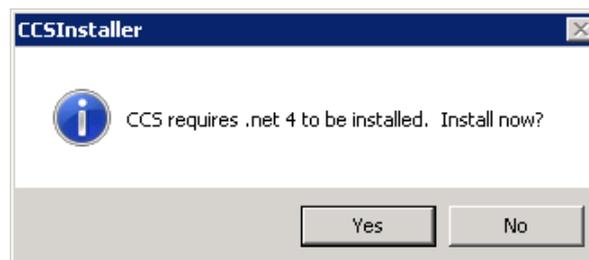
1.2.1 CCS Report Server Installation

This is for a new install of CCS Report Server **ONLY** on a **Single Server**

Step 1 - Run the **CCSInstaller** application with Administrator privilege.



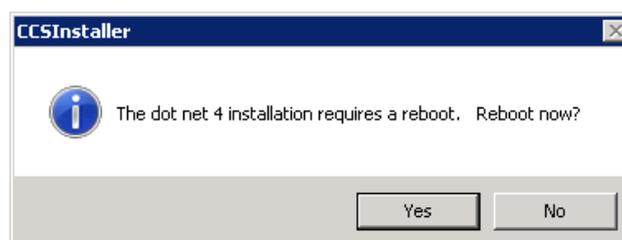
Step 2 - If **Microsoft .NET Framework 4.0** is not yet installed, you will receive the message to install it → Select **Yes**.



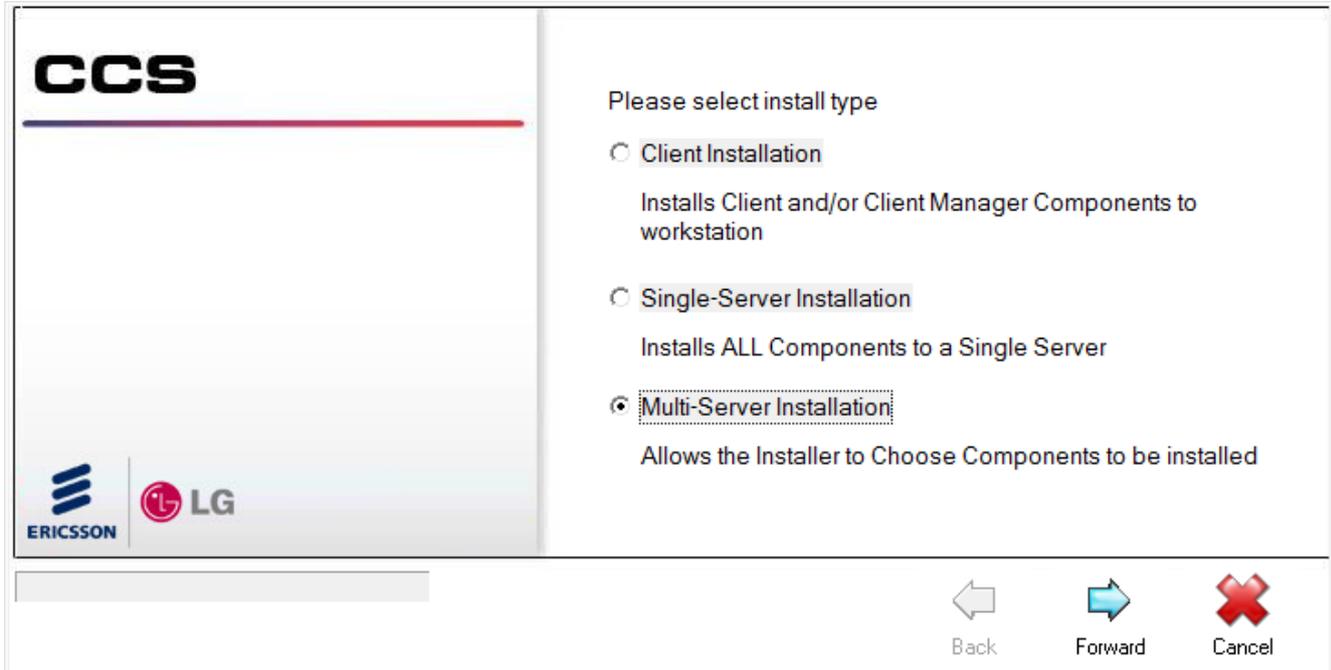
The installation may take a few minutes to complete.

NOTE

You will be prompted to **reboot** your system once the install completes. Please ensure you do the reboot before continuing with the install.



Step 3 - Once you log back in, the CCS Installation will continue and you will receive the Option to Install the Client or Server → Select **Multi-Server Installation** → Click **Forward**.



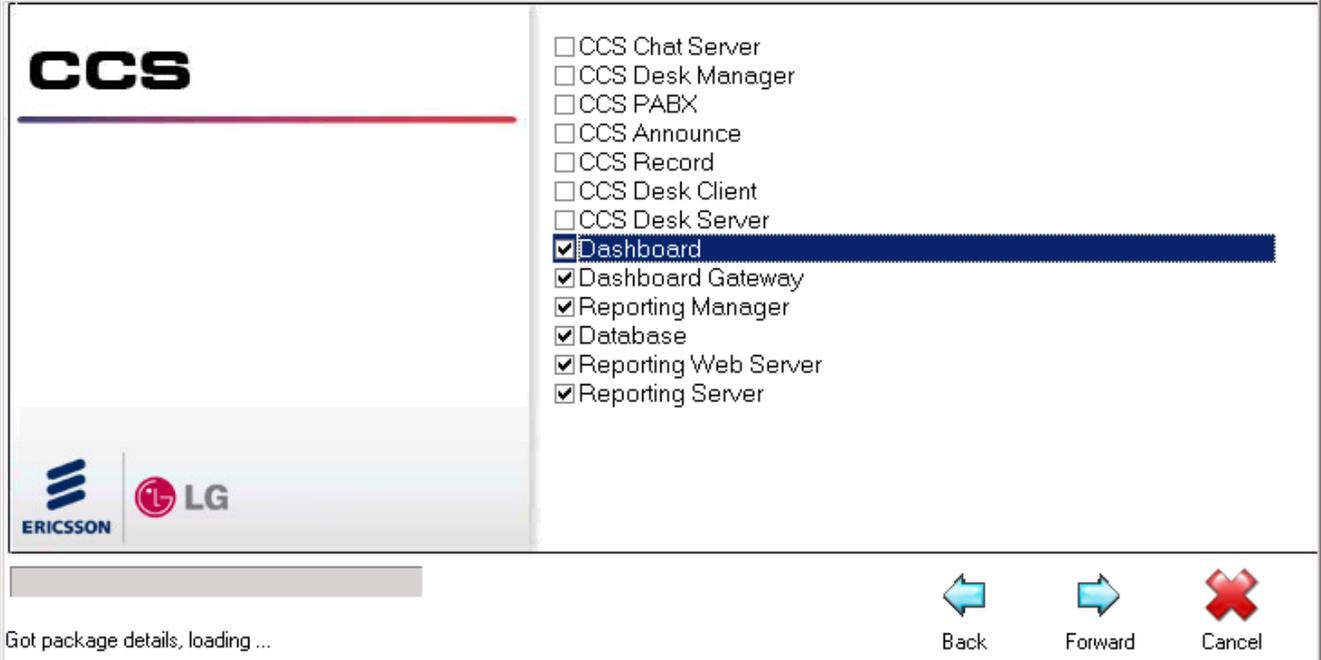
Step 4 - At the next screen, you will need to enter your **CCS License Code** and **PABX details**.

Software Registration Code – the CCS License Package Code.

PABX IP Address – the IP address of the iPECS MFIM.

PABX Password – the administration password for iPECS.

Step 5 - Choose the **CCS Report components** to be installed → Click **Forward**.



CCS

- CCS Chat Server
- CCS Desk Manager
- CCS PABX
- CCS Announce
- CCS Record
- CCS Desk Client
- CCS Desk Server
- Dashboard**
- Dashboard Gateway
- Reporting Manager
- Database
- Reporting Web Server
- Reporting Server

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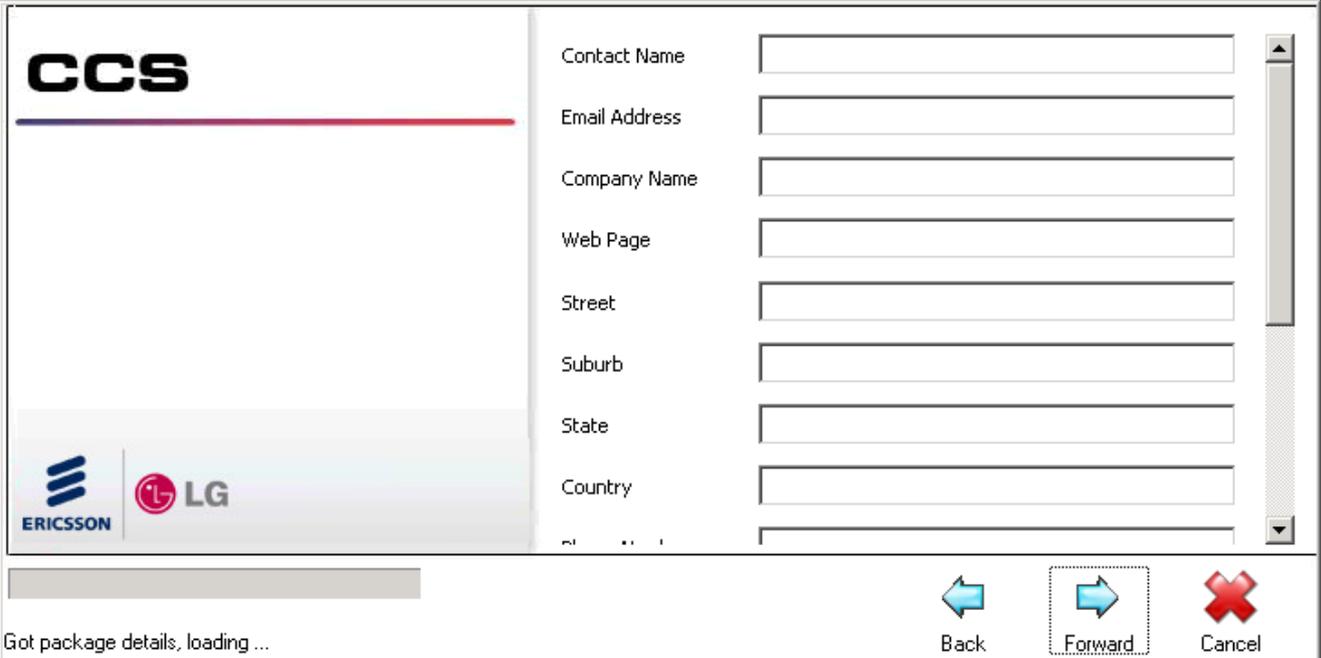
Got package details, loading ...

Back Forward Cancel

Step 6 - Complete the **software registration form**.

The iPECS serial number that will be linked against the license is shown at the end of the form

→ Click **Forward**.



CCS

Contact Name

Email Address

Company Name

Web Page

Street

Suburb

State

Country

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Got package details, loading ...

Back Forward Cancel

CCS

State

Country

Phone Number

Region/City

PostCode

Reseller Name

Pabx Serial Number

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Got package details, loading ...

Back Forward Cancel

Step 7 - Read and agree to the **CCS Software License Agreement** → Click **Forward**.

CCS

Software Licence Agreement

IMPORTANT - YOU SHOULD READ THIS AGREEMENT CAREFULLY BEFORE USING THIS SOFTWARE. BY VERIFYING AND USING THE SOFTWARE, YOU INDICATE YOUR ACCEPTANCE OF THE FOLLOWING SOFTWARE LICENCE AGREEMENT.

This is a Software licence agreement between you ('you' or 'Licensee') and LG-Ericsson Co., Ltd. ('LG-Ericsson') for use of the Software. This is not an agreement for sale of the Software. This is a Licence Agreement only. Please read the terms and conditions of this agreement before using the Software. By verifying and/or using the Software, you are agreeing to be legally bound by the terms and conditions of this agreement.

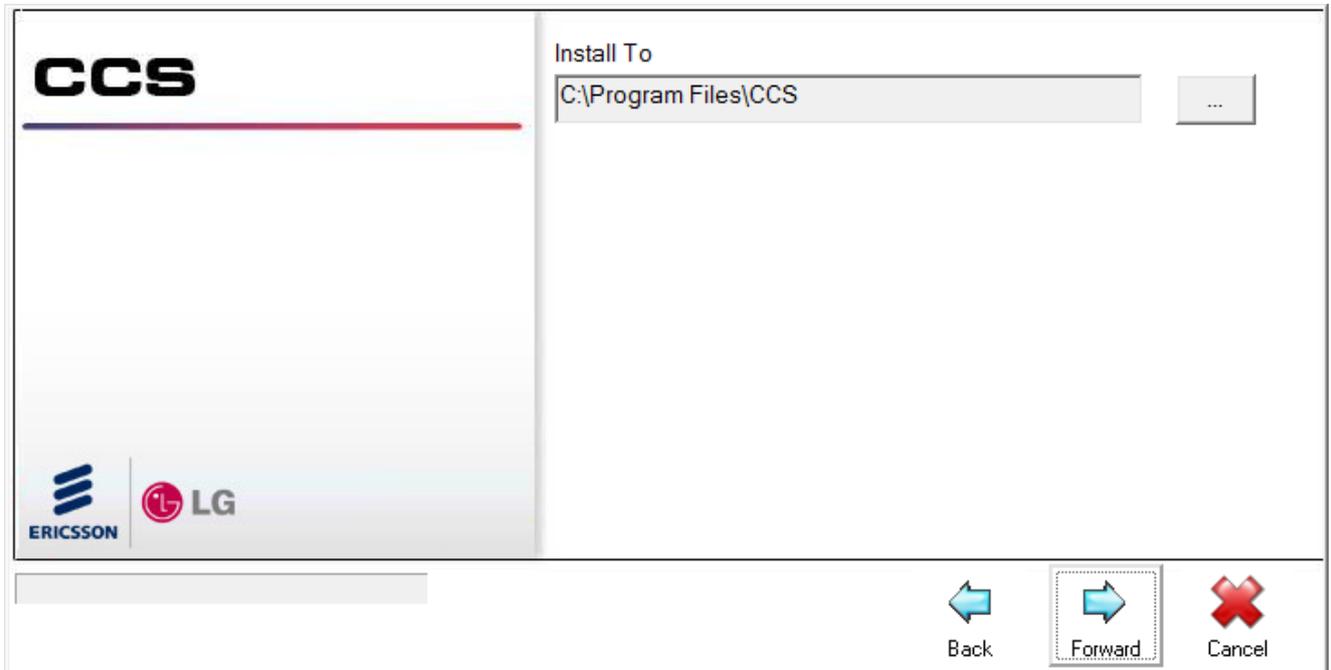
I have read and accept this licence

ERICSSON LG

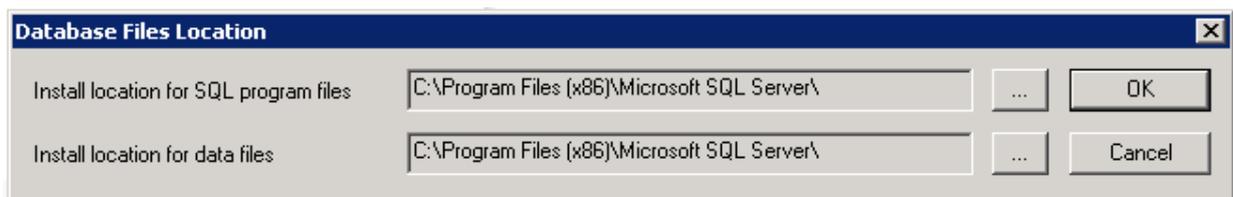
Got package details, loading ...

Back Forward Cancel

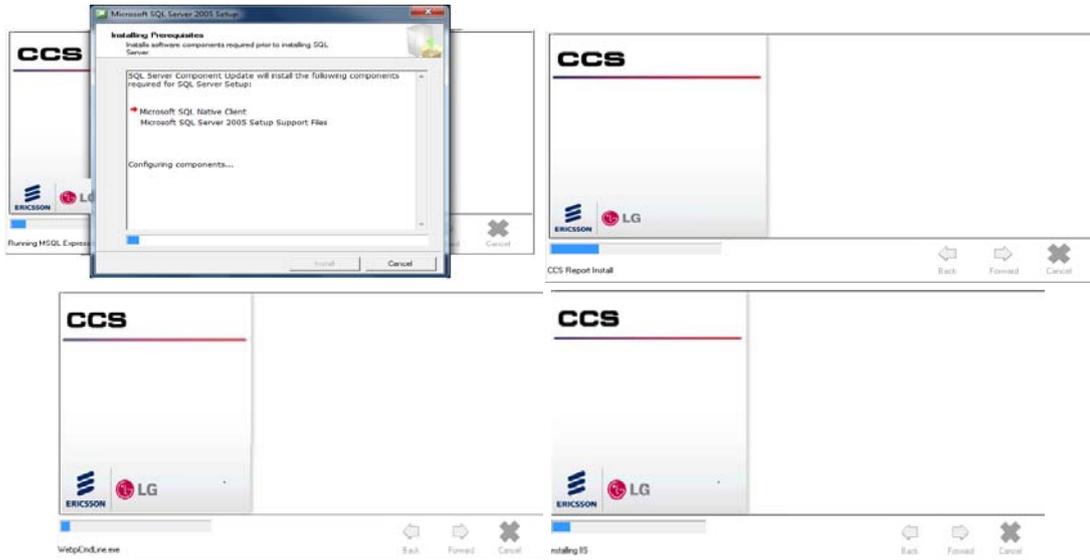
Step 8 - Confirm the **installation path** for the CCS program files → Click **Forward** to start the installation.



Step 9 - The CCS Installer will check if **Microsoft SQL Server** (default instance) has been installed on the machine. If not, the Installer will have to install the SQL Server first thus asks for the location to store the database files → Click **OK**.

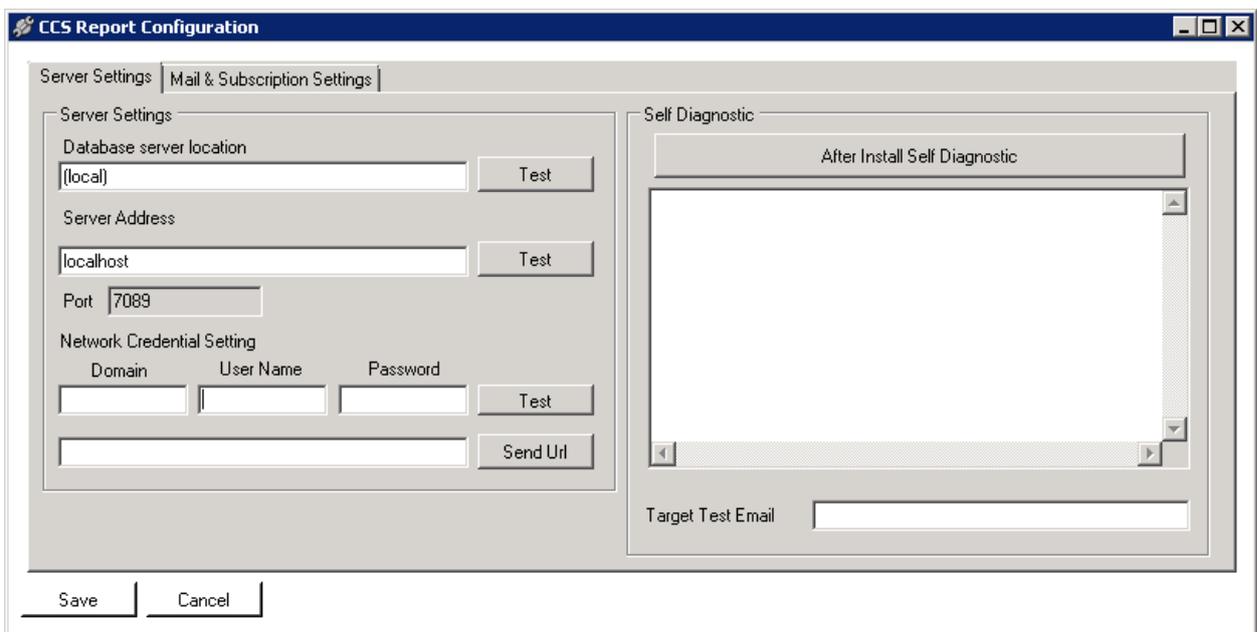


Step 10 - The CCS Installer will start **installing each component** to completion. You will then get to the CCS Report Configuration Window as shown in the next step.



Step 11 - CCS Report Configuration

There are 2 tabs which require configuration:



Server Settings

Database Server Location – the address of the machine that runs CCS Report database. Click 'Test' button to test the connection.

Server Address – the address of the machine that runs CCS Report server. Click 'Test' button to test the connection.

Port – the port number to connect to CCS Report Server. This setting is read-only.

Network Credential Setting – specify a Windows account that has administrator privilege. This is used for temporary files during subscription, export and tests.

The other configurations in this tab are not required at this stage.

The screenshot shows a window titled "CCS Report Configuration" with two tabs: "Server Settings" and "Mail & Subscription Settings". The "Mail & Subscription Settings" tab is active. It is divided into two panels. The left panel, "Mail Settings", contains input fields for "Host", "Port", "Username", "Password", "Domain", and "Timeouts" (with a value of 30 and the unit "seconds"). The right panel, "Subscription Settings", contains input fields for "File Path", "Sender Email Address", and "Max File Limit (kB)" (with a value of 10000). At the bottom of the dialog are "Save" and "Cancel" buttons.

Mail Settings

Host – the name of the SMTP email server.

Port – the port number for SMTP.

Username – the user account to use SMTP.

Password – the password to the SMTP user account.

Domain – the domain for the SMTP user account, if required.

Timeouts – the time it waits when attempting to connect with the SMTP server.

Subscription Settings

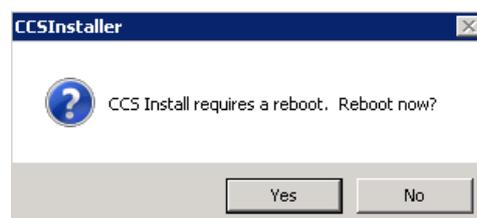
File Path – the address to store the subscription file for server file sharing. This can be set to a network UNC path e.g. `\\server\folder`, however, the network credential setting must have enough access to write into this folder.

Sender Email Address – the 'From' address when sending email from CCS Report Web.

Max File Limit (kB) – the maximum number of bytes allowed by the SMTP email server.

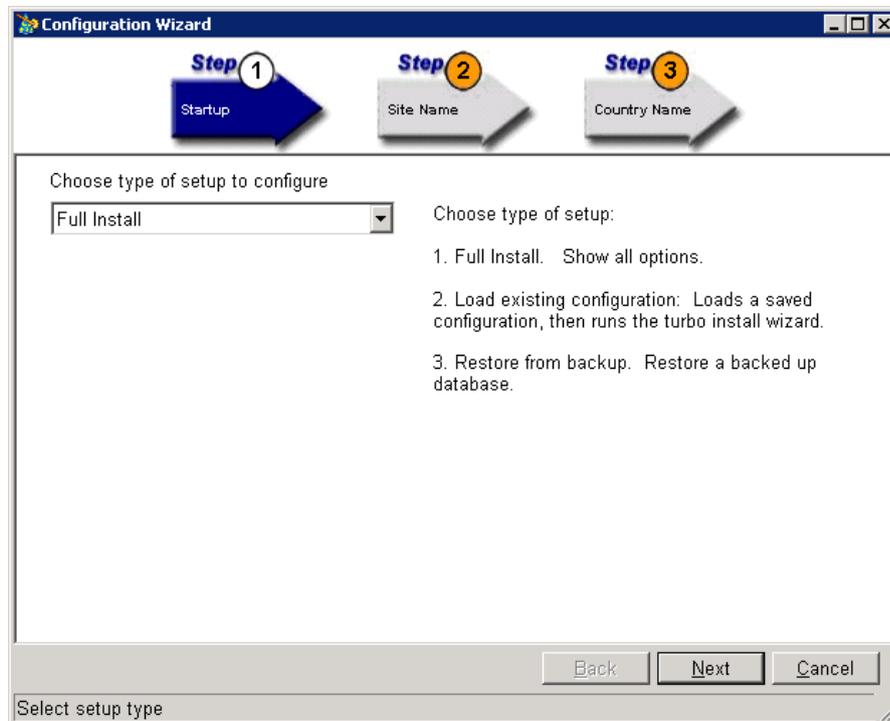
→ Press the **Save** button after completing the configurations.

Step 12 - The installation will continue to install the other CCS components → You will be prompted to **Reboot** → Select **Yes**.



Step 13 - After reboot, CCS Report Server will be started automatically together with **CCS Report Configuration Wizard**.

Step 13.1 - You will need to select your **install type** → Click **Next**.



There are 3 available options:

Full Install – run each step of the configuration wizard.

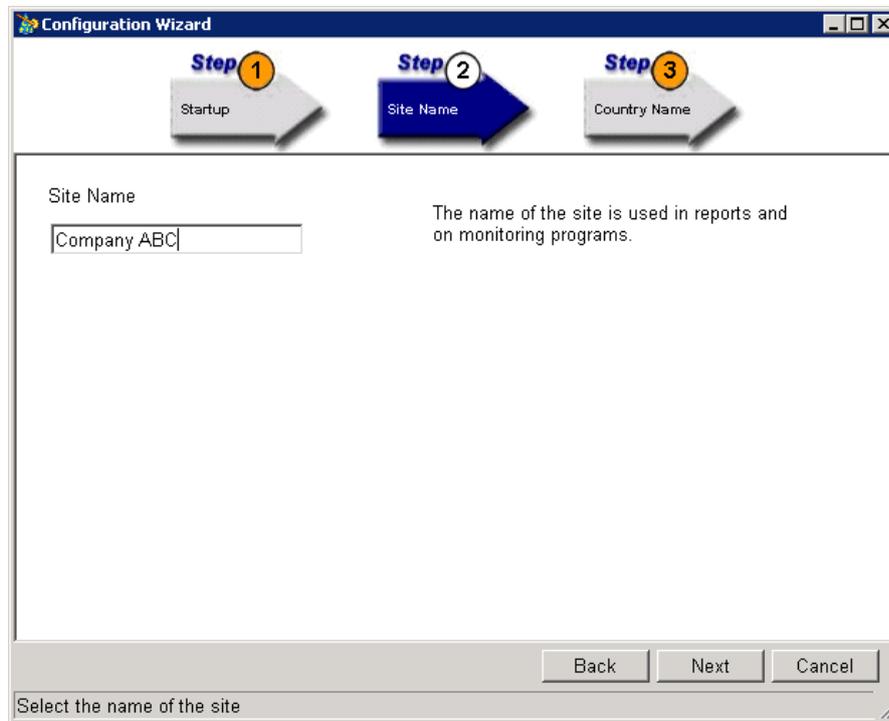
Load existing configuration – use a saved export file from the configuration wizard to create the new CCS Report configuration wizard.

Restore from Backup – use a Microsoft SQL backup file of the CCS Report database to create the new CCS Report configuration.

Note

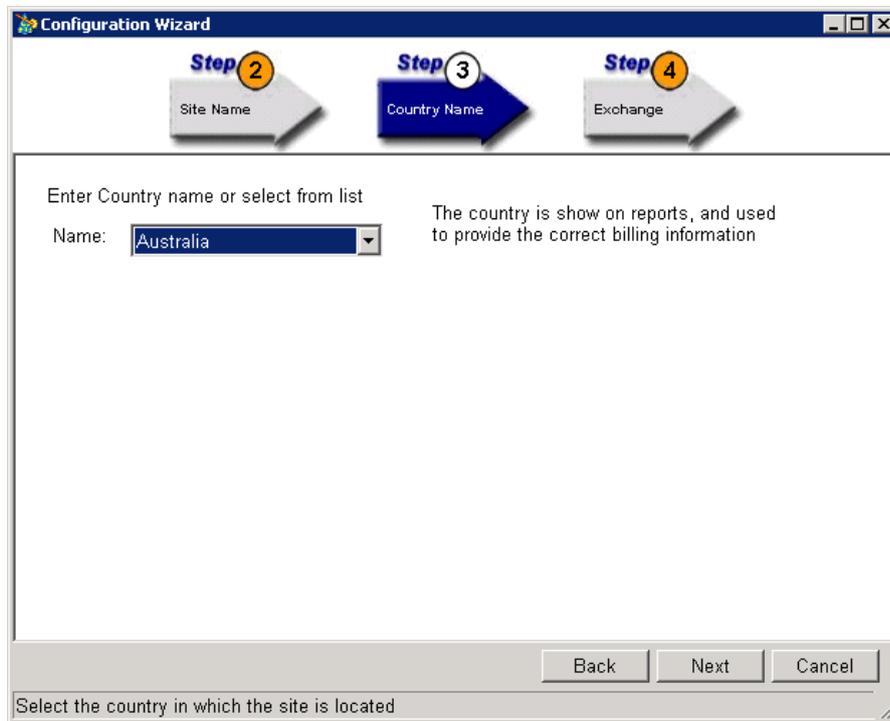
This document will only discuss the 'Full Install' type.

Step 13.2 - Enter the **site name** → Click **Next**.



Site Name – the name of the site.

Step 13.3 - Enter the **Country Name** for this site → Click **Next**.



Name – select the country for this site.

Step 13.4 – Enter the location (**Exchange**) details for this site → Click **Next**.

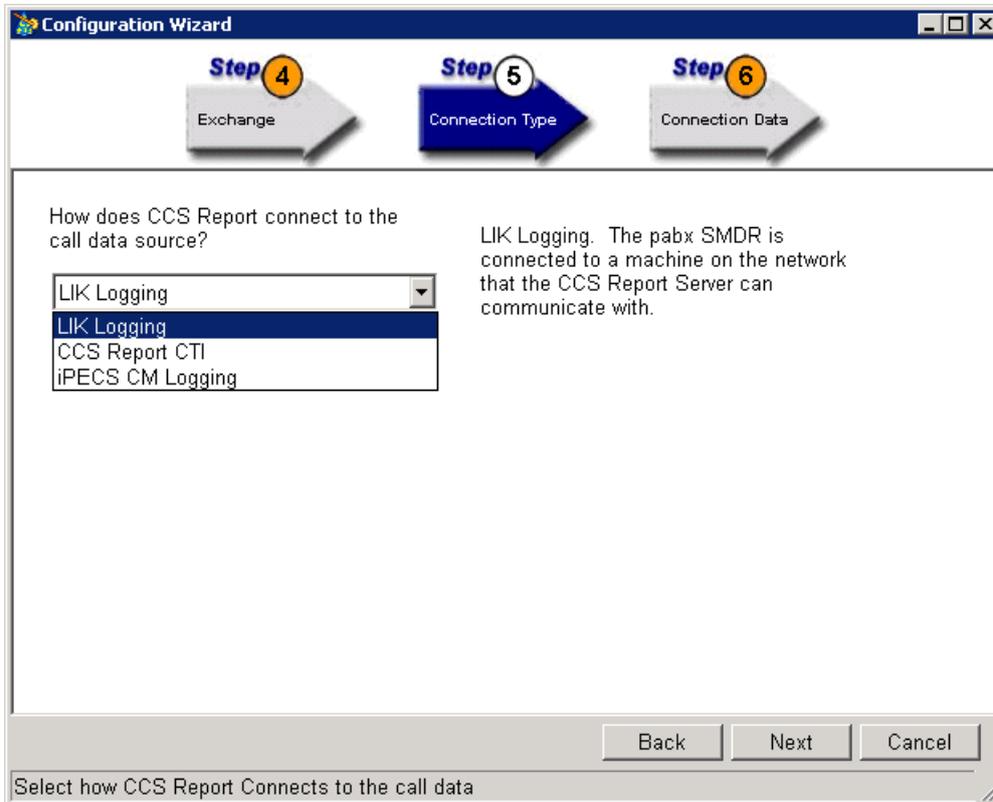
The screenshot shows a 'Configuration Wizard' window with three steps: Step 3 (Country Name), Step 4 (Exchange), and Step 5 (Connection Type). Step 4 is the active step. The main area contains the following elements:

- Instruction: "Enter local number or location (exchange), or select location (exchange) from list"
- Text box: "Local Number, or Location:" containing "0299591400" and a "Search" button.
- Dropdown menu: "Location:" with "Sydney" selected.
- Text box: "Selected Exchange" containing "Sydney".
- Help text: "The location (exchange) of the site is needed for call billing. The location (exchange) can be selected by either entering the local number in the text box, and clicking 'Search' or by choosing the name of the location from the drop down list."
- Buttons: "Back", "Next", and "Cancel".
- Status bar: "Select the exchange the site uses".

Local Number or Exchange Name – choose the exchange for the site from the drop down list. Alternatively the site’s phone number can be entered and click the ‘Select’ button to find the matching exchange.

Selected Exchange – shows the result of the Local Number search.

Step 13.5 - Select the **Connection Type** → Click **Next**.



There are 3 Connection Types that can be selected:

LIK Logging – connects to the iPECS LIK via TCP/IP connection. This requires the network address of the iPECS LIK plus port number.

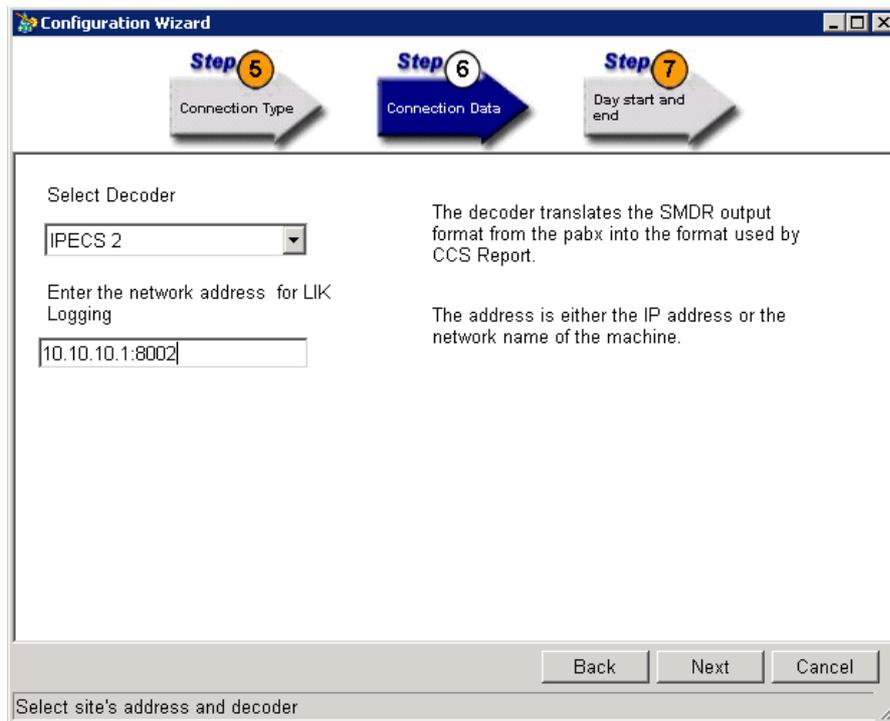
CCS Report CTI – connects to CTI server i.e. CCS Desk. This requires the network address of the CCS Desk Server.

iPECS CM Logging – A special mode for connection to the iPECS CM. This requires the network address of the iPECS CM as well as the port that it listens to.

Note

This document will only discuss the 'LIK Logging' connection mode.

Step 13.6 – Select the **Decoder** and enter the iPECS LIK **IP address** → Click **Next**.



A decoder must be selected to match the PABX make and model. The network address of the call data source must be entered in the edit box using the IP Address and port number, separated by a colon symbol.

For example:

IP Address = 192.168.0.1 and Port number = 9240

→ 192.168.0.1:9240

Step 13.7 - **Day start and end** allows you to configure the start and end of business during normal days and weekends → Click **Next**.

The screenshot shows a 'Configuration Wizard' dialog box with three steps: Step 6 (Connection Data), Step 7 (Day start and end), and Step 8 (Download intervals). Step 7 is the active step, highlighted in blue. The dialog contains four spin boxes for configuring hours: Day start hour (9), Day end hour (17), Weekend day start hour (9), and Weekend day end hour (17). To the right of these boxes is explanatory text: 'The alarm timeouts for CCS Report differ depending on whether it is day or night.' and 'The hours that start the times considered day or night are configured here.' At the bottom, there are 'Back', 'Next', and 'Cancel' buttons. A status bar at the very bottom reads 'Select the day start and end hours'.

Step 6	Step 7	Step 8
Connection Data	Day start and end	Download intervals

Day start hour:

Day end hour:

Weekend day start hour:

Weekend day end hour:

The alarm timeouts for CCS Report differ depending on whether it is day or night.

The hours that start the times considered day or night are configured here.

Back Next Cancel

Select the day start and end hours

Step 13.8 – The wizard will jump to Step 9 to configure the **inactivity timeouts** for each time zone. Only the number of downloads before inactivity can be changed. Timeouts can also be ignored for certain time zones → Click **Next**.

The screenshot shows a 'Configuration Wizard' window with three steps: Step 8 (Download intervals), Step 9 (Inactivity timeouts), and Step 10 (Sales Tax Configuration). Step 9 is the active step. The main area contains two sections for configuring inactivity timeouts. The first section has a text box for 'Day inactivity timeout' set to '01:00:00' and an unchecked 'Ignore timeout' checkbox. The second section has a text box for 'Night inactivity timeout' set to '04:00:00' and a checked 'Ignore timeout' checkbox. A third section repeats the 'Day inactivity timeout' and 'Night inactivity timeout' settings, both with checked 'Ignore timeout' checkboxes. To the right of the first section, there is explanatory text: 'If CCS Report doesn't receive any call data for at least the timeout period it will raise an alarm.' and 'The timeouts are different for day time and night time, and each can be set here.' At the bottom right are 'Back', 'Next', and 'Cancel' buttons. A status bar at the bottom left reads 'Set the inactivity timeouts for day and night'.

Section	Day inactivity timeout	Night inactivity timeout	Ignore timeout
Section 1	01:00:00	04:00:00	<input type="checkbox"/>
Section 2	01:00:00	04:00:00	<input checked="" type="checkbox"/>

Step 13.9 - Enter a **Sales Tax Name** and **Rate** → Click **Next**.

The screenshot shows a 'Configuration Wizard' dialog box with three steps: Step 9 (Inactivity timeouts), Step 10 (Sales Tax Configuration), and Step 11 (Line Group Configuration). Step 10 is the active step. The main area contains a 'Sales Tax Name' field with 'GST' entered, a 'Sales tax amount' field with '10.00' and a percentage sign, and a descriptive text box stating: 'The name and amount of sales tax is used for reporting and calculating the cost of calls.' At the bottom, there are 'Back', 'Next', and 'Cancel' buttons. A status bar at the very bottom reads 'Select the name and value of sales tax'.

Step	Description
Step 9	Inactivity timeouts
Step 10	Sales Tax Configuration
Step 11	Line Group Configuration

Sales Tax Name

Sales tax amount
 %

The name and amount of sales tax is used for reporting and calculating the cost of calls.

Back Next Cancel

Select the name and value of sales tax

Step 13.10 - Create the first **trunk group** for the site by providing a name and selecting a carrier. The list of carrier is determined by the country selected earlier → Click **Next**.

Note

More trunk groups can be created with CCS Report Manager.

The screenshot shows a 'Configuration Wizard' window with three steps: Step 10 (Sales Tax Configuration), Step 11 (Line Group Configuration), and Step 12 (Digit Modification). Step 11 is the active step. The main area contains a 'Trunk Group Name' text box with 'First Trunk Group' entered, and a 'Carrier' dropdown menu with 'Telstra Bus. Line Plus' selected. A text box on the right explains: 'Trunk lines are divided into trunk groups, each of which has a separate name for reporting, and calls outgoing on a trunk are all assigned a common carrier for the purpose of calculating call costs.' At the bottom are 'Back', 'Next', and 'Cancel' buttons. A status bar at the very bottom reads 'Select the name of the line group, and it's carrier'.

Step 13.11 - Create one **digit modification** settings for the trunk group, if applicable → Click **Next**.

Note

More digit modifications can be created with CCS Report Manager.

The screenshot shows a 'Configuration Wizard' window with three steps: Step 11 (Line Group Configuration), Step 12 (Digit Modification), and Step 13 (Extension Range). Step 12 is the active step. The main area contains a checkbox for 'Digit modification present?' which is checked. Below it are fields for 'Digit modification name' (containing 'First Digit Mod') and 'Prefix to match' (containing '1893'). There is a spinner box for 'Number of digits to remove from the front of a matching number' set to '4'. Below that are 'Prefix to add' (empty) and 'New carrier' (a dropdown menu showing 'WorldCom'). To the right of these fields are three columns of explanatory text. At the bottom right are 'Back', 'Next', and 'Cancel' buttons. A status bar at the bottom reads 'Define a digit modification made on reported numbers, if any'.

Step	Description
Step 11	Line Group Configuration
Step 12	Digit Modification
Step 13	Extension Range

Digit modification present?

Digit modifications are applied to dialed number as the first part of calculating the cost of a call.

Digit modification name: First Digit Mod Prefix to match: 1893

They can be used to modify or remove an unwanted prefix on a call, or change the carrier from the Trunk group default.

Number of digits to remove from the front of a matching number: 4

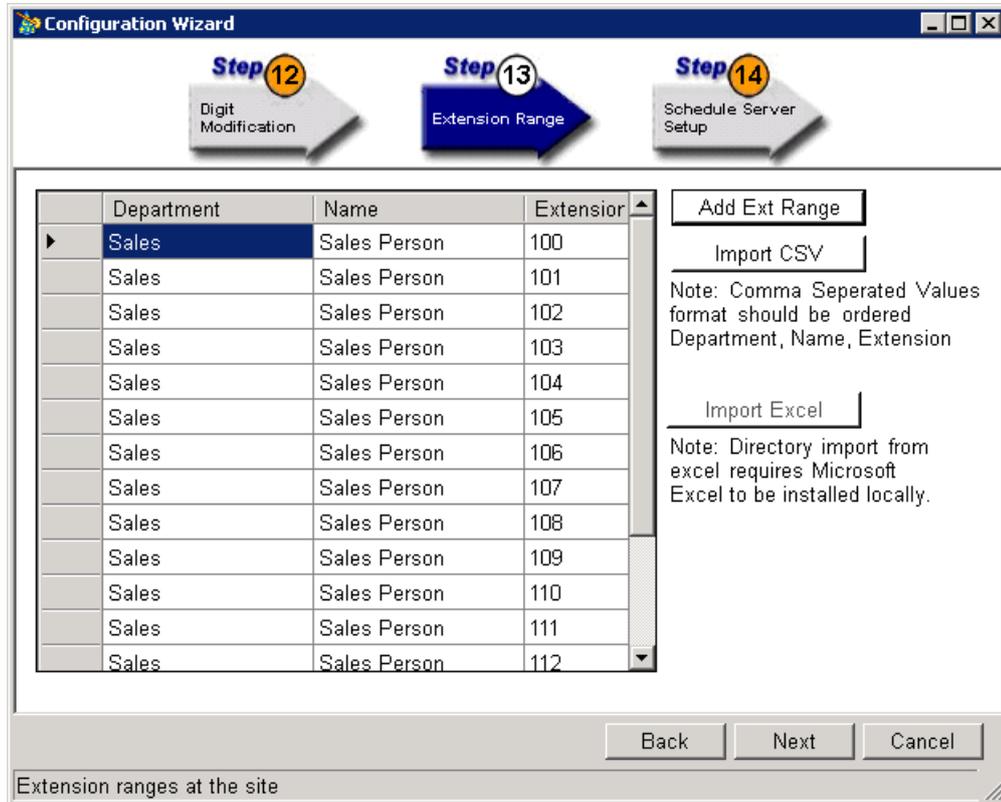
Prefix to add: New carrier: WorldCom

The digit modification will only be applied to numbers starting with the prefix to match. The specified number of digits will be removed from the front of the number, the prefix to add prepended, and the carrier set to the new carrier.

Back Next Cancel

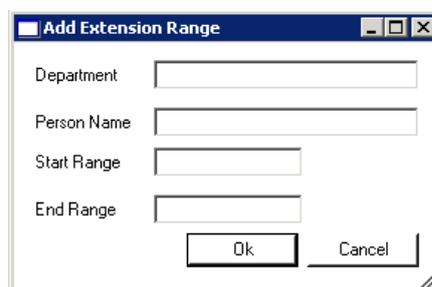
Define a digit modification made on reported numbers, if any

Step 13.12 - Add the **extensions** to be monitored and reported by CCS Report with this step →
Click **Next**.



There are several different methods to create or import your Extension Range:

Use the **Add Ext Range** tool to create range of new devices against a department or name.

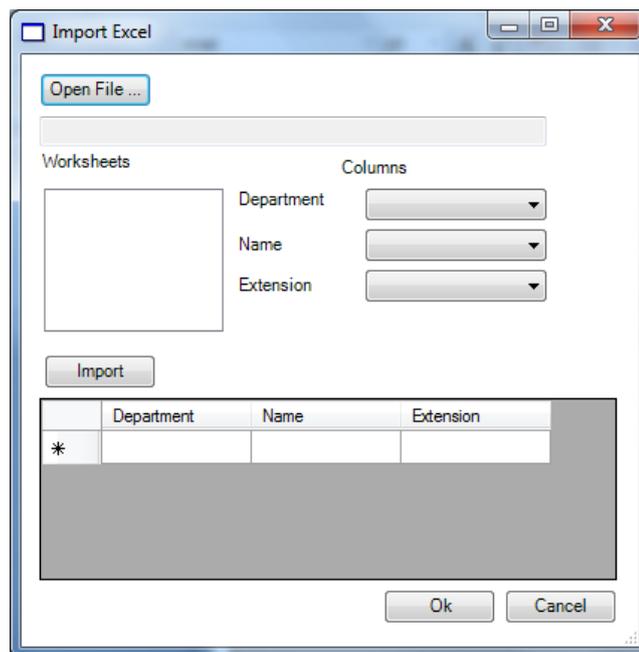


Import CSV – load a CSV file that contains the required information. The CSV file must be formatted correctly as per example below.

*DEPARTMENT, CONTACT, EXT
Support, Taupheeq Omar, 100*

Import Excel - load an Excel spreadsheet that contains the required information. To use this tool, Excel 2007 or later must be installed on the server machine.

- Select the workbook with the **Open File...** button.
- Select the **worksheets** and **columns** that contain the **Department, Name** and **Extension**.
- Click on the **Import** button.
- The imported extension range will be displayed on the cells at the bottom.



Step 13.13 - **Schedule Server Setup** allows you to configure **email** settings for CCS Report Server → Click **Next**.

Note

This must be configured with the same settings as CCS Report Configuration in Step 11.

The screenshot shows a 'Configuration Wizard' window with three steps: Step 13 (Extension Range), Step 14 (Schedule Server Setup), and Step 15 (Setup backups). Step 14 is the active step. The form contains the following fields and values:

Server name	mail.company.com	The CCS Report scheduler will send email via the defined email server.
Port	25	
Username		
Password		
Domain		
Timeout (ms)	60000	

At the bottom of the dialog are 'Back', 'Next', and 'Cancel' buttons. The status bar at the bottom reads 'Setup of main server used by Scheduling service'.

Server Name – the network address of the SMTP email server.

Port – the SMTP port number.

Username – the user account for SMTP, if required.

Password – the password for the user, if required.

Domain – the domain name for the user, if required.

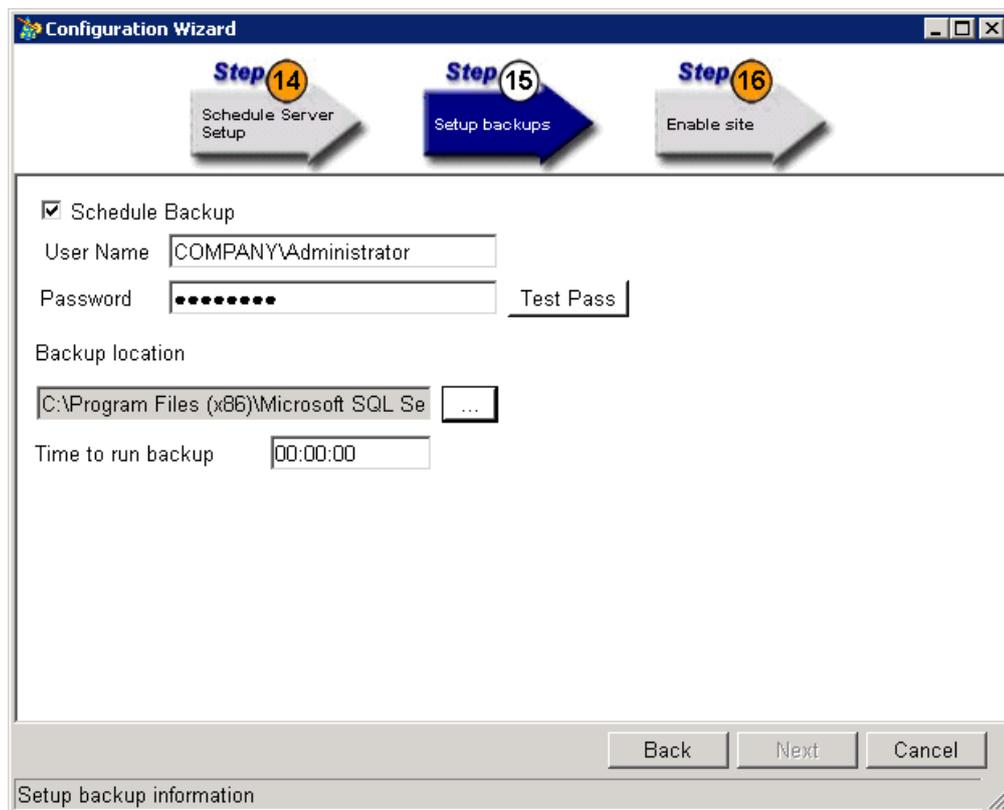
Timeout – the number of seconds it waits when attempting to send an email.

