

# BUSINESS REPORTER

RELEASE 7.1.3

USER GUIDE



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## **Business Reporter User Guide**

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# Chapter 1

## BUSINESS REPORTER

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*What's new in Version 7.1?*

*Licensing*

*About this user guide*

*Documentation conventions*

*Required and optional software  
components*

## BUSINESS REPORTER

MiVoice® Business Reporter ensures businesses have a true picture of how and where their telecommunication budgets are spent. It helps businesses track phone use, reconcile carrier bills, and bill back departments. Business Reporter can also help businesses detect toll fraud. Using Business Reporter, businesses can better manage telecommunication expenses and set up telecommunication systems for optimal performance.

Informative reports help businesses bill back departments and detect telecommunications misuse. Reporting information is available for general business and ring group extensions, attendant consoles, and trunk traffic.

Real-time extension monitoring provides valuable statistical and presence information for general business extensions, including those extensions that are ring group members.

The following optional applications combine with Business Reporter to provide additional features.

### **Subscriber Services**

Subscriber Services is an optional application that works with Business Reporter. Using detailed subscriber reports, businesses can bill subscribers for the use of services provided. They can mark up or discount prices based on fixed rates or percentage rates.

### **Traffic Analysis**

Traffic Analysis is an optional application that works with Business Reporter. Traffic Analysis helps businesses analyze trunk traffic so they can make adjustments to optimize trunk use and decrease costs. Traffic Analysis attendant console reports include performance and attendant console call traffic data.

### **Contact Center Management**

Business Reporter enables managers to track, understand, and ultimately predict call patterns. When combined with Contact Center Management, businesses enjoy both contact center and general business costing, and advanced data mining and reporting for telecommunications management.

### **Contact Center Softphone**

Contact Center PhoneSet Manager and Contact Center Softphone applications provide employees with the ability to use their desktop computers as IP-based phones. Contact Center PhoneSet Manager and Contact Center Softphone are designed for the 3300 ICP telephone system.

### **Contact Center Screen Pop**

Contact Center Screen Pop is an optional application that requires Contact Center Management and Contact Center Softphone or Contact Center PhoneSet Manager. Optionally, if you want to screen pop based on caller entered digits, you require IVR Routing with the Collect Caller Entered Digits options.

Contact Center Screen Pop launches applications or webpages. In addition, it enables extensions to automatically receive caller and account information via pop-ups on their computer monitors every time they receive calls. Contact Center Screen Pop provides extensions with the caller name, caller phone number (ANI), called number (DNIS), and the queue used in the call.



### **CTI Developer Toolkit**

CTI Developer Toolkit is a programmable .NET C# Dynamic-link library (DLL) that can be used in any .NET (Release 2.0+) application or website. The CTI Developer Toolkit completes the migration from Mitel Agent Portal to Mitel Contact Center Screen Pop.

### **Salesforce.com Integration**

Salesforce.com Integration is an optional application that enables Salesforce.com customer records to display when calls are received. This integration enables employees to perform all call-related functions through a single user interface. In addition, call details are automatically logged for reporting purposes.

## WHAT'S NEW IN VERSION 7.1?

The following section briefly describes the features and product enhancements that were introduced in Business Reporter Version 7.1.

### **Business Reporter**

Business Reporter, formerly Call Accounting, has been revamped for Version 7.1. While continuing to provide call costing, Traffic Analysis, and Subscriber Services, Business Reporter now also includes support for ring group monitoring and reporting for general business purposes.

Business Reporter is included in all licensing starter packs but is also available as a standalone product. A Business Reporter license must be owned for each extension, including non-ACD extensions, that will be reported on or viewed in real time. All licensed Business Reporter extensions can be monitored in real-time using the new Extension Now monitor, available in Contact Center Client.

### **Support for ring groups**

Members of ring groups can now be reported on and viewed in real-time.

In Version 7.1, voice queue reports apply to both ACD paths and ring group configurations (when applicable). For more information regarding ring group reporting, see the reports guide that applies to your contact center edition (Enterprise, Business, Workgroup, or Business Reporter).

Ring group members can be monitored in all Contact Center Client queue monitors, except the Agent State by Time for Queue monitor. Interactive Visual Queue does not support ring groups. For more information regarding ring group real-time monitoring, see the Real-time Monitors chapter in this guide.

Ring group support requires MCD 7.0+.

For information regarding ring group configuration, see "Adding ring groups" on page 109. MadCap Software

### Enhancements to Silent Monitor

Contact Center Solutions Version 7.1 leverages MCD 7.0 and MCD 7.0.1 capabilities to improve silent monitoring. For example, in conjunction with MCD 7.0/7.0.1, up to six supervisors can monitor the same agent across all call states. Also, supervisors can access Class of Service controlled monitoring of non-prime lines and can start monitoring an agent or extension before they handle a call. When the call starts, silent monitoring begins automatically.

For more information, see "Silent monitoring calls" on page 282.

### Addition of Whisper Coach ability

Whisper Coach is a feature of Silent Monitor, enabling supervisors to talk to the agent and coach them throughout the call without the customer hearing what the supervisor is saying. If needed, supervisors can conference into an active call to talk to the customer.

Whisper Coach requires either MCD 7.0+ on a MiVoice Business for ISS platform, a Multi Instance Platform, or VMWare for Virtual Appliance. Whisper Coach is not supported on Mxe platforms.

For more information, see "Coaching extensions on a call with customers" on page 283.

### Inter-Tel database import tool

The Inter-Tel database import tool enables customers with historical CSM data (collected using either a 5000 or 3300 media server) to convert their data when migrating to Contact Center Solutions Business, Workgroup, or Enterprise Edition. The import tool is designed to process data from either Access or DB2 databases.