Step 13.14 - A **database backup** can be scheduled daily by the Configuration Wizard. This is important because the CCS Report database contains all the call data records and system configuration.

Note

This step can be skipped by disabling the 'Schedule Backup' box. Otherwise all information must be completed before it can move to the next step.

→ Click **Next**.



The screenshot shows the 'Configuration Wizard' window at Step 15, 'Setup backups'. At the top, three steps are shown as arrows: Step 14 'Schedule Server Setup' (disabled), Step 15 'Setup backups' (active), and Step 16 'Enable site' (disabled). The main area contains the following fields:

- Schedule Backup
- User Name:
- Password: Test Pass
- Backup location: ...
- Time to run backup:

At the bottom right are 'Back', 'Next', and 'Cancel' buttons. The status bar at the bottom left reads 'Setup backup information'.

Schedule Backup – enables the feature.

User Name – the Windows user with administrator privilege.

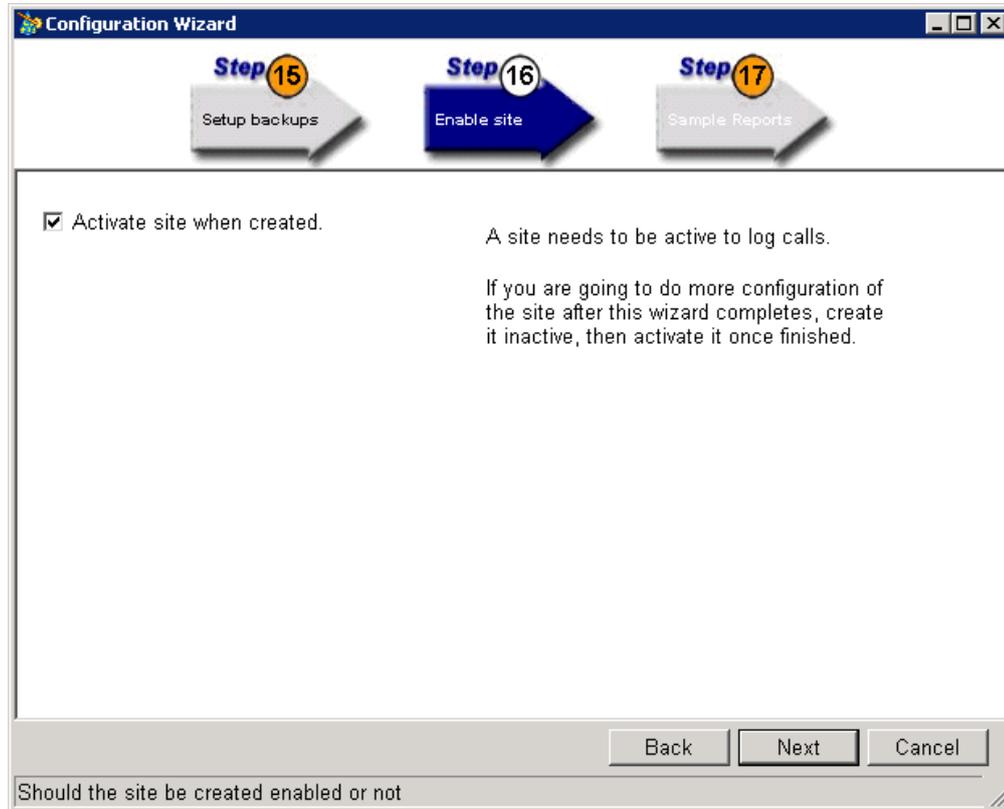
Password – the password to the Windows user.

Test Pass – used to test the username and password.

Backup Location – storage path and name of the backup file.

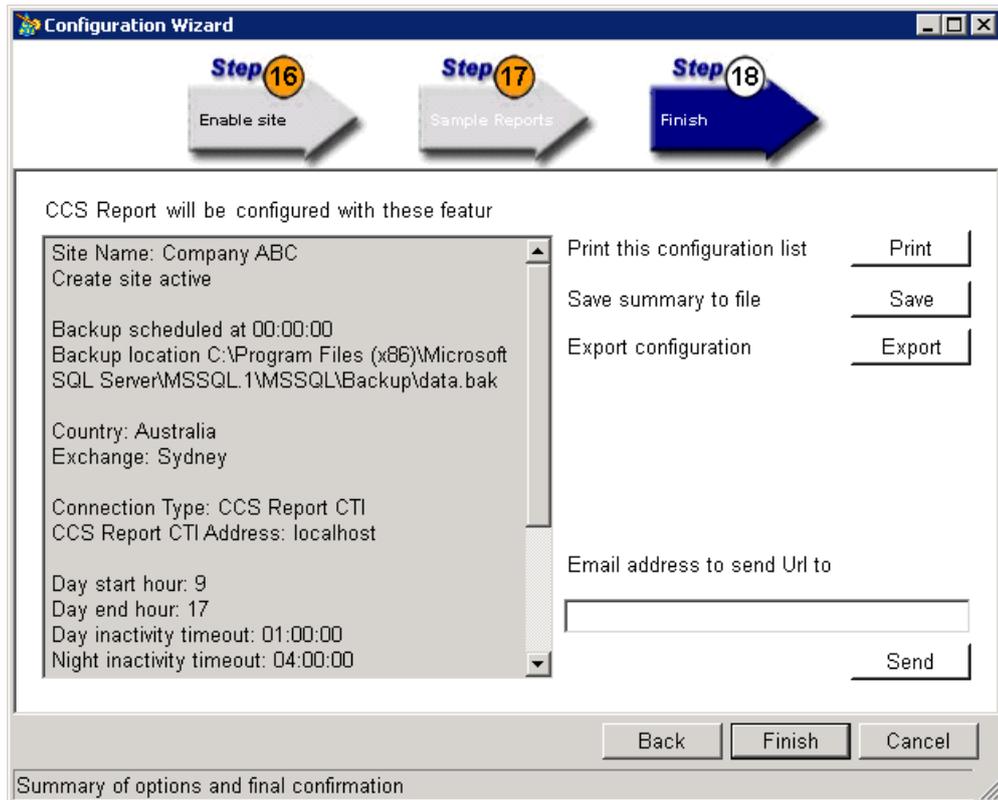
Time to Run Backup – the time when the backup task will be performed daily.

Step 13.15 - Select **Activate site when created** to enable CCS Report Server to start collecting call data records for this site → Click **Next**.



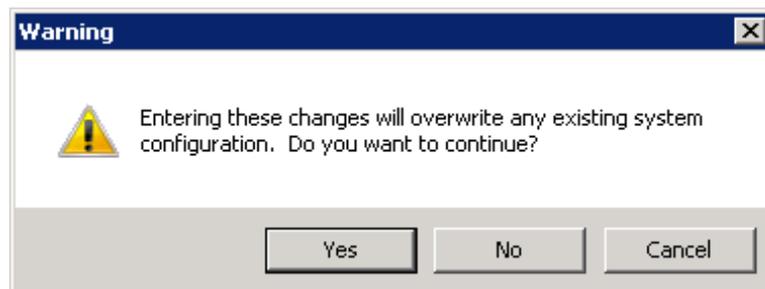
Step 13.16 - The wizard will jump to Step 18 which provides a **Summary** of all the settings used. The summary of the configurations can be **printed** and **saved as a text file**.

The configuration can also be **exported** so that it can be loaded into the configuration wizard. Please consult Step 13.1 for more information.



→ Click **Finish** to write the configuration into the database.

→ Click **Yes** on the warning. Any existing configuration will be overwritten and is not recoverable.

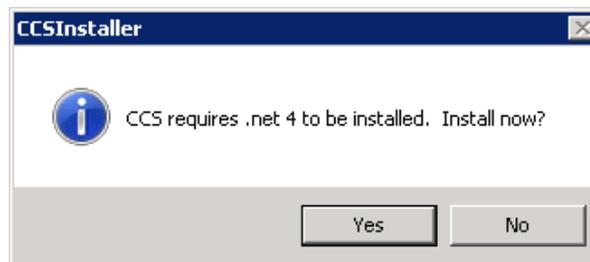


1.2.2 CCS Report Client Installation

Step 1 - Run the **CCSInstaller** application with Administrator privilege.



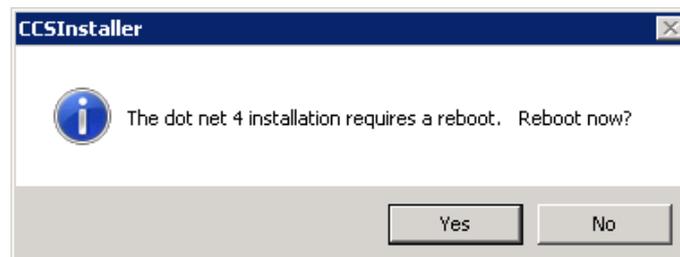
Step 2 - If **Microsoft .NET Framework 4.0** is not already installed, you will receive the message to install it → Select **Yes**.



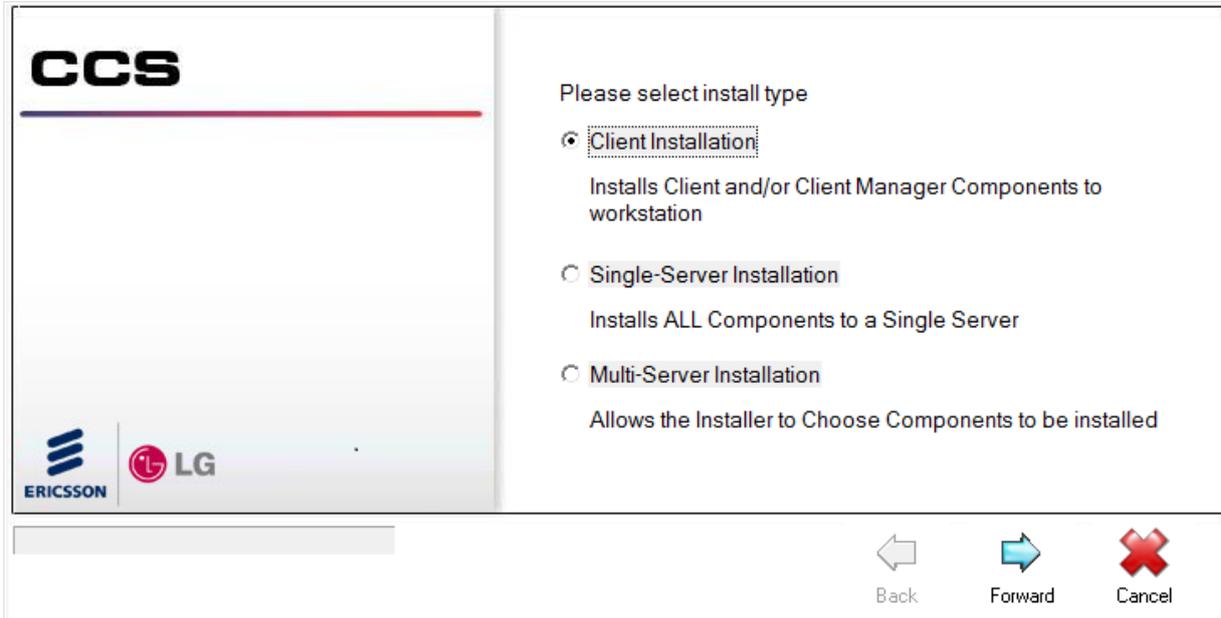
The installation may take a few minutes to complete.

NOTE

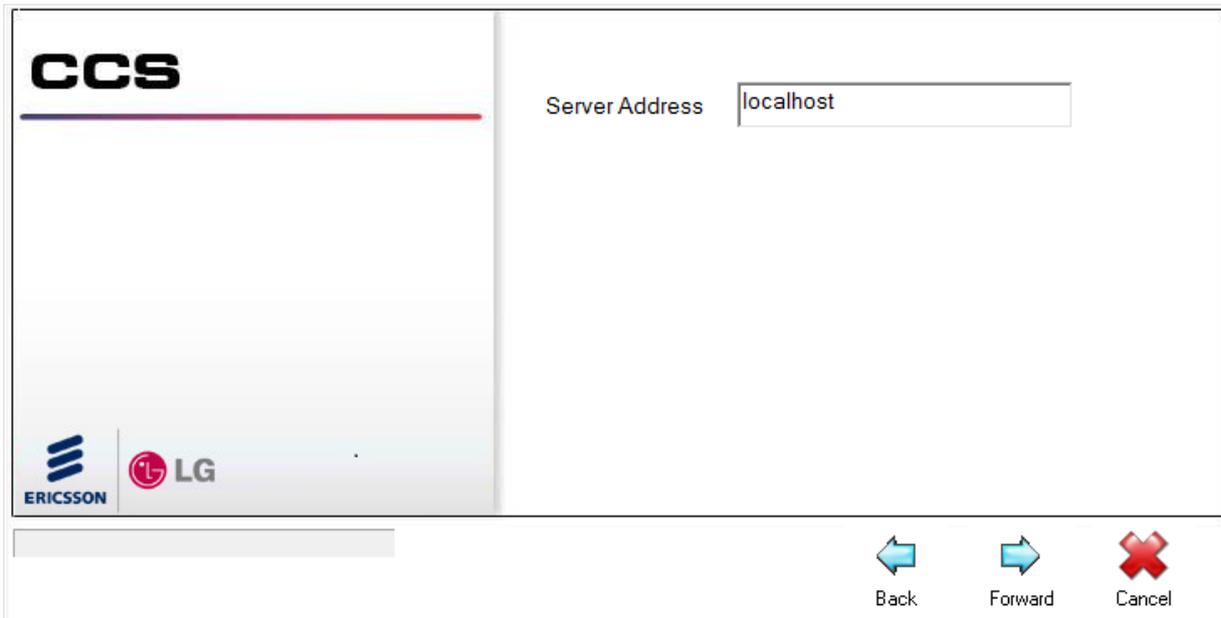
You will be prompted to **reboot** your system once the install completes. Please ensure you do the reboot before continuing with the install.



Step 3 - Once you log back in the CCS Installation will continue and you will receive the Option to Install the Client or Server → Select **Client Installation** → Click **Forward**.

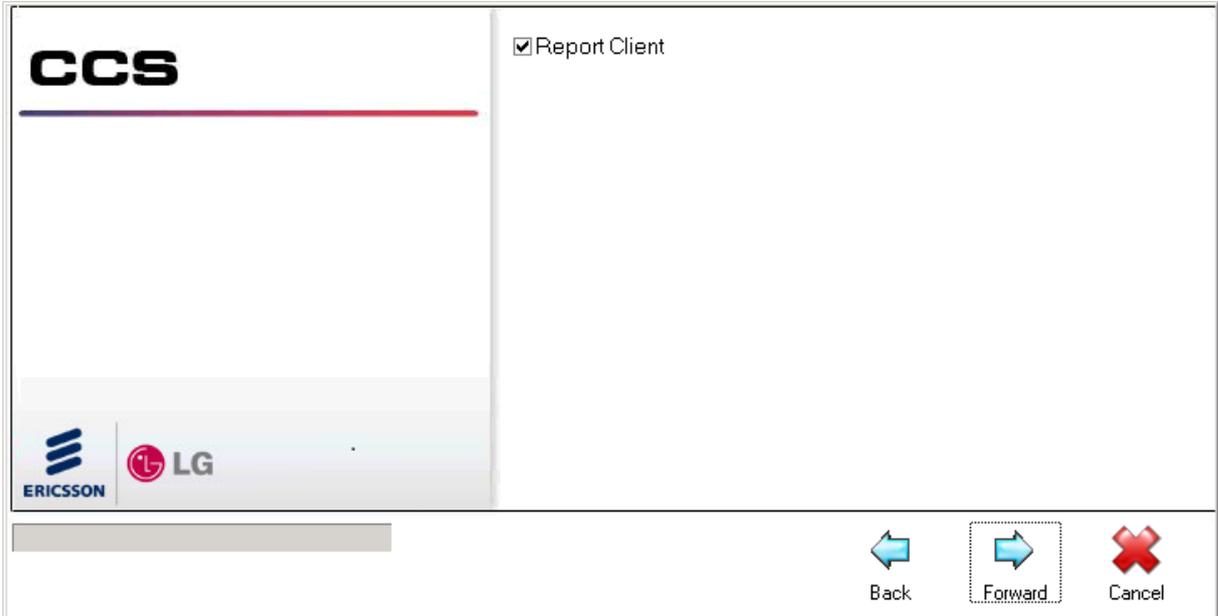


Step 4 - Enter the CCS Report Server address → Click **Forward**.

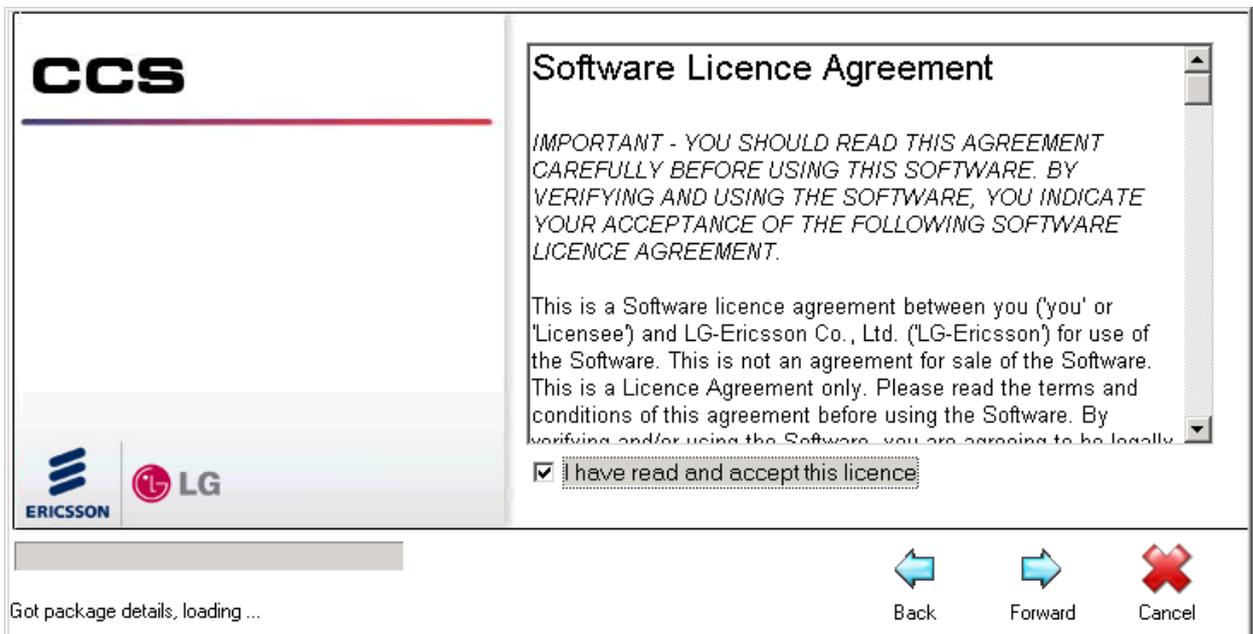


Step 5 - Choose the **CCS Report Client component** to be installed → Click **Forward**.

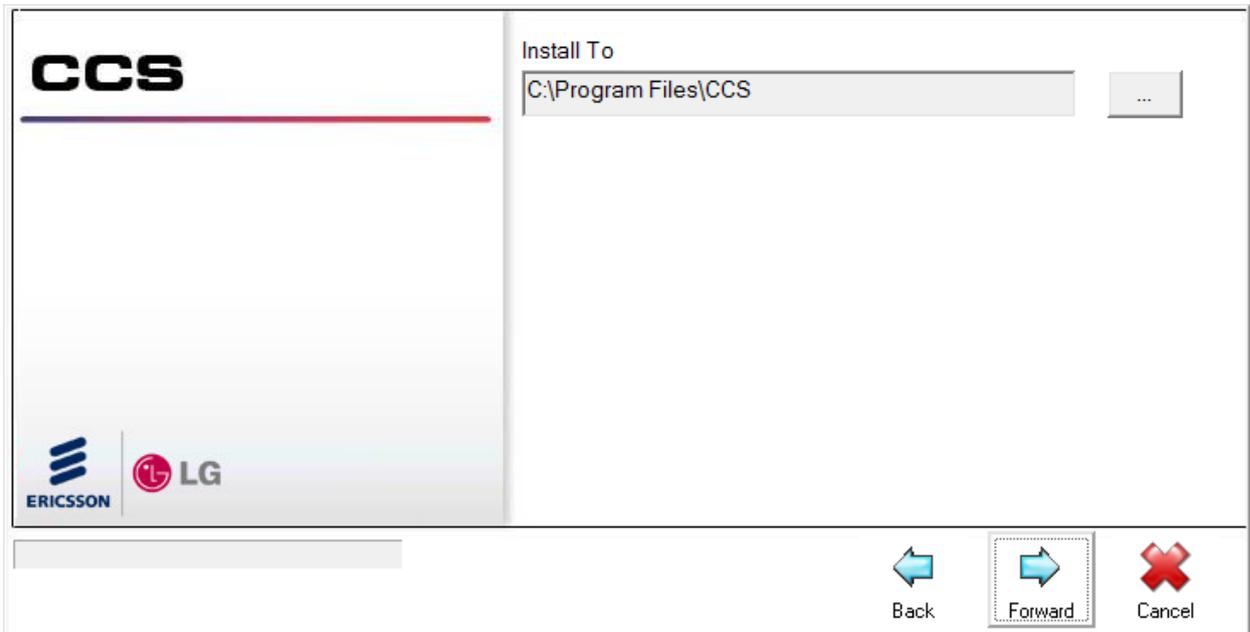
Other CCS components might also be listed if the server components are also running on the same server machine.



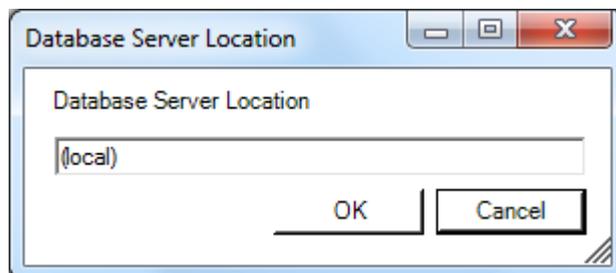
Step 6 - Read and agree to the **CCS Software License Agreement** → Click **Forward**.



Step 7 - Confirm the **installation path** for the CCS program files → Click **Forward**.



Step 8 - The installer will ask for the **location of the MSSQL database**.
Configure the correct IP address or machine name as applicable → Click **OK**.

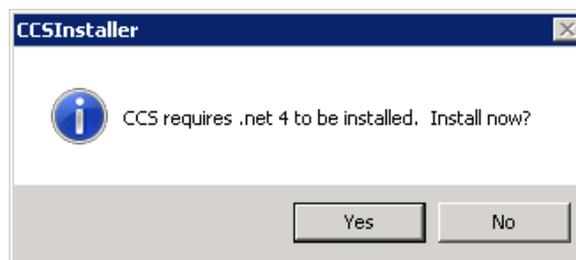


1.2.3 CCS Dashboard Client Installation

Step 1 - Run the **CCSInstaller** application with Administrator privilege.



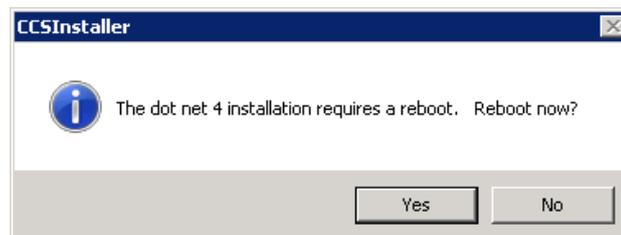
Step 2 - If **Microsoft .NET Framework 4.0** is not already installed, you will receive the message to install it → Select **Yes**.



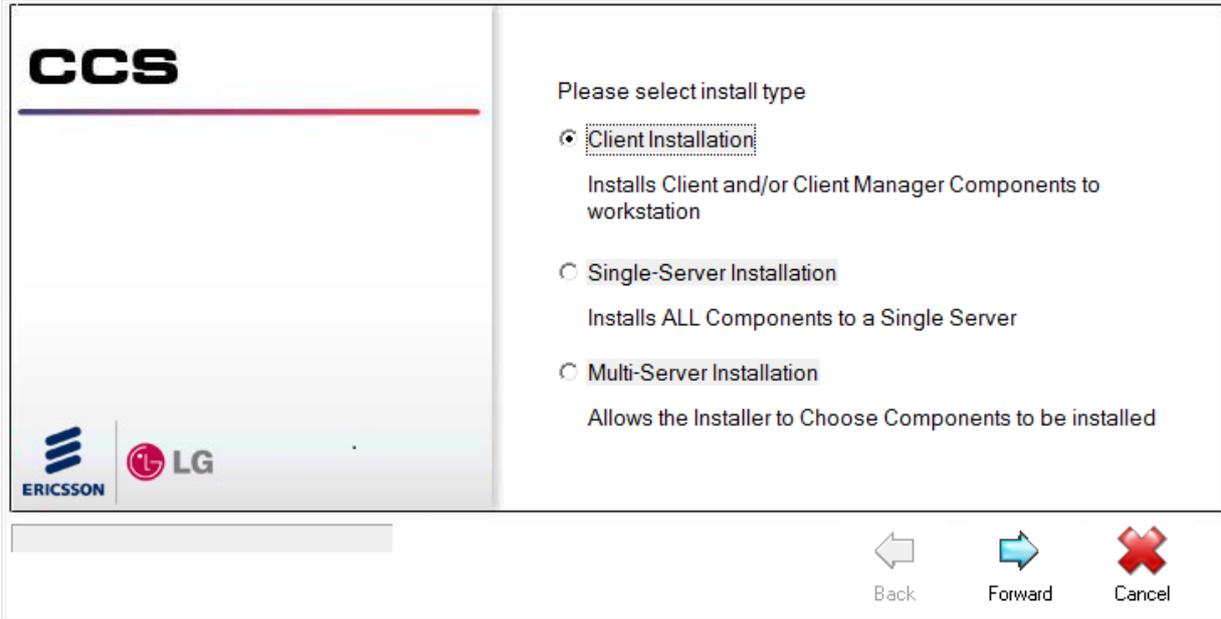
The installation may take a few minutes to complete.

NOTE

You will be prompted to **reboot** your system once the install completes. Please ensure you do the reboot before continuing with the install.



Step 3 - Once you log back in the CCS Installation will continue and you will receive the Option to Install the Client or Server → Select **Client Installation** → Click **Forward**.

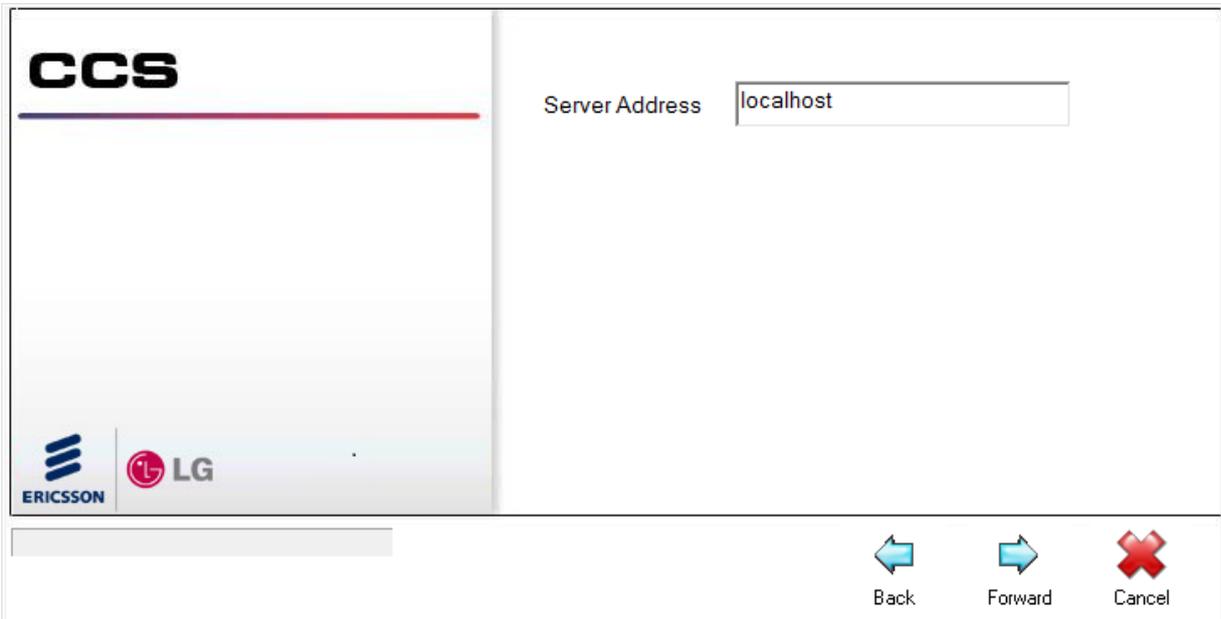


The screenshot shows the CCS installation wizard interface. On the left, there is a header with the 'CCS' logo and the Ericsson and LG logos at the bottom. The main content area is titled 'Please select install type' and contains three radio button options:

- Client Installation**
Installs Client and/or Client Manager Components to workstation
- Single-Server Installation**
Installs ALL Components to a Single Server
- Multi-Server Installation**
Allows the Installer to Choose Components to be installed

At the bottom right of the window, there are three navigation buttons: 'Back' (left arrow), 'Forward' (right arrow), and 'Cancel' (red X).

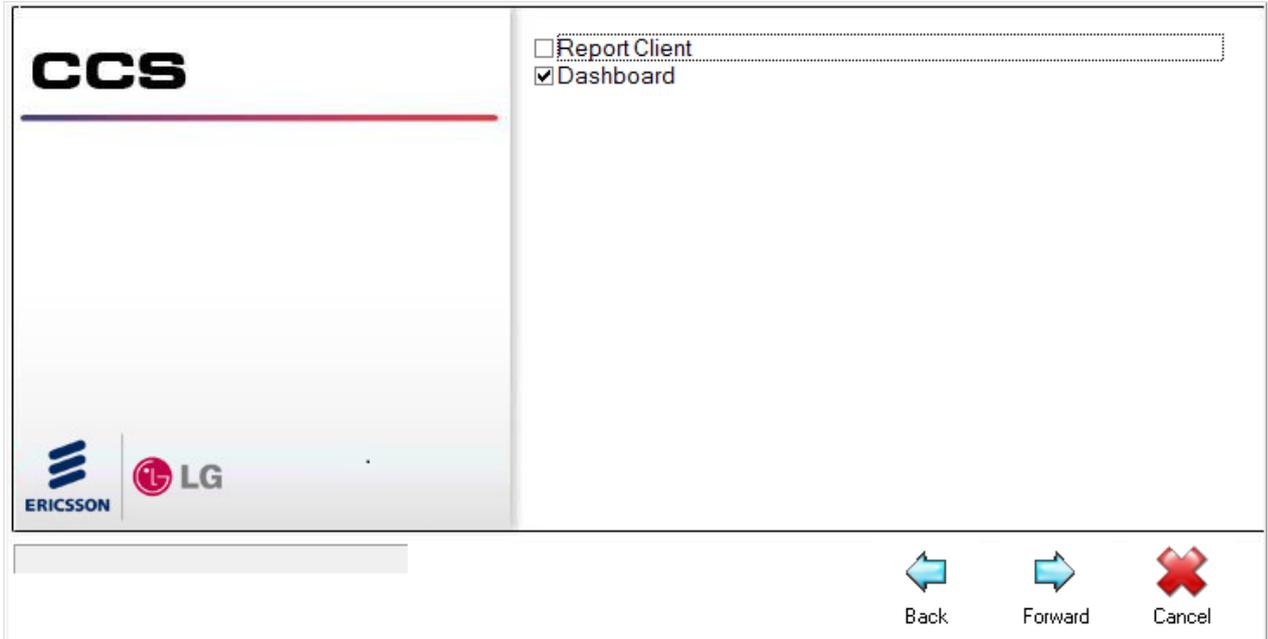
Step 4 - Enter the **CCS Dashboard Gateway address** → Click **Forward**.



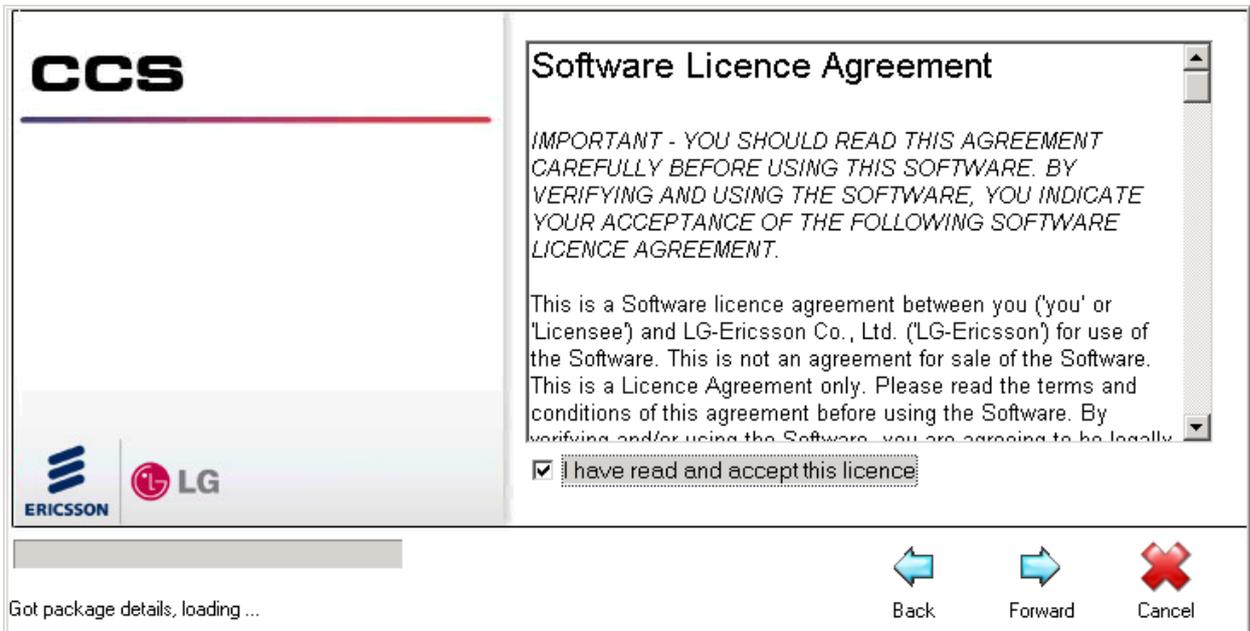
The screenshot shows the next step in the CCS installation wizard. The left sidebar remains the same with the 'CCS' and Ericsson/LG logos. The main content area now has a text input field labeled 'Server Address' containing the text 'localhost'. At the bottom right, the navigation buttons are 'Back' (left arrow), 'Forward' (right arrow), and 'Cancel' (red X).

Step 5 - Choose the **CCS Dashboard Client component** to be installed → Click **Forward**.

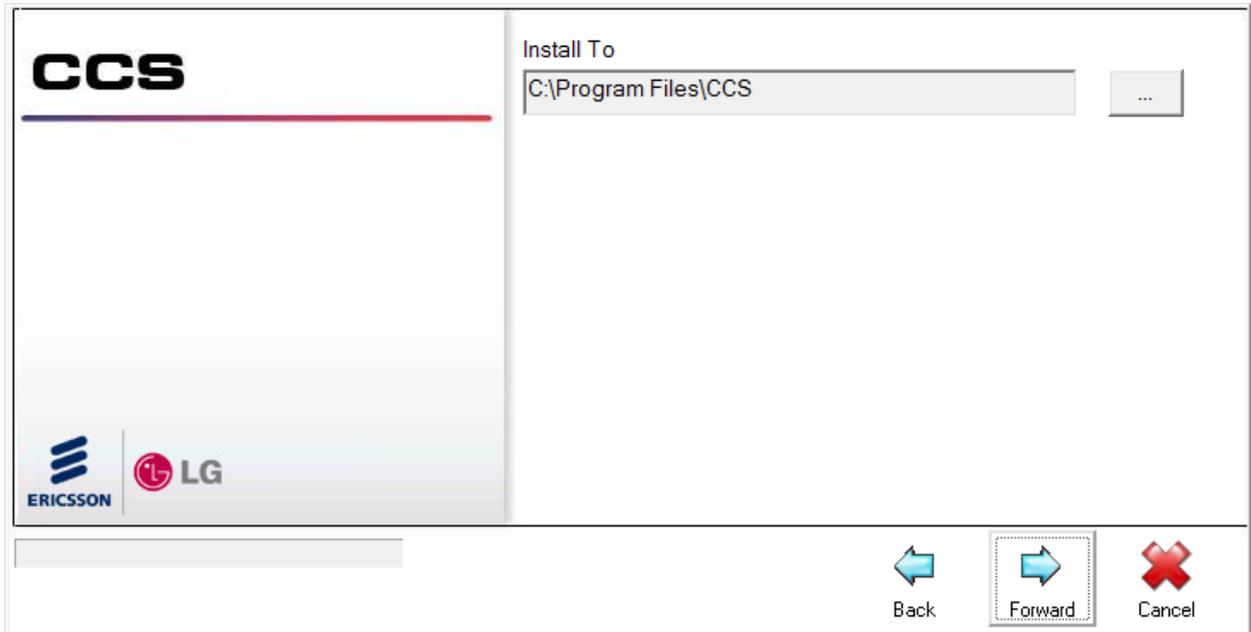
Other CCS components might also be listed if the server components are also running on the same server machine.



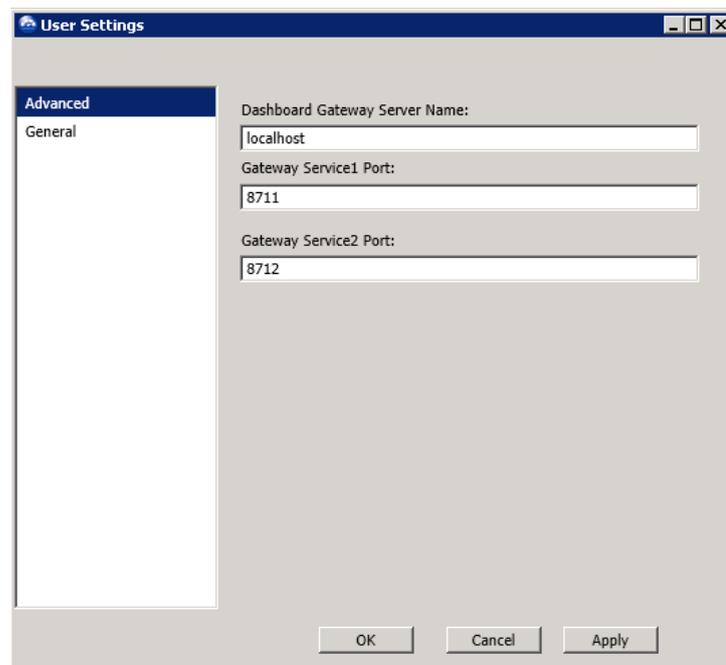
Step 6 - Read and agree to the **CCS Software License Agreement** → Click **Forward**.



Step 7 - Confirm the **installation path** for the CCS program files → Click **Forward**.



Step 8 - Run the **CCS Dashboard** using the shortcut on the desktop. The 'User Settings' configuration screen will be prompted so we can perform the initial configuration.



Enter the following configurations:

→ **Dashboard Gateway Server Name** – the name of the machine (or IP address) that hosts the CCS Dashboard Gateway service.

→ **Gateway Service1 Port** – it must be set to 8711.

→ **Gateway Service2 Port** – it must be set to 8712.

Step 9 - Click **OK** → The Dashboard must now be restarted.



2. iPECS CCS CHAT

2.1 Pre-Installation Requirements

The requirements for CCS Chat are divided into two parts:

- 3.1.1 **System Requirements** and
- 3.1.2 **Installation of CCS Desk**

2.1.1 System Requirements

The CCS Chat Server must meet the following minimum specifications.

CCS Chat Recommended Hardware				
Install Scope	Up to 100 Chat Per Day	Up to 300 Chat Per Day	Up to 600 Chat Per Day	More than 600 Chat Per Day
Dedicated Server Required	No	No	No	Yes
Dedicated SQL Server Required	No	No	No	No
Virtual Server Possible	Yes	Yes	Yes	Yes
Operating System	Windows 7 Professional or Windows Server 2008 R2	Windows Server 2008 R2	Windows Server 2008 R2	Windows Server 2008 R2
CPU	I3 2120 3.3GHz	I3 2120 3.3GHz	I3 2120 3.3GHz	I3 2120 3.3GHz
RAM	4 GB	4 GB	4 GB	8 GB
Disk Space	40 GB	40 GB	100 GB	200 GB

2.1.2 Installation of CCS Desk

Before CCS Chat can be configured, the installation of CCS Desk must be completed (or included). Please consult *CCS Desk Manual* Section 2 for more information.

2.2 Installation

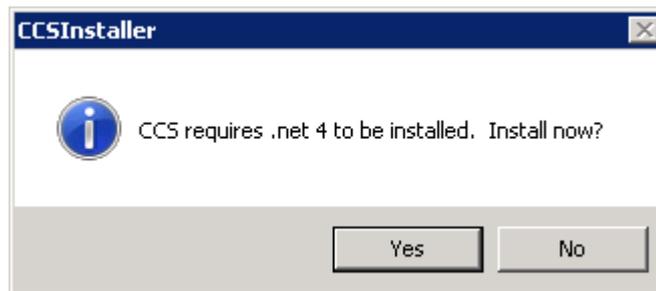
2.2.1 CCS Chat Server

This is for a new install of CCS Chat Server

Step 1 - Run the **CCSInstaller** application with Administrator privilege.



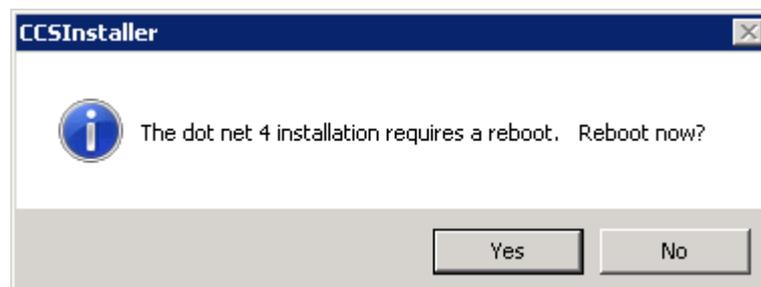
Step 2 - If **Microsoft .NET Framework 4.0** is not already installed, you will receive the message to install it → Select **Yes**.



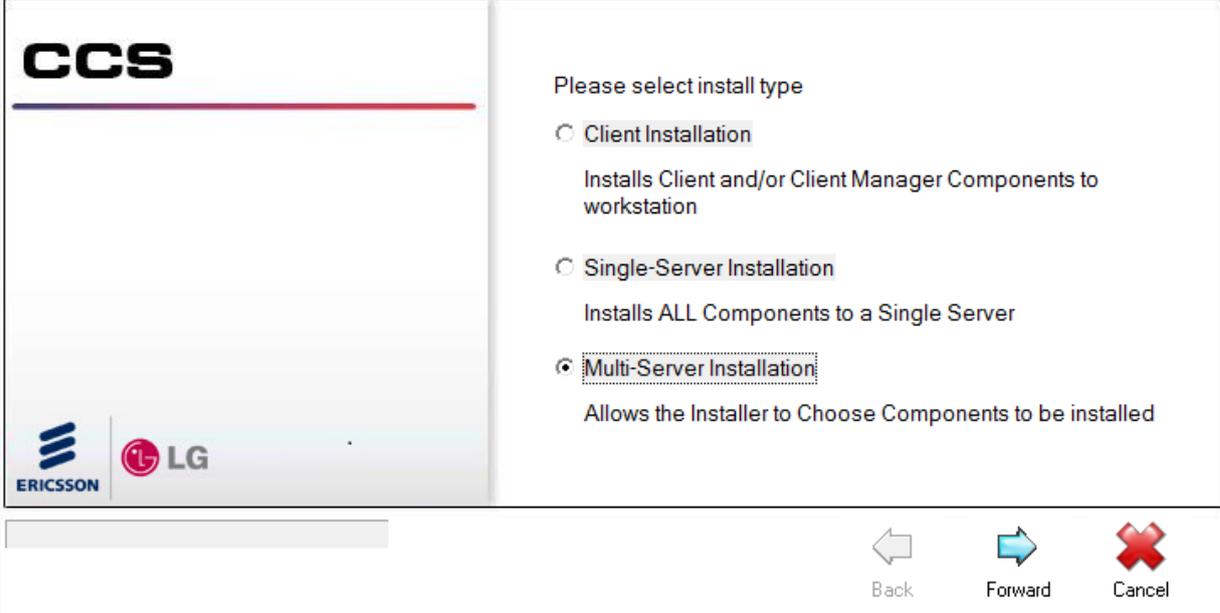
The installation may take a few minutes to complete.

NOTE

You will be prompted to **reboot** your system once the install completes. Please ensure you do the reboot before continuing with the install.



Step 3 - Once you log back in the CCS Installation will continue and you will receive the Option to Install the Client or Server → Select **Multi-Server Installation** → Click **Forward**.



The screenshot shows the CCS installation interface. On the left, there is a header with the 'CCS' logo and the Ericsson and LG logos at the bottom. The main content area is titled 'Please select install type' and contains three radio button options:

- Client Installation
Installs Client and/or Client Manager Components to workstation
- Single-Server Installation
Installs ALL Components to a Single Server
- Multi-Server Installation
Allows the Installer to Choose Components to be installed

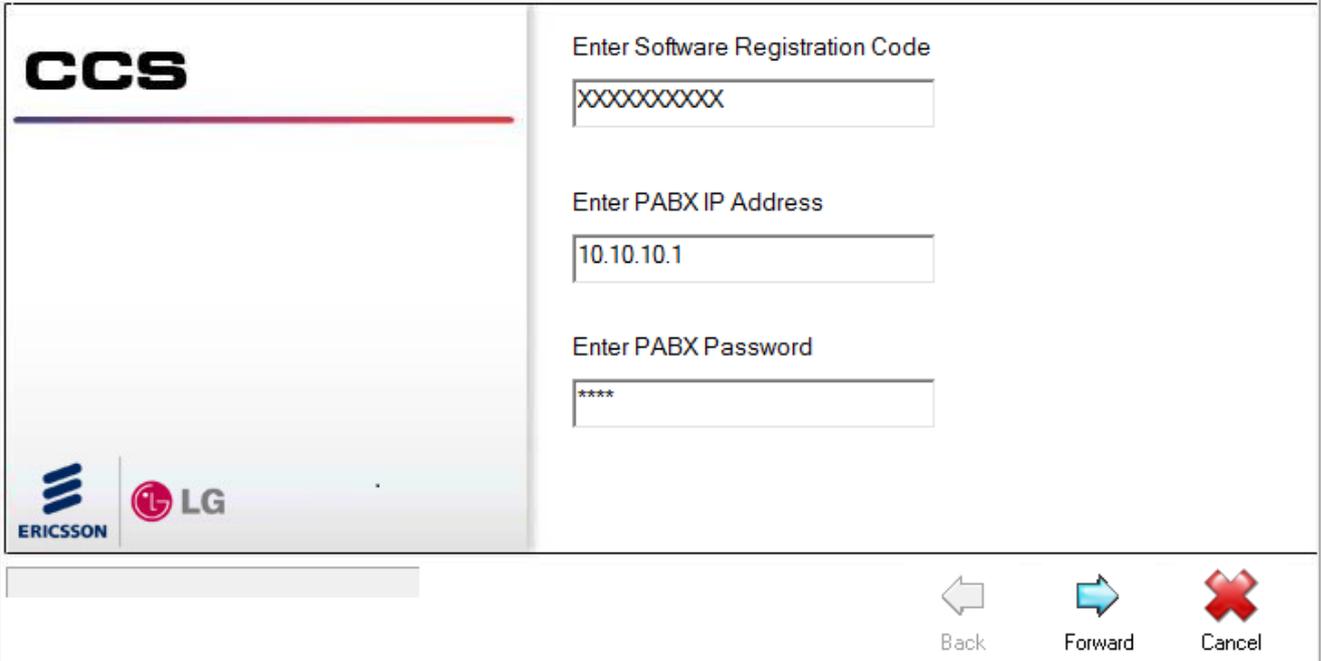
At the bottom right, there are three navigation buttons: 'Back' (left arrow), 'Forward' (right arrow), and 'Cancel' (red X).

Step 4 - At the next screen you will need to enter your **CCS license code** and **PABX details**.

Software Registration Code – the CCS license package code.

PABX IP Address – the IP address of the iPECS MFIM.

PABX Password – the administration password for iPECS.

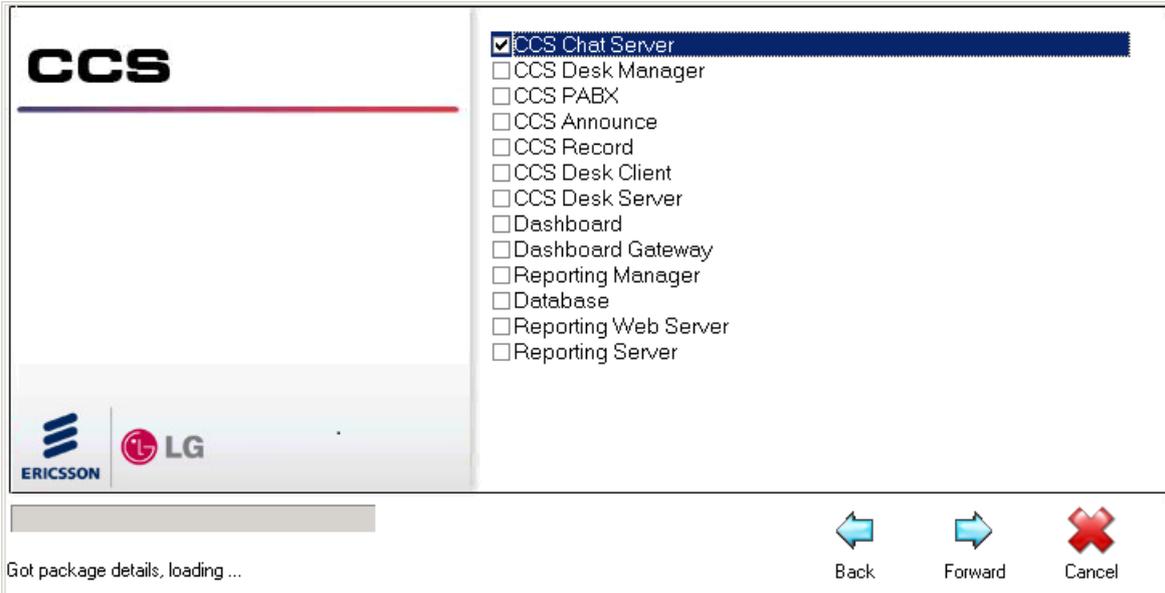


The screenshot shows the CCS installation interface for entering registration details. On the left, there is a header with the 'CCS' logo and the Ericsson and LG logos at the bottom. The main content area contains three input fields:

- Enter Software Registration Code**: A text box containing 'XXXXXXXXXX'.
- Enter PABX IP Address**: A text box containing '10.10.10.1'.
- Enter PABX Password**: A text box containing '****'.

At the bottom right, there are three navigation buttons: 'Back' (left arrow), 'Forward' (right arrow), and 'Cancel' (red X).

Step 5 - Select the **CCS Chat Server component** to be installed → Click **Forward**.



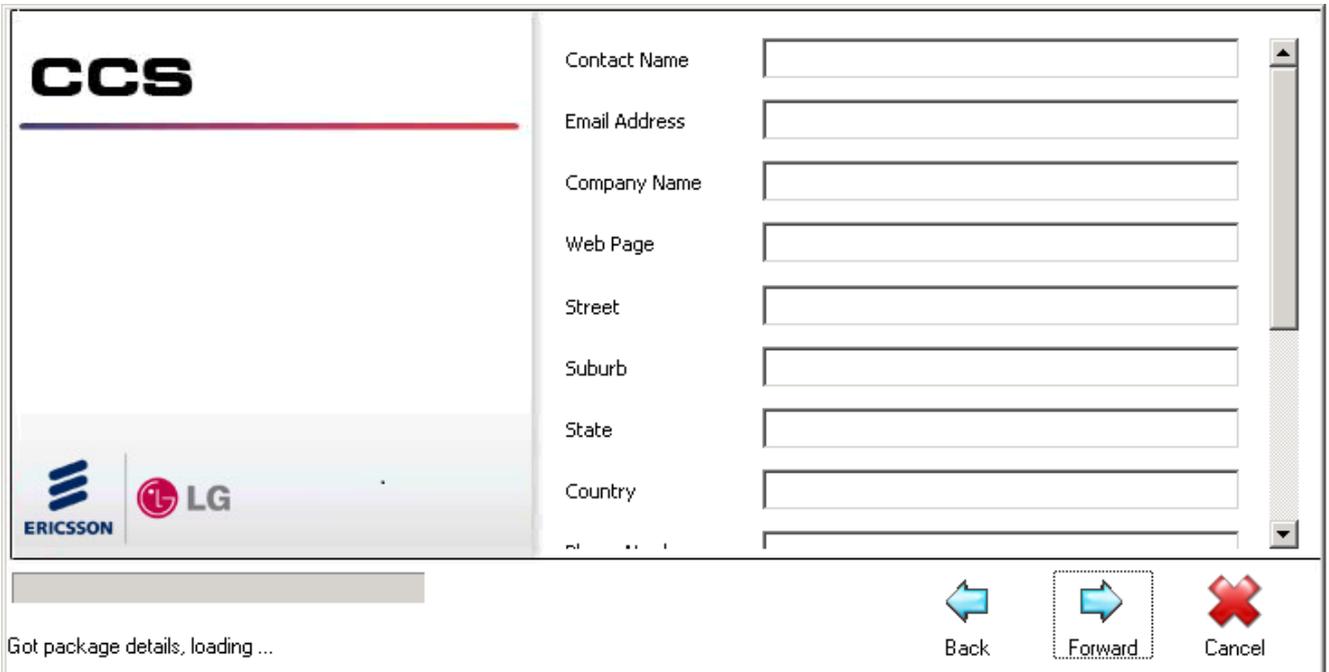
The screenshot shows the CCS installation interface. On the left, there is a header with the 'CCS' logo and the Ericsson and LG logos at the bottom. The main area on the right contains a list of components with checkboxes. The 'CCS Chat Server' component is selected, indicated by a blue highlight and a checked checkbox. Other components listed include CCS Desk Manager, CCS PABX, CCS Announce, CCS Record, CCS Desk Client, CCS Desk Server, Dashboard, Dashboard Gateway, Reporting Manager, Database, Reporting Web Server, and Reporting Server. At the bottom right, there are three buttons: 'Back' (left arrow), 'Forward' (right arrow), and 'Cancel' (red X).

<input checked="" type="checkbox"/>	CCS Chat Server
<input type="checkbox"/>	CCS Desk Manager
<input type="checkbox"/>	CCS PABX
<input type="checkbox"/>	CCS Announce
<input type="checkbox"/>	CCS Record
<input type="checkbox"/>	CCS Desk Client
<input type="checkbox"/>	CCS Desk Server
<input type="checkbox"/>	Dashboard
<input type="checkbox"/>	Dashboard Gateway
<input type="checkbox"/>	Reporting Manager
<input type="checkbox"/>	Database
<input type="checkbox"/>	Reporting Web Server
<input type="checkbox"/>	Reporting Server

Step 6 - Complete the **software registration form**.

The iPECS serial number that will be linked against the license is shown at the end of the form.

→ Click **Forward**.



The screenshot shows the CCS software registration form. On the left, there is a header with the 'CCS' logo and the Ericsson and LG logos at the bottom. The main area on the right contains a form with several input fields for registration details: Contact Name, Email Address, Company Name, Web Page, Street, Suburb, State, and Country. At the bottom right, there are three buttons: 'Back' (left arrow), 'Forward' (right arrow, which is highlighted with a dotted border), and 'Cancel' (red X).

CCS

State

Country

Phone Number

Region/City

PostCode

Reseller Name

Pabx Serial Number

ERICSSON LG

Got package details, loading ...

Back Forward Cancel

Step 7 - Read and agree to the **CCS Software License Agreement** → Click **Forward**.

CCS

Software Licence Agreement

IMPORTANT - YOU SHOULD READ THIS AGREEMENT CAREFULLY BEFORE USING THIS SOFTWARE. BY VERIFYING AND USING THE SOFTWARE, YOU INDICATE YOUR ACCEPTANCE OF THE FOLLOWING SOFTWARE LICENCE AGREEMENT.

This is a Software licence agreement between you (you' or 'Licensee') and LG-Ericsson Co., Ltd. (LG-Ericsson) for use of the Software. This is not an agreement for sale of the Software. This is a Licence Agreement only. Please read the terms and conditions of this agreement before using the Software. By verifying and/or using the Software, you are agreeing to be legally bound by the following terms and conditions.

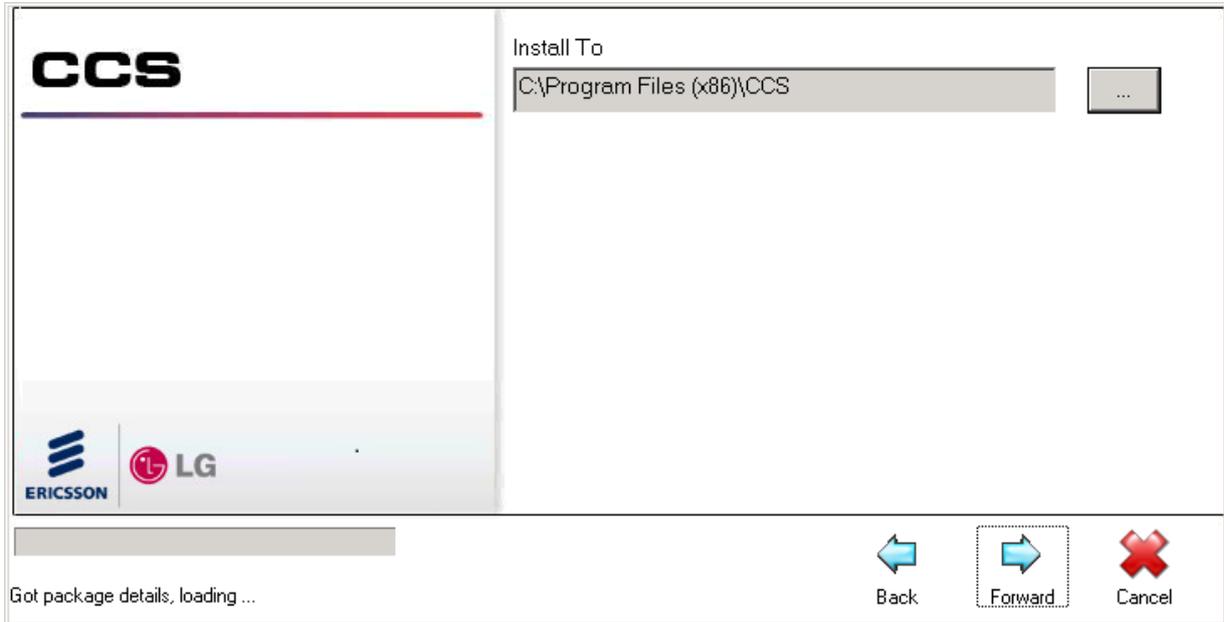
I have read and accept this licence

ERICSSON LG

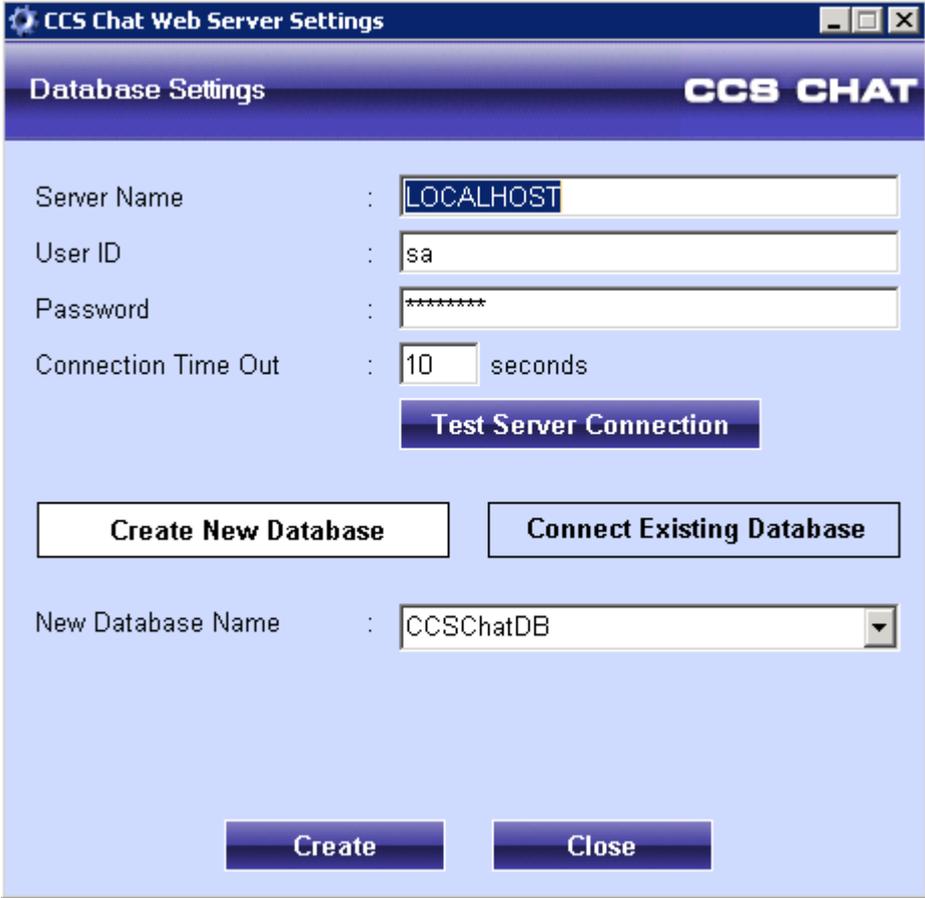
Got package details, loading ...

Back Forward Cancel

Step 8 - Confirm the **installation path** for the CCS program files → Click **Forward** to start the installation.



Step 9 - The **CCS Chat Web Server Settings** will be launched automatically when the installation finishes. This application helps us to create / configure the SQL database for CCS Chat.



The screenshot shows a Windows-style dialog box titled "CCS Chat Web Server Settings". The dialog has a blue header with "Database Settings" on the left and the "CCS CHAT" logo on the right. Below the header, there are four labeled input fields: "Server Name" (containing "LOCALHOST"), "User ID" (containing "sa"), "Password" (containing "*****"), and "Connection Time Out" (containing "10" followed by "seconds"). Below these fields is a "Test Server Connection" button. Further down are two buttons: "Create New Database" and "Connect Existing Database". At the bottom, there is a "New Database Name" dropdown menu showing "CCSChatDB". At the very bottom of the dialog are two buttons: "Create" and "Close".

Server Name – the machine name or IP address of the server machine, followed by the instance name if applicable.

User ID – the SQL username. Use 'sa'.

Password – the password to SQL account i.e. the 'sa' password.

Connection Time Out – keep default.

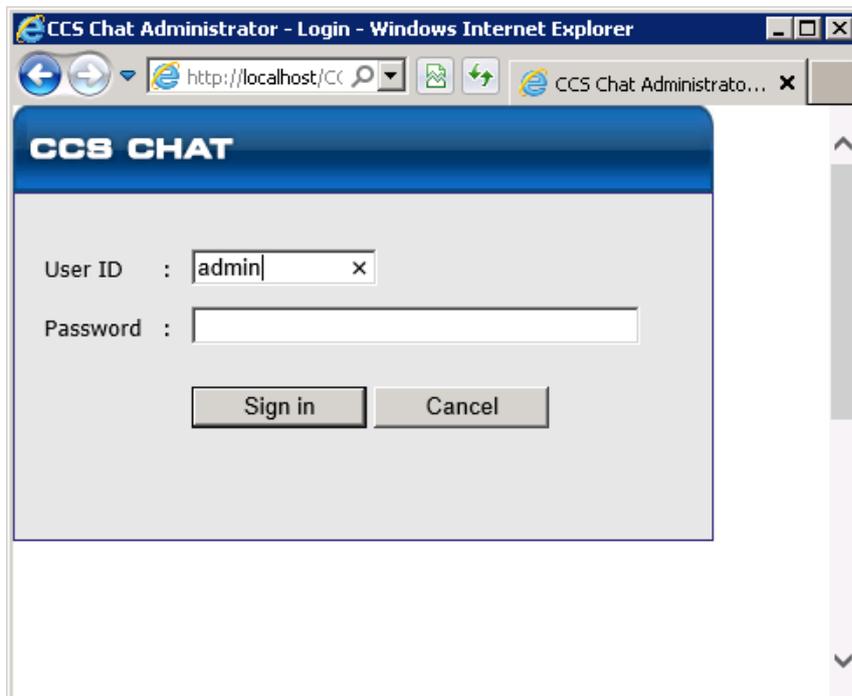
→ Click **Create New Database** → Click **Create** button to start the process.

Step 10 - We need to make several configurations with the **CCS Chat Admin page**.

The admin page can be accessed from the CCS Chat server by opening the address below with a web browser: **<http://localhost/CCSChat/AdminPage>**

User ID is **admin**

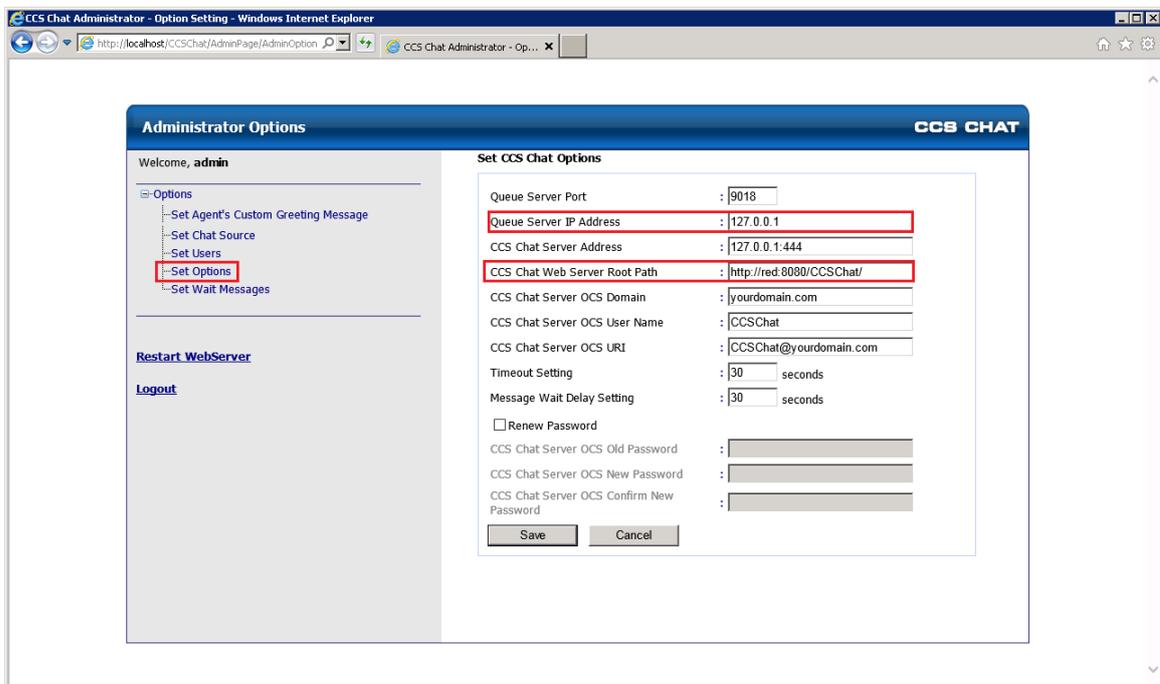
Password is blank by default.



Step 11 - Click **Set Options** and ensure the following configurations are correct:

- **Queue Server IP address:** the IP address of the CCS Desk server. 127.0.0.1 can be used if CCS Desk is running on the same machine.
- **CCS Chat Web Server Root Path:** this must be changed to the proper URL with the correct web server name or IP address. For example: **http://red/CCSChat/**.

Port configuration might be required when the web administrator has manually modified the CCS Chat website binding configuration in IIS. The screenshot below shows the required configuration when the CCS Chat website is bound to port 8080.

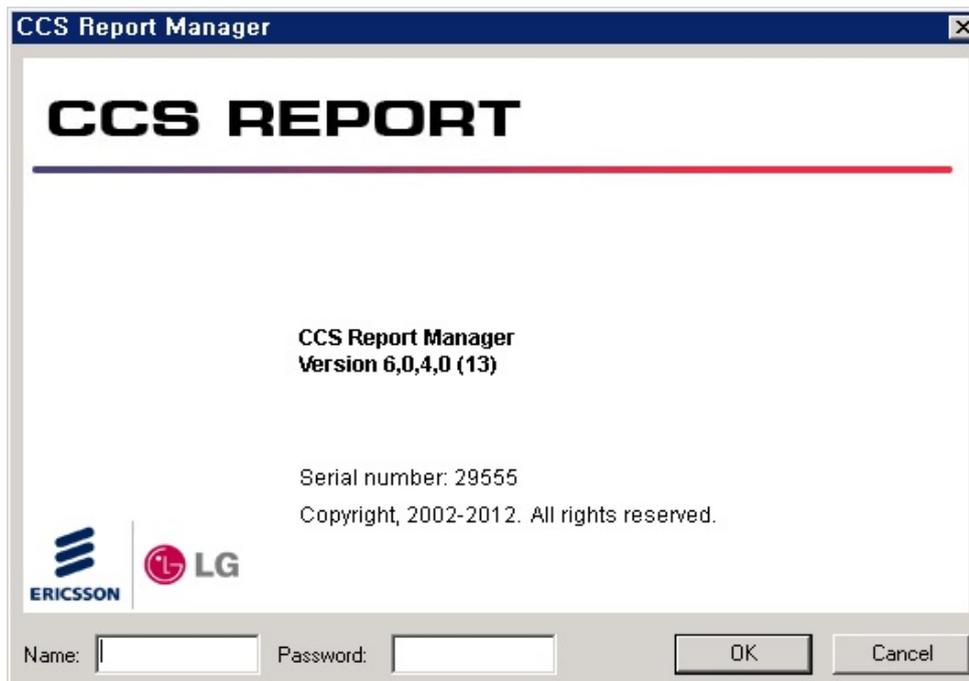
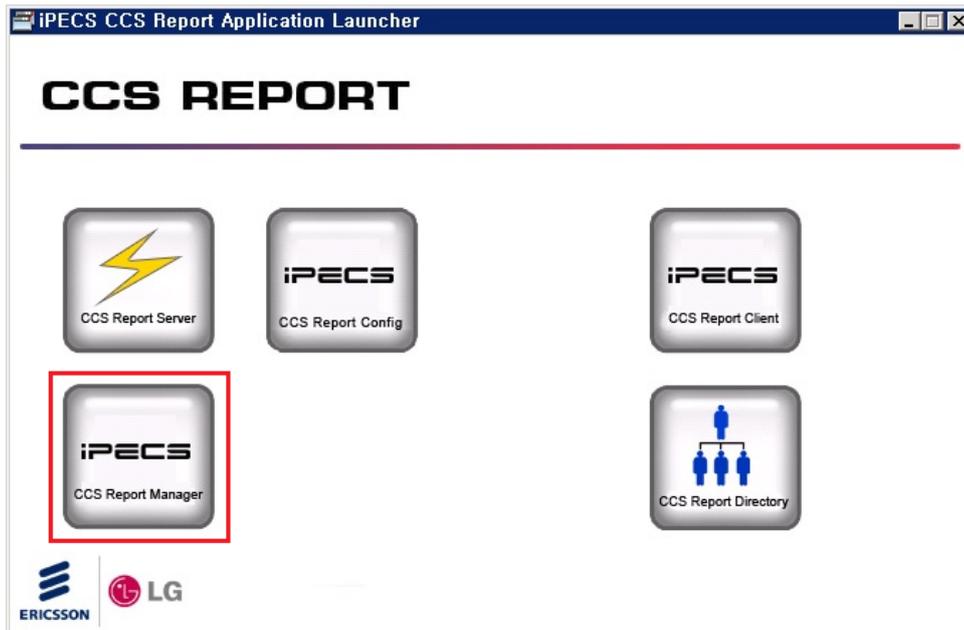


→ Once all settings are configured, click **Save** → Click **OK** to restart the web server.

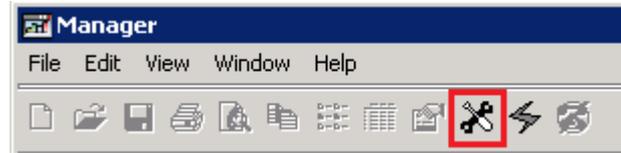
3. CONFIGURING CCS REPORT

3.1 Using CCS Report Manager

Further CCS Report configurations can be done with the CCS Report Manager. Run **CCS Report Manager** from the CCS Report Application Launcher.

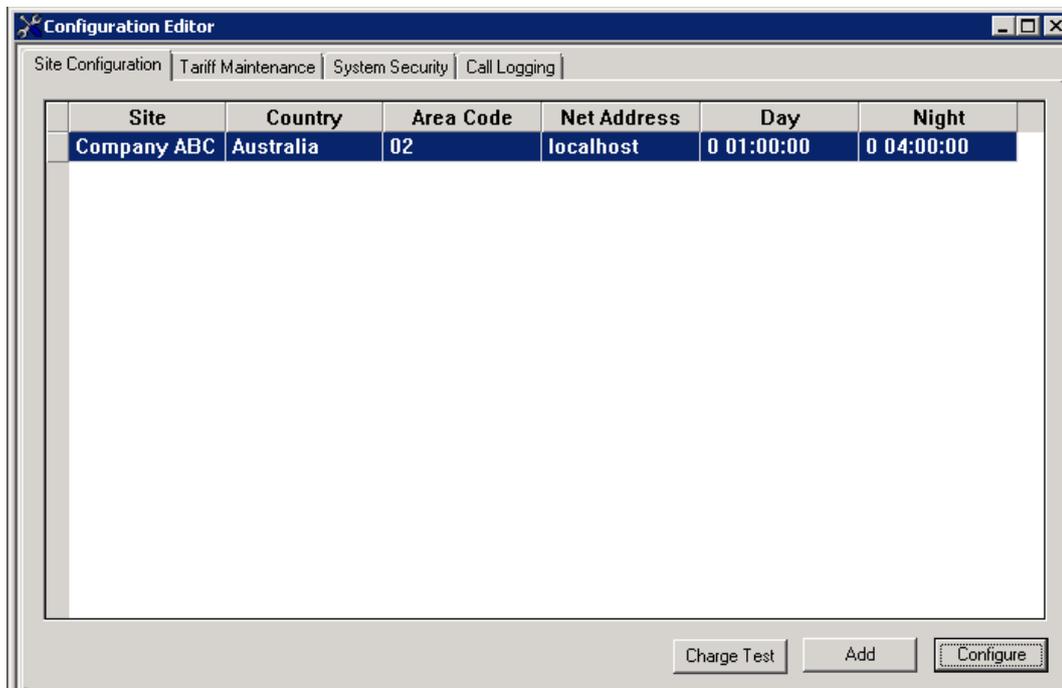


Use the same CCS Report credentials which by default is set as username 'Administrator' with no password. On the main screen of CCS Report Manager, click on the *Configuration Editor* icon.



3.1.1 Site Configuration

In the 'Site Configuration' screen is a list of the sites configured for this installation of CCS Report.

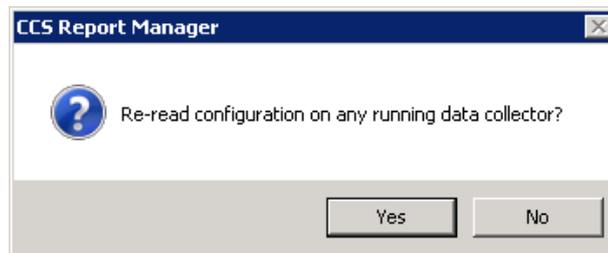


For each site there are columns showing the site's name, the country in which the site is located, the area code of the site, the network address of the site and the interval between downloads for both the day and the night.

Assuming the CCS Report license allows multiple sites, a new site can be added by clicking the **Add** button. This will add a new, blank site and open the site's configuration dialog. Without proper license, the 'Add' button will be disabled. A site can be deleted by clicking the small red trash can icon  to the left of the site. There must be at least one site, and so the first site,

which comes in a default state with the system, cannot be deleted. A pre-existing site can be edited by either double clicking its entry on the list, or by highlighting it and clicking the **Configure** button.

To save all changes made in the Configuration Editor, either select **File | Save** from the menu bar, or click the save icon  in the tool bar. Then click 'Yes' so CCS Report Server reads the new configuration.



The 'Charging Test' dialog is used to test the charges calculated by the call-charging algorithm for a site. It is opened by clicking the **Charge Test** button on the *Configuration Editor* screen.

The top half of this dialog is controls, which are used to set up the parameters of a call. In the centre is a list box, which gives detailed feedback from the call charging engine. At the bottom of the dialog are the results displays, the **Calculate** button that starts the calculation of the cost of a call and the **OK** button, which closes the dialog.

Charging Test

Mode: Site:

Date: Incoming Trunk:

Time: Outgoing Trunk:

Duration: Meter Units:

Destination: Over Carrier:

```
*** Opening Database ***
*** Success! ***
***** Load SpecialCalls *****
07/11/13 12:38:24 milliseconds: 515
07/11/13 12:38:24 milliseconds: 527
07/11/13 12:38:24 milliseconds: 549
*****
```

Cost: Tier:

Carrier: Rate:

Simple Mode – the carrier of the call is selected directly from the *Over Carrier* drop list box.

Advanced Mode – the trunk used by the call is specified and used to find the carrier of the call.

Date – set the date of the call, using the edit box, or the drop down calendar.

Time – set the time of the call, using the edit box, or the spin control.

Duration – set the duration of the call, using the edit box, or the spin control

Destination – enter the telephone number of the call's destination.

Site – list of available sites.

Incoming Trunk – select the trunk used by an incoming call when using 'Advanced' mode.

Outgoing Trunk – select the trunk used by an outgoing call when using ‘Advanced’ mode.

Meter Units – set the meter units used by the call.

Over Carrier – select the carrier to use. This control is only available in ‘Simple’ mode.

When the parameters of the sample call are set up in the above controls, the call-costing algorithm is started by clicking the **Calculate** button. Detailed diagnostics on the call cost calculation is displayed on the list box in the centre of the dialog. When completed, the results of the calculation are displayed at the base of the dialog.

Cost – the total cost of the call.

Carrier – the name of the carrier.

Tier – the name of the tier of the carrier used by the call.

Rate – the name of the time rate of the carrier used by the call.

3.1.1.1 Configure Site

When either a new site is created or an existing site is selected for editing, the 'Configure Site Details' dialog is displayed. This extensive dialog allows all features of a site to be modified.

The screenshot shows the 'Configure Site Details' dialog box. The fields are as follows:

- Site Name: Company ABC
- Country: Australia
- Exchange: Sydney-02
- Connection Type: LIK Logging
- Persist Connection:
- Address: 10.10.10.1:8002
- Tax Name: GST
- Tax Rate: 10
- Disable Site:

Buttons on the right side: Configure Trunks, Configure Holidays, Configure Decoders, Configure Barring, Configure Timeouts.

Buttons at the bottom: Login Options, OK, Cancel.

Decoders section: IPECS 2

Available Decoders section: Add button, dropdown menu.

Site Name – the name of the site.

Country – the country that the site is situated. It is used to calculate the call charges.

Exchange – the exchange that the site is situated. It is used to calculate the call charges.

Connection Type – how CCS Report Server receives call record data.

1. **LIK Logging.** This indicates that the call data source is iPECS LIK reachable via TCP/IP connection. The *Address* box must be configured with the LIK IP address followed by the colon sign and the SMDR port number e.g. **10.10.10.1:8002**. Persistent connection can be enabled.

2. **CCS CTI**. This indicates that the call data source comes from CTI server i.e. CCS Desk. The *Address* is the network address of the CCS Desk Server. Port configuration is not required.
3. **iPECS CM Logging** – A special mode for connection to the iPECS CM. This requires the network address of the iPECS CM as well as the port that it listens to.

Tax Name – the name of sales tax applicable to the site.

Tax Rate – the rate at which the tax is charged.

Disable Site – When enabled, CCS Report Server will never attempt to collect calls from the call data source.

The right hand column of controls starts with five buttons.

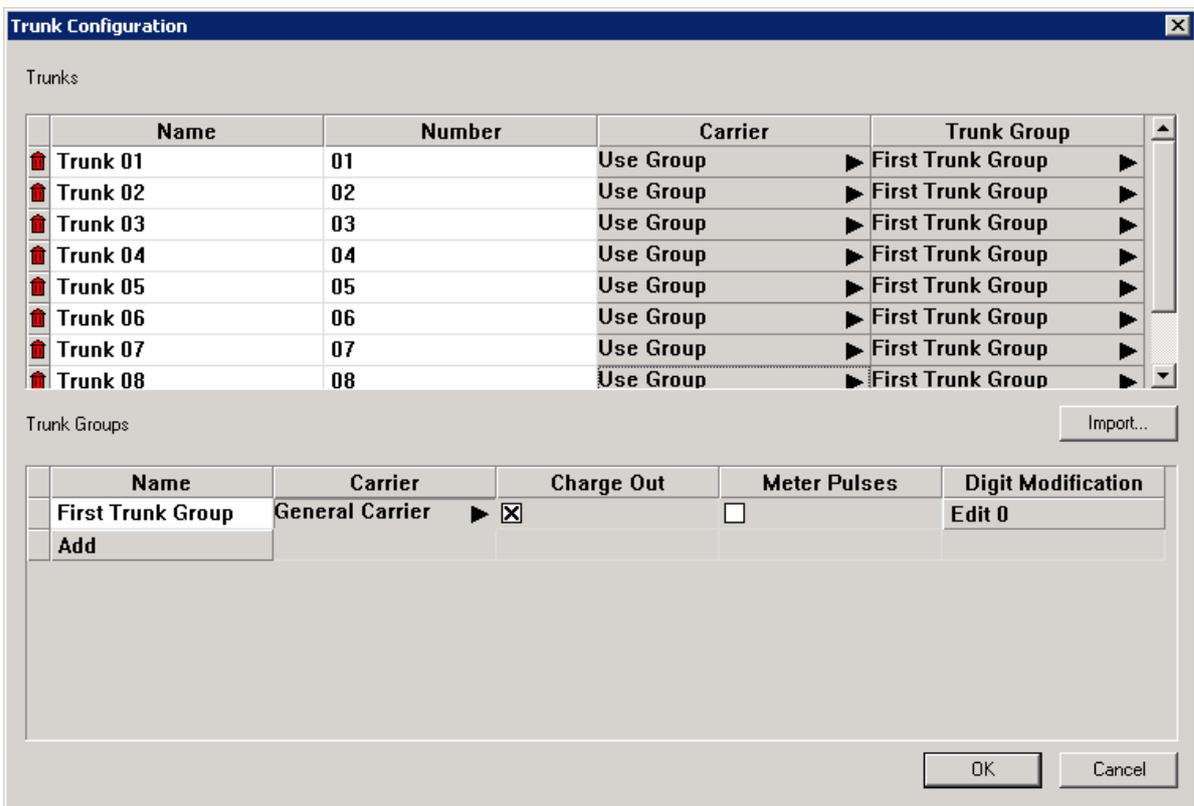
- **Configure Trunks** – modify the parameters of the trunks for a site.
- **Configure Holidays** – manage holidays at the site. This is necessary to get the call charges correct on these days.
- **Configure Decoders** – starts the decoder editor, by decoders can be created and modified.
- **Configure Barring** – configure the call barring class of service codes to bar and unbar for budgeting and CCS Report Hospitality purposes.
- **Configure Timeouts** – configure the day, night and weekend download intervals and inactivity timeout timers.

The **Decoders** list specifies the decoders selected for this site. Decoders are used to change the output of the PABX to a standard form. A selected decoder can be removed from this list by clicking the 'red bin' icon  on the items left.

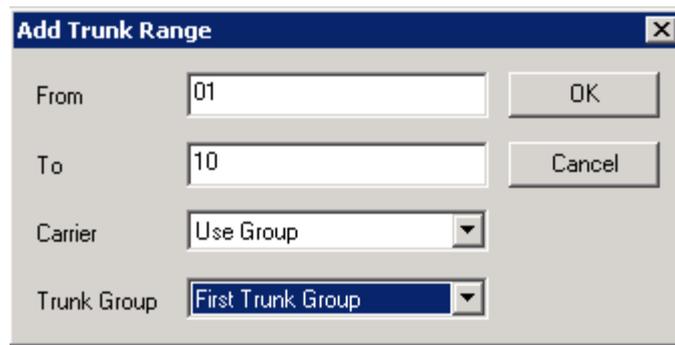
A decoder selected in the **Available Decoder** list can be added to the list of decoders selected for this site by either selecting it from the list with the mouse or selecting it in the list with the keyboard and clicking the **Add** button.

3.1.1.2 Configure Trunks

The parameters of the trunks at a site, along with the trunk groups, can be edited. The 'Trunks' grid displays a list of all the trunks at this site. This list is automatically populated as calls are logged.



If CCS Report Server logs a call that uses a trunk not listed for a site, it will add that trunk to the list of trunks for the site, with a carrier of *Use Group* and a Trunk Group of the first trunk group for that site. Trunks can also be added manually for a site. To add a trunk, click the **Add** button at the base of the list.



The screenshot shows a dialog box titled "Add Trunk Range". It has a close button (X) in the top right corner. The dialog contains four input fields: "From" with the value "01", "To" with the value "10", "Carrier" with a dropdown menu showing "Use Group", and "Trunk Group" with a dropdown menu showing "First Trunk Group". There are "OK" and "Cancel" buttons on the right side.

A range of trunks can also be added by clicking **Add Range** button instead.

Added trunks can be deleted by clicking the 'red bin' icon  on the left of the trunk's name. Any modifications to each trunk can still be made by clicking on the cell to be edited.

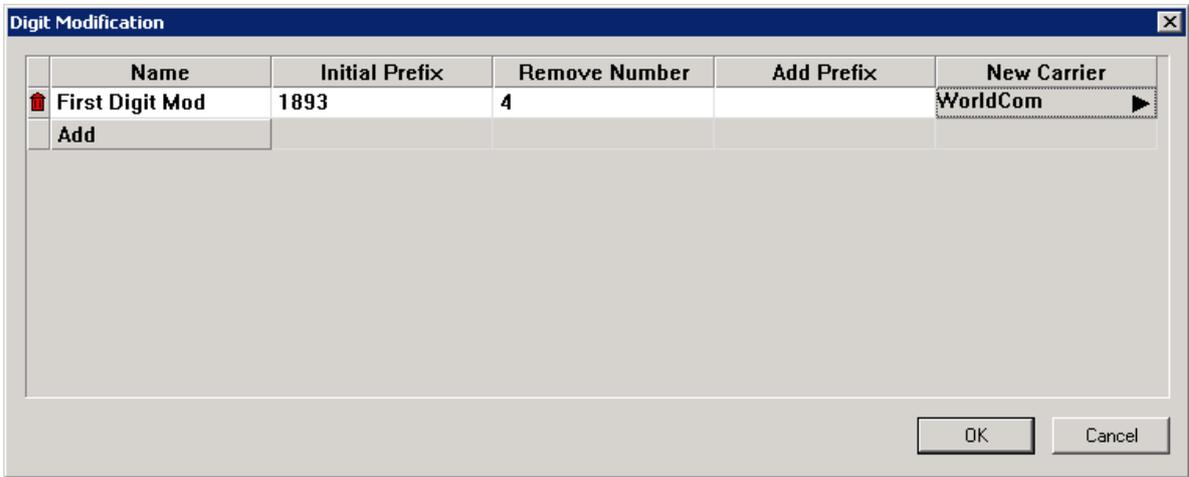
A set of preconfigured trunks can be imported from a CSV (comma-separated value) file by clicking the **Import** button. A standard file explorer will be shown to select the CSV file. The CSV file must be formatted as in three columns: **Trunk Number**, **Carrier Name**, **Trunk Group Name**.

A trunk group can be added to the list by clicking the **Add** button. A trunk group can be deleted by clicking the 'red bin' icon  on the left of the trunk group's name. At least one trunk group must always be present and so the first trunk group cannot be deleted.

The **Charge Out** box must always be checked unless outgoing calls using trunks on this trunk group should be charged to zero. Calculation using **Meter Pulses** can also be enabled on the trunk group.

3.1.1.3 Digit Modification

This configuration is used to add, delete and edit digit modifications associated with a particular trunk group.



A new digit modification is added by clicking the **Add** button at the bottom of the *Name* column. A digit modification is deleted by clicking the 'red bin' icon to the left of a digit modification's name.

Initial Prefix – the sequence of numbers that need to match at the beginning of a dialled number for this digit modification to apply.

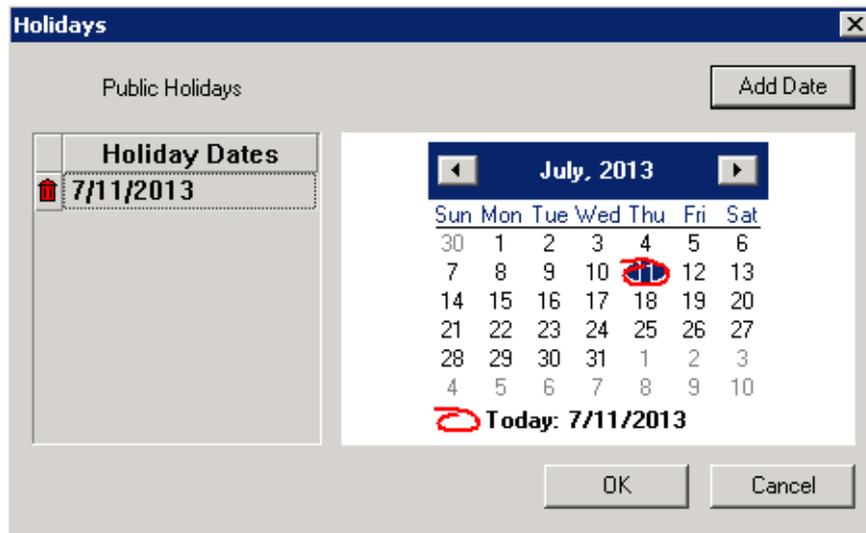
Remove Number – the number of digits that are removed from the beginning of a dialled number that has been found to begin with the 'Initial Prefix'.

Add Prefix – the sequence of digits, which are added to the beginning of a dialled number being modified after 'Remove Number' of digits has been removed.

New Carrier - Specifies the new carrier will be, or select *Unchanged* if change is not required.

3.1.1.4 Configure Holidays

This is used to set public holiday dates for a site. Calls made on these days will be charged at any public holiday rate being used by the carrier.



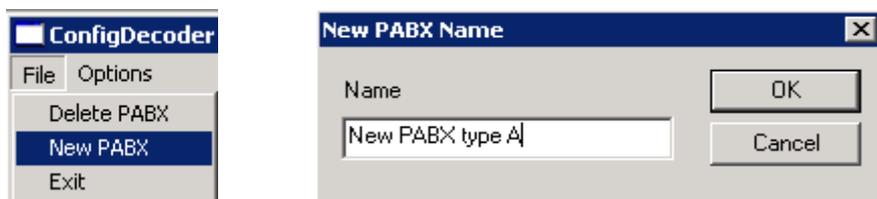
On the left is a list of the public holiday dates configured for this site. A date can be removed from this list by clicking the 'red bin' icon  to the left of the date.

On the right side of the dialog is a calendar control. To add a public holiday date, select the date in the calendar control and click the **Add Date** button.

PABX Name

The PABX Name is actually the name of the Decoder. In many cases, a particular PABX would usually require only one decoder but there might be occasions where special versions of a decoder are required. Some PABXs, for example, have a configurable output, where the installer can select which information is output in a record and in what order the fields appear.

To create a new decoder, select **File** then **New PABX**. Enter the PABX name with more details when required.



Call Type

There are seven call types that can be selected, however below are those the most frequently used:

Internal – a call made from one extension to another.

Incoming – a call coming into the PABX on a trunk and going to an extension.

Outgoing – a call made from an extension to an outside number using a trunk.

Tandem – a call coming into the PABX on a trunk and exiting back out of the PABX on a different trunk.

The other call types e.g. Feature, Unknown, Date Record, are rarely used.

Call Record Type

A Call Record Type is a set of configurations inside a decoder that decodes a particular type of records from the PABX data. Some PABX systems can only give basic call records, but some may output extensive call data records that CCS Report may need to log.

Identifiers

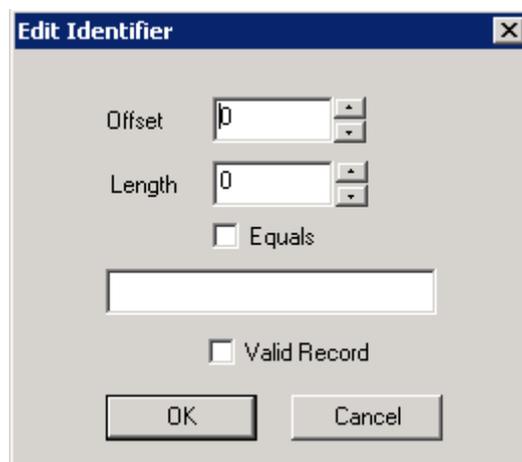
When multiple Call Record Types have been defined for a decoder, the decoder needs to know which one refers to each call record it is processing.

Identifiers are used to tell the decoder where to look in the record for certain fields of data to identify the record.

Example: Valid if offset 30, length 3 does not equal 'ABC'

When the decoder is processing the call record it has received, it will look at the 30th character in the data, and check if the 30th, 31st and 32nd characters are the sequence 'ABC'. If they are, this identifier says that this record is valid. The decoder will then attempt to extract the information from the record using the information in the rest of the decoder to find the various fields.

Click on 'Add' to add a new identifier to the call record type.



Each record consists of a number of characters in a string. The first character is offset 0, the second if offset 1 etc.

Offset – the number of characters from the beginning of the string.

Length – the length of the string to match.

The empty box can be used to make the Identifier valid if the data is either the same as the text in the 'Text to match' field or different to it, depending on how they are set. They both have a similar same effect, as explained.

3.1.1.6 Configure Barring

The screenshot shows a 'Barring Configuration' dialog box with the following fields and settings:

- Bar template: \$02 {E} {G}{G}{G}
- Auth Bar template: \$36 {C} {G}{G}{G}
- UnBar template: \$02 {E} {U}{U}{U}
- Auth UnBar template: \$36 {C} {U}{U}{U}
- GOS to bar: 7
- Auth GOS to bar: 7
- GOS to unbar: 1
- Auth GOS to unbar: 1
- Send Notification to Administrator:
- Administrator Email: admin@company.com
- Send Notification to User:
- Warning Percentage: 80
- Send warning to user:
- Send warning to Administrator:
- Template: (Empty text area)
- Auth Template: (Empty text area)
- Buttons: OK, Cancel

Bar Template – the string sequence that will be sent to the PABX to bar an extension.

Unbar Template – the string sequence that will be sent to the PABX to unbar an extension.

Auth Bar Template – the string sequence that will be sent to the PABX to bar an authorization code.

Auth Unbar Template – the string sequence that will be sent to the PABX to unbar an authorization code.

GOS to bar / unbar – the respective class of service to be set on an extension.

Auth GOS to bar / unbar – the respective class of service to be set on an authorization code.

Send Notification to Administrator – when enabled, it will send an email notification to Administrator.

Administrator Email – the target email address for administrator.

Send notification to User – when enabled, it will send an email notification to users as well.

Warning Percentage – If the budget is less than this value, it will be stopped.

Send warning to user – send budgeting warning to users' email address.

Send warning to Administrator – send budgeting warning to the administrator.

Template – the template for the email notification that will be sent to administrator or user, for extension.

Auth Template – the template for the email notification that will be sent to administrator or user, for authorization code.

3.1.1.7 Configure Timeouts

This configuration determines when CCS Report Server contacts the call data source to retrieve call data records.

Weekdays		Weekends	
Ignore timeout	<input type="checkbox"/>	Ignore timeout	<input checked="" type="checkbox"/>
Day Download Interval	01:00:00	Day Download Interval	01:00:00
Day Inactivity Timeout	01:00:00	Day Inactivity Timeout	01:00:00
Day Start Hour	9	Day Start Hour	9
Ignore timeout	<input type="checkbox"/>	Ignore timeout	<input checked="" type="checkbox"/>
Night Download Interval	04:00:00	Night Download Interval	04:00:00
Night Inactivity Timeout	04:00:00	Night Inactivity Timeout	04:00:00
Night Start Hour	17	Night Start Hour	17

There are 4 time modes with identical configurations for each: **Weekdays Day**, **Weekdays Night**, **Weekends Day**, and **Weekends Night**.

Download Interval – the interval between downloads.

Inactivity Timeout – if a site does not log any calls in the time in this box during the day, an alarm will be activated.

Start Hour – the start of the time zone of the CCS Report Server.

Ignore timeout – when checked, it disables the inactivity alarms.

3.1.2 Tariff Maintenance

When a call is logged by CCS Report Server, it calculates the cost of the call, the carrier used by the call, the tier used by the call, and the rate used by the call. This information is stored in the database along with the other call details. Therefore, the parameters used by the carrier to calculate the cost of a call need to be available to CCS Report. When CCS Report is installed, some of these tariffs are already supplied but a tariff editing function is available with CCS Report Manager.

3.1.2.1 Cost Calculation

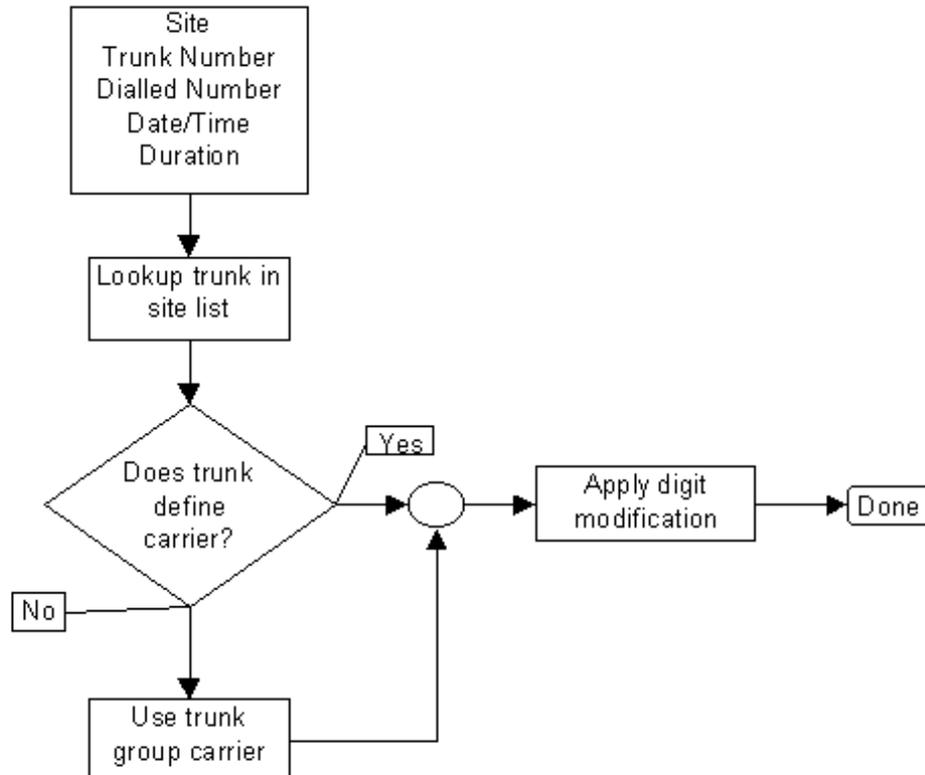
The inputs to calculating the cost of a call are:

- The site of the call.
- The trunk number.
- The number dialled.
- The starting date and time.
- The duration of the call.

The stages of calculating cost of the call are:

- Use the site, trunk and dialled number to find the carrier used for the call.
- Use the carrier and dialled number to find the tier used for the call.
- Use the tier and date/time of the call to find the rate. Calculate the cost for a call of this duration, taking care that a new rate is started when the call passes into another charging period.

Calculate the carrier

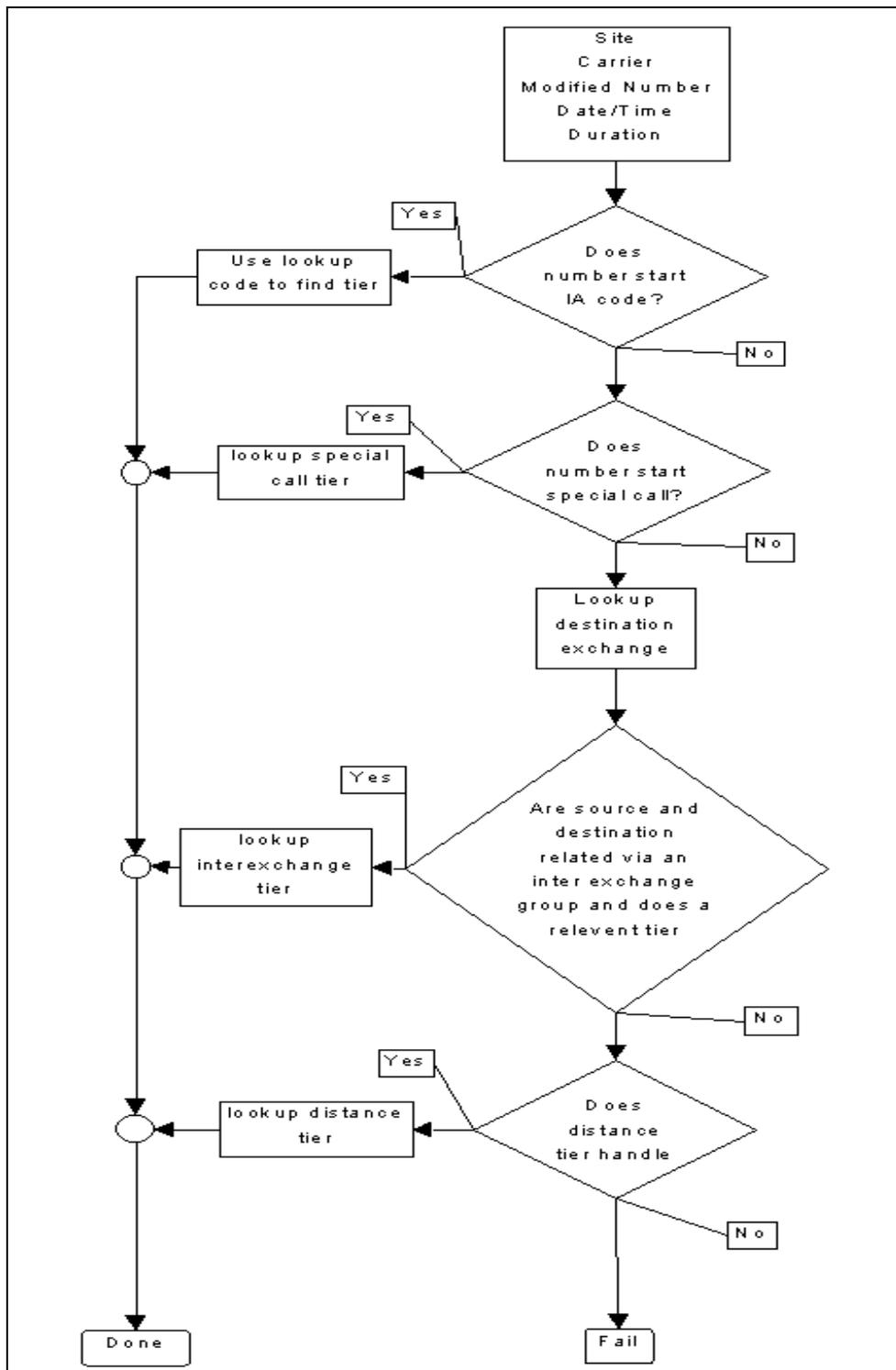


Two factors determine the carrier associated with a call. Initially the carrier is determined from either the trunk or trunk group used by the call, and then both it and the dialed number can be changed by digit modifications associated with the trunk group.

For each site there is a list of trunks. The trunk number is looked up in this. Associated with each trunk is a trunk group, which has an assigned carrier. Individual trunks can override this and use a different specified carrier. The initial carrier used by a call is either that assigned to the trunk or to the trunk group.

With each trunk group are associated zero or more digit modifications. The digit modifications associated with a trunk group may result in changes to both the dialed number and the carrier for the call.

Calculate the Tier



The set of time rates which are applied for a particular call are called a tier. For instance a local call with a flat rate of \$0.25 and an intercapital call which is charged at \$0.12 a minute

during the day and \$0.13 during the night use different tiers. CCS Report has four different types to identify the tier that a call uses. Each of these is checked in order.

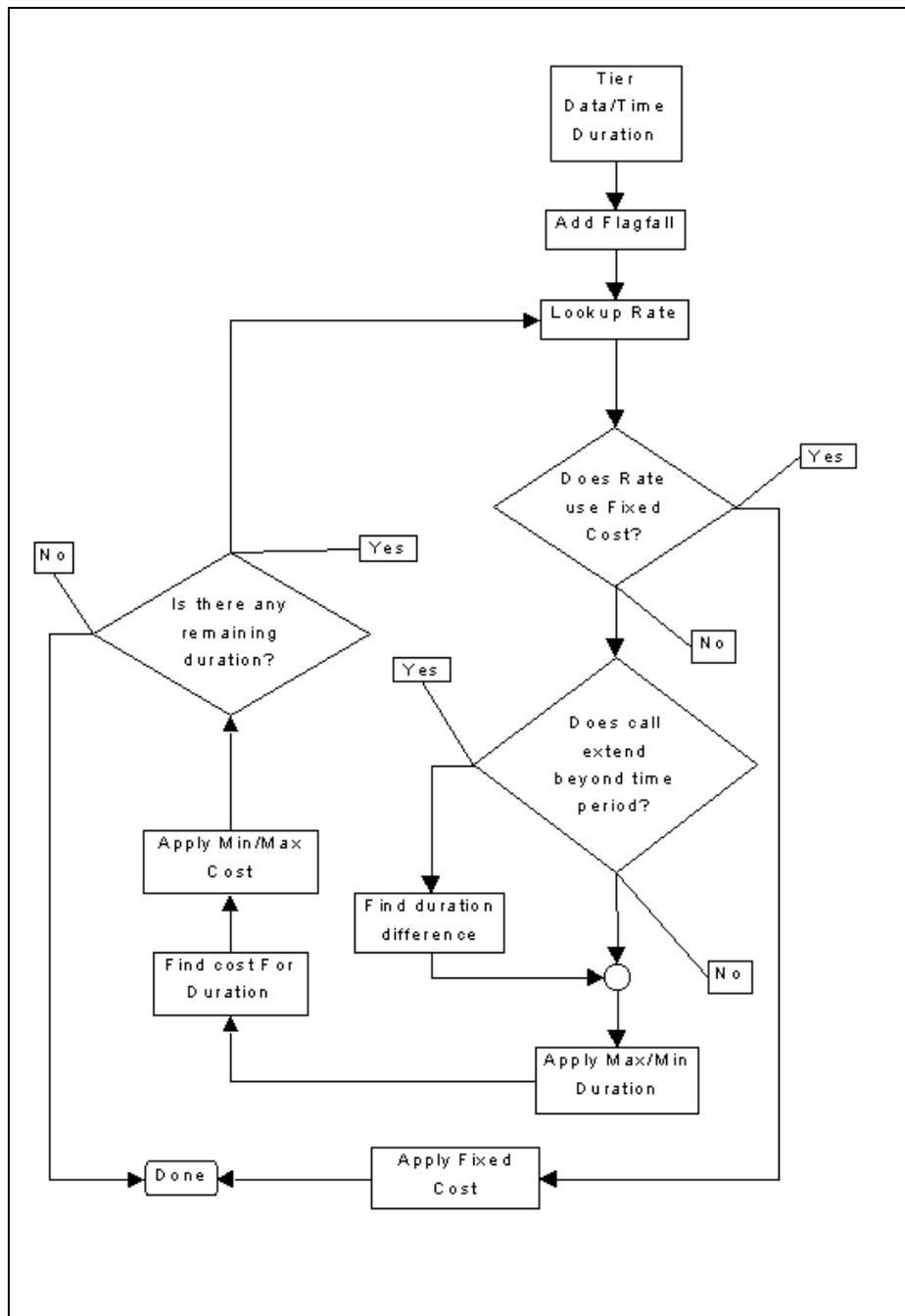
International – If the dialled number begins with an international access code of the country specified for the site then this is removed and the beginning of the remainder of the number matched against the lookup codes of the list of countries. If a match is found then this call is an international call. The originating country and destination country is then looked up in the list of tiers for this country to determine the tier to use.

Special – If the beginning of the dialled number matches against the special call prefix of a tier, then the call is a special call and uses that tier.

Inter Exchange – the area code of the call is added to the beginning of the dialled number if there is not already an area code at the beginning of the dialled number. The destination exchange of the call is then looked up in the numbers list for exchanges. The source and destination exchanges are looked up to see if they are related via an exchange group. Finally the tiers are checked to see if any of them are related to this exchange group.

Distance - the latitude and longitude of each exchange is known. From this the distance between the two exchanges can be calculated. Then the distance is matched with the distance bands of each tier to find the appropriate tier.

Calculate the Rate cost



Once the tier has been found the date/time of the call is used to find the call's rate and the charges associated with that rate in the tier are used to find the cost. Associated with each carrier are one or more period names and period sets. A period set assigns a period name to all times of all days of the week, including holidays.

For instance, a certain carrier might have period names flat, peak, off peak and weekend.

The carriers period sets might be called flat, which applies the flat rate to all hours of all days, and national which applies the weekend rate all day Saturday, Sunday and public holidays, peak rate between eight and six weekdays and off peak at other times.

One of the period sets associated with a carrier is associated with each tier.

Each tier has a rate for each period name. Each tier also has a specific costing scheme for each rate. Hence for a call being charged the date/time is looked up for the tier's period set to find a rate and then the charging scheme of the call is applied to the call.

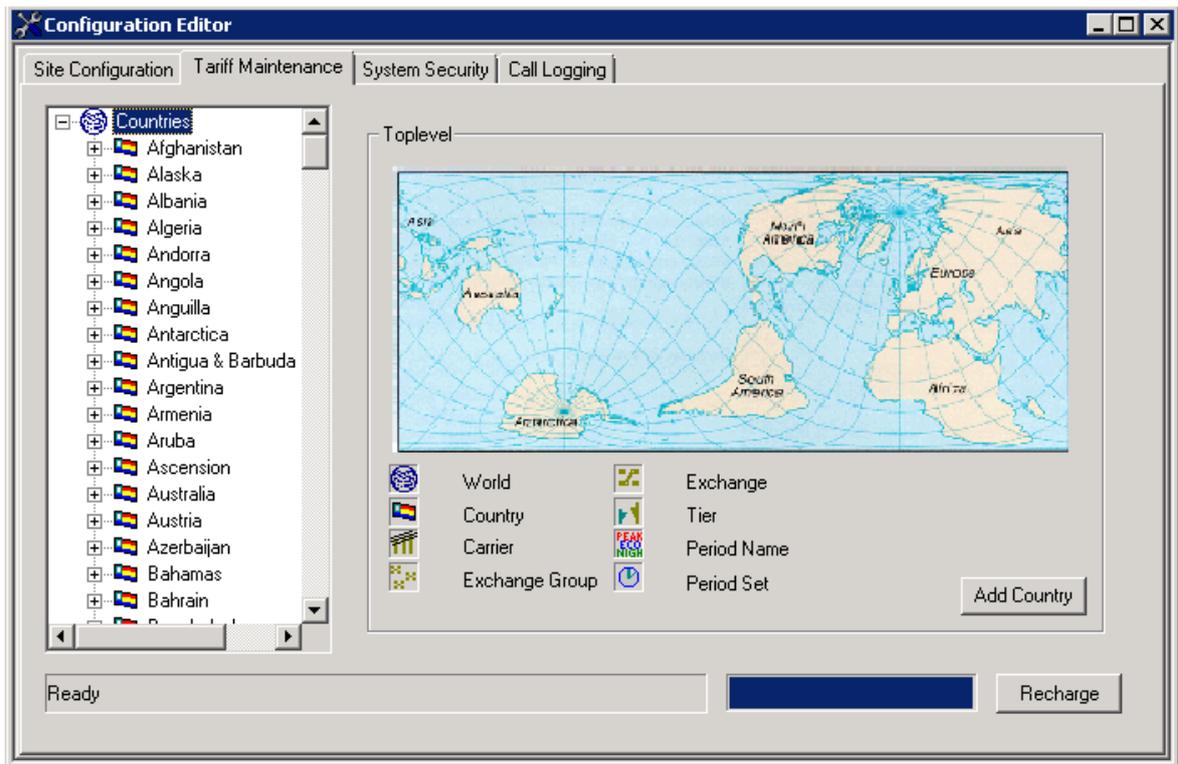
There are two types of charging scheme:

- Fixed cost, where a fixed charge is applied for the call.
- Per time cost, where the cost is calculated in set increments per unit time. In this case the duration is important. If the call lasts sufficiently long that another rate becomes applicable this must be accounted for. Per time costs also allow the possibility of the calls having a maximum or minimum cost or duration set.

A tier also has a flag fall cost, which is a cost that is applied to a call as soon as it begins.

3.1.2.2 Configure Tariff

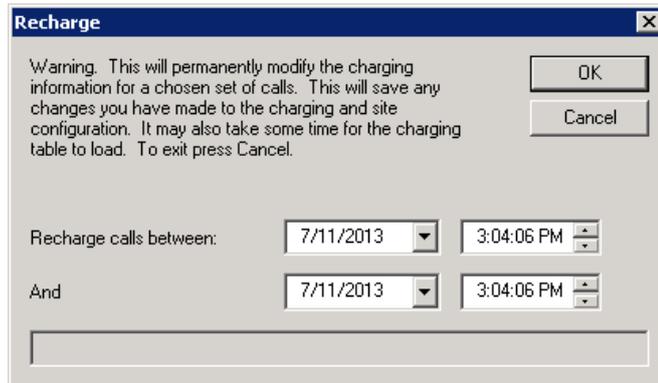
The Tariff Maintenance screen is used to edit the tariffs used to calculate the costs of calls.



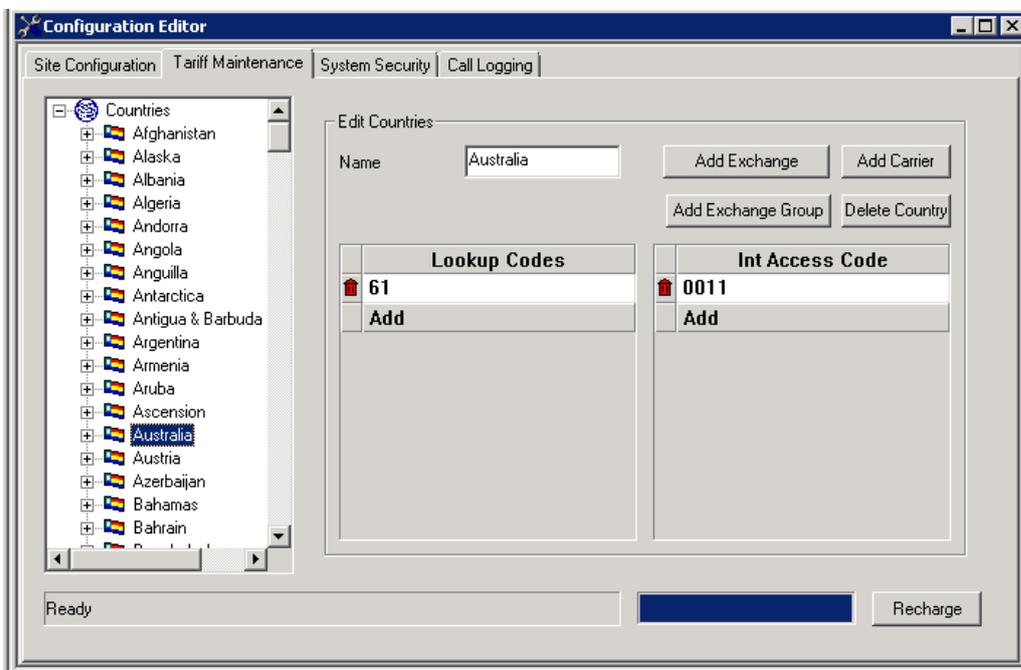
This screen consists of three regions. On the left hand side is a tree through which the hierarchy of tariff configuration sub-screens can be navigated. On the right hand side is the current tariff configuration sub-screen is displayed. At the bottom of the screen are options for the recharging of calls already in the database.

The top level tariff sub-screen is reached by selecting **Countries** in the left hand tree. On this sub-screen is a map of the world, a key to the icons appearing in the left hand tree and the **Add Country** button to add a new country to the list. A new untitled country will be created and its editing sub-screen chosen.

When tariffs have been changed, the new rate does not apply to calls already in the database. To recharge existing calls, click the **Recharge Calls** button at the bottom, set the required data to be recharged, and click the 'OK' button to start. Note that recharging calls is an intensive process and may cause CCS Report Server to stop responding while it is in progress.



Country



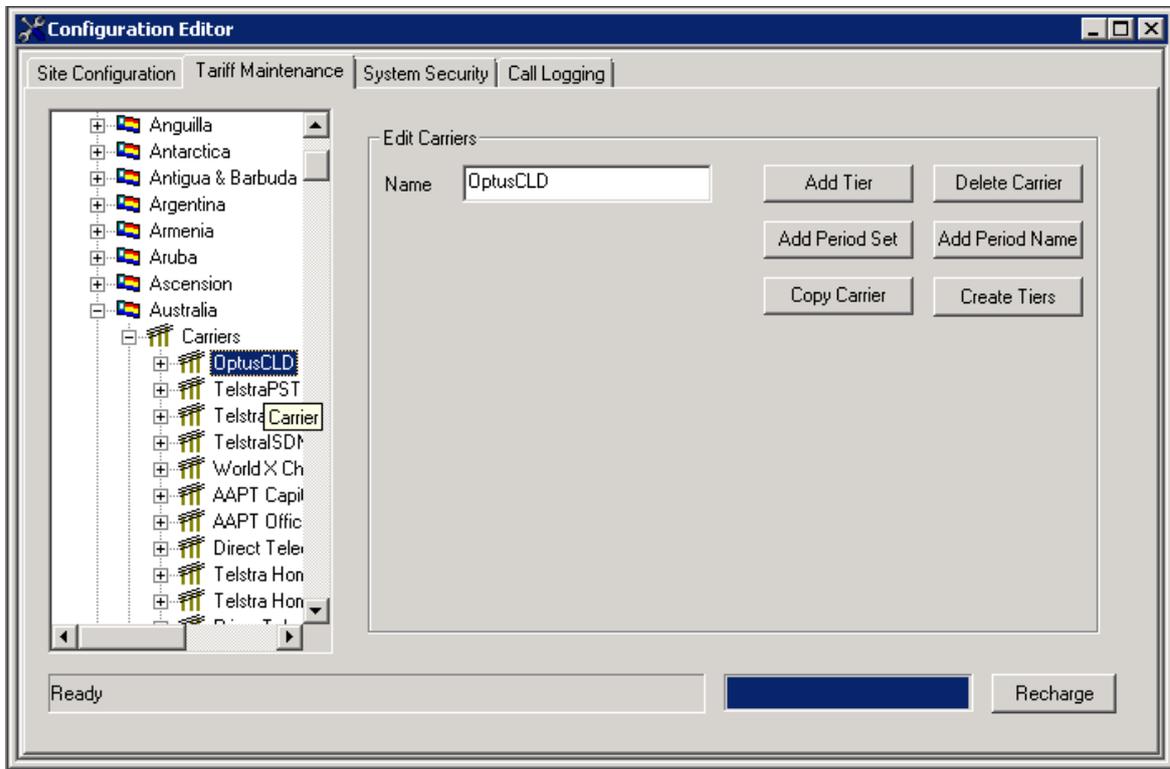
Name – The name of the country.

Lookup Codes – prefixes on the dialled numbers of international calls which indicate which country the call is destined for.

International access codes – the numbers dialled to indicate an international call from that country. This will be used when the Tier calculation takes place.

Add Exchange / Country / Exchange Group – add new respective items to the country.

Carrier



Name – the name of the carrier.

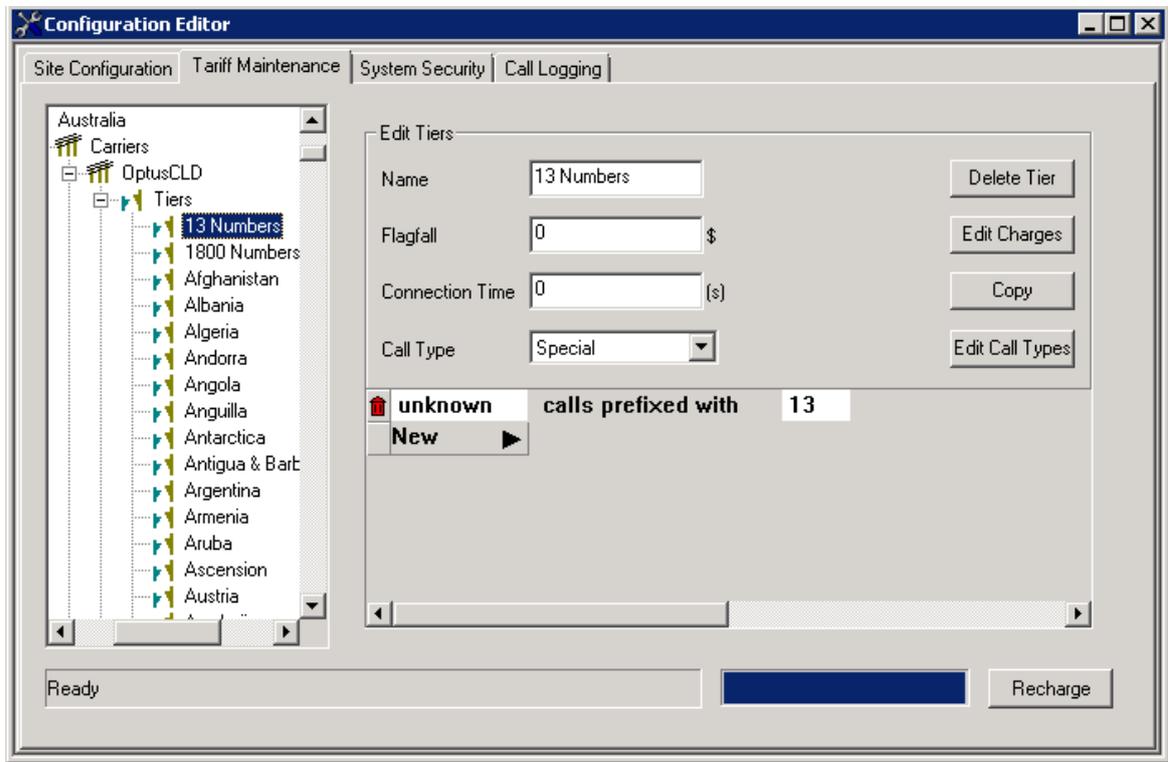
Add Tier / Period Set / Period Name – add new respective items to the carrier.

Delete Carrier – erase the carrier.

Copy Carrier – make a copy of the carrier, including copies of all tiers, period sets and period names.

Create Tiers – generate blank tiers for each country.

Tier



Name – the name of the tier.

Flagfall – call connection fee.

Connection Time – the time that a call using this tier is deemed to take to connect. This time is subtracted from the call's duration and not charged.

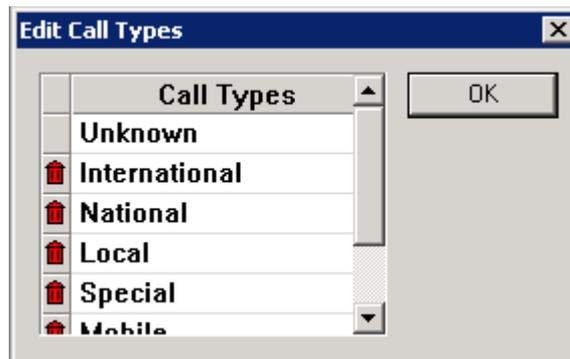
Call Type - tiers are grouped into larger sets based on their call type.

Delete Tier – erase the tier.

Edit Charges – edit call charges associated with this tier

Copy – make a copy of the tier, including all charges.

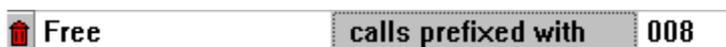
Edit Call Types – add / remove the call types that can be selected.



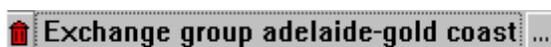
At the bottom of the Tiers sub-screen is the tier types list. To add a tier type open the *Add* menu at the bottom of the list and select the type of tier type you wish to add. To delete a tier type from the list click the 'red bin' can icon  to the left of the entry.



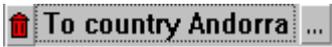
The inland distance tier type matches the tier against the distance between the source and destination exchanges of the call. This tier type has four variations which are selected from the menu. Inland distances can be up to a given number, between two distances, about a certain distance or for all distances.



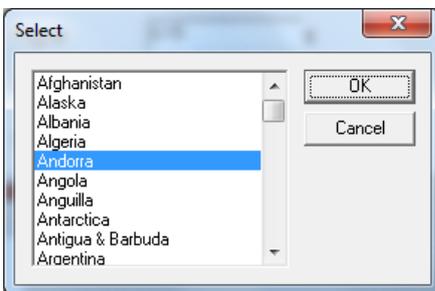
The special calls tier type selects the tier based on the prefix of the dialled number. The name of the special call type is the first item and the special call prefix is the second.



The exchange group tier type selects the tier based on the exchange group which relates the source and destination exchange. To configure the exchange group click the three dots (...) button.



The country tier type selects the tier based on the destination country of the call. To configure the destination country, click the three dots (...) button.



Edit Charges

This is used to edit the costs charged for various rates using a tier.

Name	Fixed Cost	Min/Max Duration (s)	Min/Max Cost	Cost	Time (s)
flat	<input type="checkbox"/>	<input type="checkbox"/> 0 0	<input type="checkbox"/> \$0 \$0	\$0.038333	1
peak	<input type="checkbox"/>	<input type="checkbox"/> 0 0	<input type="checkbox"/> \$0 \$0	\$0.000000	60
weekend	<input type="checkbox"/>	<input type="checkbox"/> 0 0	<input type="checkbox"/> \$0 \$0	\$0.000000	60
off peak	<input type="checkbox"/>	<input type="checkbox"/> 0 0	<input type="checkbox"/> \$0 \$0	\$0.000000	60

At the top left hand of the dialog is the name of the tier. On the top right is a drop list entitled 'Period Set' from which the period set used by this tier is set. The rates whose period names are not used by the selected period set are inapplicable and greyed out.

Name – the period name of this rate. This name cannot be edited.

Fixed Cost – whether this rate uses a fixed cost or not. Check to use a fixed cost. When this is done the other columns merge into one, in which the fixed cost is entered by clicking on the value.

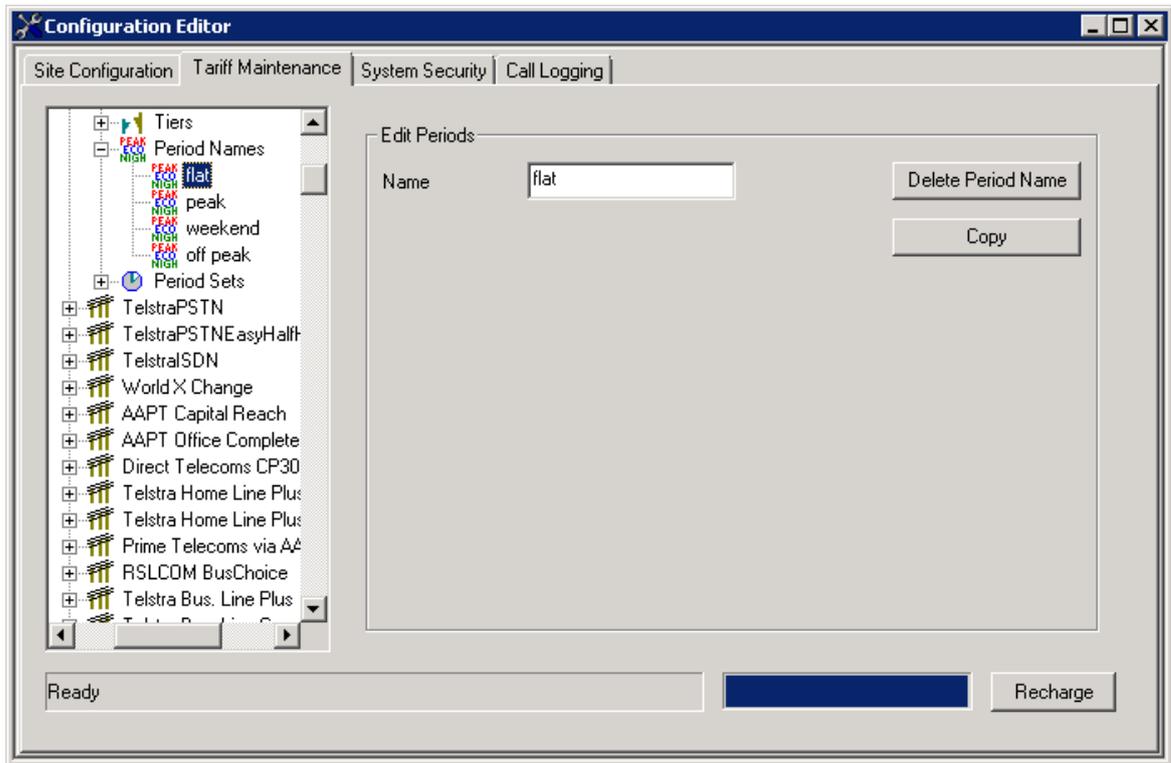
Min/Max Duration – the minimum and maximum duration of the call.

Min/Max Cost – the minimum and maximum cost of the call.

Cost – the cost per unit time of the call. This value is added to the cost of the call for every time of duration.

Time – the duration of the timing period of the call. The cost of the call is incremented for each period of this length in the duration.

Period Name



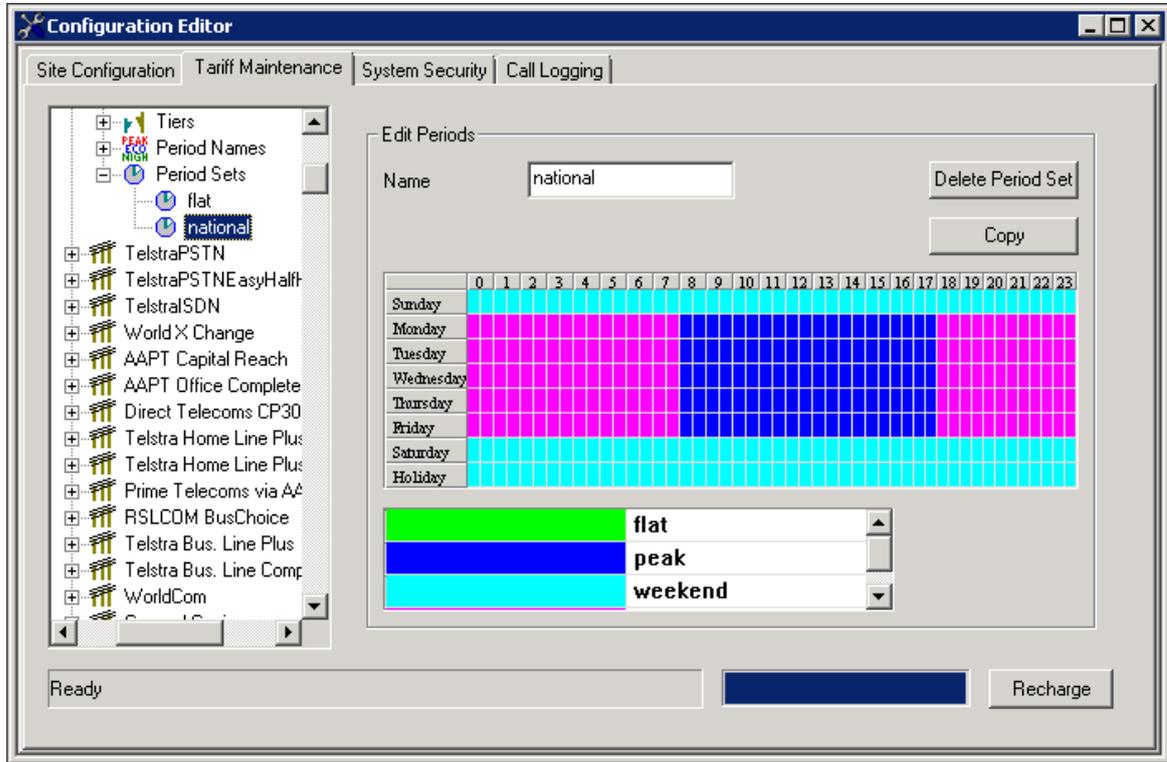
Name – the name of the period name.

Delete Carrier – erase the period.

Copy – make a copy of the period name.

Period Set

A period set assigns every hour of every day a period name.



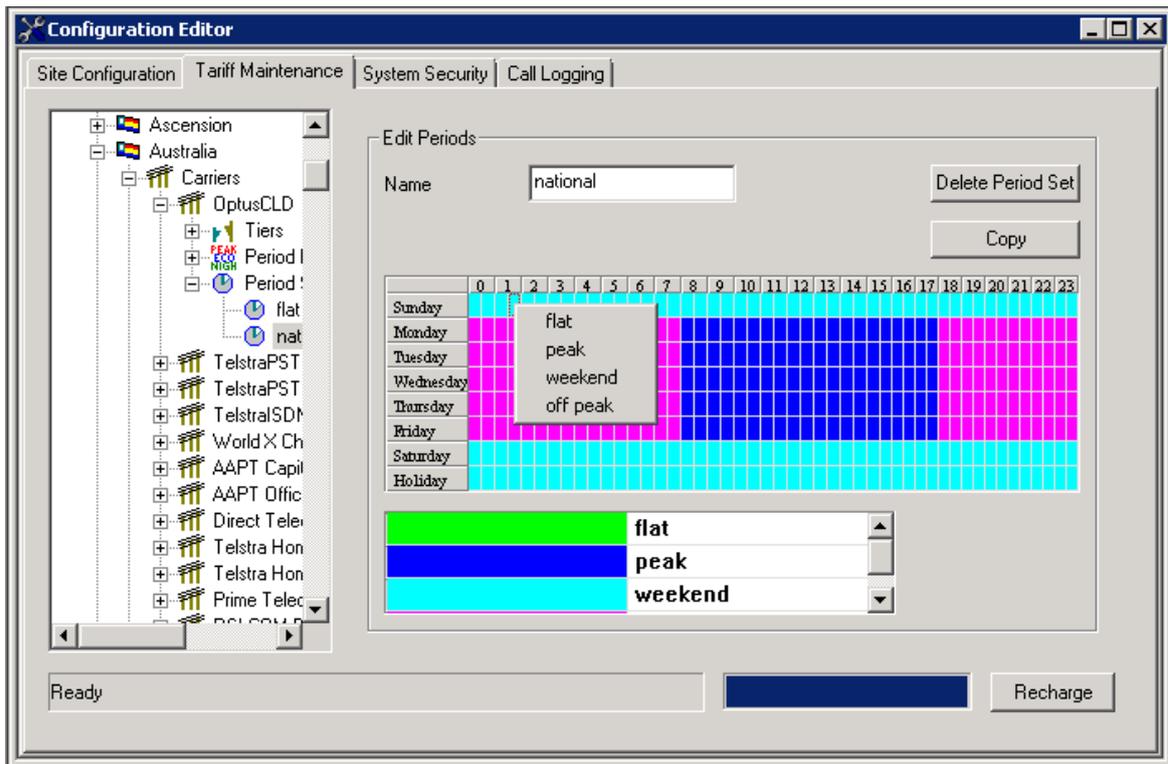
Name – the name of the period set.

Delete Period Set – erase the period set.

Copy – A copy of this period set can be created by clicking the **Copy** button.

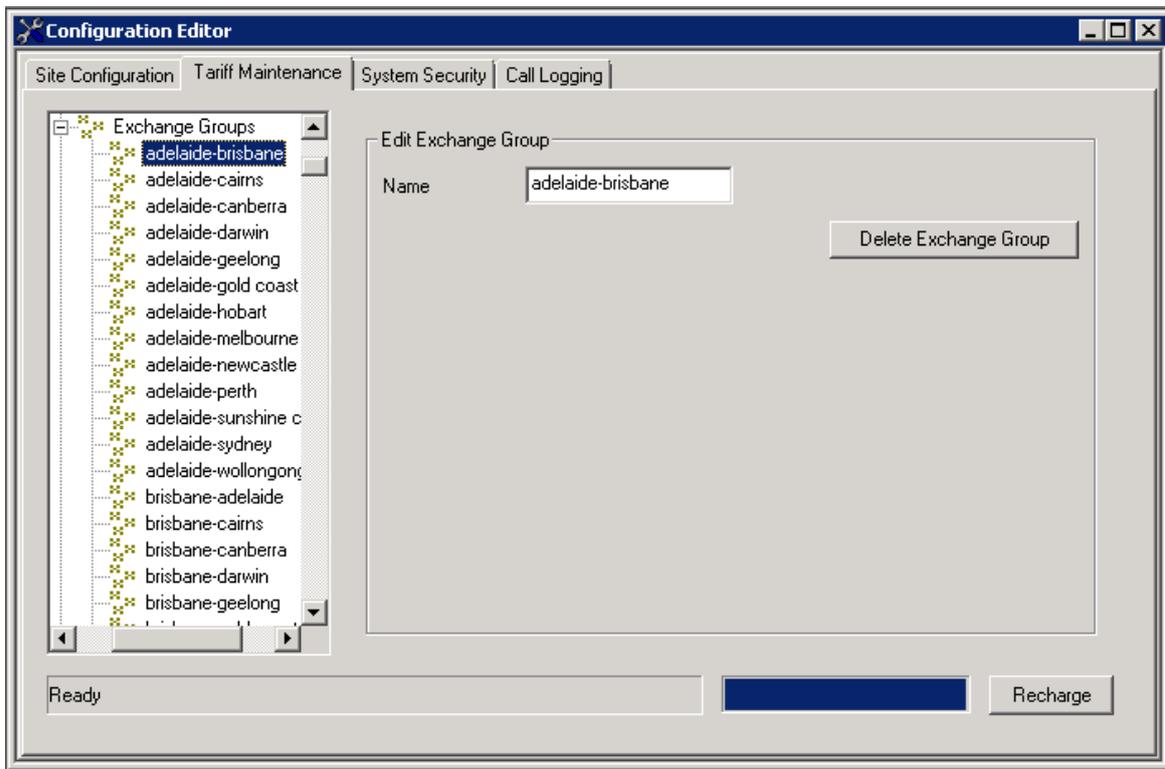
In the centre of the screen is a table of hours and days showing the assignment of period names to times. Below is a list of the period names along with the colours with which they are represented on the table.

On the table the rows represent weekdays, extended with the 'special' day 'Holiday' for holidays. The columns are the hours of the day, labelled in twenty four hour time. The colour of the table represents the period name to which that hour of that day belongs.



The assignment of period names in this table is edited by selecting (by dragging on the table) a range of cells. Then right click on the selection to bring up a menu of the period names. The period name to change the selected cells to can then be selected from the menu.

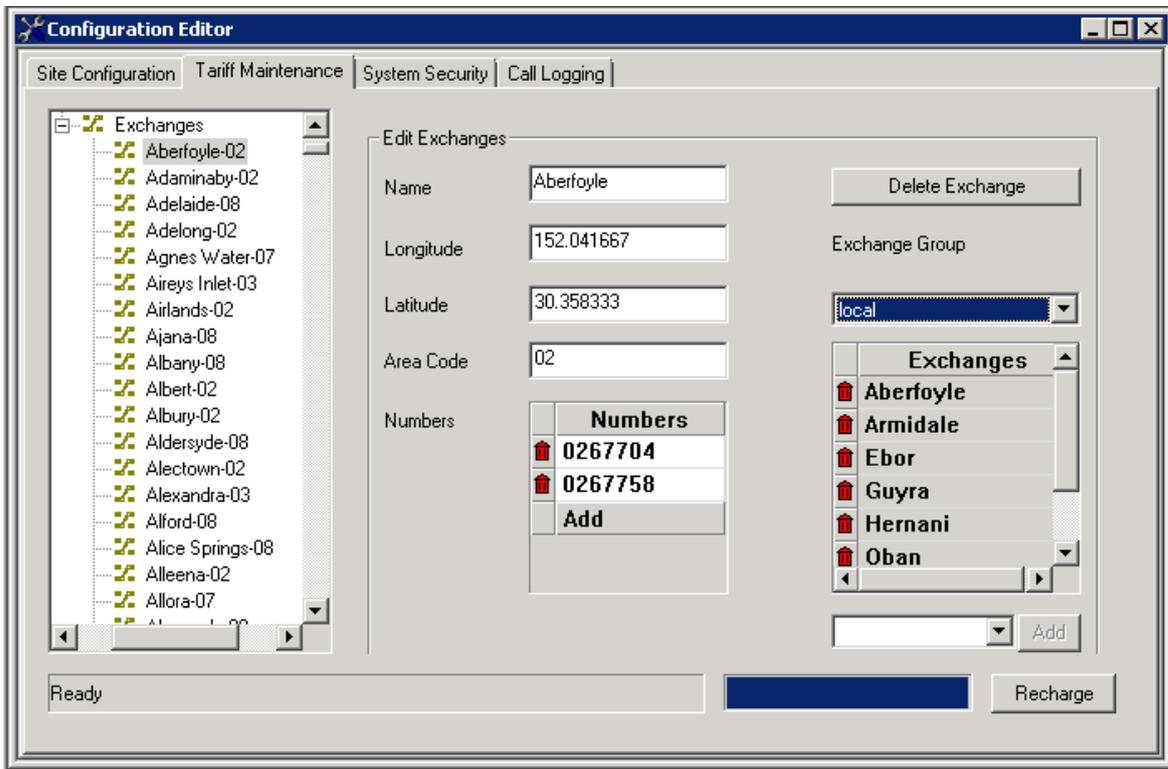
Exchange Group



Name – the name of the exchange group.

Delete Exchange – the exchange group is deleted by clicking in **Delete Exchange Group** button.

Exchange



Name – the name of the exchange to be changed.

Latitude / Longitude – the position of the exchange.

Numbers – the list of prefixes of dialled numbers which, if they match the dialled number of a call indicate that the call went to this exchange.

The exchange can be deleted by clicking the **Delete Exchange** button.

A list of exchanges related to this exchange via an exchange group can be viewed and edited by selecting the name of the exchange group from the drop list entitled 'Exchange Group'. The exchanges appear in the list entitled *Exchanges*.

To delete an exchange from the list of exchanges for an exchange group click the red trash can icon  to the left of the exchange name.

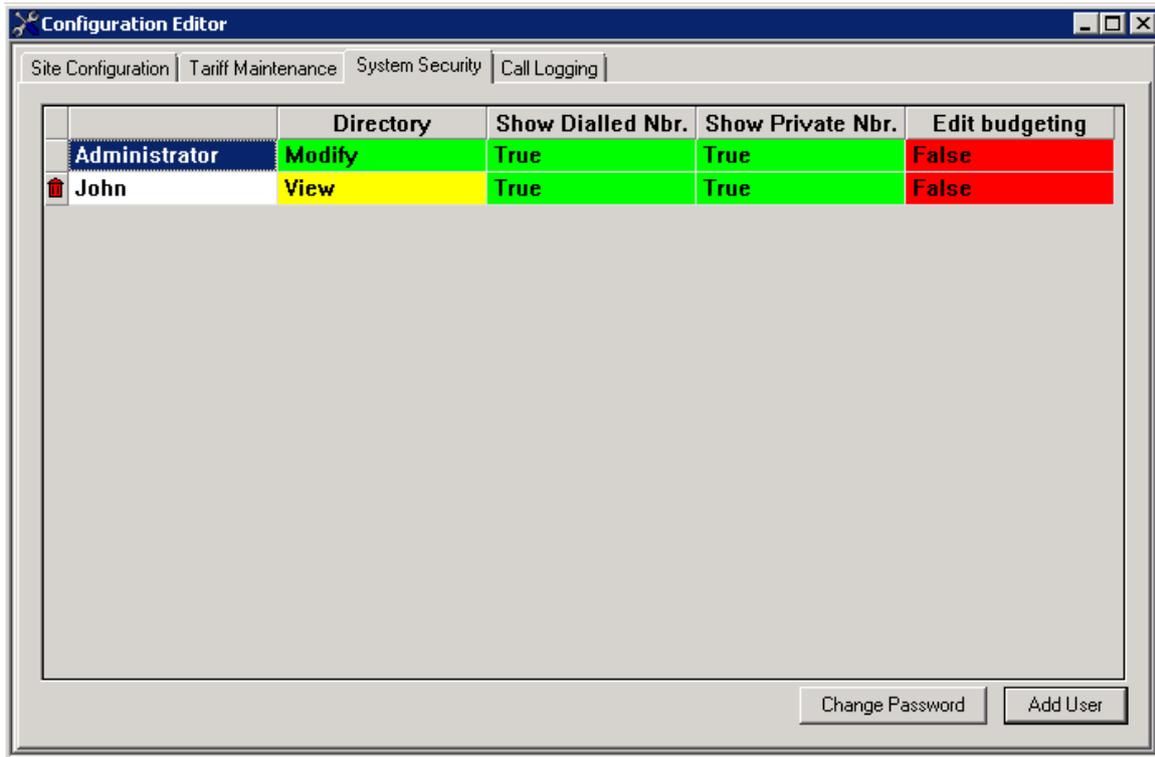
An exchange can be added to the list of exchanges related to this exchange through an exchange group by selecting it from the drop list below the list of exchanges. If the exchange is selected through the keyboard the **Add** button needs to be clicked to add it to the exchange list.

Any exchange in the list can be selected by double clicking on its name in the *Exchanges* list.

This configuration determines when CCS Report Server contacts the call data source to retrieve call data records.

3.1.3 System Security

The System Security tab contains a list of all users of the CCS Report System. The name of the user is shown under in the User column. The other columns describe the user's level of access to various system features which can be changed by right-clicking on the cell and choose the available options.



Directory – ‘Modify’ gives user permission to make changes in CCS Report Directory. ‘View’ restricts access to view only.

Show Dialed Numbers – When set to ‘True’, the user is able to see the full caller number / dialed number in the reports. When set to ‘False’, the last 2 digits will be masked with XX.

Show Private Numbers – When set to ‘True’, the report generated by this user will not show any of the ‘Private Numbers’

Show Editing of Budget – When set to ‘True’, the user can access the Budgeting area in CCS Report Web.

To add a user to the system, click the **Add User** button at the bottom of the screen. The *Add User* dialog box will be displayed.



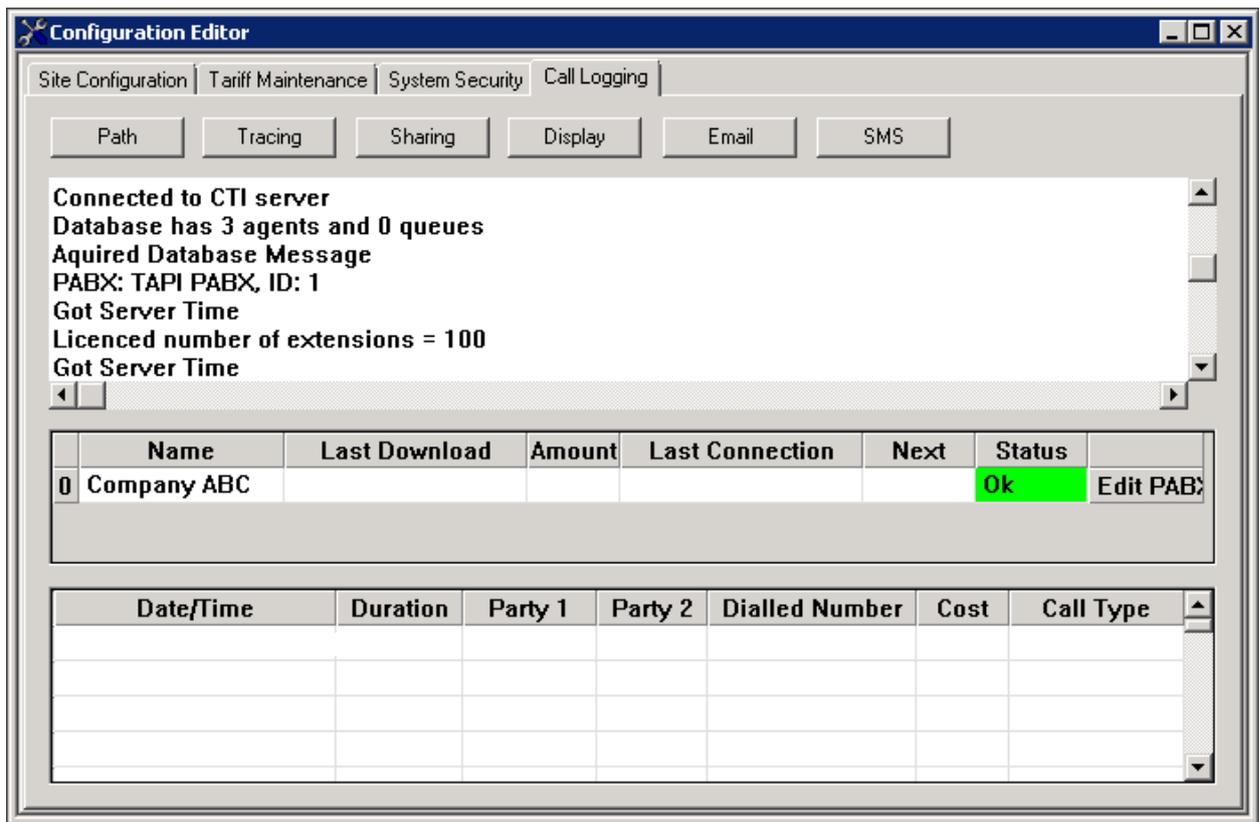
To delete a user click the red trash can icon  to the left of the user's name. The Administrator is a special user and so cannot be deleted.



The **Change Password** allows password to be modified, including the password for Administrator.

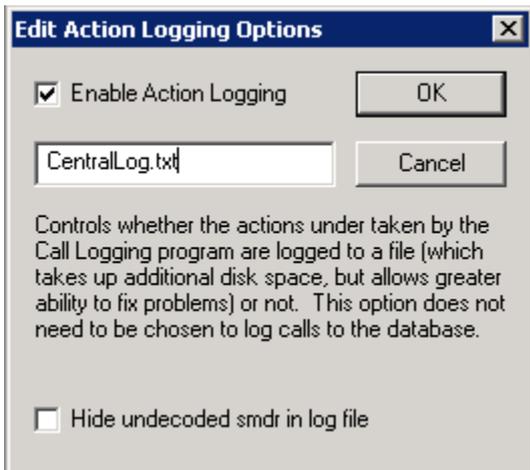
3.1.4 Call Logging

The 'Call Logging' tab provides a view of the CCS Report Server. This is very useful when CCS Report Server is running as a service. The 'Poll Now' button can also be used from this view, and the CCS Report Server options can also be modified from here.



Path – When CCS Report Server downloads files, it places these in a temporary data storage folder. This defaults on install to 'C:\Program Files\CCS\CCS Report\tmp', however, it can be changed with this option.

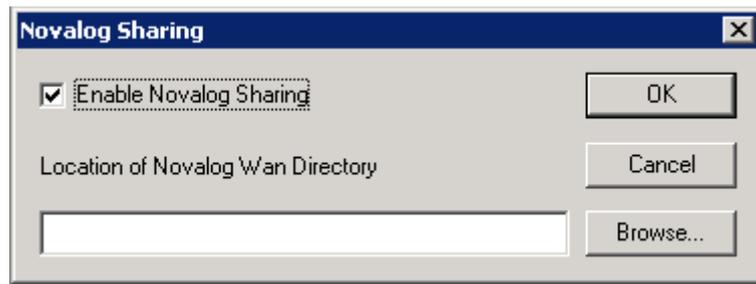
Tracing – Controls the ability to write a log of the CCS Report Server actions, mainly used for troubleshooting. The log files are stored in 'C:\Users\ProgramData' (Windows 7 or 2008 Server) or 'C:\Documents and Settings\All Users\Application Data' (Windows XP or 2003 Server).



Enable Action Logging – check this box to enable the feature.

Hide undecoded smdr in log file – omits any decoder failure from the action log.

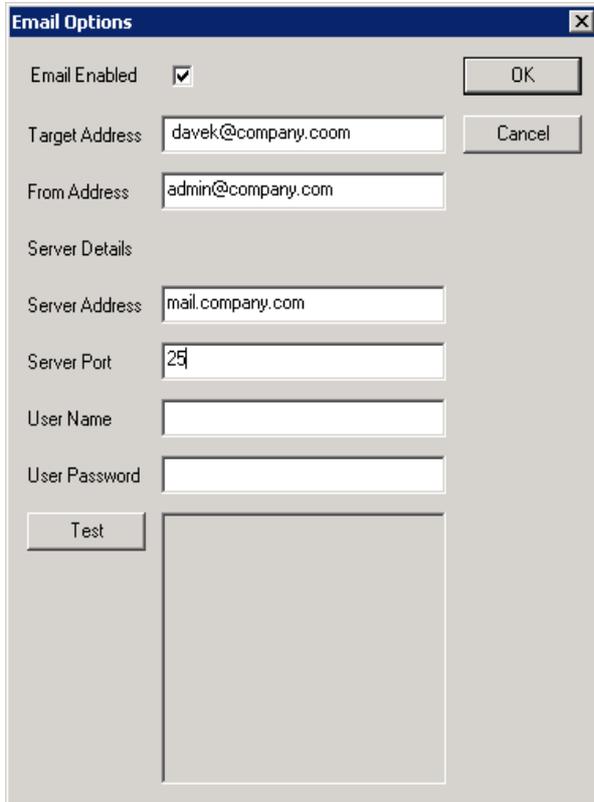
Sharing – If a legacy Novalog system is already in operation, this assist the transition to CCS Report.



Display – Check the 'Display Modified Dialed Numbers' for the Dialed Number column on the CCS Report Server logged calls pane to display the modified dialed number, which is the dialed number after the application of digit modification and prefixed area codes.



Email – When CCS Report Server starts an alarm, it can be configured to send a message to one email address.



The screenshot shows a dialog box titled "Email Options". It has a blue title bar with a close button. The main area contains several fields and buttons. At the top, "Email Enabled" is checked. Below it are "Target Address" (davek@company.com) and "From Address" (admin@company.com). A "Server Details" section follows, with "Server Address" (mail.company.com), "Server Port" (25), "User Name", and "User Password" fields. At the bottom left is a "Test" button, and at the bottom right are "OK" and "Cancel" buttons.

Email Enabled – enable the sending of email notification.

Target Address – the destination email address.

From Address – the sender email address.

Server Address – the SMTP email server address.

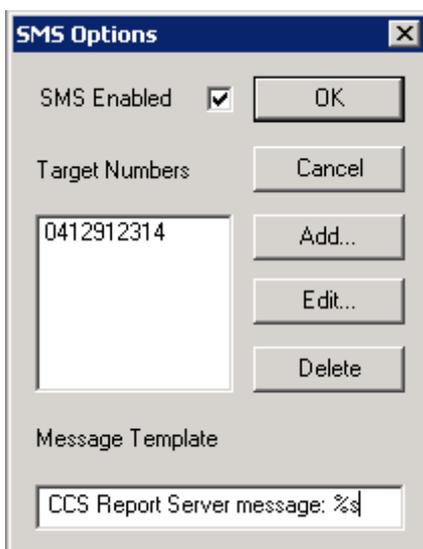
Server Port – the SMTP port number. By default it must be configured to 25.

User Name – the SMTP username, if required.

User Password – the SMTP password, required.

Test – sends a test email notification using the configured settings.

SMS – When CCS Report Server starts an alarm, it can be configured to send a message to one or more mobile phones via CCS SMS if this is installed.



The screenshot shows a dialog box titled "SMS Options". It has a blue title bar with a close button. The main area contains several fields and buttons. At the top, "SMS Enabled" is checked. Below it is a "Target Numbers" field containing "0412912314". At the bottom is a "Message Template" field containing "CCS Report Server message: %s". On the right side, there are buttons for "OK", "Cancel", "Add...", "Edit...", and "Delete".

SMS Enabled – enable the sending of SMS notification.

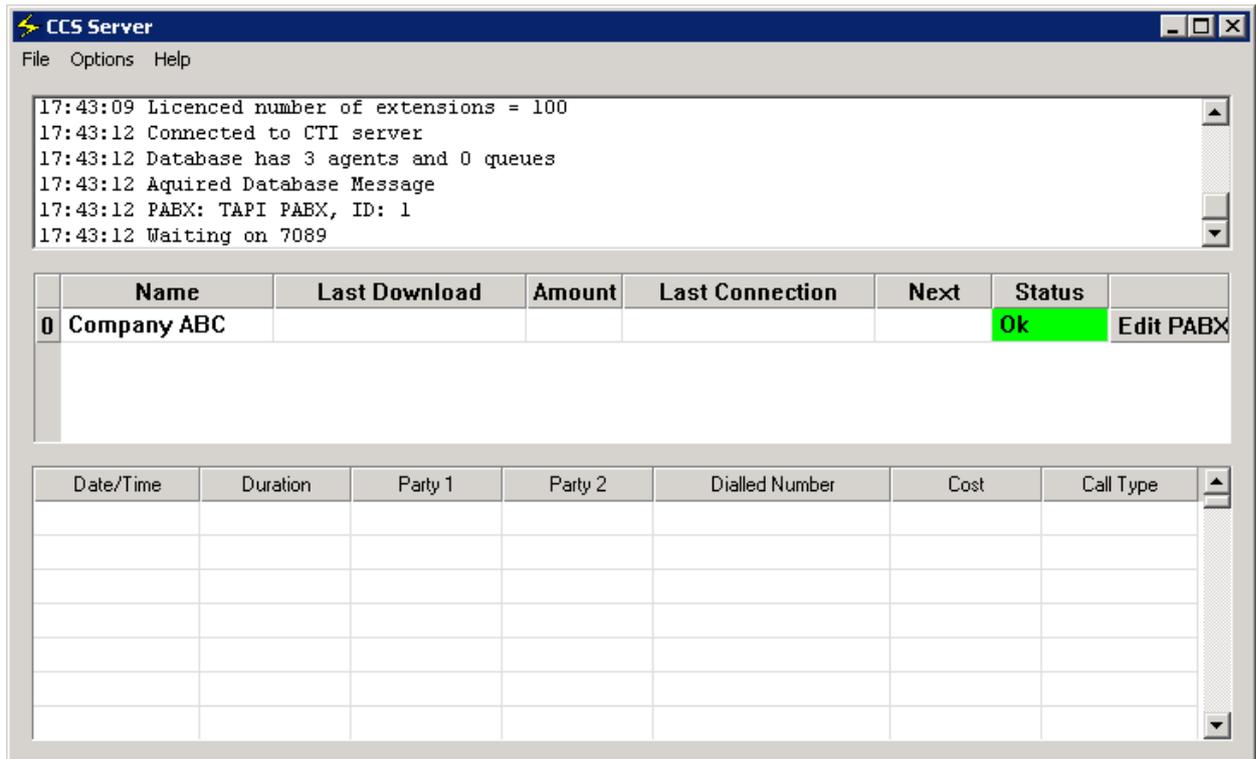
Target Numbers – list of devices to receive the SMS notification. The Add / Edit / Delete buttons perform applicable function into this list.

Message Template – configure the SMS message that will be sent. The special symbol %s will be replaced with the text of the CCS Report Server alarm message.

3.2 Using CCS Report Server

The principle purpose of the CCS Report Server is to download data from the PABX on a regular basis, interpret this data and enter it into the CCS Report database. A secondary purpose on CCS Report Server is to act as a license server for other CCS Report applications.

3.2.1 Main Interface



This screen appears when CCS Report Server first starts. There are three panes:

1. The **system message** window – shows all messages relating to the operation of the server.
2. The **sites** screen – the status of the configured sites is displayed.
3. The **logged calls** screen – the most recent logged calls.

The 'sites screen' shows a list of the sites currently configured on the system.

Name – the name given to the site.

Last Download – the time that the last download from the site took place, blank if no download has occurred yet.

Amount – total bytes downloaded in the last download, blank if no download has occurred yet.

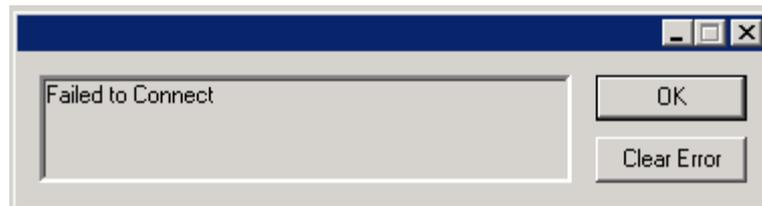
Last Connection – the time that the site was last connected to. This is not the same as Last download as the site might not have logged any data in the time between downloads.

Next – the time to the next download.

Status – the status of the site, based on the last download. This item has three states.

Ok – this means that the site is operation correctly,

Details... – a problem has occurred and an alarm has started. Click on the status to display the error details. The alarm can be cleared by clicking **Clear Error**.



Disabled – call logging for this site is disabled.

Poll Now – when clicked it will begin an immediate download from a site, regardless of Disabled or error status.

The columns in the 'logged calls' screen, from left to right, are,

Date/Time – the date/time that the call began.

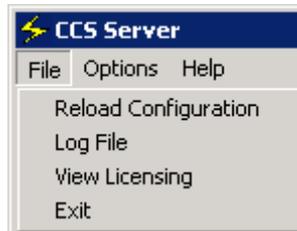
Duration – the duration, in seconds, of the call.

Party 1 / Party 2 – the number of the first and second party to the call. This value is prefixed by a letter indicating what type of party it is. 'E' indicates that it is an extension, and the number is the extension number, 'T' indicates a trunk and the number is the trunk number.

Dialled Number – the number dialled to make this call.

Call Type – Incoming, Outgoing, Internal, Tandem, Feature or Unknown.

3.2.2 File Menu



Reload Configuration – CCS Report Server will re-read from the database all site configuration, all decoder configuration and all other database configuration as it would on initial start-up.



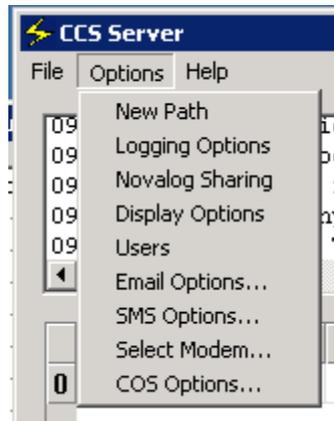
Log File – Allows a file of PABX data to be imported into the database as if it comes from a site.

File – the location of the call data records file.

As Site – the name of the site for the call to be logged against.

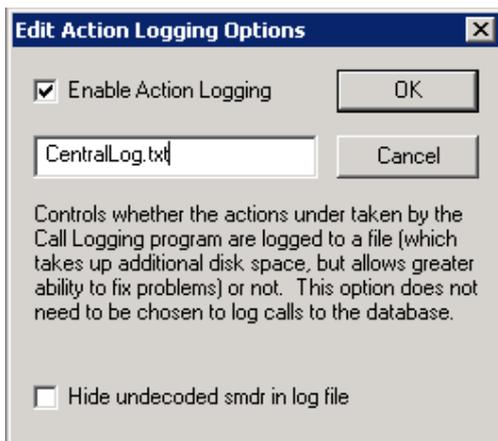
View Licensing – opens the CCS Report licensing window to view the features enabled.

3.2.3 Options Menu



New Path – When CCS Report Server downloads files, it places these in a temporary data storage folder. This defaults on install to 'C:\Program Files\CCS\CCS Report\tmp', however, it can be changed with this option.

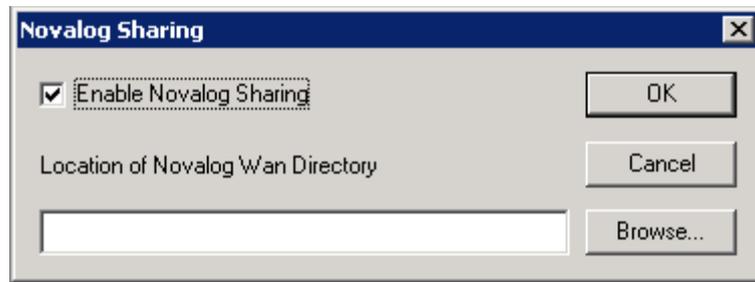
Logging Options – Controls the ability to write a log of the CCS Report Server actions, mainly used for troubleshooting. The log files are stored in 'C:\Users\ProgramData' (Windows 7 or 2008 Server) or 'C:\Documents and Settings\All Users\Application Data' (Windows XP or 2003 Server).



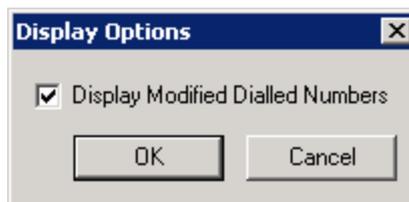
Enable Action Logging – check this box to enable the feature.

Hide Undecoded smdr in log file – omits any decoder failure from the action log.

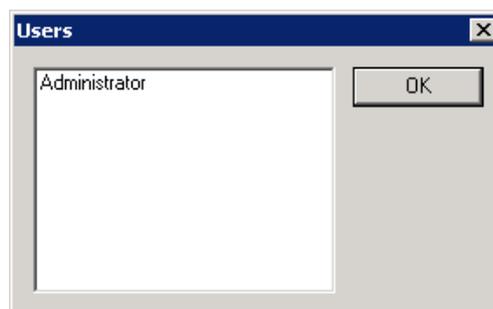
Noalog Sharing – If a legacy Noalog system is already in operation, this assist the transition to CCS Report.



Display Options – Check the 'Display Modified Dialed Numbers' for the Dialed Number column on the CCS Report Server logged calls pane to display the modified dialed number, which is the dialed number after the application of digit modification and prefixed area codes.



Users – Shows a list of the users currently logged onto CCS Report Server.



Email Options – When CCS Report Server starts an alarm, it can be configured to send a message to one email address.

Email Enabled – enable the sending of email notification.

Target Address – the destination email address.

From Address – the sender email address.

Server Address – the SMTP email server address.

Server Port – the SMTP port number. By default, it must be configured to 25.

User Name – the SMTP username, if required.

User Password – the SMTP password, if required.

Test – sends a test email notification using the configured settings.

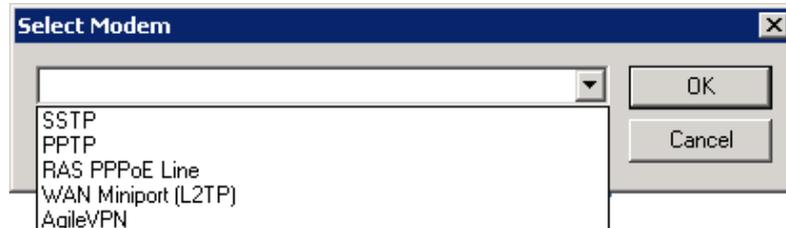
SMS Options – When CCS Report Server starts an alarm, it can be configured to send a message to one or more mobile phones via CCS SMS if this is installed.

SMS Enabled – enable the sending of SMS notification.

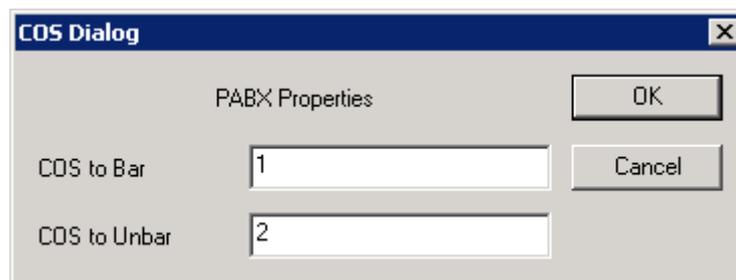
Target Numbers – list of devices to receive the SMS notification. The Add / Edit / Delete buttons perform applicable function into this list.

Message Template – configure the SMS message that will be sent. The special symbol **%s** will be replaced with the text of the CCS Report Server alarm message.

Select Modem... – In the case that CCS Report Server is connecting to CCS Report Remote via a modem, the modem that is used can be selected by selecting from this menu.



COS Options – If the CCS Report Hospitality is used to bar and unbar extensions then the mapping of the barred and unbarred states to the internal COS of the PABX can be set using this configuration.



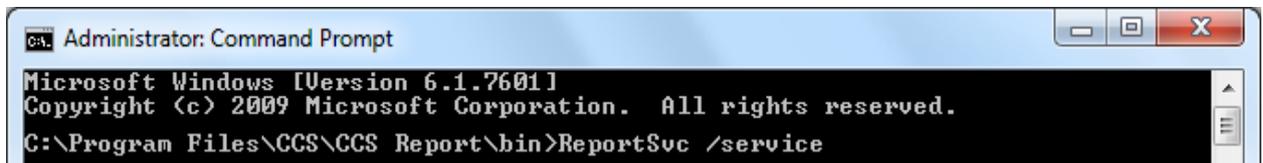
3.2.4 Running CCS Report as a Service

CCS Report Server must be running at all times. When the application is started from the Start Menu, the main interface is available on the desktop as shown in earlier sections. When minimized, a system tray icon will be displayed. 

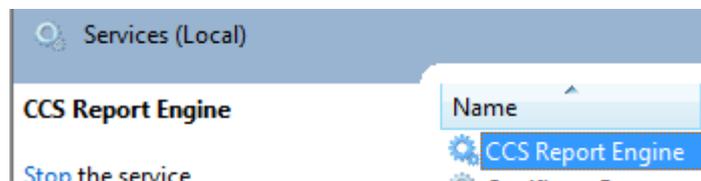
CCS Report Server can also run as a service. When it is running as a service, the main interface is not available on the desktop and no system tray icon will be displayed. This also means that the above CCS Report Server settings will not be able to be configured while it is running as a service.

The CCS Report Configuration Wizard gives the option to run CCS Report Server as a service, and if checked, would have installed the service automatically. To install the service manually, run following command from the CCS Report installation folder as illustrated with the command prompt below:

ReportSvc /service

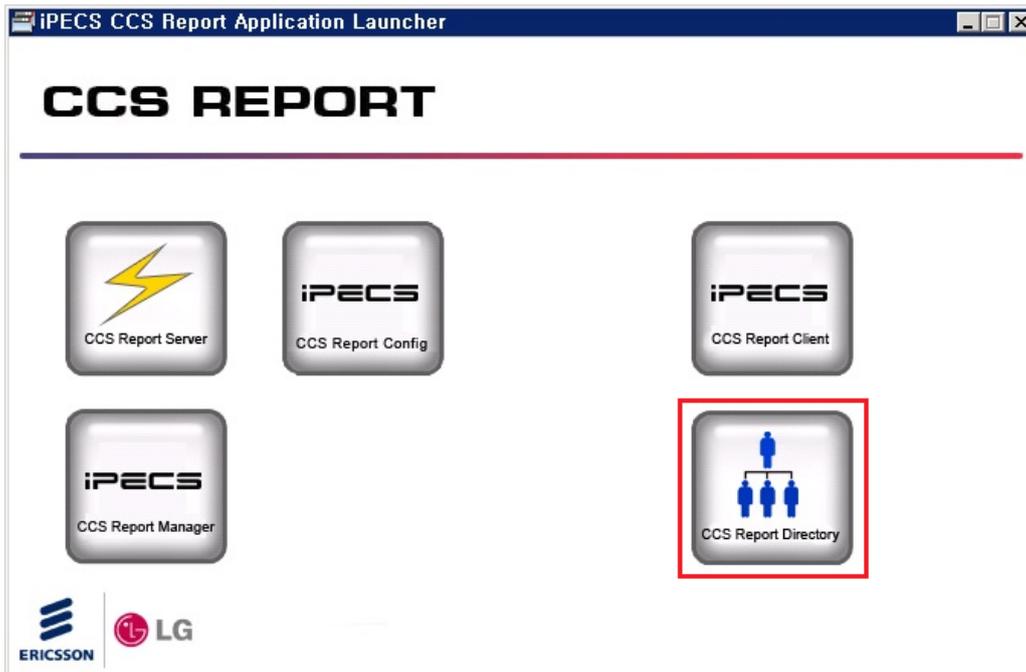


The service can be managed from the Windows management console for Services, or using CCS Service Manager assuming CCS Desk is installed.



3.3 Using CCS Report Directory

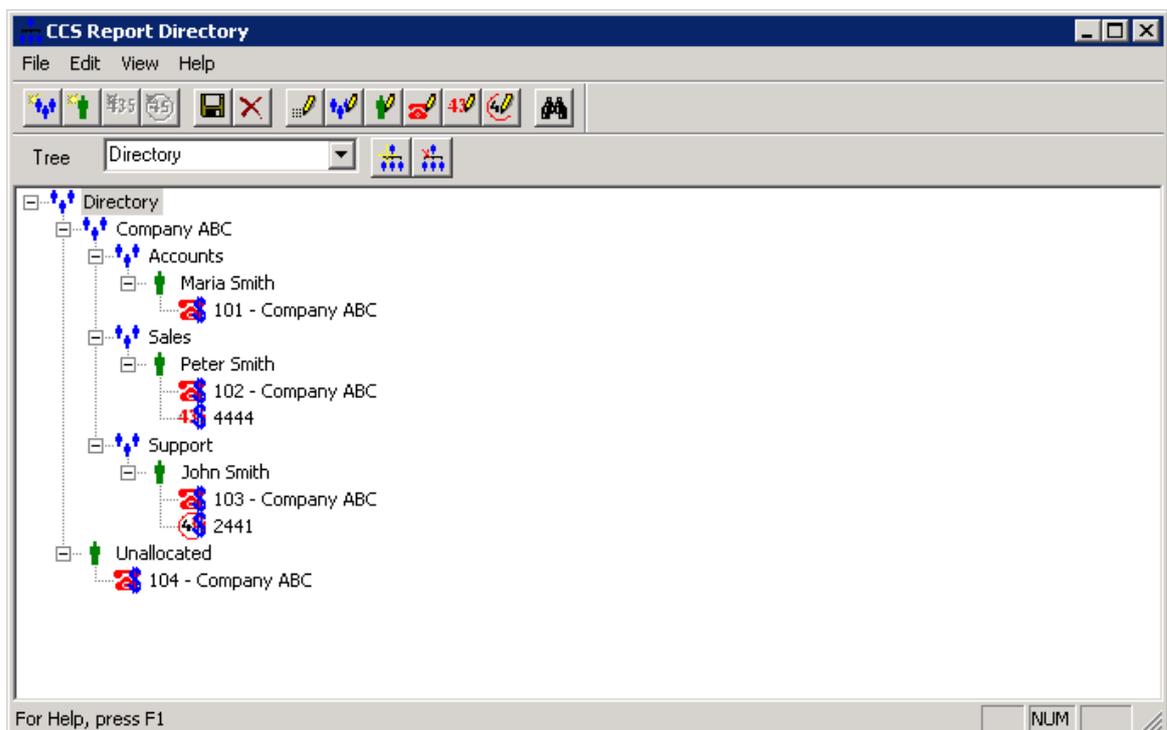
CCS Report Directory allows the administrator to assign items such as an extension number, account code, and/or authorization code to a user and logically group these users. Additional information such as e-mail address and mobile phone number can be added to the properties of a directory object. Run CCS Report Directory from the CCS Report Application Launcher.



The default username is **Administrator** with no password. Note that CCS Report users may only have 'View' access to the Directory. Only users with 'Modify' access are allowed to make changes in CCS Report Directory.

3.3.1 Main Interface

The CCS Report Directory interface has a top row of buttons that are context sensitive. Buttons that are not related to the currently selected directory object will be disabled.



The default 'Tree' name is Directory. To change this name, simply double click on it and enter a new name.

Typically only one tree is required for each CCS Report installation, but more 'trees' can be added by clicking on the  button. Trees can be deleted by using the other button .

The main window area contains a *Windows Explorer* folder view style of interface. There are five different types of objects that can be manipulated in the directory tree. These objects are:

- Group 
- Person 

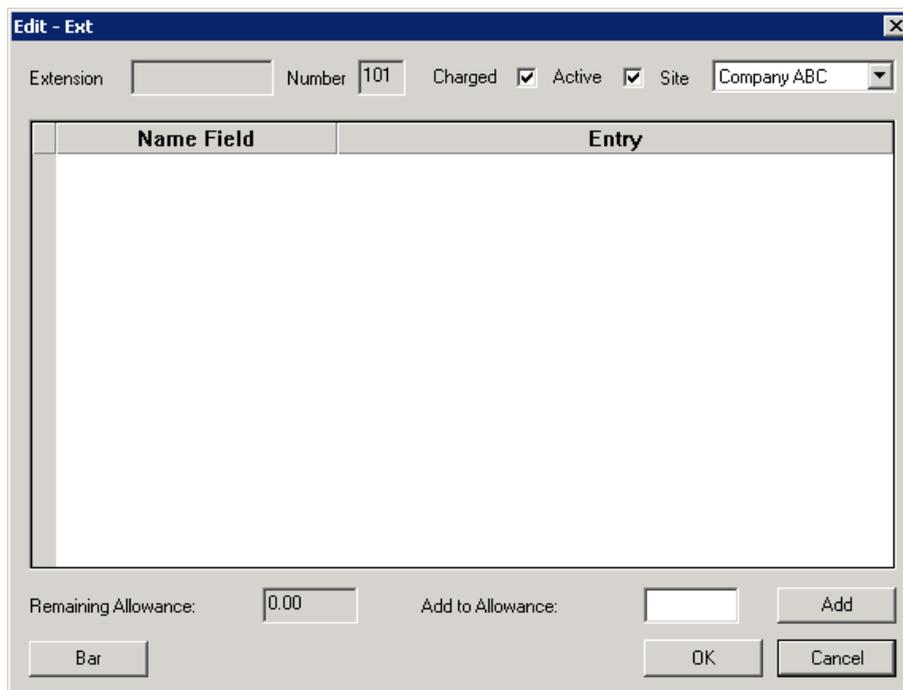
- Extension 
- Account Code 
- Authorization Code 

A 'Group' object can contain either 'Group' or 'Person' objects. Typically, separate groups would be formed for different departments or offices in a company.

A 'Person' object can only contain 'Extension', 'Account Code' and 'Authorization Code' objects.

An 'Extension' can either be active or inactive. The CCS Report license the number of extensions that can be made active in CCS Report. **Only calls related to 'active' extensions / account codes will be logged.** An inactive extension is indicated by the icon being grey  rather than red.  Right click on an extension and click 'Edit' to change its 'Active' status.

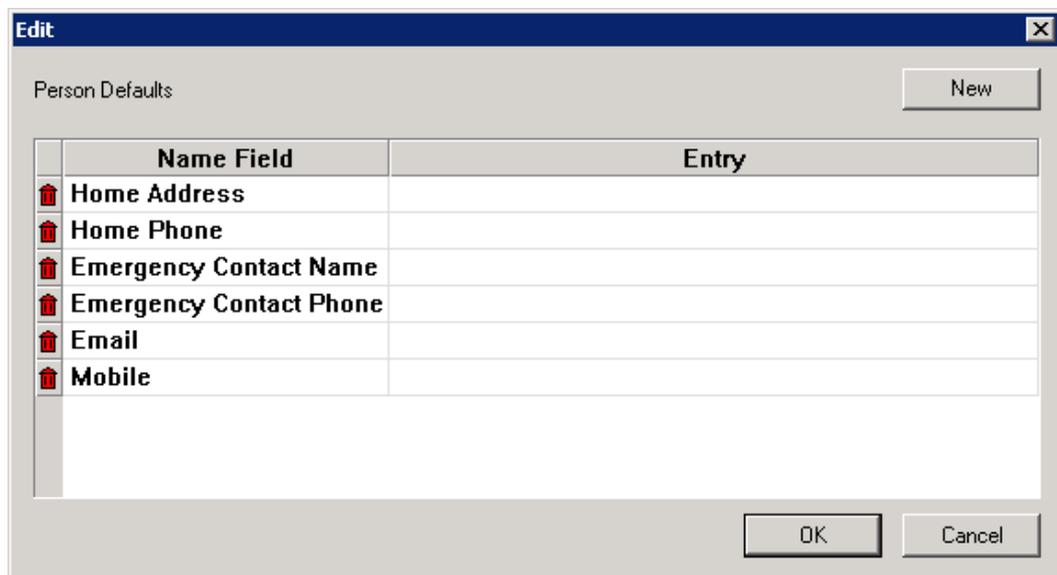
An 'Extension', 'Account Code', and 'Authorization Code' can be set to not charged which means CCS Report Server will assign zero cost against call made with one of those objects. A charged object will have the blue dollar sign by the icon.  Right click on an object and click 'Edit' to change its 'Charged' status.



Name Field	Entry
------------	-------

3.3.2 Defining CCS Directory Defaults

To modify the defaults fields for each directory object, click on the corresponding toolbar button. This will display a window showing any existing fields that were defined.

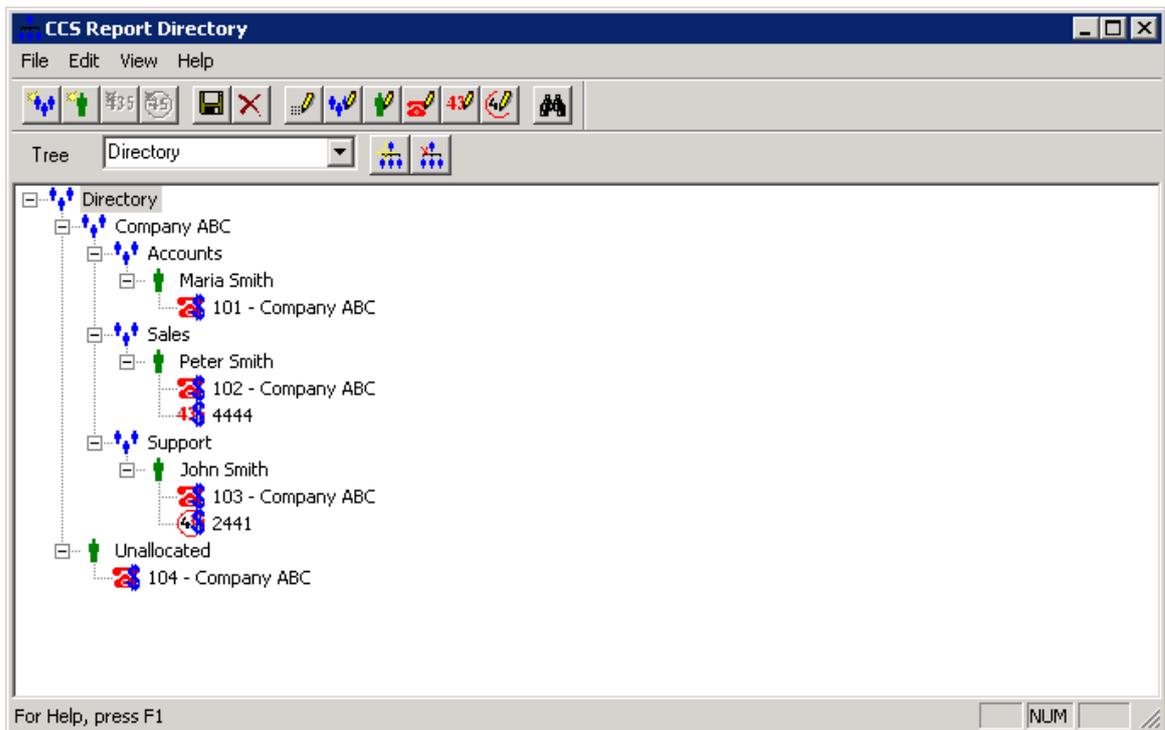


To add a new field, click on the **New** button and enter a name for the field in the *Name Field* cell. To remove an existing field, click on the button.

Any changes made in this window will have a global effect on all objects of the type selected. E.g. if a new field called 'Mobile' is added to *Person Defaults*, then all 'Person' objects will contain a 'Mobile' field. It is recommended to leave Entry blank because it will overwrite the values of the field in all objects

3.3.3 Create Directory Objects

The root of the tree contains a default group that is named *Directory*. Select this group then click on the  button to change the name.



The next step is to create a tree structure that logically represents the company's own office and departmental structure. The example from the above screen shot shows two group objects that are part of the default group, which represent two companies. Departmental 'Sub-Groups' such as *Accounts*, *Sales* and *Support* are then created under each company. Each 'Person' object can then be added to the appropriate departmental group. Finally, 'Extension', 'Account Code', and 'Authorization Code' objects can be assigned to the 'Person' object.

Edit - Group

Group:

Name Field	Entry
------------	-------

Script:

Notes:

OK Cancel

To create a new 'Group', select the parent group that should contain this new group.

Next click on the  button and enter a name in the **Group** edit box. Information can also be entered for the default fields.

Edit - Person

Name:

Name Field	Entry
Home Address	
Home Phone	
Emergency Contact Name	
Emergency Contact Phone	
Email	

Notes:

Title:

Email Address:

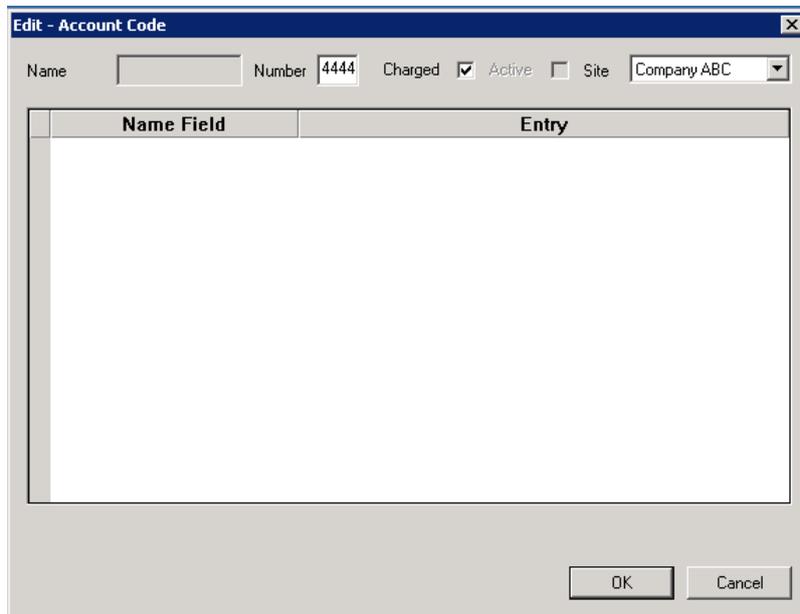
OK Cancel

To add a new 'Person', first select the group that they will belong to.

Next click on the  button and enter a name in the **Name** edit box. Information can also be entered for the default fields.



To add a range of 'Extensions', select Edit from the top menu, and then 'Add Extension Range'. Select the lower, upper extensions and site, and then click **OK** to add these extensions. The added extensions will be active by default, unless no more active extensions can be added. Duplicate extensions will not be added.



To add a new 'Account Code', first select the person that it will belong to. Next click on the  button and enter the account code in the **Number** edit box.

The '**Charged**' check box should be selected if the cost of calls made against the account code is to be calculated

Ensure that the correct site is selected on the **Site** pull-down menu.

The screenshot shows a dialog box titled "Edit - Authorisation Code". At the top, there are several input fields: "Name" (empty), "Number" (containing "2441"), "Charged" (checked checkbox), "Active" (unchecked checkbox), and "Site" (pull-down menu showing "Company ABC"). Below these is a large table with two columns: "Name Field" and "Entry". The table is currently empty. At the bottom of the dialog, there are two more text boxes: "Remaining Allowance" (containing "0.00") and "Add to Allowance" (containing "0.00"). To the right of these are three buttons: "Add", "OK", and "Cancel".

To add a new 'Authorization Code', first select the person that it will belong to. Next click on the  button and enter the account code in the **Number** edit box.

The '**Charged**' check box should be selected if the cost of calls made against the authorization code is to be calculated

Ensure that the correct site is selected on the **Site** pull-down menu.

3.3.4 Updating, Deleting, Moving

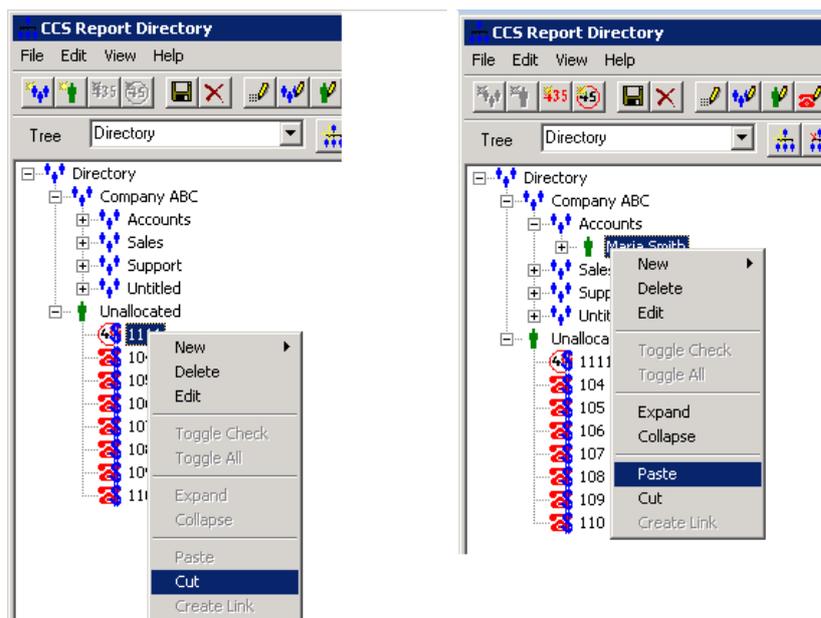
As the company structure changes, it will be necessary to update the directory tree. It is important to keep the CCS Report Directory up to date, as the information it contains can be used by other applications.

The details of directory object can be updated by selecting the object and clicking on the  button.

To delete a directory object, select the object then click on the  button. A confirmation box will appear to verify that the object should be deleted. Note that any objects that belong to the selected object will also be deleted.

Extensions are not deleted but inactivated and moved to the 'Unallocated' person.

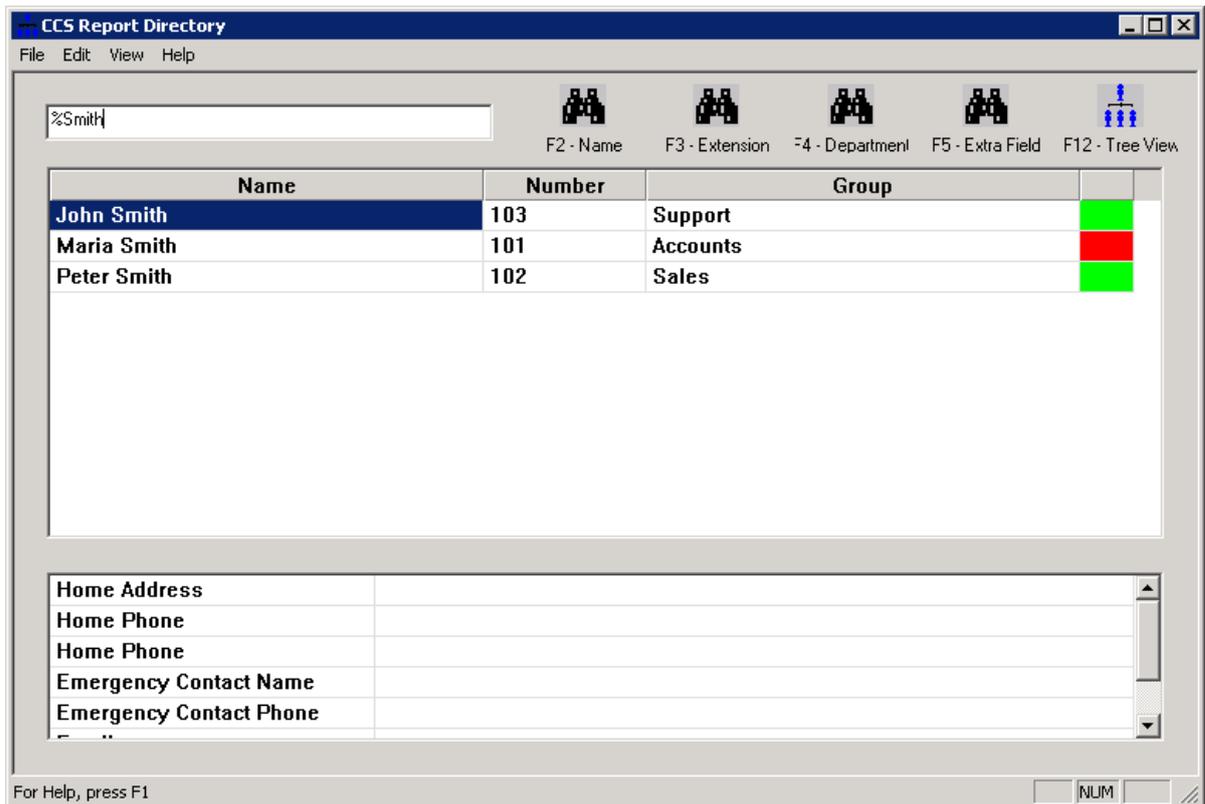
A directory object can be simply 'dragged-and-dropped' from one location to another. Sometimes, the location that the object needs to be moved to is not visible in the CCS Report Directory window. To move such objects, first select the object and then click on it with the right mouse button and select **Cut**. Then select the destination object and again click on it with the right mouse button and select **Paste** from the menu.



Finally, it is important to note that any changes made to the directory will not be saved until the  button is clicked.

3.3.5 Fast Search

To search the directory, click on the search icon  in the tool bar. The Directory can be searched by Name, Extension, Department, or values in Person Fields. The edit box is entered with the text to match, and the percentage symbol can be used as a wildcard.



In the results pane, double clicking on an entry will search for that entry.

To sort on a column, double click on its header.

Active extensions are indicated by a green mark in the active column, inactive by a red mark.

When an entry is selected, clicking on the tree view icon  will return to the tree view screen, with the selected Directory entry shown and selected.

4. CONFIGURING CCS REPORT WEB

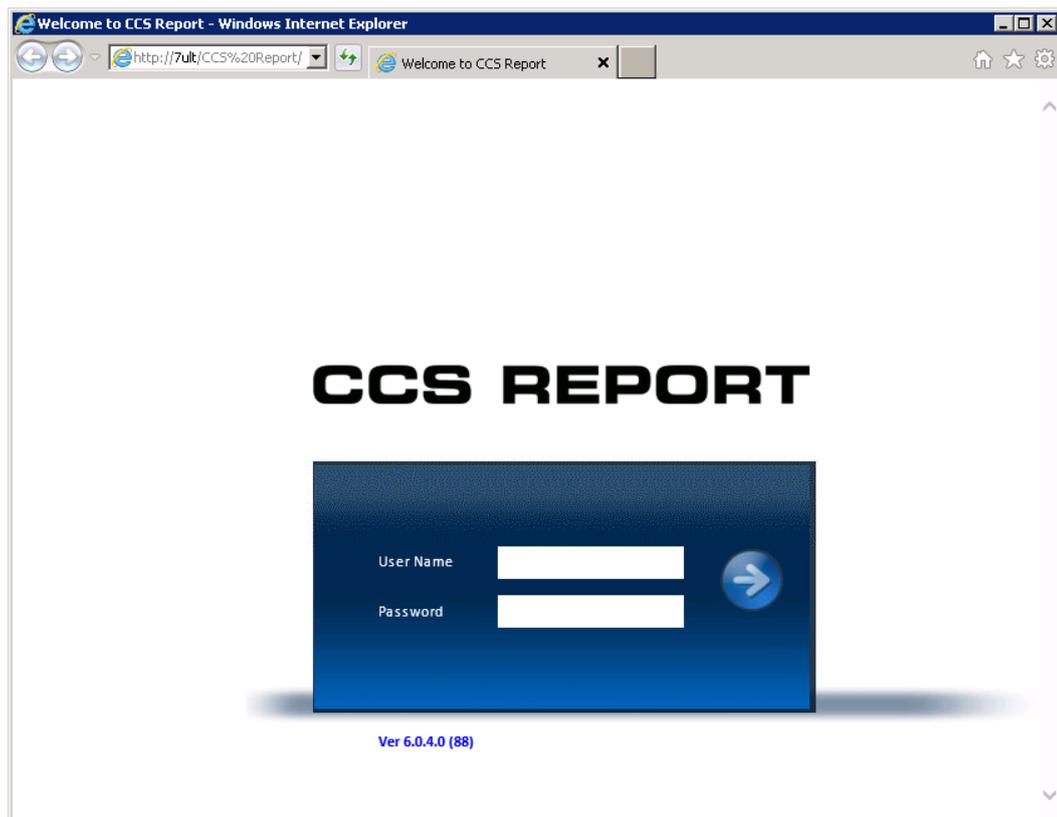
4.1 Using CCS Report Web

The CCS Report Web Application allows users to run reports, subscribe to scheduled reports, print and export reports in Excel or PDF format for further manipulation.

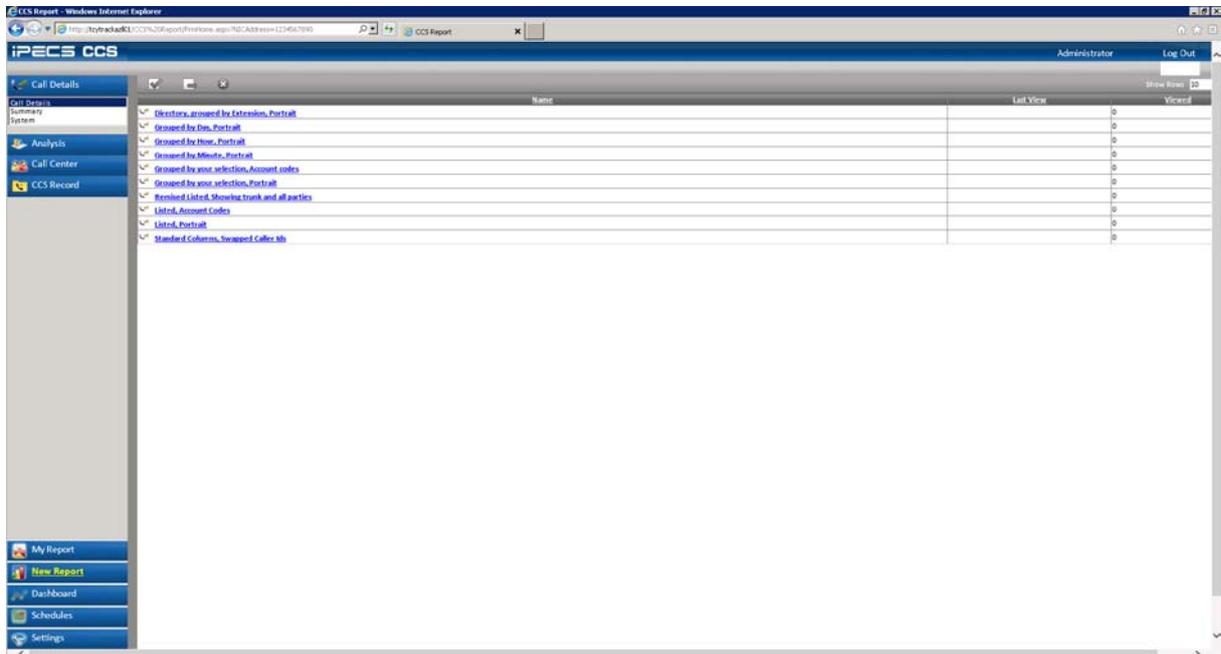
4.1.1 Getting Started with CCS Report Web

CCS Report Web is a web based client which only requires a URL to access the reports. To run CCS Report Web, open Internet Explorer and type in the CCS Web URL.

Assuming that the CCS Report Web machine name is *7ult* and the website is installed on the IIS default website port 80, the URL is ***http://7ult/CCS%20Report***

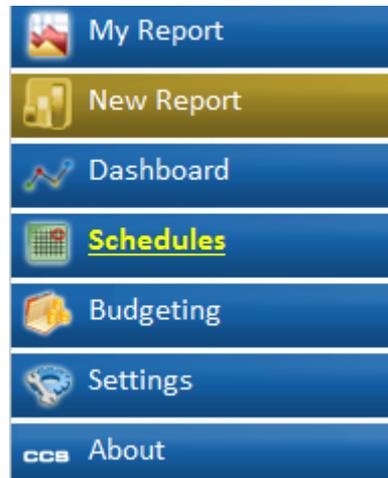


To login, use the default user ID 'Administrator' with a blank password.

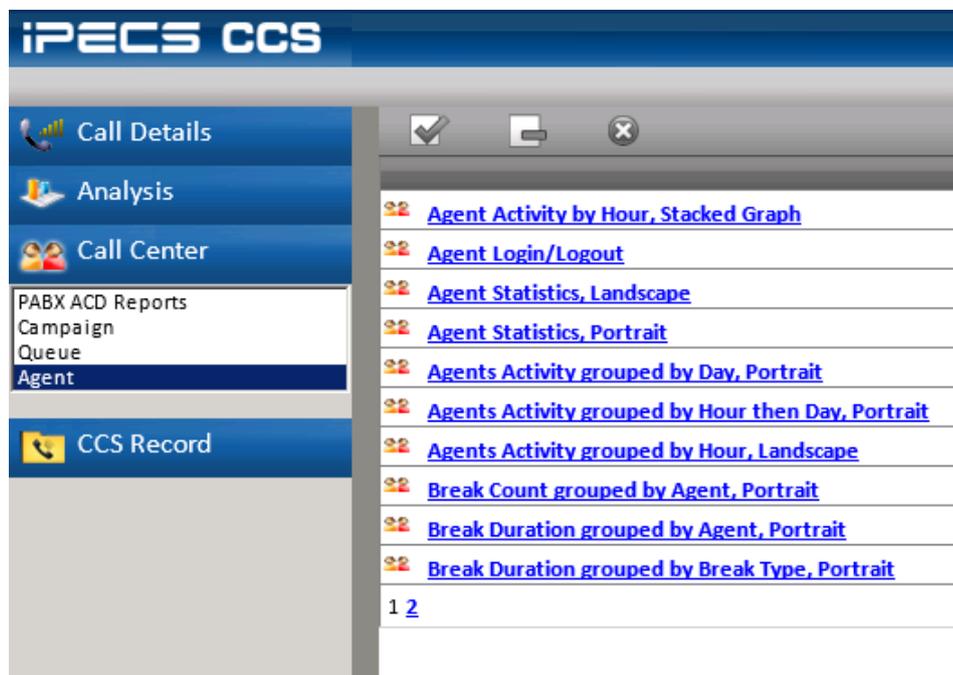


4.1.2 Run a New Report

To Run a new Report, select a report of your choice from the 'New Report' folder and click on it to open the three step reports wizard.

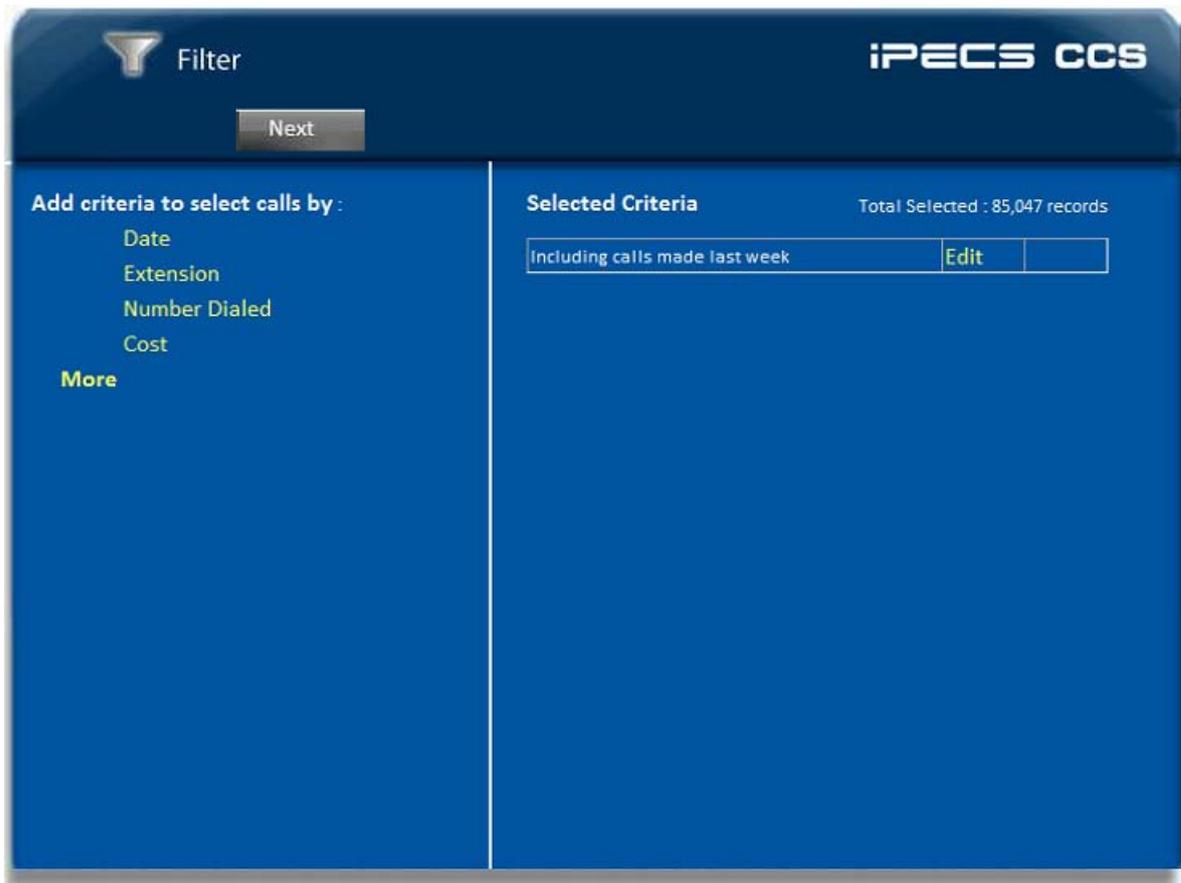


In this example, we are going to run a report for CCS Desk agent break. Click on 'Call Centre' to open the category tree, then CCS Desk sub category and then click on 'Break Count Grouped by Agent, Portrait'.

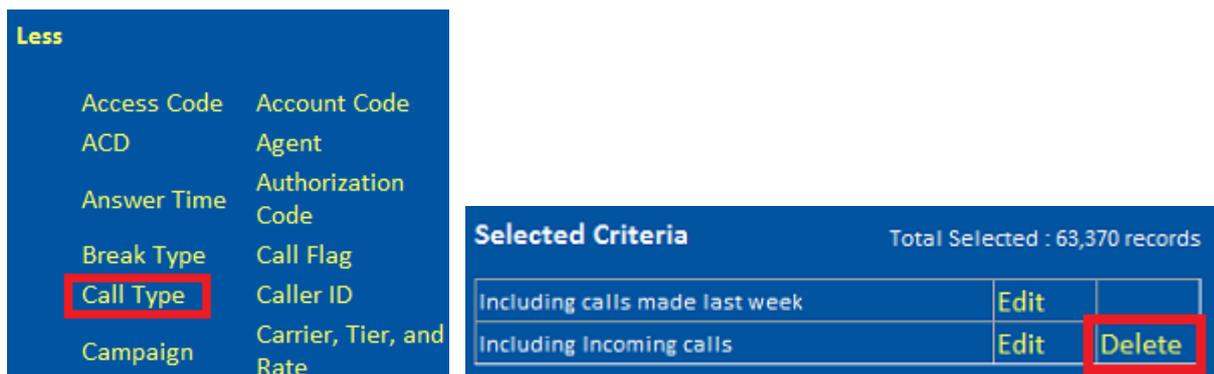


4.1.3 Filter – Step 1

CCS Report Web guides you through the process of selecting data and options for your Report in a simple 3 Step Wizard. The first step allows you to select from a list of multiple criterion. Each individual filter criteria will be discussed in more details in this section.



The default filter will generate a report that contains all calls made on today's date. To add a filter simply click on the criteria from the left hand plain or to remove a filter click on delete on the right plain under selected criteria.

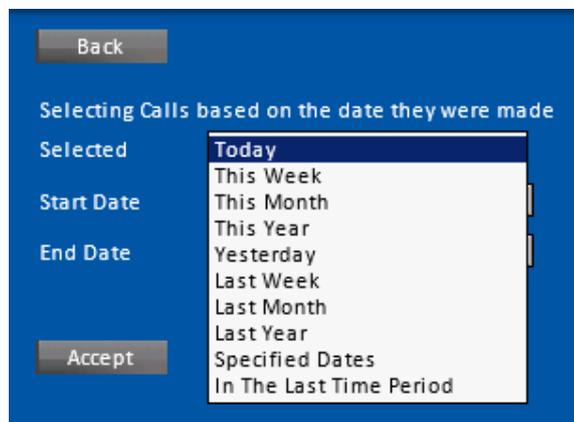


4.1.3.1 Date Range

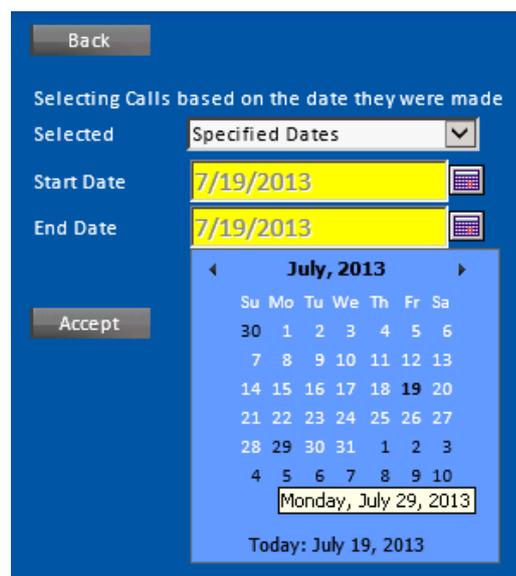
To change the date range, click on the **Edit** label on the right hand plain. By default the date range is set to 'Today'.



This will open another window with more details. From the 'Selected' drop down list, select the applicable date range.

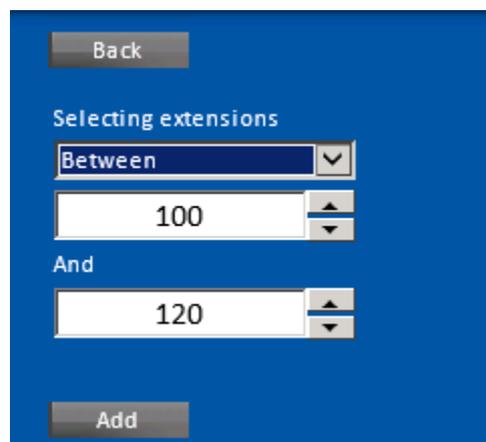
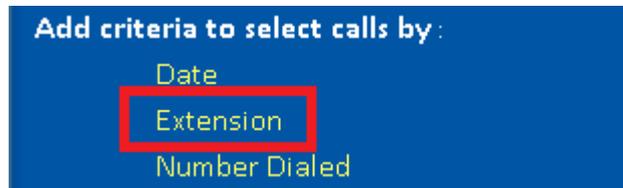


Selecting 'Specified Dates' allows user to select a start and end date.



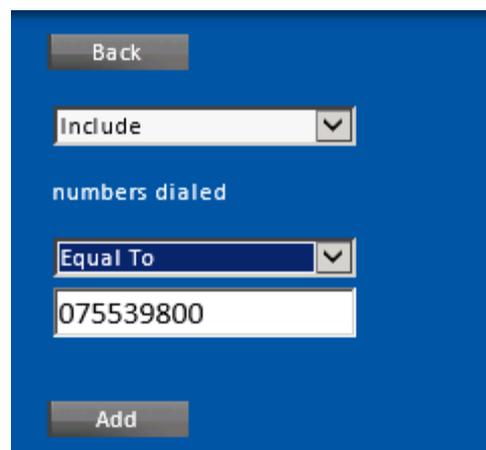
4.1.3.2 Extension

Calls can be filtered based on the **Extension** number. This filter requires one boolean operator and specific numeric values.



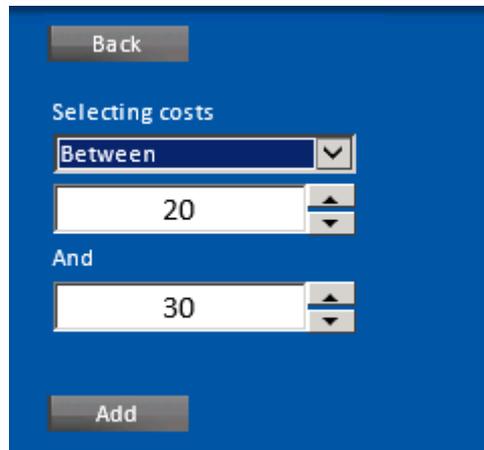
4.1.3.3 Numbers Dialed

Calls can be filtered based on the **Numbers Dialed**. This filter requires one boolean operator and specific numeric values.



4.1.3.4 Cost

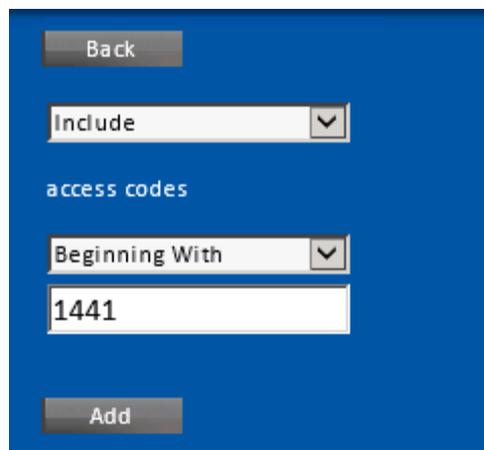
Calls can be filtered based on the **Cost** calculated by CCS Report. This filter requires one boolean operator and specific numeric values.



The screenshot shows a blue interface for configuring a filter. At the top left is a 'Back' button. Below it is the text 'Selecting costs'. A dropdown menu is set to 'Between'. Below the dropdown are two numeric input fields: the first contains '20' and the second contains '30'. Between these two fields is the word 'And'. At the bottom of the form is an 'Add' button.

4.1.3.5 Access Codes

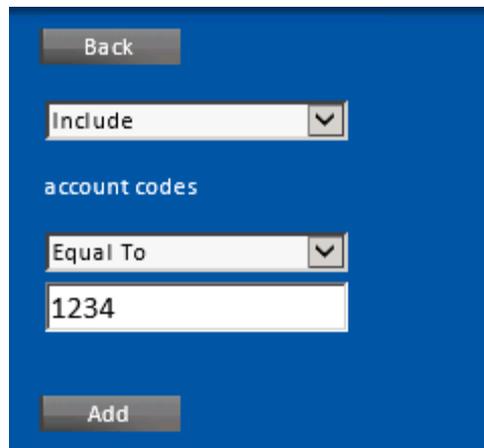
If the PABX supports this feature, calls can be filtered based on the **Access Codes**. This filter requires one boolean operator and specific numeric values.



The screenshot shows a blue interface for configuring a filter. At the top left is a 'Back' button. Below it is a dropdown menu set to 'Include'. Below the dropdown is the text 'access codes'. Another dropdown menu is set to 'Beginning With'. Below that is a numeric input field containing '1441'. At the bottom of the form is an 'Add' button.

4.1.3.6 Account Codes

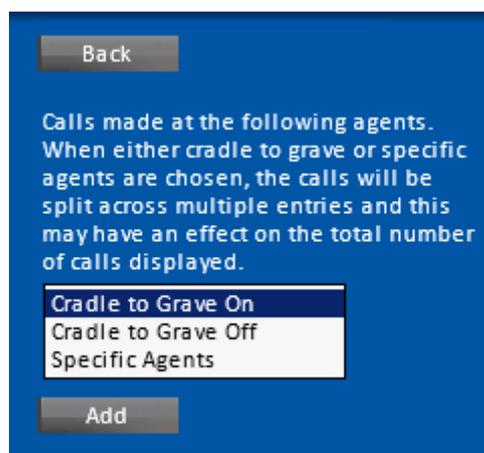
If the PABX supports this feature, calls can be filtered based on the **Account Codes**. This filter requires one boolean operator and specific numeric values.



The screenshot shows a blue interface with a 'Back' button at the top left. Below it is a dropdown menu set to 'Include'. Underneath, the text 'account codes' is displayed. This is followed by another dropdown menu set to 'Equal To' and a text input field containing the number '1234'. At the bottom is an 'Add' button.

4.1.3.7 Agent

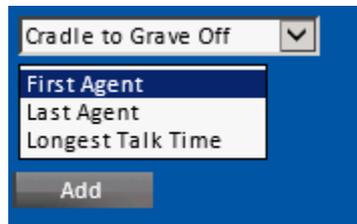
When integrated with CCS Desk, CCS Report can filter the calls based on the **CCS Desk agents**. Because of the complex scenario and possibilities that could happen with a call i.e. transfers, diverts, recalled, etc., there are 3 modes available that determines how the report analyzes the agent data.



The screenshot shows a blue interface with a 'Back' button at the top left. Below it is a text block: 'Calls made at the following agents. When either cradle to grave or specific agents are chosen, the calls will be split across multiple entries and this may have an effect on the total number of calls displayed.' Below this text is a dropdown menu with three options: 'Cradle to Grave On' (highlighted), 'Cradle to Grave Off', and 'Specific Agents'. At the bottom is an 'Add' button.

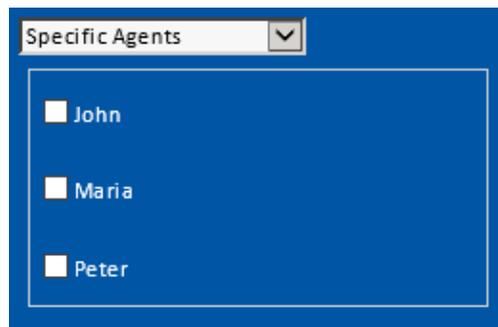
Cradle to Grave On – calls and statistics are split and reported against each agent involved in the call.

Cradle to Grave Off – calls and statistics will be combined and reported against one agent, which can be chosen from the following: **First Agent**, **Last Agent**, or the one with the **Longest Talk Time**.



A screenshot of a software interface showing a dropdown menu. The dropdown is currently set to 'Cradle to Grave Off'. The menu is open, showing three options: 'First Agent', 'Last Agent', and 'Longest Talk Time'. Below the menu is a grey 'Add' button.

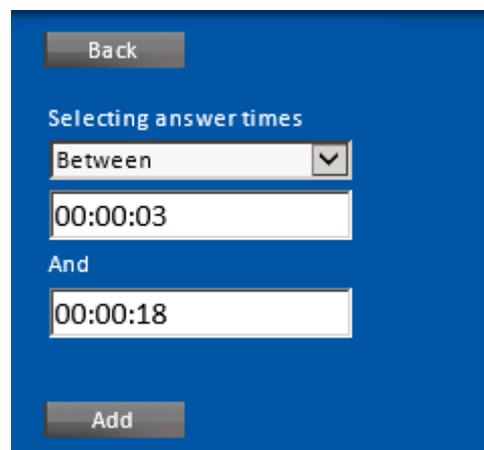
Specific Agents – select a list of agents that will be included in the report. Excluded agents' calls and statistics will be ignored by the report



A screenshot of a software interface showing a selection box titled 'Specific Agents'. The box contains three entries, each with a checkbox and a name: 'John', 'Maria', and 'Peter'. All checkboxes are currently unchecked.

4.1.3.8 Answer Time

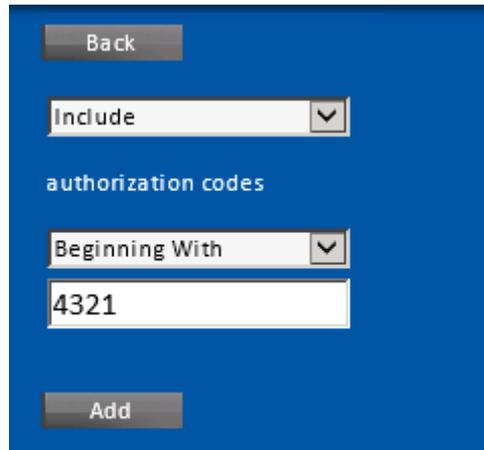
If the PABX supports this feature, calls can be filtered based on the **Answer Time**. This filter requires one boolean operator and specific *hh:mm:ss* values.



A screenshot of a software interface for selecting answer times. It features a 'Back' button at the top left. Below it is the text 'Selecting answer times'. A dropdown menu is set to 'Between'. Below the dropdown are two input fields: the first contains '00:00:03' and the second contains '00:00:18'. The word 'And' is positioned between the two input fields. At the bottom is a grey 'Add' button.

4.1.3.9 Authorization Codes

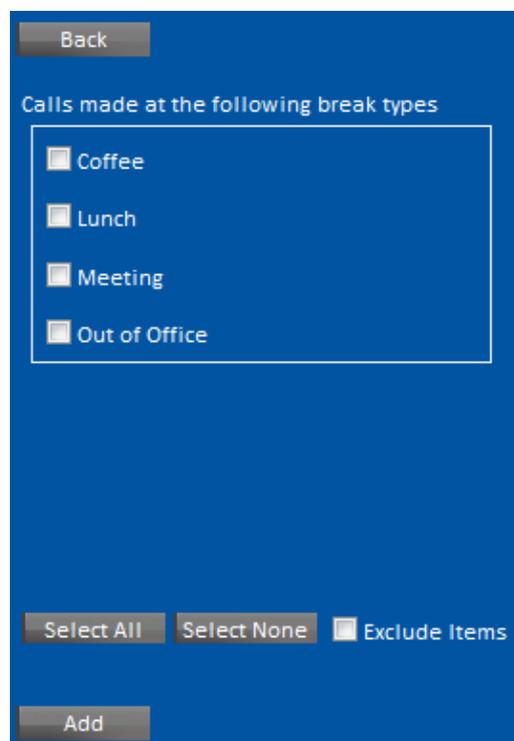
If the PABX supports this feature, calls can be filtered based on their **Authorization Codes**. This filter requires one boolean operator and specific numeric values. You can also 'Exclude' the selected codes.



The screenshot shows a blue interface for filtering calls by authorization codes. At the top left is a 'Back' button. Below it is a dropdown menu set to 'Include'. Underneath, the text 'authorization codes' is displayed. This is followed by another dropdown menu set to 'Beginning With' and a text input field containing the number '4321'. At the bottom is an 'Add' button.

4.1.3.10 Break Type

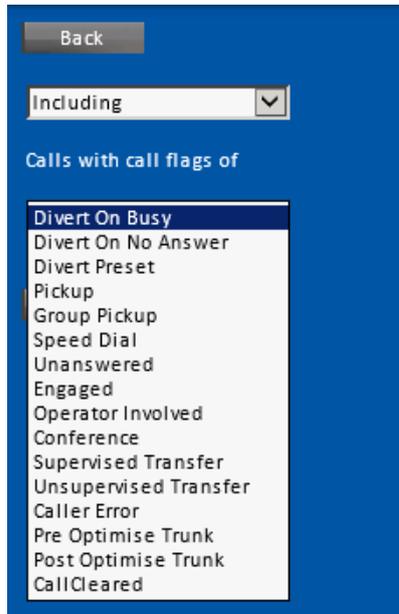
When integrated with CCS Desk, CCS Report can filter the calls based on the **Break Types**.



The screenshot shows a blue interface for filtering calls by break type. At the top left is a 'Back' button. Below it, the text 'Calls made at the following break types' is displayed. This is followed by a list of four break types, each with an unchecked checkbox: 'Coffee', 'Lunch', 'Meeting', and 'Out of Office'. At the bottom, there are three buttons: 'Select All', 'Select None', and 'Exclude Items'. At the very bottom is an 'Add' button.

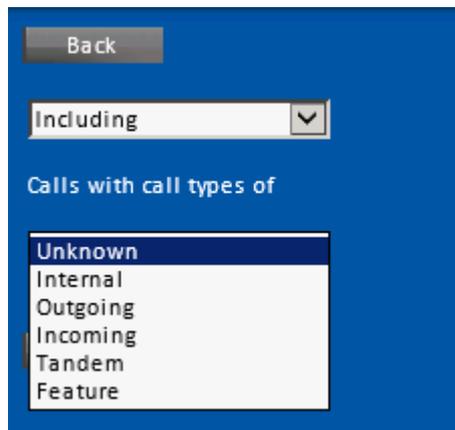
4.1.3.11 Call Flags

If the PABX supports this feature, calls can be filtered based on their **Call Flags**. This filter has two drop-down menus. The first one defines if the call type should be **included** or **excluded**. The second defines the call flag.



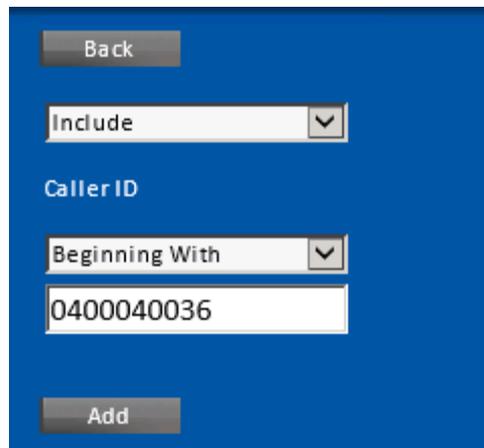
4.1.3.12 Call Type

Calls can be filtered based on their **Call Type**. This filter has two drop-down menus and one edit box. The first menu defines if the call type should be **included** or **excluded**. The second menu defines the call type.



4.1.3.13 Caller ID

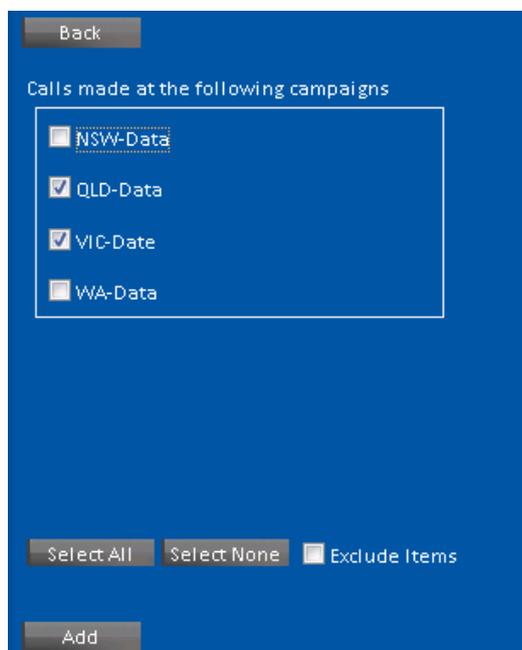
If the PABX supports this feature, calls can be filtered based on the **Caller ID**. This filter requires one boolean operators and specific numeric values.



The screenshot shows a blue interface for filtering calls by Caller ID. At the top left is a 'Back' button. Below it is a dropdown menu currently set to 'Include'. Underneath is the label 'Caller ID'. Below that is another dropdown menu set to 'Beginning With'. A text input field contains the number '0400040036'. At the bottom is an 'Add' button.

4.1.3.14 Campaign

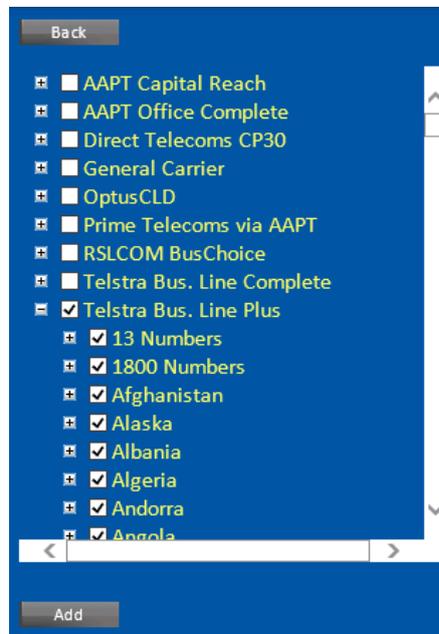
When integrated with CCS Q or CCS Call, CCS Report can filter the calls based on the **campaigns**. Click 'Campaigns' and simply tick the required campaign. You can also 'Exclude Items' selected.



The screenshot shows a blue interface for filtering calls by campaign. At the top left is a 'Back' button. Below it is the text 'Calls made at the following campaigns'. A list of four campaigns is shown, each with a checkbox: 'NSW-Data' (unchecked), 'QLD-Data' (checked), 'VIC-Data' (checked), and 'WA-Data' (unchecked). Below the list are three buttons: 'Select All', 'Select None', and 'Exclude Items'. At the bottom is an 'Add' button.

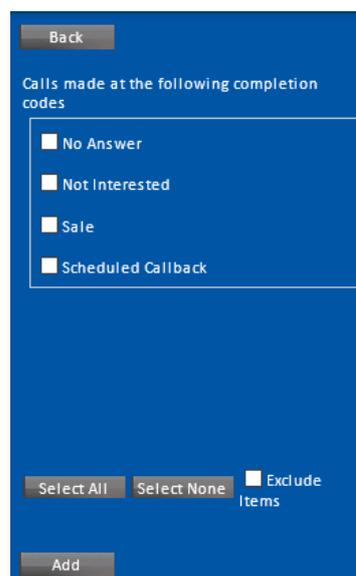
4.1.3.15 Carrier, Tier, Rate

Based on the carrier setting in CCS Report, reports can be filtered using corresponding **Carrier, Tier, or Rate** selection.



4.1.3.16 Completion Code

When integrated with CCS Desk and Completion Code is used, CCS Report can filter the calls based on the **completion codes**. Click 'Completion Codes' and simply tick the required codes. You can also 'Exclude Items' selected.



4.1.3.17 Directory

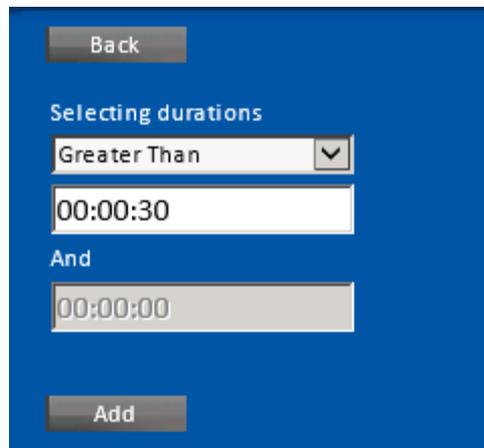
On the Directory tab of a filter, queries are based on the directory structure of the organisation configured in CCS Report Directory. The tree forms the directory, with check boxes against the groups, people, extensions, account codes, and authorization codes. Tick the items to be reported.

In the example below, we are selecting Bill's extension from the Sales group, and every item in Technical group. The selected item and all sub items will have a check box containing a tick beside them. Parents to a checked item will have their check boxes given a grey background; however, this does not indicate that they are disabled.



4.1.3.18 Duration

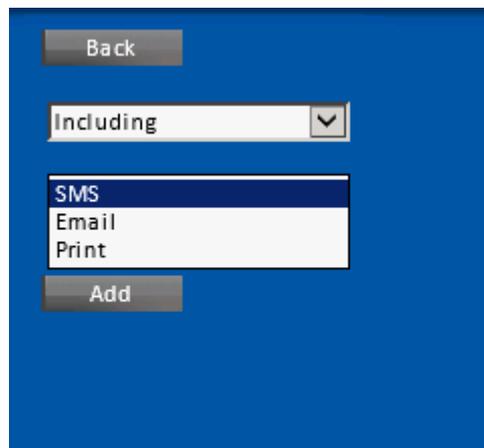
Calls can be filtered based on their **Duration**. This filter requires one boolean operator and specific *hh:mm:ss* values.



The screenshot shows a blue interface for configuring a duration filter. At the top left is a 'Back' button. Below it, the text 'Selecting durations' is displayed. A dropdown menu is set to 'Greater Than'. Below the dropdown is a text input field containing '00:00:30'. Underneath is the word 'And', followed by another text input field containing '00:00:00'. At the bottom is an 'Add' button.

4.1.3.19 Email / SMS

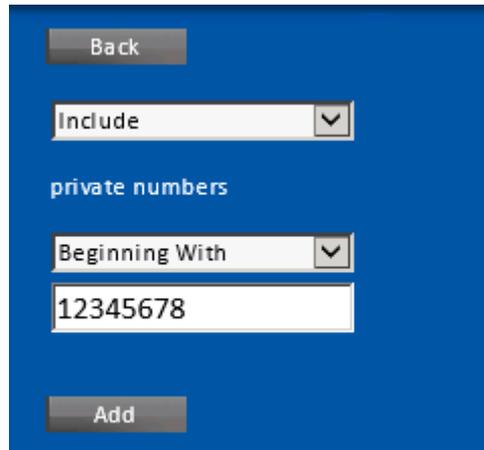
When integrated with CCS Console, CCS Report can filter the **SMS**, **Email**, and **Print** transactions generated performed using CCS Console. The first menu defines if the call type should be **included** or **excluded**. The second menu defines the transaction type.



The screenshot shows a blue interface for configuring an Email / SMS filter. At the top left is a 'Back' button. Below it is a dropdown menu set to 'Including'. Below the dropdown is a list box containing three items: 'SMS', 'Email', and 'Print'. At the bottom is an 'Add' button.

4.1.3.20 Private Number

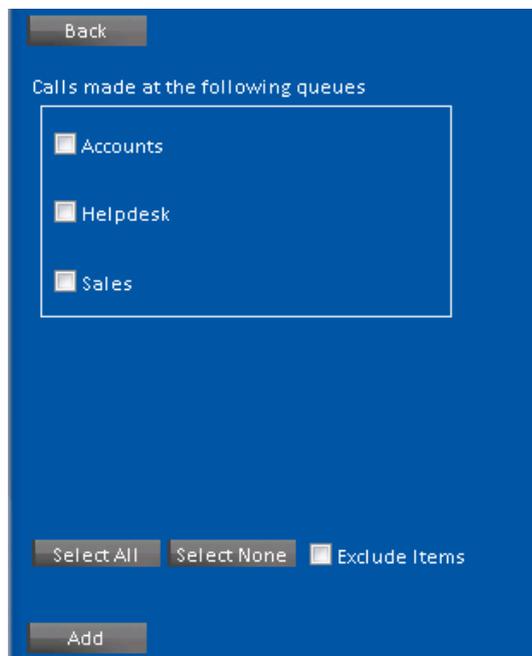
CCS Report administrators are able to import a list of private and business numbers, and calls can be filtered based **Private Numbers**. This filter requires one boolean operator and specific numeric values.



The screenshot shows a blue interface for configuring a filter. At the top left is a 'Back' button. Below it is a dropdown menu set to 'Include'. Underneath is the text 'private numbers'. This is followed by another dropdown menu set to 'Beginning With', and a text input field containing the number '12345678'. At the bottom is an 'Add' button.

4.1.3.21 Queue

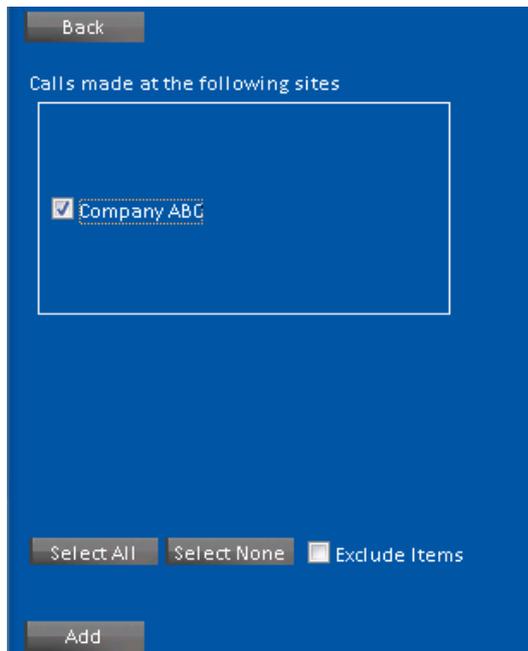
When integrated with CCS Q or CCS Call, CCS Report can filter the calls based on the **campaigns**. Tick the required queue. You can also 'Exclude Items' selected.



The screenshot shows a blue interface for configuring a filter. At the top left is a 'Back' button. Below it is the text 'Calls made at the following queues'. This is followed by a list of three items: 'Accounts', 'Helpdesk', and 'Sales', each with an unchecked checkbox. At the bottom are three buttons: 'Select All', 'Select None', and 'Exclude Items' (with an unchecked checkbox). At the very bottom is an 'Add' button.

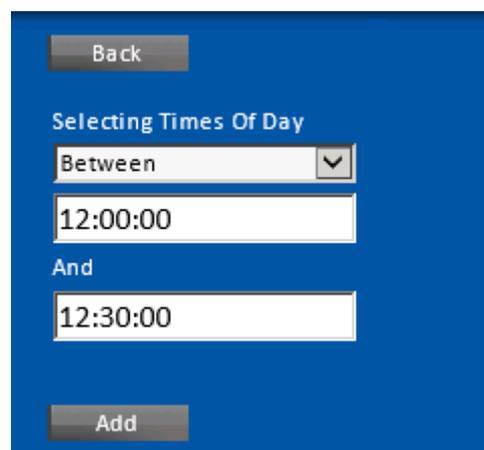
4.1.3.22 Site

CCS Report can be used as a centralized reporting system for multiple sites / PABXs. Calls can be filtered based on the **Sites**. Tick the required site. You can also 'Exclude Items' selected.



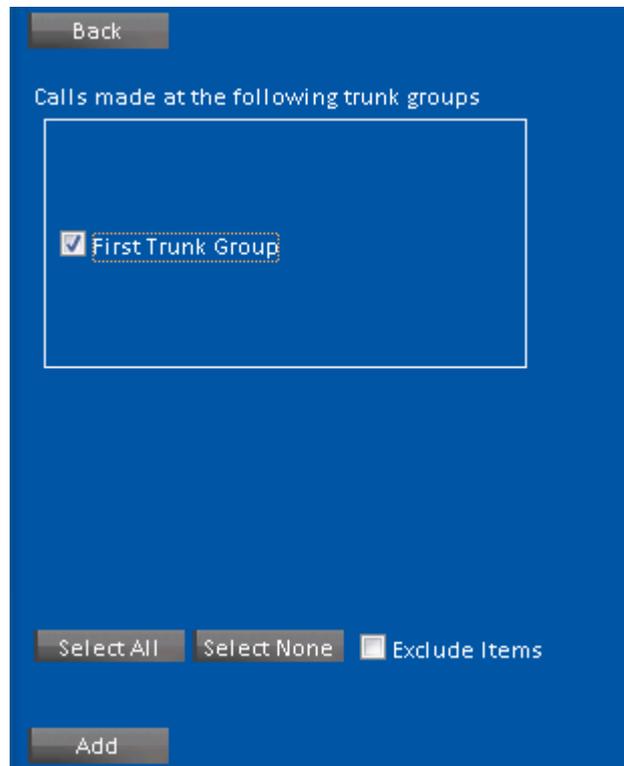
4.1.3.23 Times of Day

Calls can be filtered based on the **Times of Day** that the call was made. This filter requires one boolean operator and specific *hh:mm:ss* values.



4.1.3.24 Trunk Group

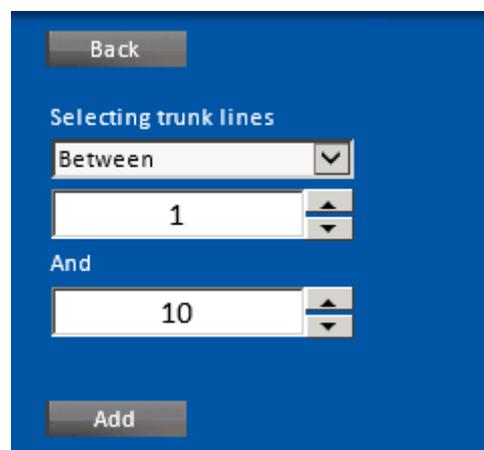
Calls can be filtered based on the **Trunk Groups** configured in CCS Report. Tick the required trunk group. You can also 'Exclude Items' selected.



The screenshot shows a blue interface for selecting trunk groups. At the top left is a 'Back' button. Below it, the text 'Calls made at the following trunk groups' is displayed. A white-bordered box contains a single entry: a checked checkbox followed by the text 'First Trunk Group'. At the bottom of the interface, there are three buttons: 'Select All', 'Select None', and 'Exclude Items' (with an unchecked checkbox icon). Below these is an 'Add' button.

4.1.3.25 Trunk Line

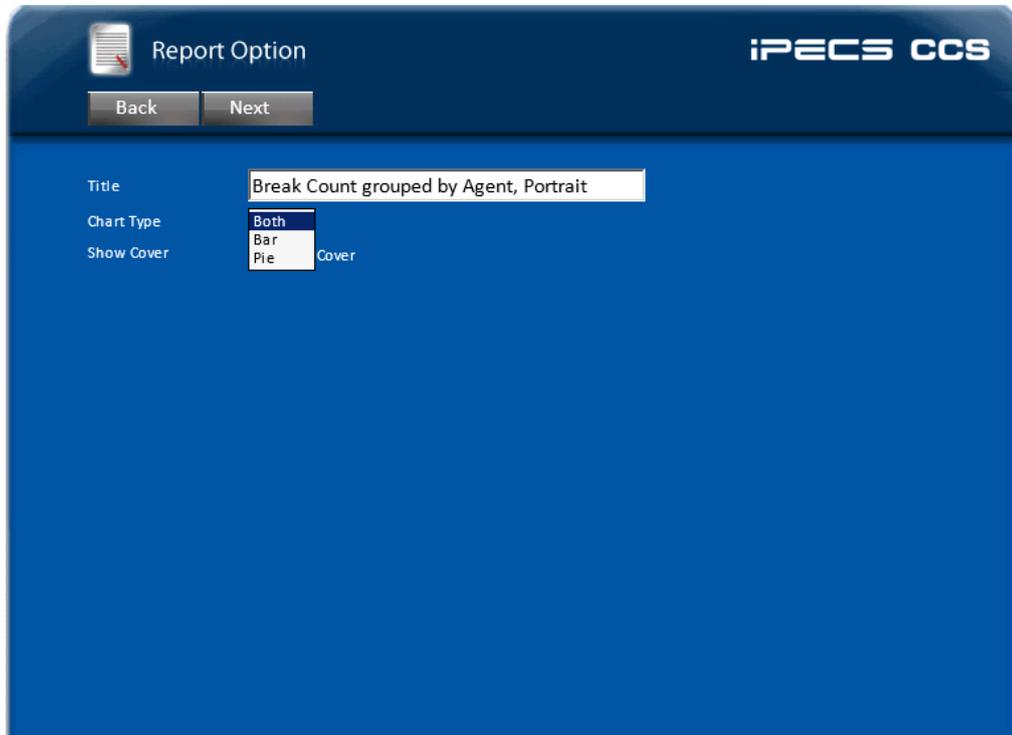
Calls can be filtered based on the **Trunk Line** number. This filter requires one boolean operator and specific numeric values.



The screenshot shows a blue interface for selecting trunk lines. At the top left is a 'Back' button. Below it, the text 'Selecting trunk lines' is displayed. A dropdown menu is set to 'Between'. Below the dropdown are two numeric input fields: the first contains '1' and the second contains '10'. Between the two input fields is the word 'And'. At the bottom of the interface is an 'Add' button.

4.1.4 Report Options – Step 2

Step 2 allows us to create a title for our report – and also select any report options that may be available.



The screenshot shows a web interface titled "Report Option" with the "iPECS CCS" logo in the top right. Below the title bar are "Back" and "Next" buttons. The main content area has a blue background and contains the following fields:

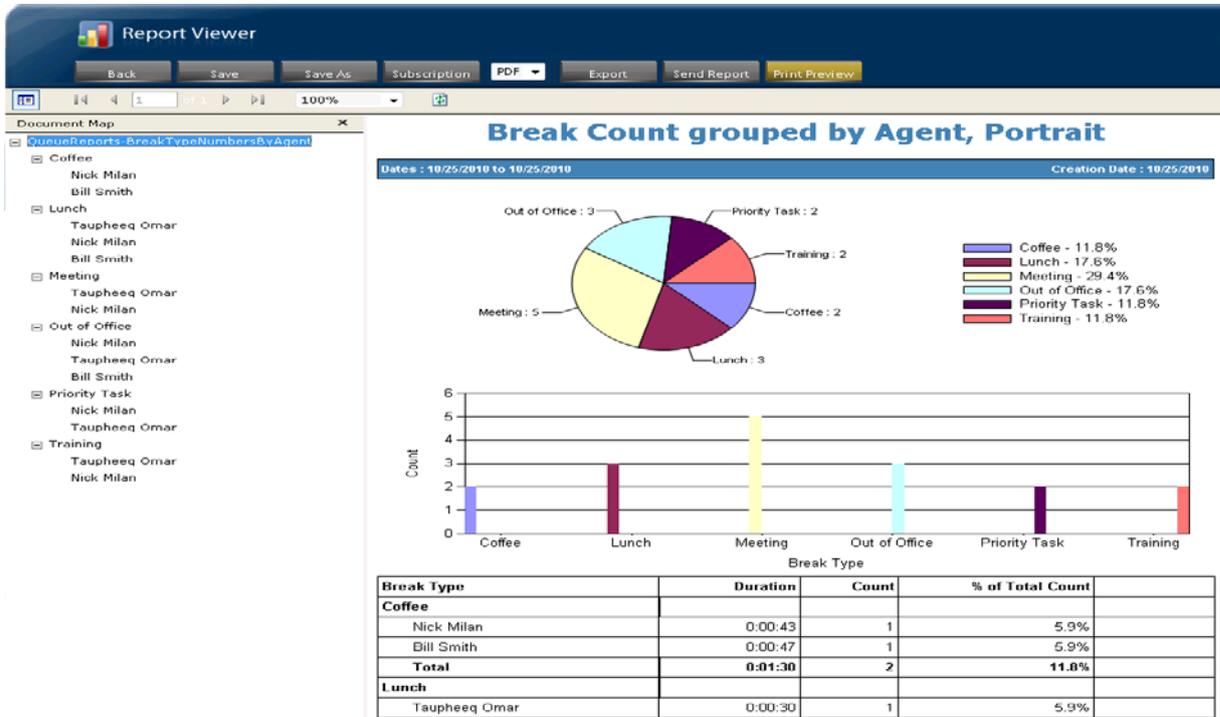
- Title:** Break Count grouped by Agent, Portrait
- Chart Type:** A dropdown menu is open, showing the following options: Both (highlighted), Bar, and Pie.
- Show Cover:** A checkbox that is checked, with the word "Cover" to its right.

We will select a 'Both' in this instance.

Click 'Next' to Continue.

4.1.5 Report Viewer – Step 3

Your Report is Ready! Your Report is displayed to the screen providing you with further options.



You can print, email, or output to PDF, Excel and many more formats.

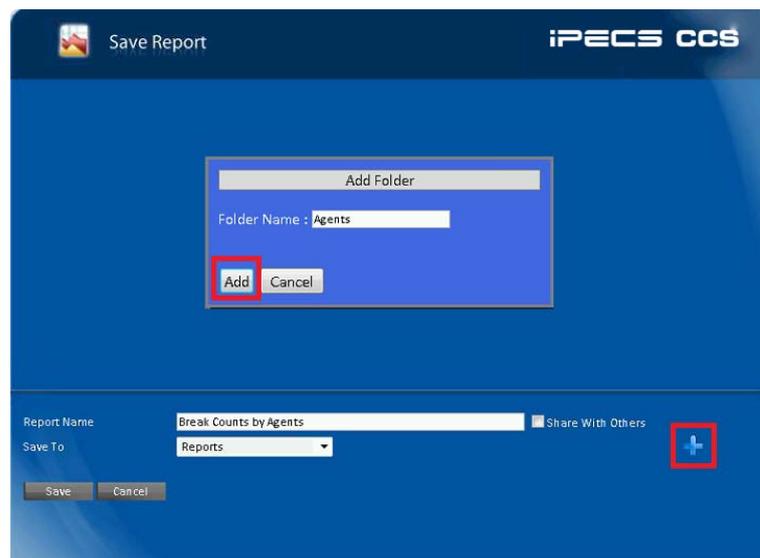
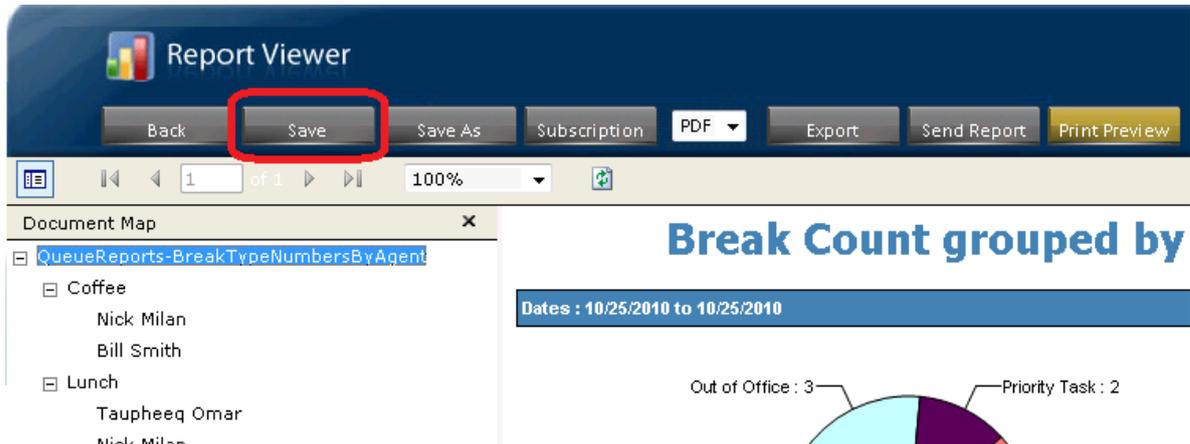
By clicking on the 'Back' Button at the top left of the screen you can go back and edit selections you have made.

By clicking on the 'Save' Button on the top left hand corner you can save this report to your 'My Reports' categories on the main command screen of CCS Report.

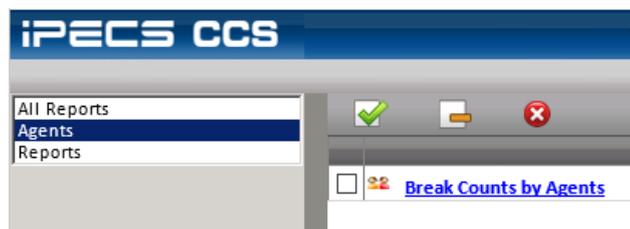
These options will be discussed in more details below.

4.1.5.1 Save Options

Once a report has been run, the report template with the selected criteria can be saved for future use. The 'Save' or 'Save As' button on the Top menu allows a user to save the report to a specified folder.



Report Templates can be saved in the generic Reports or under a Specified Folder for ease of use and identification in the case of multiple users or categories.



4.1.5.2 Subscription

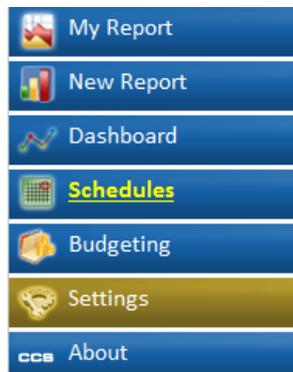
Once a Report Template is saved, CCS Report Web allows users to subscribe to the report based on a defined schedule. Below we will look at an hourly schedule to be emailed to a recipient.



To setup a report Subscription, open a saved report template and click on 'Subscription'.

4.1.5.3 Mail Setting

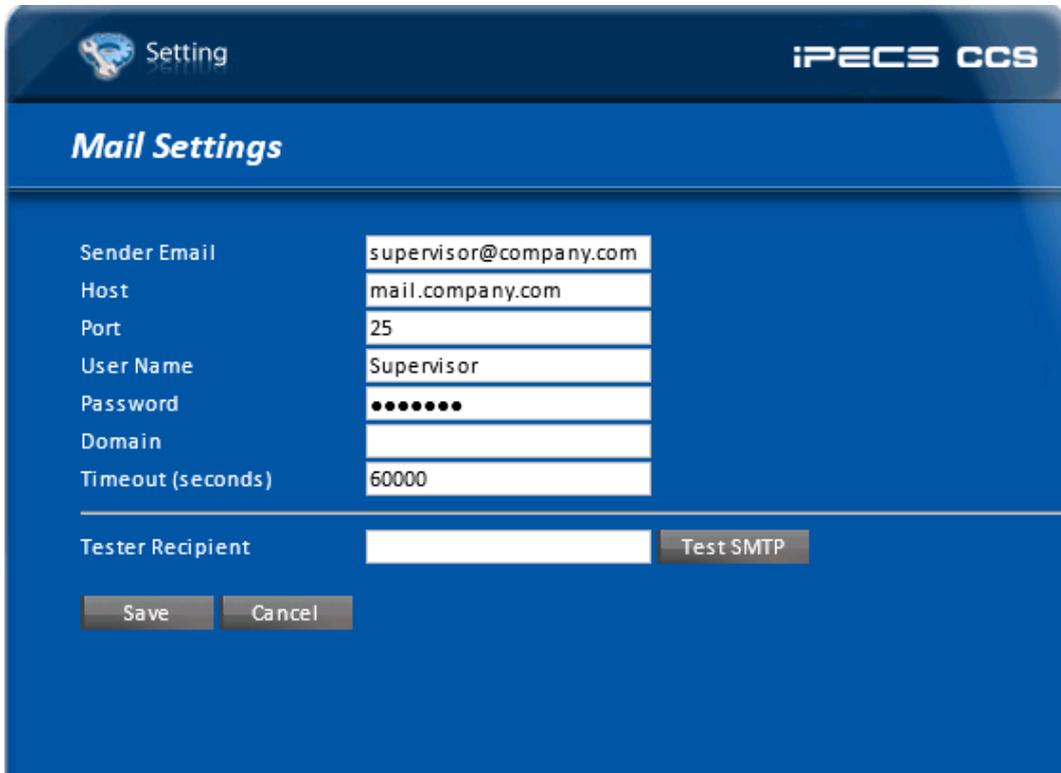
Before a Subscription can be enabled, the following CCS Report Settings must be configured first. On the main CCS Report Web Interface, click on 'Settings'.



Select 'Mail Settings' from the list on the right hand plain.



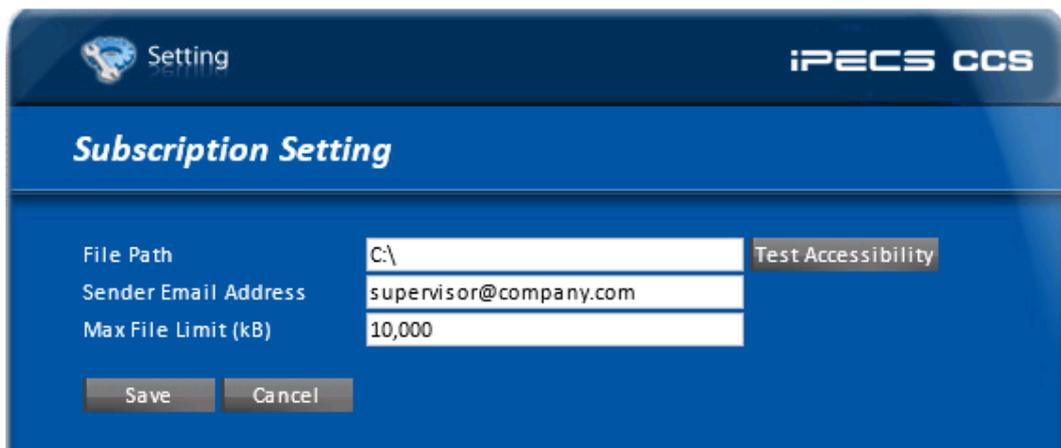
Enter your SMTP details and user name and password. There is also a facility to test the SMTP settings.



The screenshot shows the 'Mail Settings' window in the iPECS CCS application. The window has a blue header with the 'Setting' icon and 'iPECS CCS' text. Below the header, the title 'Mail Settings' is displayed. The main area contains several input fields for SMTP configuration: 'Sender Email' (supervisor@company.com), 'Host' (mail.company.com), 'Port' (25), 'User Name' (Supervisor), 'Password' (masked with dots), 'Domain' (empty), and 'Timeout (seconds)' (60000). At the bottom, there is a 'Tester Recipient' field, a 'Test SMTP' button, and 'Save' and 'Cancel' buttons.

4.1.5.4 Subscription Setting

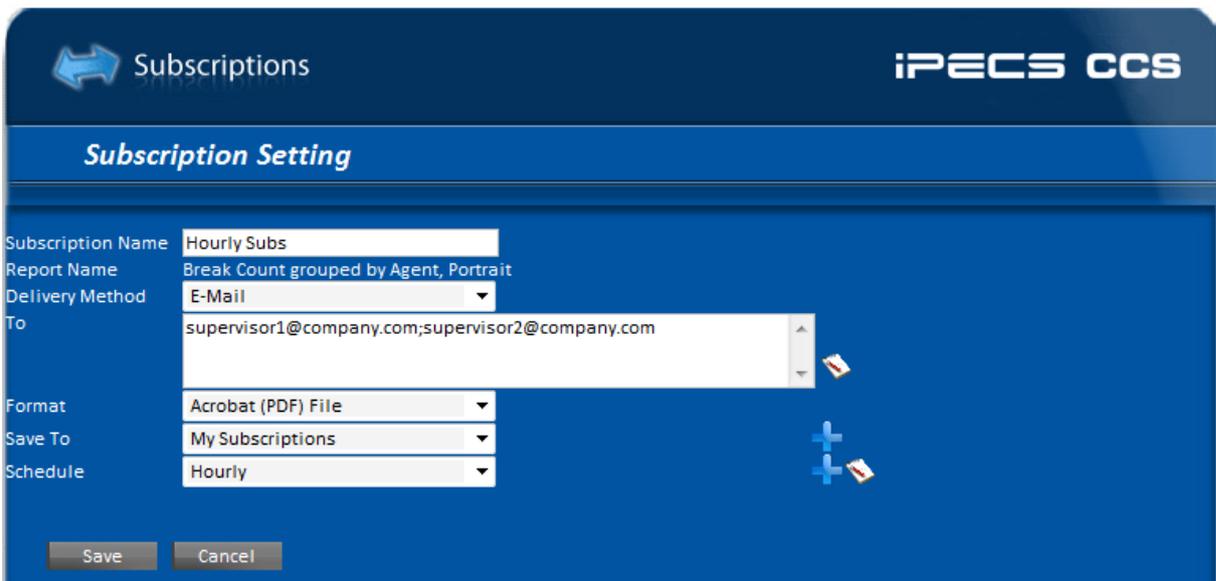
Specify the folder location for file storage and from address for emails. There is a feature to test the folder access to ensure CCS Report Web to create subscription into that folder.



The screenshot shows the 'Subscription Setting' window in the iPECS CCS application. The window has a blue header with the 'Setting' icon and 'iPECS CCS' text. Below the header, the title 'Subscription Setting' is displayed. The main area contains three input fields: 'File Path' (C:\), 'Sender Email Address' (supervisor@company.com), and 'Max File Limit (kB)' (10,000). A 'Test Accessibility' button is located to the right of the 'File Path' field. At the bottom, there are 'Save' and 'Cancel' buttons.

4.1.5.5 Subscription Settings

Once the mail settings and subscription settings is entered correctly, the saved reports can now be subscribed. Simply open a saved report template and click on 'Subscriptions'.



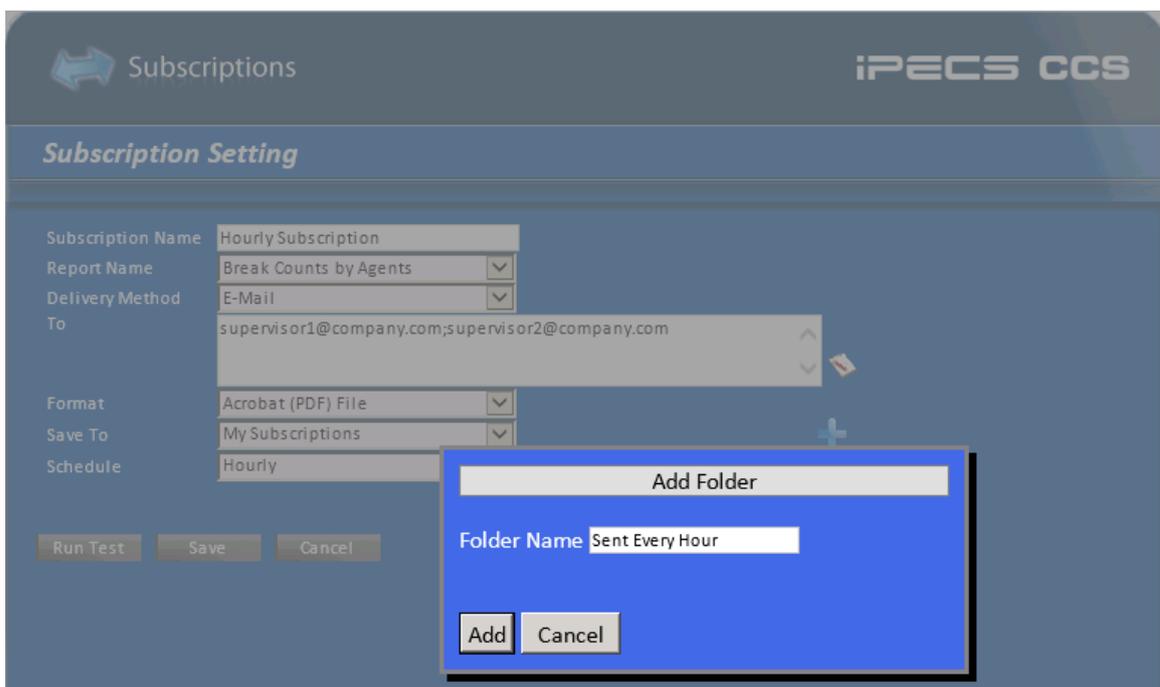
The screenshot shows the 'Subscriptions' page in the iPECS CCS application. The page title is 'Subscriptions' and the iPECS CCS logo is in the top right. Below the title is a section titled 'Subscription Setting'. The form contains the following fields:

- Subscription Name: Hourly Subs
- Report Name: Break Count grouped by Agent, Portrait
- Delivery Method: E-Mail
- To: supervisor1@company.com;supervisor2@company.com
- Format: Acrobat (PDF) File
- Save To: My Subscriptions
- Schedule: Hourly

At the bottom of the form are 'Save' and 'Cancel' buttons. There are also icons for adding and deleting folders next to the 'Save To' and 'To' fields.

4.1.5.6 New Subscription Folder

Subscriptions can be saved to individual users' folders for ease of use and identification. Simply click on the plus (+) sign next to the 'Save To' option and create a new folder.



The screenshot shows the 'Subscriptions' page in the iPECS CCS application. The page title is 'Subscriptions' and the iPECS CCS logo is in the top right. Below the title is a section titled 'Subscription Setting'. The form contains the following fields:

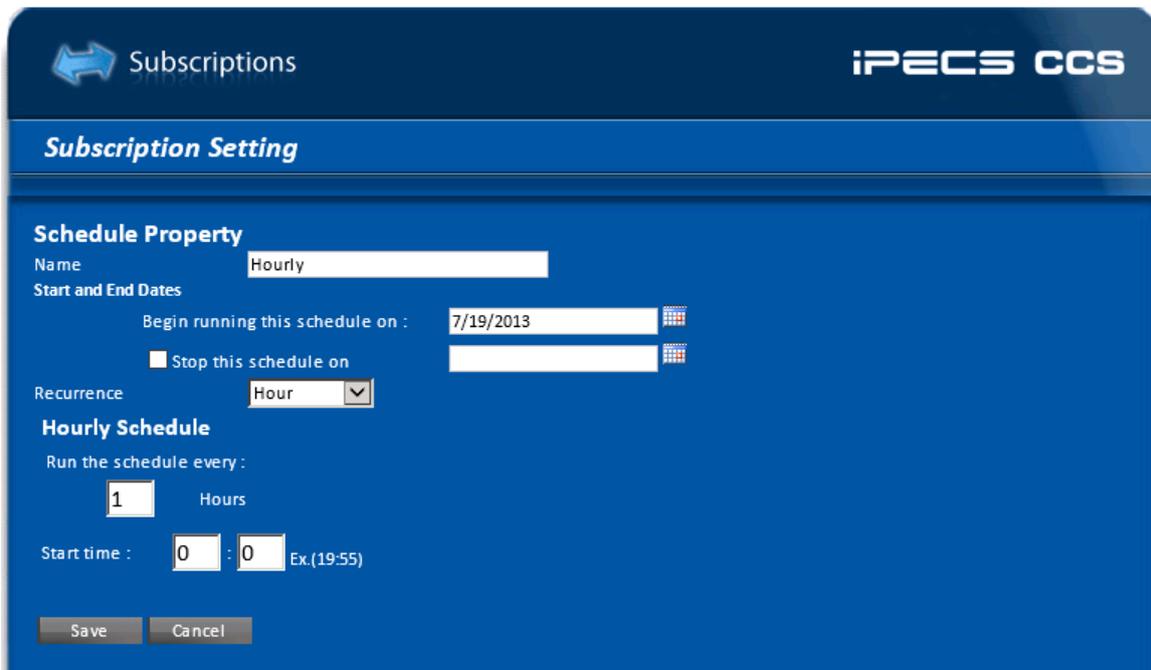
- Subscription Name: Hourly Subscription
- Report Name: Break Counts by Agents
- Delivery Method: E-Mail
- To: supervisor1@company.com;supervisor2@company.com
- Format: Acrobat (PDF) File
- Save To: My Subscriptions
- Schedule: Hourly

At the bottom of the form are 'Run Test', 'Save', and 'Cancel' buttons. There are also icons for adding and deleting folders next to the 'Save To' and 'To' fields. An 'Add Folder' dialog box is open over the 'Save To' field, with the following fields:

- Folder Name: Sent Every Hour
- Buttons: Add, Cancel

4.1.5.7 New Schedule

New schedule can be added at the time of subscription by simply clicking on the plus (+) sign next to the 'Schedule' option.

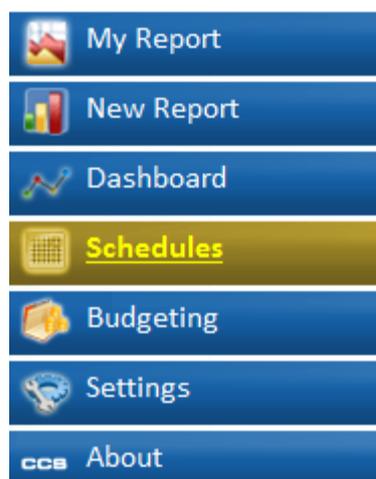


The screenshot shows the 'Subscription Setting' dialog box in the iPECS CCS application. The dialog has a dark blue header with a 'Subscriptions' icon and the text 'iPECS CCS'. Below the header is a section titled 'Subscription Setting'. Underneath, there is a 'Schedule Property' section with the following fields: 'Name' (text box containing 'Hourly'), 'Start and End Dates' (with 'Begin running this schedule on:' and a date picker set to '7/19/2013', and a checkbox for 'Stop this schedule on' with an empty date picker), 'Recurrence' (dropdown menu set to 'Hour'), and 'Hourly Schedule' (with 'Run the schedule every:' and a text box containing '1' followed by 'Hours', and 'Start time:' with two time pickers set to '0' and '0' followed by 'Ex.(19:55)'). At the bottom of the dialog are 'Save' and 'Cancel' buttons.

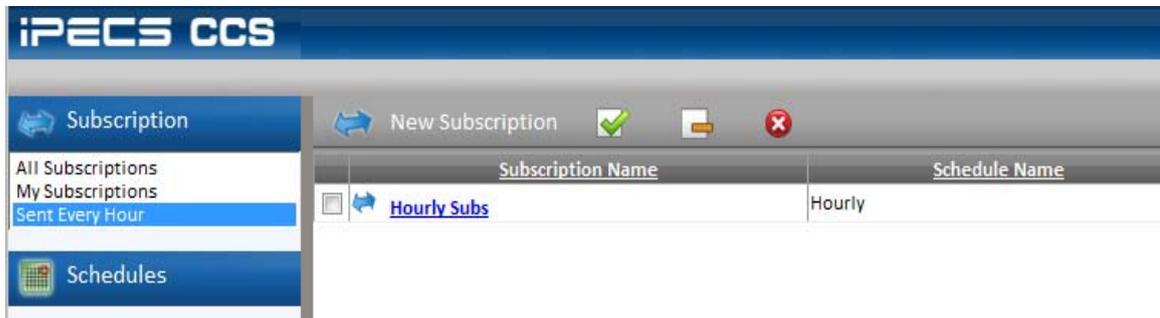
Click on save once a schedule has been specified.

4.1.5.8 Testing Subscription

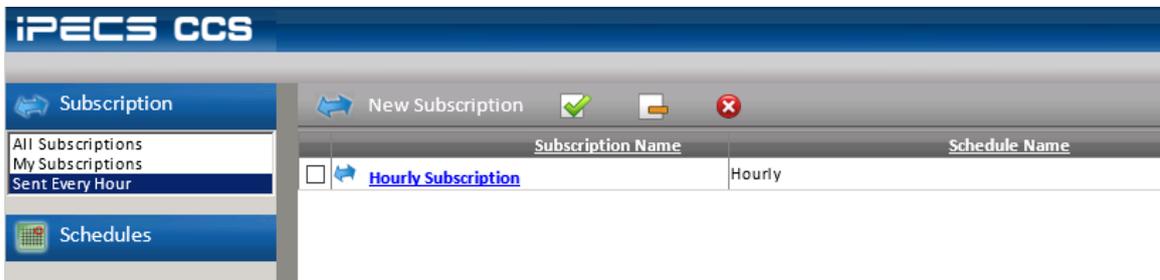
Once a subscription is setup, it can be tested by going into the 'Schedules' options of the main Web menu.



Select the Subscription item you would like to test.

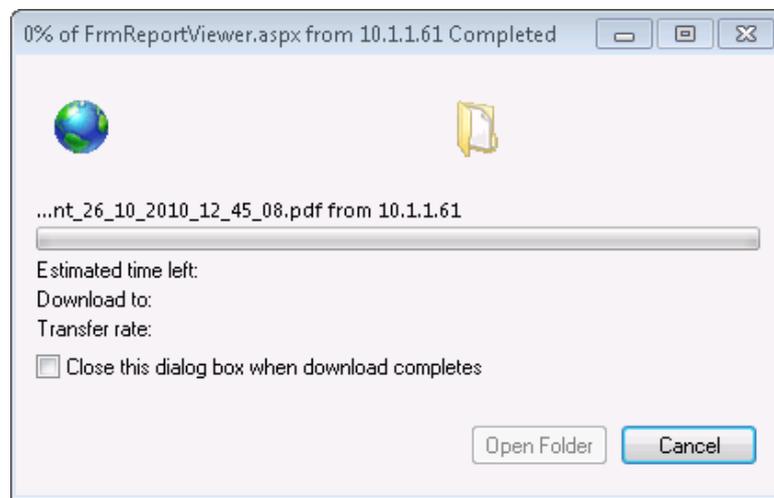


Click on 'Run Test' to ensure the mail setup is correct.



4.1.5.9 Export Report

Reports can be exported into PDF or Excel formats from the Report Viewer by clicking on the 'Export' button on the menu bar. Save the export to a specified location.



4.1.5.10 Print Report

A report can be printed from the report view by clicking the 'Print Preview' button on the menu bar.



4.1.6 Dashboard

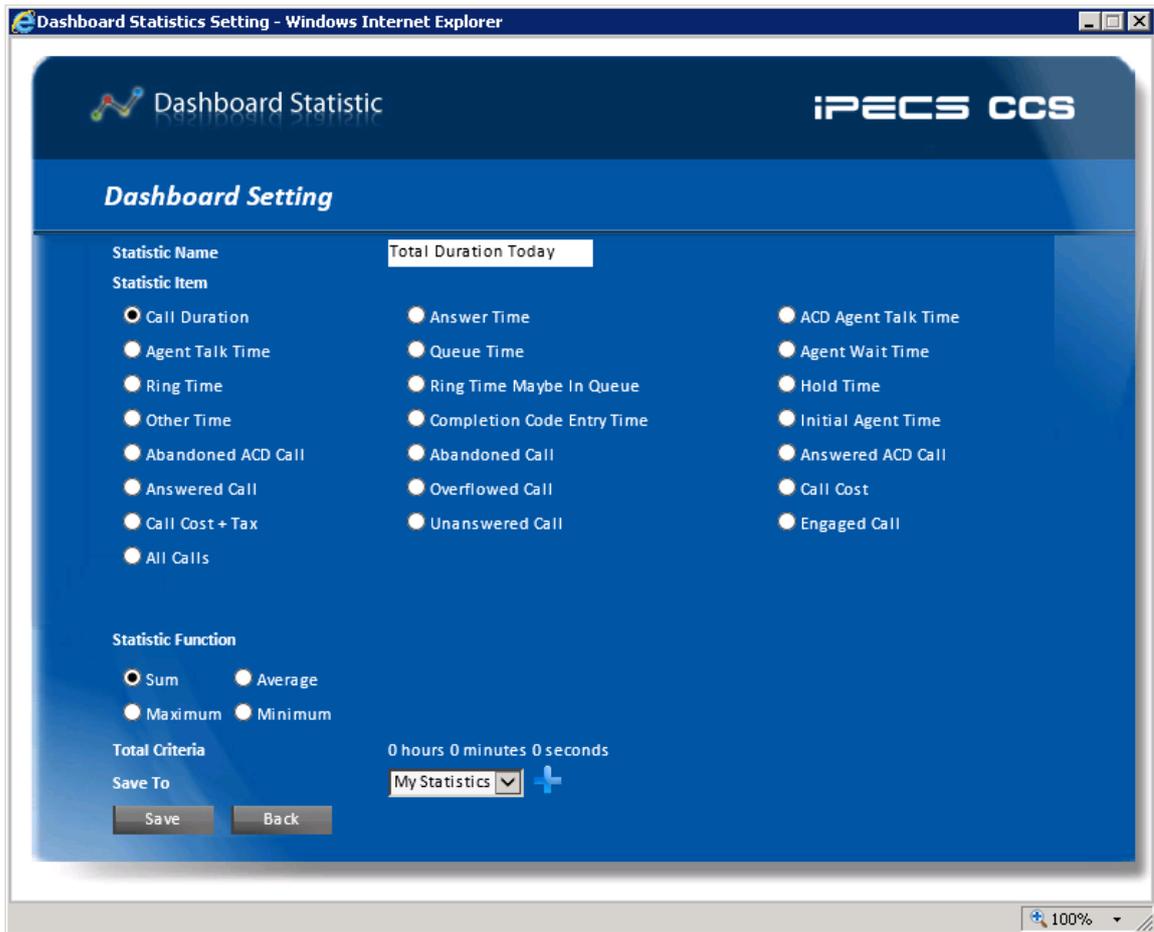
CCS Report Web allows a certain report statistics to be created and made available for CCS Dashboard. To create a new statistic, enter on the 'Dashboard' section and select 'New Dashboard'.

4.1.6.1 Filter – Step 1

The first step allows you to select from a list of multiple criterion. This process is identical to the first step in generating reports.



4.1.6.2 Choose Statistic – Step 2



To complete the second step, the following configuration must be completed:

Statistic Name – the name of the statistic. This is what CCS Dashboard will see.

Statistic Item – choose the statistic to report from the list of statistics items available.

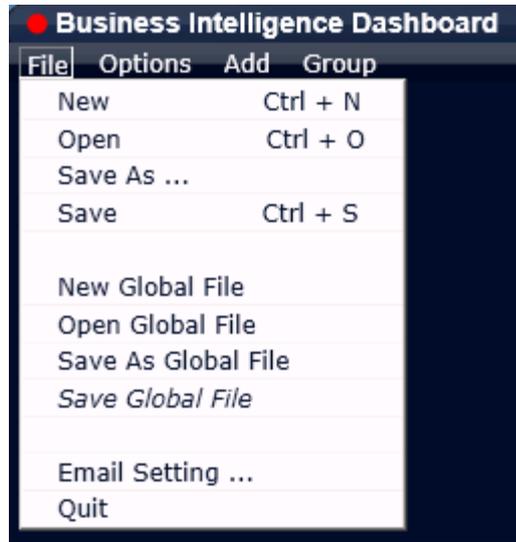
Statistic Function – determines how to calculate the records. Some statistic item may only have 'Sum' to choose from.

Once completed, click 'Save' and the CCS Dashboard should be able to use this new statistic.

5. CONFIGURING CCS DASHBOARD

5.1 USING CCS DASHBOARD

5.1.1 File Menu



New – create a new Dashboard canvas, and set the 'Configuration File Settings' in Options to default to local configuration file when the Dashboard is reopened.

Open – open a saved XML local configuration file. Use the explorer window to find the file.

Save As ... – save the current Dashboard layout into an XML local configuration file.

Save – overwrite the opened XML local configuration file.

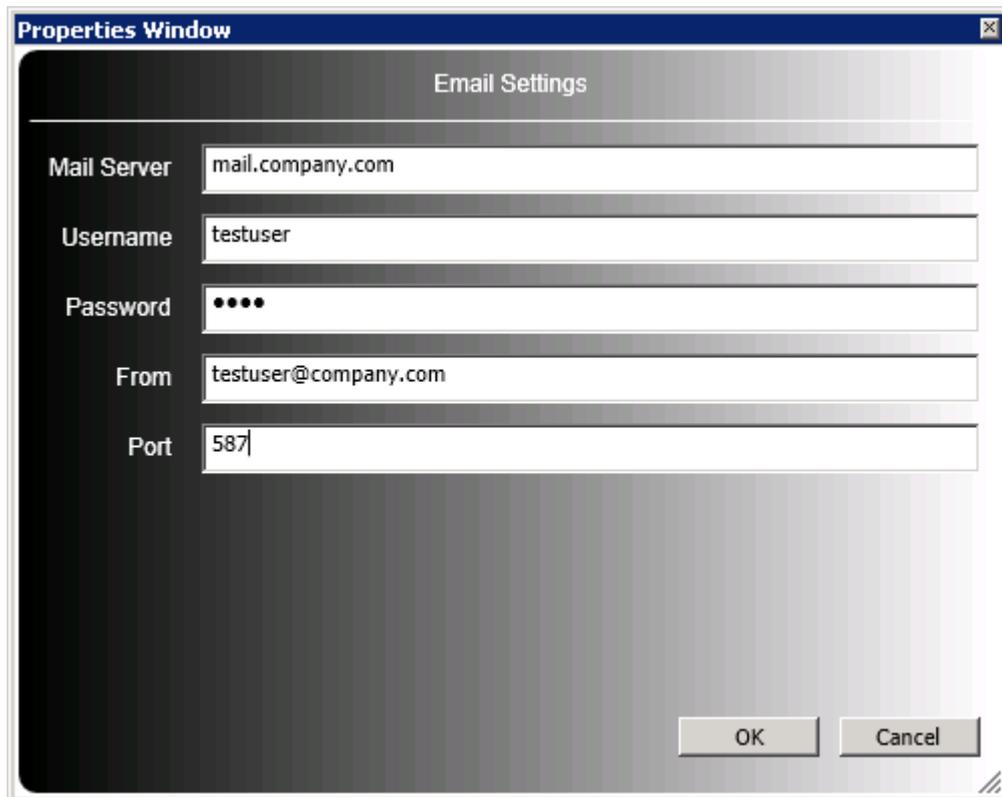
New Global File – create a new Dashboard canvas, and set the 'Configuration File Settings' in Options to default to global configuration file when the Dashboard is reopened.

Open Global File – open a saved global configuration file.

Save As Global File – save the current Dashboard layout into a global configuration file.

Save Global File – overwrite the opened global configuration file.

5.1.1.1 Email Setting



The screenshot shows a 'Properties Window' titled 'Email Settings'. It contains five input fields for configuration:

- Mail Server:** mail.company.com
- Username:** testuser
- Password:** masked with four dots (••••)
- From:** testuser@company.com
- Port:** 587

At the bottom right of the window are 'OK' and 'Cancel' buttons.

Configure the email server settings to be used for email notifications.

Mail Server – address of the SMTP email server.

Username – the SMTP user account.

Password – the password to the user.

From – the sender's email address.

Port – the port number for SMTP.

5.1.2 Options Menu

Hide Menu – hide the top menu. Once hidden, the menu can be shown again by right clicking on the empty area of the canvas and select 'Show Menu'.



Status Bar – show or hide the status bar. The status bar shows the current state of the Dashboard, the configuration file opened, the software version, and the main data source it connects to.



Full Screen – maximize the Dashboard canvas to full screen.

Auto Run – when enabled, the Dashboard will auto-run the most recent local/global configuration file as soon as it launches.

Snap to Grid – enable / disable the snap function.

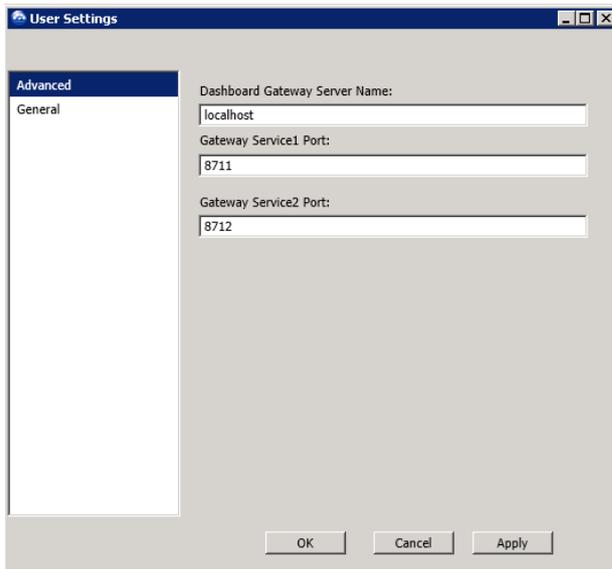
- **Snap to Grid** – activates the grids.
- **Snap to Grid Size** – change the size of each grid.



5.1.2.1 Options

Open the 'User Settings' configuration screen.

Advanced

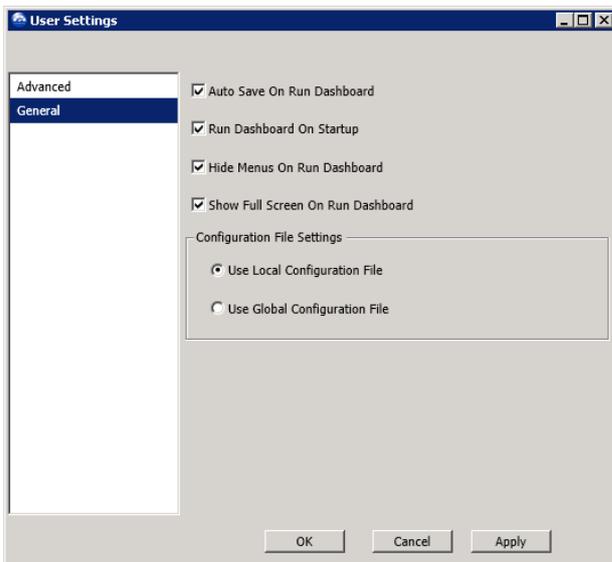


Dashboard Gateway Server Name – the name of the machine that hosts the CCS Dashboard Gateway service

Gateway Service1 Port – must always be set to 8711.

Gateway Service2 Port – must always be set to 8712.

General



Auto Save on Run Dashboard – automatically saves the configuration before the dashboard enters 'running' mode.

Run Dashboard on Startup – enable this to start Dashboard when Windows starts.

Hide Menus On Run Dashboard – hide the top menu bar when the dashboard is running.

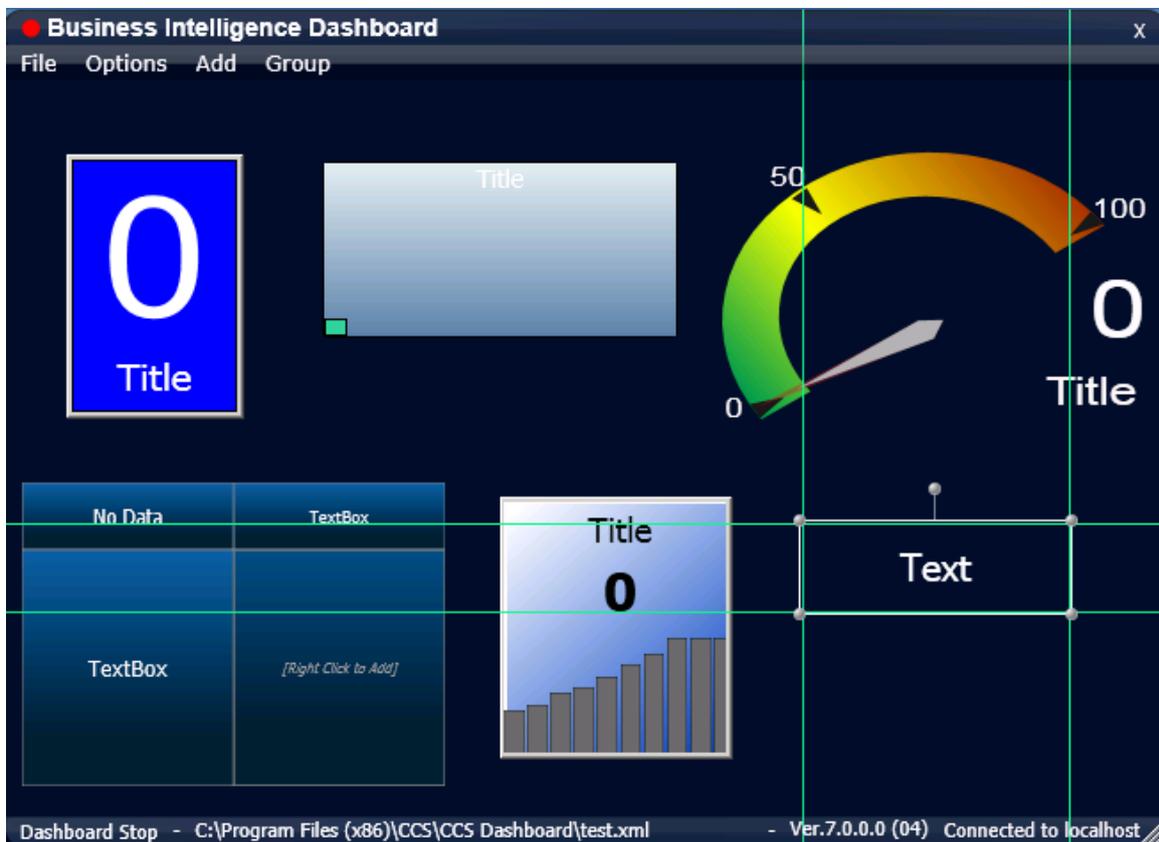
Show Full Screen On Run Dashboard – maximizes to full screen when Dashboard runs.

Configuration File Settings – choose to use a Local configuration XML or a global configuration file.

5.1.3 Add Menu



This gives a list of objects that can be created in the Dashboard. The new object is automatically added into the canvas once selected. Details about each object will be discussed in later section.



5.1.4 Group Menu



Settings – currently only one setting is available in this section.

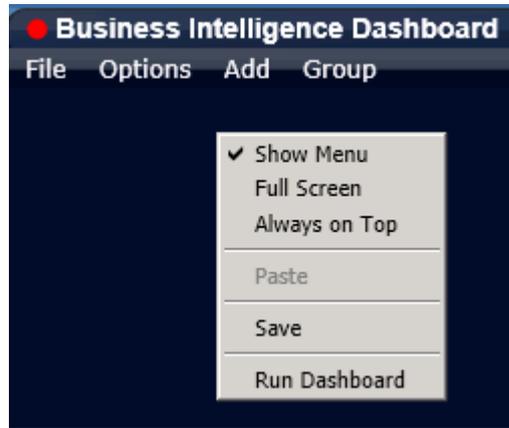
- **Delete All Objects** – when checked and then OK, it will erase all objects in the Dashboard canvas.

Select Mode – choose the grouping mode.

- **Group** – group all selected objects into a group
- **Un-Group** – remove the objects from any association to a group

Available Groups – show a list of groups created.

5.1.5 Canvas Menu



By right clicking on the empty area of the canvas, there are several options that can be selected.

Show Menu – restores the top menu once hidden.

Full Screen – activates the full screen mode.

Always on Top – keeps the Dashboard on the foreground at all times.

Paste – creates a copy of an object. The object must first be copied.

Save – saves the current Dashboard layout into local configuration file.

Run Dashboard – locks the design and activates the Dashboard to start collecting statistics.

5.1.6 CCS Dashboard Objects

5.1.6.1 Overview



Managing objects on the Dashboard canvas are very simple. Objects can be moved by drag-and-drop, and there are guidelines to assist the positioning of the objects. Objects can also be stretched by using the control on the edges of the object. The 'title' for each object can be edited using the 'Set Style' configuration.



Right click on an object to several menus related to the object.

Set Value – modify the data and threshold settings for the object.

Set Style – modify the style settings for the object. Note that style is not supported in some objects.

Copy – create a copy of the object, which can be pasted to an empty area on the canvas.

Paste – paste the copied object.

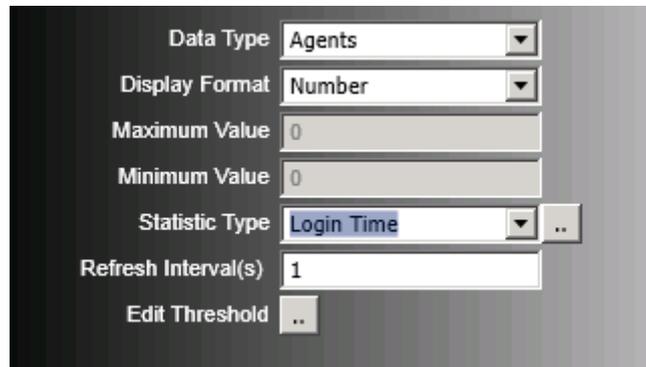
Bring to Front – adjust the Z value of the object, bringing the object on top of other overlaying objects.

Send to Back – adjust the Z value of the object, pushing the object behind other overlaying objects.

Delete – delete the object from the canvas.

5.1.6.2 Set Value

Although some objects do not have identical settings for their 'Set Value', below is a typical configuration screen for objects that display data.



The screenshot shows a configuration window with the following fields and values:

Data Type	Agents
Display Format	Number
Maximum Value	0
Minimum Value	0
Statistic Type	Login Time
Refresh Interval(s)	1
Edit Threshold	..

Data Type – there are 4 possible data types to choose from.

- **Agents** – connects with CCS Desk to obtain real-time agent information.
- **Queues** – connects with CCS Desk to obtain real-time queue information.
- **CCS Report Statistics** – connects to CCS Report and run the statistics created with CCS Report.
- **Custom Statistics** – connects to an ODBC data source to run a query or stored procedure.

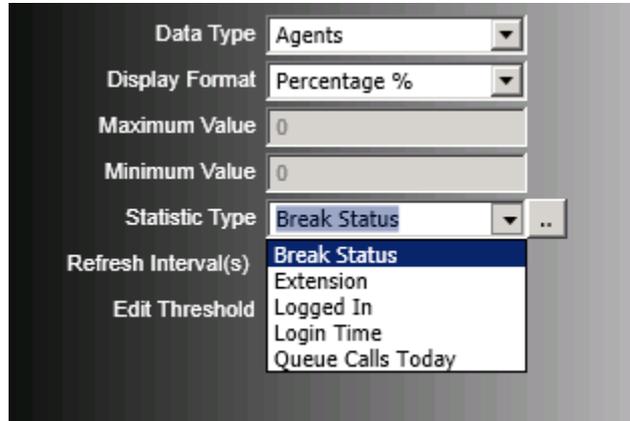
Display Format – there are 4 display modes available.

- **Number** – basic numeric value e.g. 303.
- **Percentage %** - adds the percentage symbol to the value.
- **HH:MM:SS** – assumes the value is in seconds and converts it to hours, minutes and seconds.
- **MM:SS** – assumes the value is in seconds and converts it to minutes and seconds.

Maximum Value – set the upper limit, applicable when the object contains a gauge e.g. Progress Bar and Speedo.

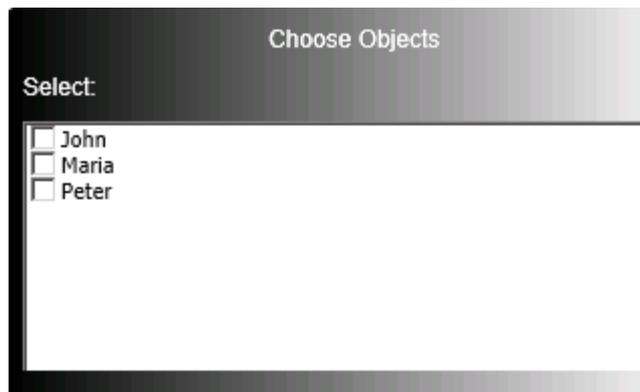
Minimum Value – set the lower limit, applicable when the object contains a graph e.g. Progress Bar and Speedo.

Statistic Type: Agents – Select one of the statistics in the list then click on the three dots (...) button to select the CCS Desk agents to be monitored.



The screenshot shows a configuration panel with the following fields and options:

- Data Type: Agents
- Display Format: Percentage %
- Maximum Value: 0
- Minimum Value: 0
- Statistic Type: Break Status (with a three-dot menu icon)
- Refresh Interval(s): Break Status
- Edit Threshold: Logged In, Login Time, Queue Calls Today



The screenshot shows a dialog box titled "Choose Objects" with a "Select:" label and a list of names with checkboxes:

- John
- Maria
- Peter

Statistic Type: Queue – select one of the statistics in the list then click on the three dots (...) button to select the queue to be monitored.

The screenshot shows a configuration window with several fields and a dropdown menu. The fields are: 'Data Type' (Queue), 'Display Format' (Percentage %), 'Maximum Value' (0), 'Minimum Value' (0), 'Statistic Type' (Agents), 'Refresh Interval(s)', and 'Edit Threshold'. The 'Statistic Type' dropdown is open, showing a list of statistics including Agents, Agents Available, Agents Break, Agents Busy, Agents In, Calls Wait Average, Calls Waiting, Calls Wait Maximum, Date Changed, Day Calls Abandoned, % Day Calls Abandoned, % Day Calls Answered, Day Calls Escalated, % Day Calls Escalated, Day Calls Received, Day Calls Started, Day Calls Total Wait, Day Calls Wait Average, Day Calls Wait Maximum, Day Emails Received, Day Emails Total Wait, Day Emails Wait Average, Day Emails Wait Maximum, Emails Wait Average, Emails Waiting, Emails Wait Maximum, and Calls Answered.

The screenshot shows a dialog box titled 'Choose Objects'. It has a 'Select:' label and two checkboxes: 'Main' and 'Overflow'. Both checkboxes are currently unchecked.

Statistic Type: CCS Report Statistics – select one of the CCS Report statistics in the list.

The screenshot shows a configuration panel with the following fields:

- Data Type: **CCS Report Statistics** (dropdown)
- Display Format: **Number** (dropdown)
- Maximum Value: **0** (text input)
- Minimum Value: **0** (text input)
- Statistic Type: **Total Calls Today** (dropdown)
- Refresh Interval(s): **1** (text input)
- Edit Threshold: **..** (button)

Statistic Type: Custom Statistics – select the configured ODBC data source from the list then click on the three dots (...) button to configure the custom query.

The screenshot shows a configuration panel with the following fields:

- Data Type: **Custom Statistics** (dropdown)
- Display Format: **Number** (dropdown)
- Maximum Value: **0** (text input)
- Minimum Value: **0** (text input)
- Statistic Type: **CCS** (dropdown) with a **..** button to its right
- Refresh Interval(s): **1** (text input)
- Edit Threshold: **..** (button)

The screenshot shows a dialog box titled "Custom Query" with the following sections:

- Query Generator**
- Select Stored Procedure: [dropdown menu]
- Table with columns: Param Name, Param Type, Param Value
- Generate Query button
- Or Type your custom query: [text area containing "select count(*) from tbldirect"]

Refresh Interval(s) – specify how frequent the Dashboard should check for new update on the statistic selected.

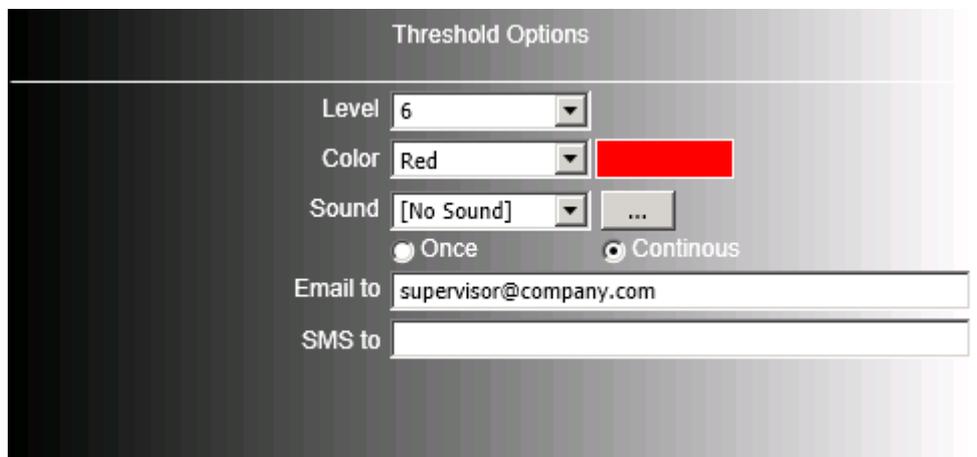
Edit Thresholds – configure alert and notifications when a particular value has been reached in this object. To enter the threshold configuration screen, click on the three dots icon (...).

There is no limit to the number of thresholds that can be added per object. The value that must be met can be modified by clicking on it. Each level serves as a 'greater than' range to the level above it.

In this example, the color of the object will be blue if the value is ≥ 0 and < 10 .



There are other actions that can be performed when a level is reached. Click on the three dots (...) icon beside a level to open the configuration screen.



Color – change the color of the object.

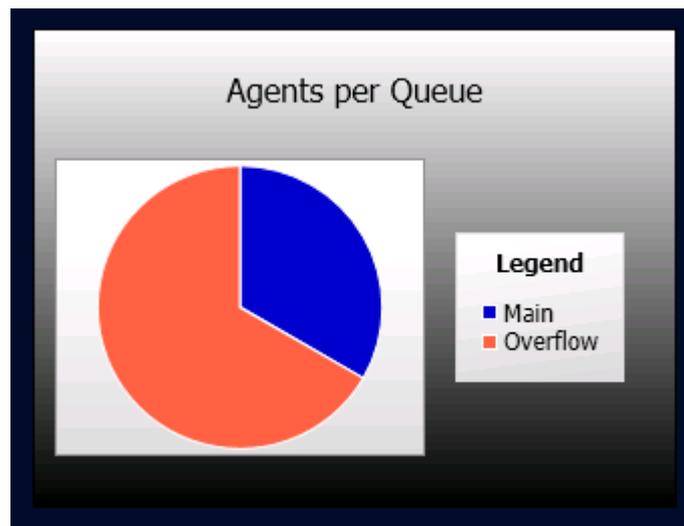
Sound – play an audio file once or continuously. The file can be selected from using the three dots (...) icon next to it.

Email to – an email notification can be sent to a destination. The email will also contain the statistic type set to the object and level / value reached.

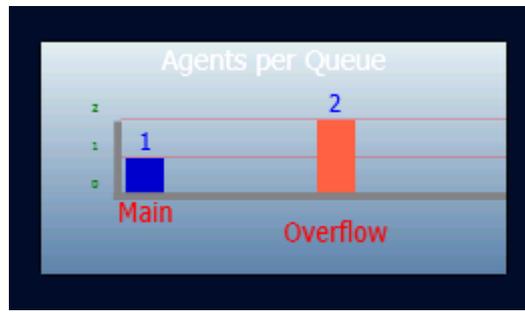
SMS to – an SMS notification can also be sent. This requires CCS SMS module.

5.1.6.3 List of Objects and Styles

Pie Chart



Bar Chart



Background Gradient 1 ..

Background Gradient 2 ..

Bar Auto Spaces

Bar Spaces

Bar Value Font Color ..

Bar Value Font Size

Bar Width

Grid Line Visible

Title

Title Font Color ..

Title Font Style

Bar Color ..

Use Set Bar Color

X Axis Font Color ..

X Axis Font Size

X Axis Line Visible

X Axis Text Skew

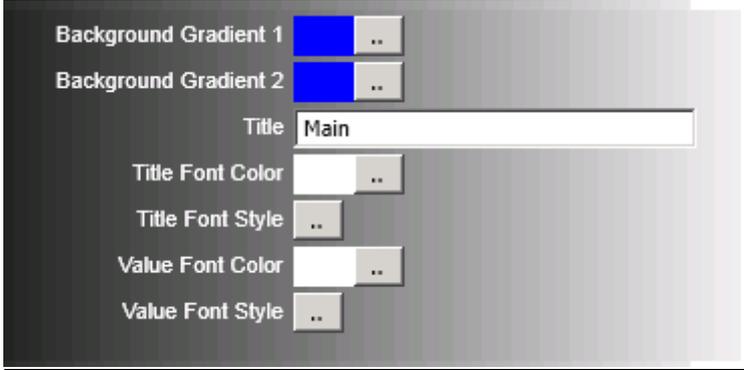
Y Axis Font Color ..

Y Axis Font Size

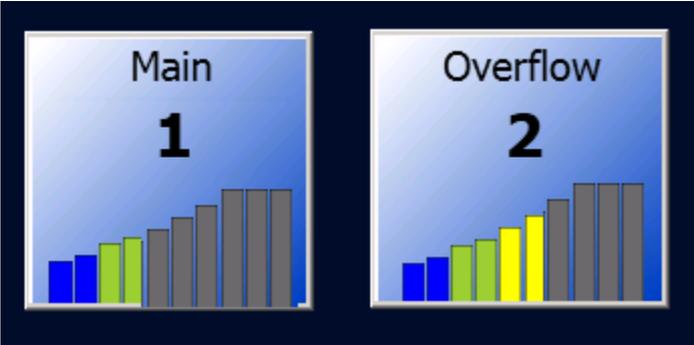
Y Axis Line Visible

Zoom Type

Boxes



Progress Bar



Background Gradient 1  ..

Background Gradient 2  ..

Reverse Bar Colors

Title

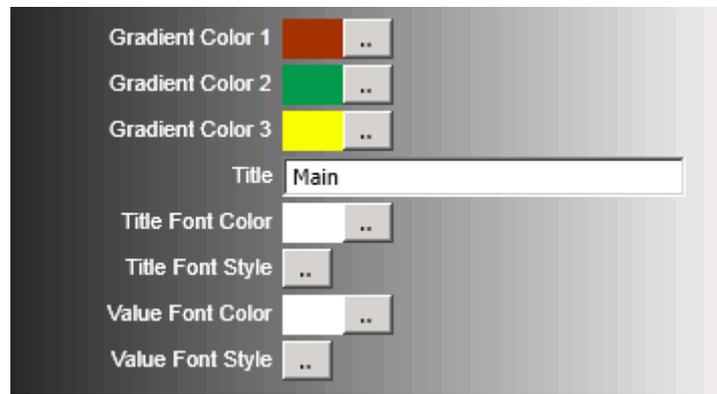
Title Font Color  ..

Title Font Style  ..

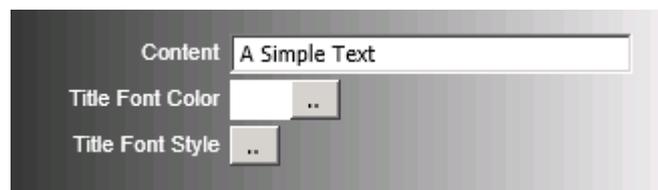
Value Font Color  ..

Value Font Style  ..

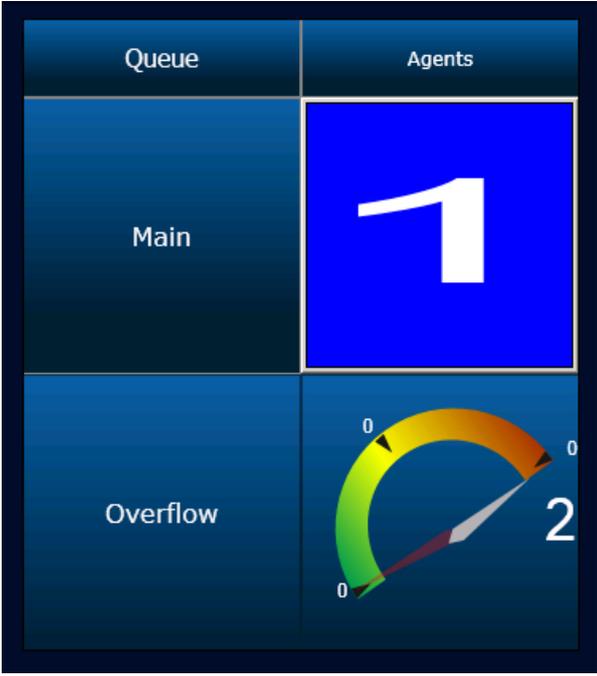
Speedo



Text



Grid



Data Grid

Total Calls	Missed	Answered	% Answered
21		21	100.00%

Allow For Scroll Bar

Header Border Color 

Header Border Thickness

Header Font Color 

Header Font Style 

Header Gradient 1 

Header Gradient 2 

Header Height

Header Horizontal Align

Header Separator Visible

Header Vertical Align

Row Border Color 

Row Border Thickness

Row Font Color 

Row Font Style 

Row Gradient 1 

Row Gradient 2 

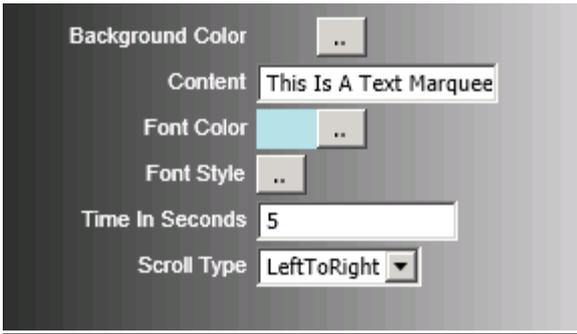
Row Border Visibility

Row Height

Background



Message Scrolls



Picture



Picture Path ..

Picture Stretch

Clock



Time & Date Settings

Type Clock :
 Digital Analog

Format
 24 Hours 12 Hours

Display:
 HH:MM:SS
 HH:MM
 Show Date

Date Format:
 Long (March 23, 2009)
 Short (23/3/2009)

Time Zone:
 ▼

Time Zone Label:

Gradient Color 1

Gradient Color 2

Date Font Color

Date Font Size

Time Font Color

Time Font Size

Time Zone Font Color

Time Zone Font Size

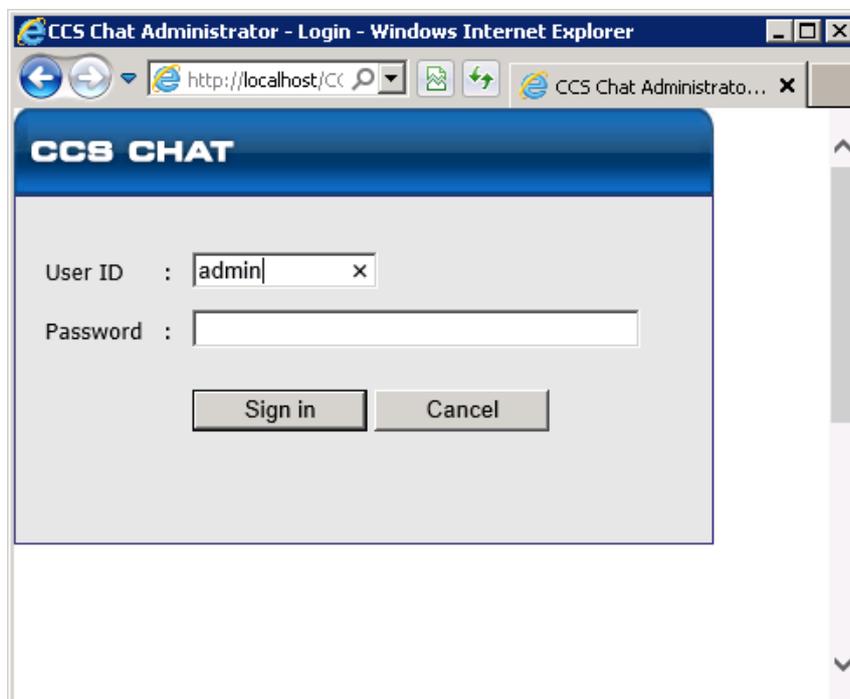
5.2 Using CCS Chat

5.2.1 Admin Page

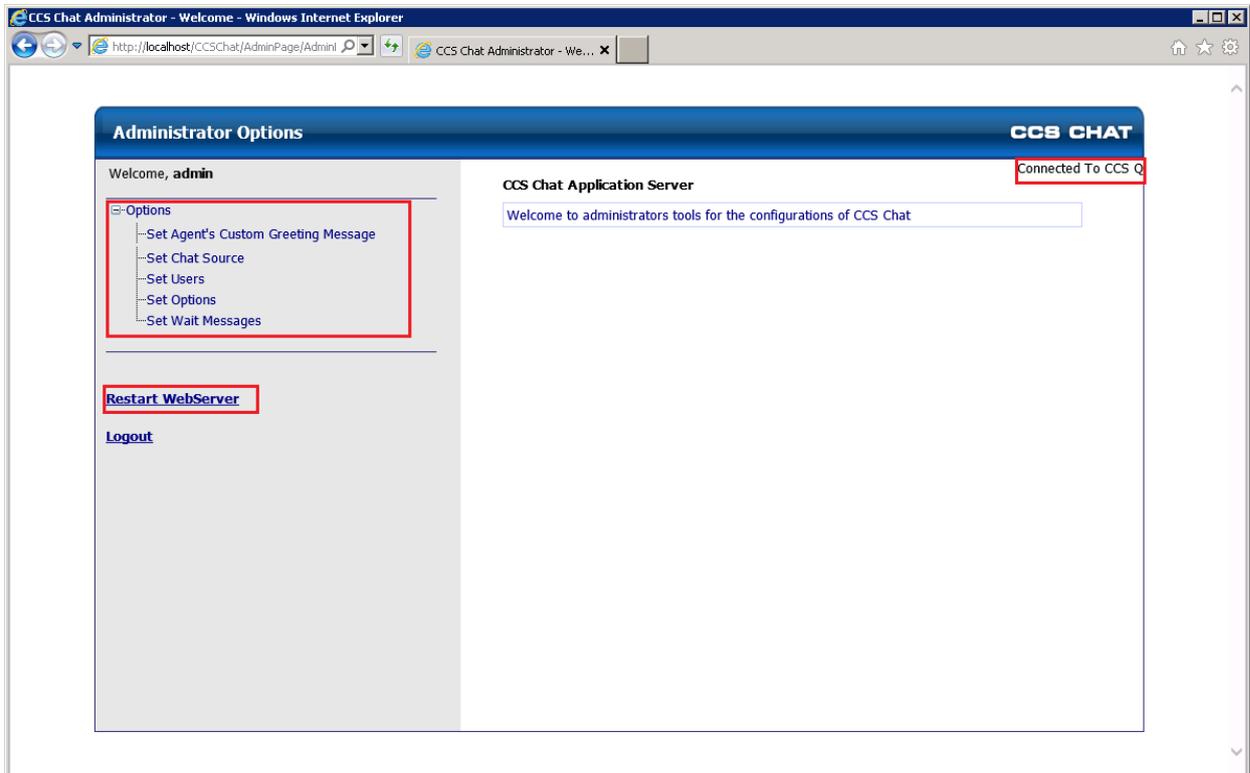
The Admin Page allows us to configure the CCS Chat system settings. It can be accessed by adding the **AdminPage** at the end of the CCS Chat URL.

For example: <http://localhost/CCSChat/AdminPage>

The default **User ID** is **admin** and its **Password** is blank by default. Once logged in, the main administration page will be loaded.



5.2.1.1 Main Page



The main page provides links to the different Options page and to restart the Chat Web Server.

The top right corner also shows the connection status of the web server to the CCS Q / CCS Desk server.

5.2.1.2 Set Agent's Custom Greeting Message

Set CCS Chat Agent's Custom Greeting Message

Agent ID :

Greeting Message :
(Maximum 100 Characters)

This page allows custom greeting messages to be configured per Chat Agent, to change the default greeting message. Agent must first be configured in the “Set Users” section before they can appear in this list.

Simply type the **Greeting Message** in the box provided and click **Save**.

5.2.1.3 Set Chat Source

Set CCS Chat Chat Source

New Source

Source Name :

Current Source

Source ID :

Source Name :

Edit	Delete	ID	Source
Edit	Delete	1	Support

Chat Source is used as an identifier when routing the call to an agent. The options will be selectable in customer chat request form. This 'Source Name' setting must match with the identical setting in CCS Desk Manager – CCS Chat tab. Please consult the *CCS Desk Manual* section 6.3.3 – *CCS Chat* for more information.

To add a new Chat Source, enter a **Source Name** in the New Source section and click **Add**.

Existing sources can be edited using the Current Source section, by first clicking the **Edit** link beside the source name. Click **Save** on any changes made.

To delete a source, click on the **Delete** link beside the source name.

5.2.1.4 Set Users

Set CCS Chat Users

New User

User Name : Ben

User ID : 2

Access Level : Is Administrator

User Password :

Confirm User Password :

Current User

Name : Jack

User ID : 1

Access Level : Is Administrator

Renew Password

User Old Password :

User New Password :

Confirm User New Password :

Edit	Delete	User ID	Name	Administrator
Edit	Delete	1	Jack	<input type="checkbox"/>
Edit	Delete	admin		<input checked="" type="checkbox"/>

This page allows CCS Desk agents to be added into the CCS Chat system.

Select the **User Name** from the list in the New User section, assign a **password**, and click on the **Add** button to complete the process. You can also grant admin page access to this user by ticking the **Is Administrator** box.

Existing user can be edited using the Current User section, by first clicking the **Edit** link beside the user. Click **Save** on any changes made.

To delete a source, click on the **Delete** link.

5.2.1.5 Set Options

Set CCS Chat Options

Queue Server Port	:	<input type="text" value="9018"/>
Queue Server IP Address	:	<input type="text" value="127.0.0.1"/>
CCS Chat Server Address	:	<input type="text" value="127.0.0.1:444"/>
CCS Chat Web Server Root Path	:	<input type="text" value="http://red:8080/CCSChat/"/>
CCS Chat Server OCS Domain	:	<input type="text" value="yourdomain.com"/>
CCS Chat Server OCS User Name	:	<input type="text" value="CCSChat"/>
CCS Chat Server OCS URI	:	<input type="text" value="CCSChat@yourdomain.com"/>
Timeout Setting	:	<input type="text" value="30"/> seconds
Message Wait Delay Setting	:	<input type="text" value="30"/> seconds
<input type="checkbox"/> Renew Password		
CCS Chat Server OCS Old Password	:	<input type="password"/>
CCS Chat Server OCS New Password	:	<input type="password"/>
CCS Chat Server OCS Confirm New Password	:	<input type="password"/>

This page contains several key configurations that are completed during the installation process.

Queue Server Port – the communication port to communicate with CCS Q.

Queue Server IP Address – the IP address of the CCS Q server.

CCS Chat Server Address – the web address for internal communication.

CCS Chat Web Server Root Path – the main URL to access CCS Chat.

Timeout Setting – Time to cancel a chat request when there is no response from the customer or the web server.

Message Wait Delay Setting – Time to send an updated Wait Message to the customer while waiting for a chat agent to become available.

Other options will be removed in the next software release.

5.2.1.6 Set Wait Messages

Set CCS Chat Wait Messages

Current Message

Message :

Edit	Delete	Message ID	Name
Edit	Delete	1	Please hold, we will be with you shortly
Edit	Delete	2	Your call is important to us, please hold

This page allows configuration of wait messages. Wait messages are periodically sent to the customer chat request screen to advise the status of their chat request. The wait message is sent according to the position of the chat request in the queue i.e. by looking at the number of request waiting ahead.

For example, if there is 1 request in front, send wait message ID 1.

A default wait message will be sent when there is no custom wait message configured for chat request position

To add a new message, type the text into the **Message** box and click the **Add** button.

Existing wait message can be edited in the same form, by first clicking the **Edit** link beside the message. Click **Save** on any changes made.

To delete a message, click on the **Delete** link beside the message.

5.2.2 Customer Page

The Customer Page is where chat request is created. Internally it can be accessed by adding the **CustomerPage** at the end of the CCS Chat URL.

For example: **http://localhost:8080/CCSChat/CustomerPage**

The end-user's Web Admin will have to configure a number of settings in their IIS, website and network to make this page accessible from the internet.

To request a chat, the customer must enter complete details on all fields. They also have to select the "Chat Source" they wish to speak to.

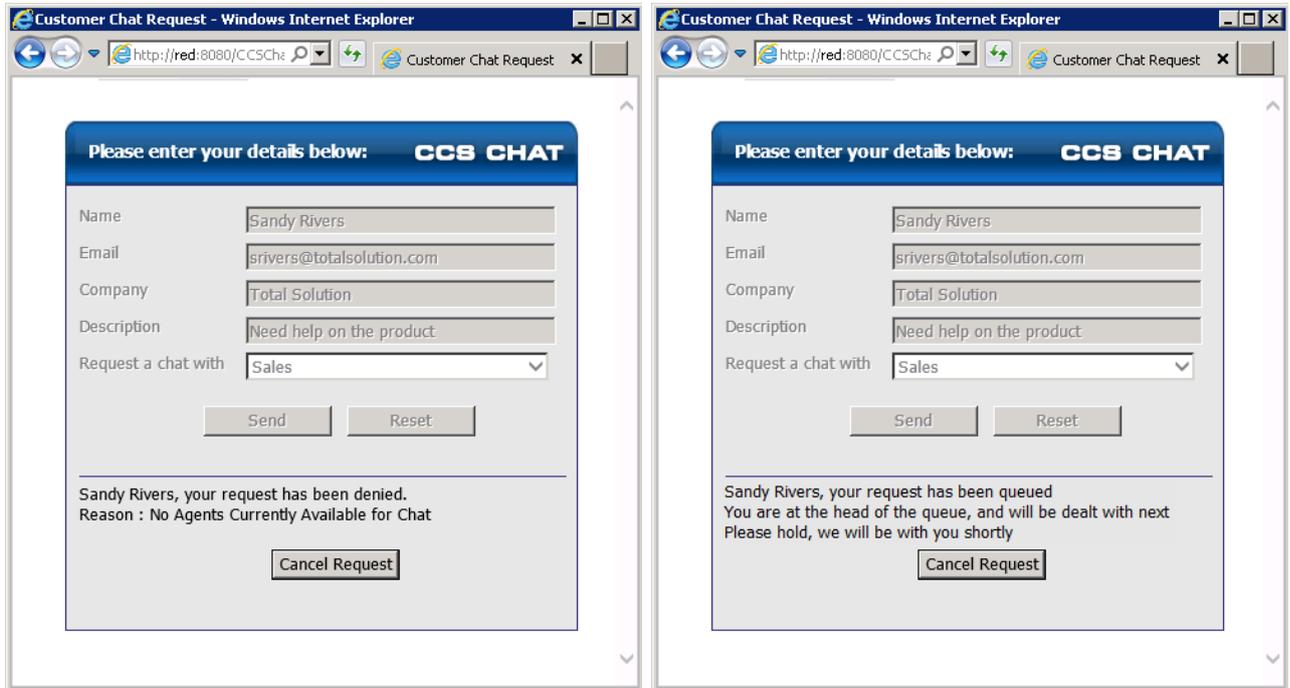


The screenshot shows a web browser window titled "Customer Chat Request - Windows Internet Explorer". The address bar contains the URL "http://red:8080/CCSChat/". The page content features a form with a blue header that reads "Please enter your details below: CCS CHAT". The form fields are as follows:

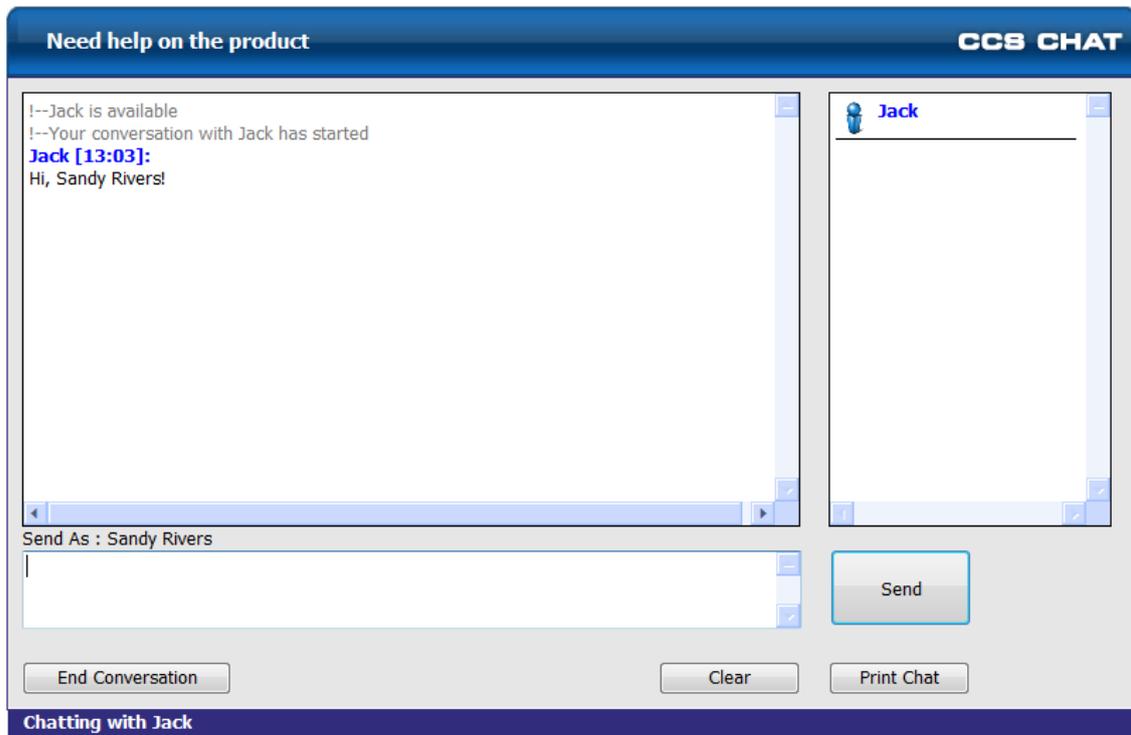
Name	<input type="text" value="Sandy Rivers"/>
Email	<input type="text" value="srivers@totalsolution.com"/>
Company	<input type="text" value="Total Solution"/>
Description	<input type="text" value="Need help on the product"/>
Request a chat with	<input type="text" value="Support"/>

Below the form are two buttons: "Send" and "Reset".

Customer will be informed when there is no agent available to handle their request or when they have to wait for an agent to become available. Chat request can be cancelled by the customer at anytime by closing the browser or hitting the **Cancel Request** button when available.



The chat conversation window is opened when an agent has accepted the chat request. Note that customer will receive the default / custom greeting message for the agent.



Type chat messages in the box provided and click Enter or the **Send** button.

The **Clear** button helps customer to clear the message box should they need to re-type the chat message.

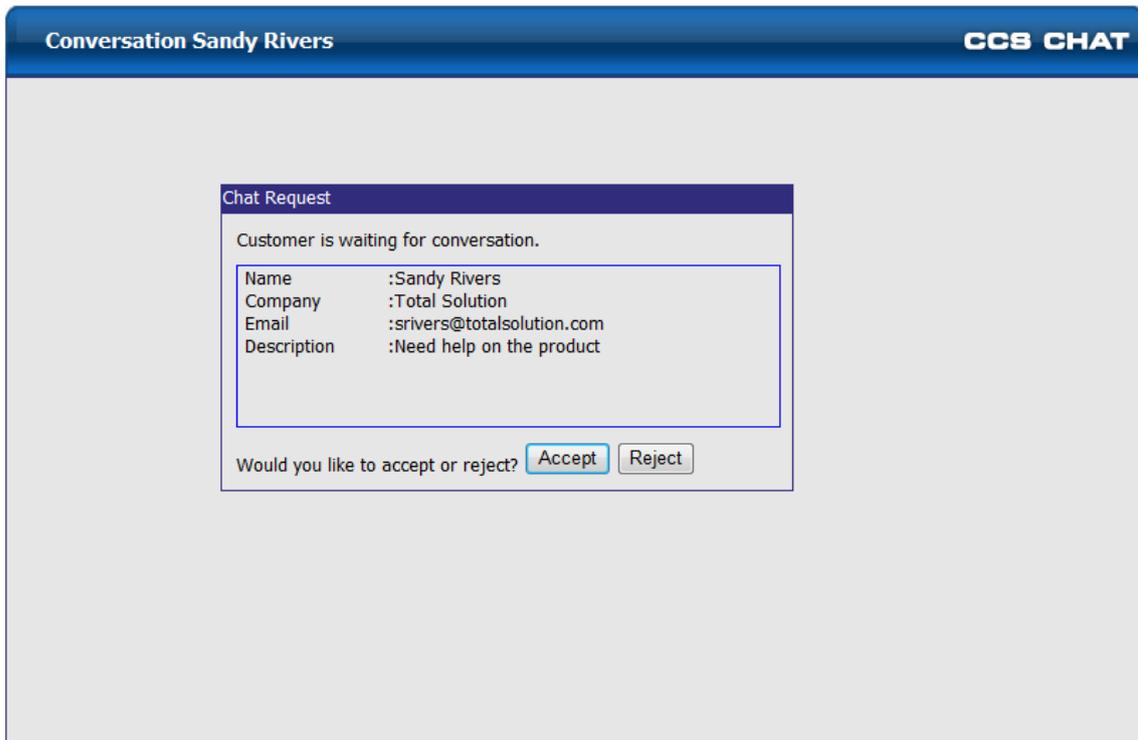
The **Print Chat** button allows customer to send the chat log to printer.

Press the **End Conversation** button to close the chat request.

Customer will also be notified when agent has left the conversation.

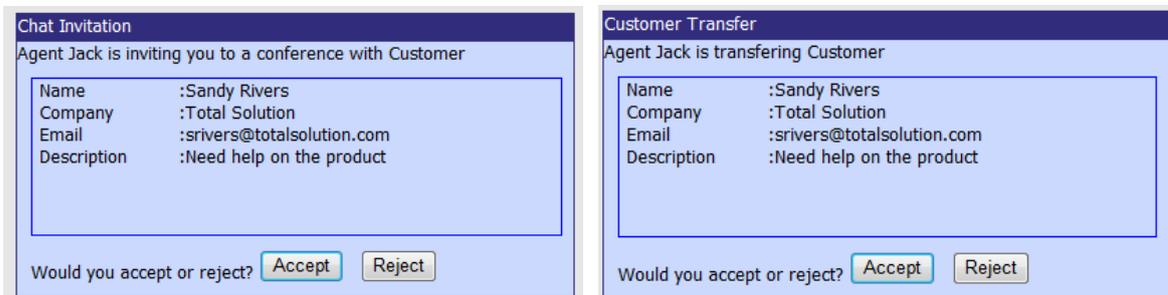
!--Jack has left the conversation

5.2.3 Agent Page

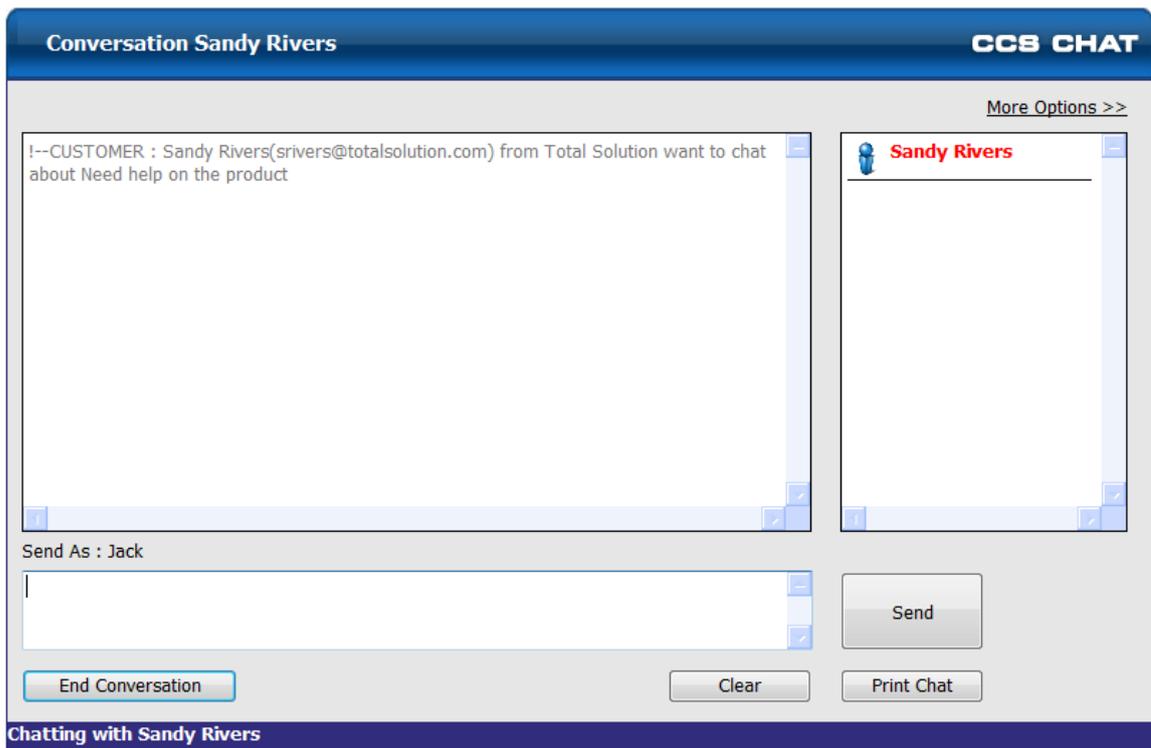


This screen will pop on chat agent's screen to inform that there is a chat request in the system. They can **Accept** the request to start the chat, or **Reject** to send the call to another agent.

In this example, we are informed that "Customer is waiting for conversation" which means it is a new customer chat request. It is possible that the chat request is an invite or a transfer from another agent.



The chat conversation window is opened when the agent accepts the chat request. Note that customer will have received the default / custom greeting message sent by the system.



The red font indicates that Sandy Rivers is a customer, not another chat agent.

Type chat messages in the box provided and click **Enter** or the **Send** button.

The **Clear** button helps customer to clear the message box should they need to re-type the chat message.

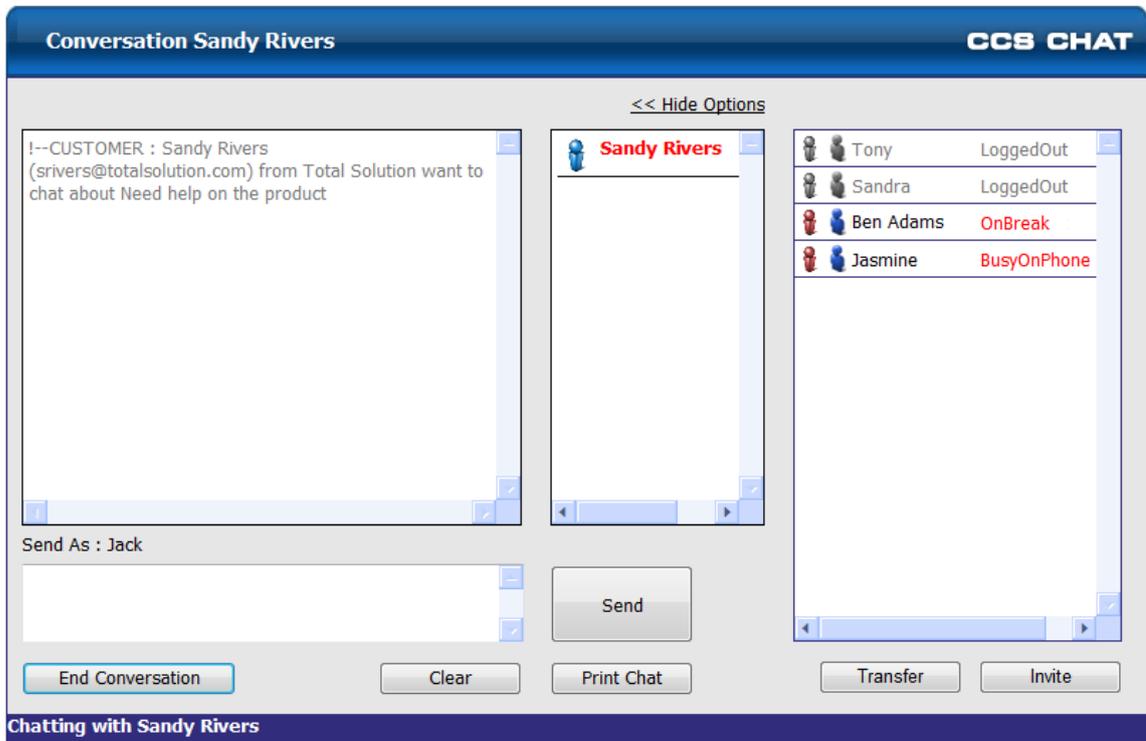
The **Print Chat** button allows customer to send the chat log to printer.

Press the **End Conversation** button to close the chat request.

Agent will also be notified when customer has left the conversation

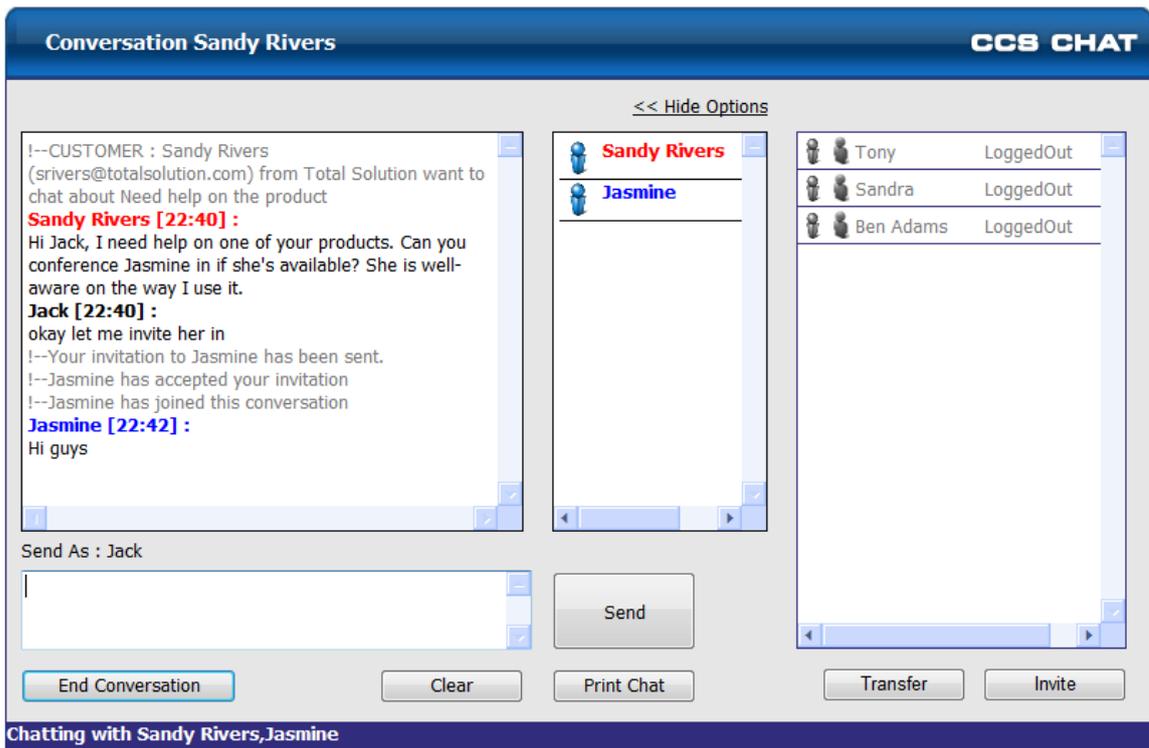
!—Sandy Rivers has left the conversation

The chat agent is able to view the status of the other agents by clicking on the **More Options** button. The status of agents can be shown as logged in i.e. free, logged out, busy on phone, or on break.

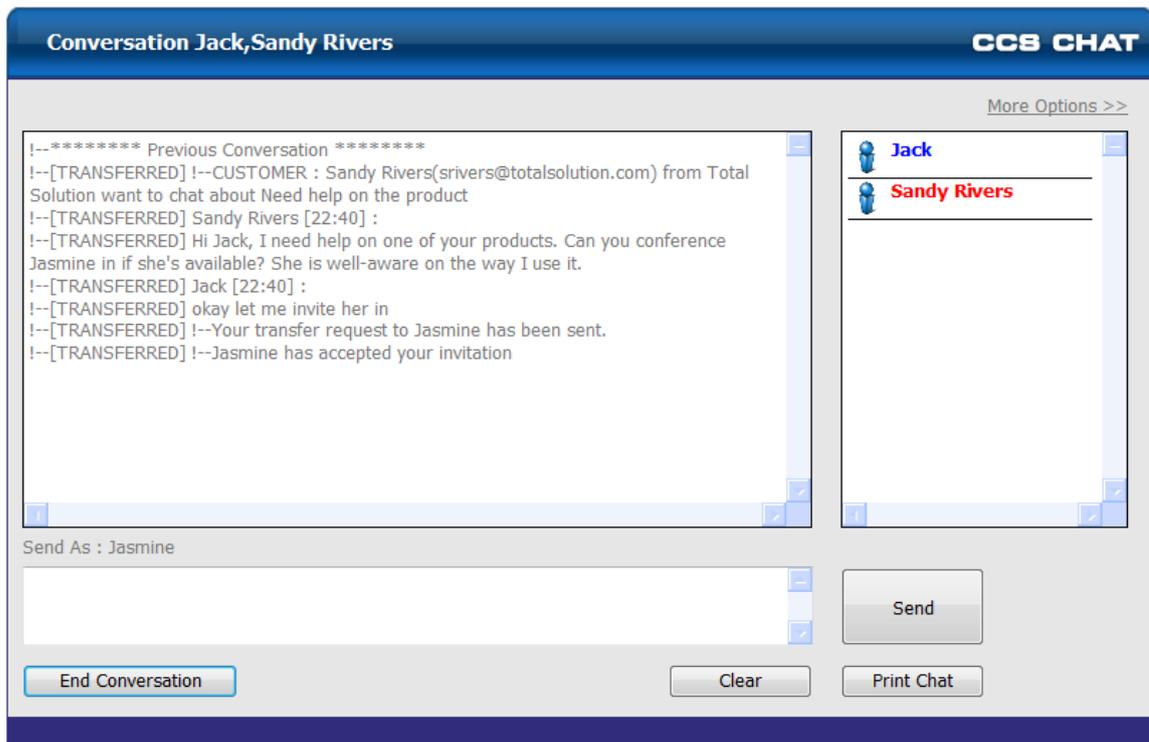


The chat agent can click on an available agent and send a request to join the conversation with either the **Invite** or the **Transfer** button.





Invite is simply adds the agent into the conversation, while **Transfer** sends the existing chat transcript to the additional agent.



Transfer and Invite request can be rejected by the other agent, however, a reason must be written in the message box provided. The text is displayed only to the agent who requested the invite / transfer.

The screenshot shows a 'Customer Transfer' dialog box with the following content:

Customer Transfer
Agent Jack is transferring Customer

Name	:Sandy Rivers
Company	:Total Solution
Email	:sdrivers@totalsolution.com
Description	:Need help on the product

Would you accept or reject?

Reason

preparing a meeting

!--Your invitation to Jasmine has been sent.
!--Jasmine has declined your transfer request. Reason :
preparing a meeting

6. TROUBLESHOOTING

6.1.1 CCS Report is slow to start up

Problem

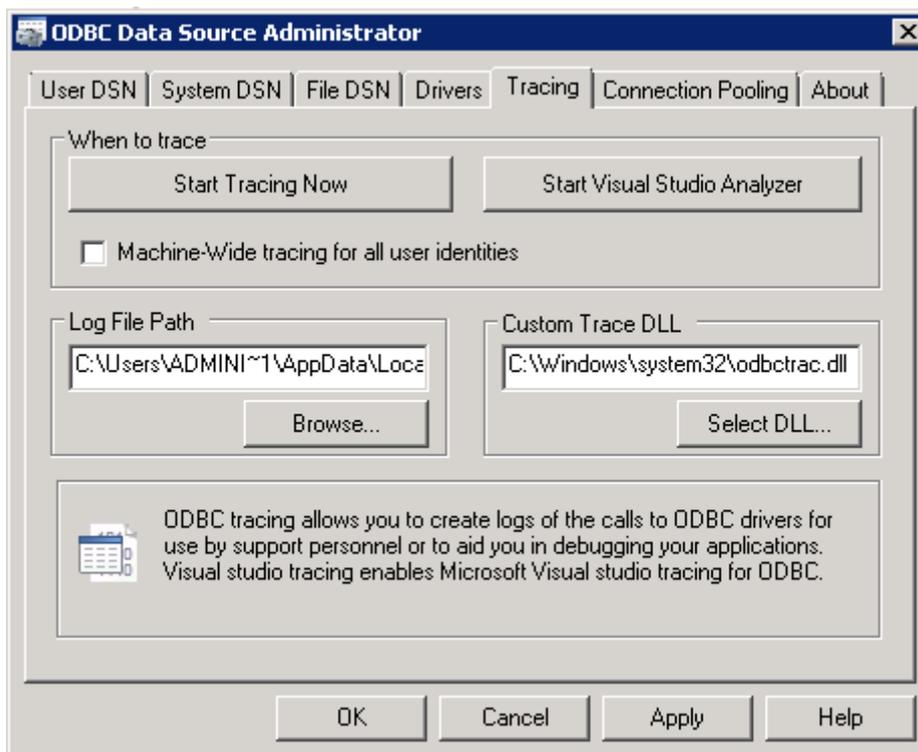
CCS Report is taking a long time to load on workstations.

Troubleshooting Steps

→ Check if ODBC tracing has been turned on for their machine.

The option is here in the **ODBC data source Administrator Dialog**-> the **Start Tracing now** button slows down all ODBC on the machine by a factor of >10.

It is recommended that you turn this feature off.



6.1.2 Database error opening CCS Report

Problem

When opening CCS Report the error 'Failed to Open Database' is displayed.

Troubleshooting Steps

→ Check the System DSN ODBC settings.

→ Check the SQL Server Name: Perhaps the local machine name is required rather than localhost or (local), this is especially pertinent if a web server is running on the same machine as CCS Report.

→ Check for SQL that the CCS User details login details are correct and that the user has access to the CCS Database.

The contents of this document are subject to revision without notice due to continued progress in methodology design and manufacturing. Ericsson-LG Enterprise shall have no liability for any error or damage of any kind resulting from the use of this document.

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