For more information, see the *Contact Center Management Installation Guide*.

### Lifecycle report filtering

Lifecycle reports now include Classification Codes.

### Licensing changes

Additional changes to licensing for Version 7.1 include the following:

- Business Reporter is now included in all starter pack levels for all contact center editions.
- Previously, Call Accounting reports could be run against an unlimited number of non-ACD extensions, however, in Version 7.1, a Business Reporter (previously Call Accounting) license must be applied to each extension that will be viewed in real time or reported on.
- Business Reporter now includes support for ring groups and, although it continues to include call costing capabilities, they are no longer its primary focus. The call costing features included in Business Reporter are supported in the following areas only: North America, Latin America, United Kingdom, and the Benelux regions. Other regions can access Business Reporter for its general business features and functionality.

Licensing is described in detail in the *Contact Center Solutions and Business Reporter System Engineering Guide*.

### Technology changes

The following technology changes have been introduced in Version 7.1.

Support for:

- MCD 7.0 and MCD 7.0.1 (some features included in Business Reporter Version 7.1 require at least MCD 7.0)
- SQL Server 2014

Support for the following technologies has been discontinued in Version 7.1:

- Intelligent Queue (used as a historical media server only)
- MCD Versions 4.0 SP4, 5.0 SP2
- VMware ESXi Versions 4.5 and 5.0

## LICENSING

You license Business Reporter based on the total number of physical extensions in your enterprise, on which you will generate reports. Your license reflects the maximum number of extensions on which you can generate reports.

To view details on your software licenses

- Click **Help=>About your Mitel applications**.

To view details on your installed professional services

- Click **Help=>About your Mitel applications=>Professional Services**.

## ABOUT THIS USER GUIDE

The *Business Reporter User Guide* provides information on how to use Business Reporter to track and report your telephone system costs.

To report an issue with this document, please email [micctechpubs@mitel.com](mailto:micctechpubs@mitel.com).

### Chapter 1 Business Reporter

Chapter 1 describes

- The features and benefits of Business Reporter
- Licensing
- The layout of the user guide
- Document conventions
- How to install client applications from the Contact Center Management website

### Chapter 2 Business Reporter Concepts

Chapter 2 describes how to

- Track phone use
- Reconcile carrier bills
- Bill back departments
- Detect toll fraud

### Chapter 3 Business Reporter Planning and Management

Chapter 3 helps you determine which configuration scenario best suits your company

- Extension based costing
- Account Code costing
- Contact center costing
- Contact center costing with 'hot desking'

### Chapter 4 Getting Started

Chapter 4 describes how to

- Register your software
- Set up Business Reporter on the Enterprise Server
- Set up Business Reporter on client computers
- Use Client Role Selector to select your Contact Center Client role
- Set up user preferences
- Set up the SMTP Mail Server for report distribution

### Chapter 5 Services and Database Administration

Chapter 5 describes how to

- Start and stop the Contact Center Management services
- Perform database and maintenance functions

### Chapter 6 Configuration

Chapter 6 describes how to configure

- Enterprise settings, schedules, and security
- Business Reporter devices
- Subscriber Services devices

## **Chapter 7 Real-Time Monitors**

Chapter 7 describes how to

- View real-time extension statistics
- Customize monitor display characteristics
- Chat online with other employees
- Alarm on call thresholds in real time

## **Chapter 8 Reports**

Chapter 8 describes how to

- Generate on-demand reports
- Set up timetables for generating reports

## **Chapter 9 Data-Mining Tools**

Chapter 9 describes how to

- Search for SMDR event records
- View the historical real-time events that occurred on a particular date, in the sequence they occurred

## **Chapter 10 Business Reporter Node**

Chapter 10 describes how to

- Configure data collection nodes in multi-site enterprises

## **Chapter 11 Subscriber Services**

Chapter 11 describes

- Subscribers
- Subscriber plans

## **Chapter 12 Traffic Analysis**

Chapter 12 describes how to

- Set up the telephone system and YourSite database so you can collect data and generate reports on the traffic data stream

## **Chapter 13 Contact Center PhoneSet Manager and Contact Center Softphone**

Chapter 13 describes how to

- Enable employees to use their desktop computers as IP-based phones

## **Chapter 14 Contact Center Screen Pop**

Chapter 14 describes how to

- Launch applications or webpages when employees receive calls
- Provide employees with caller and account information via pop-ups on their computer monitors when they receive calls

### Chapter 15 CTI Developer Toolkit

Chapter 15 describes

- Common uses of the CTI Developer Toolkit
- Examples of how to use the CTI Developer Toolkit to customize applications

### Chapter 16 Salesforce.com Connector

Chapter 16 describes how to

- Integrate your Mitel phone directly into the Salesforce.com user interface

## LOCATING THE LATEST VERSION OF OUR GUIDES

Mitel recommends you obtain the latest version of the *MiVoice Business Reporter User Guide* from <http://edocs.mitel.com>.

## DOCUMENT CONVENTIONS

This document uses the following conventions.

### UI syntax

The following terms apply to actions you perform on the user interface:

- *Click* precedes items you select with the mouse, such as buttons, menus, and items in list boxes.
- *Press* precedes items you select on the keyboard.
- *Select* or *clear* precedes items you turn on or turn off, such as check boxes.
- *Select* precedes items you select in combo boxes (text boxes with attached list boxes).

For example,

1. Click **OK**.
2. Press **ENTER**.
3. Select the **PFdatabase** check box.

### Italics

Italic typeface is used

- For emphasis (for example, *hot desking*)
- To set off words, letters, and numbers referred to as themselves in the text (for example, *overflow* is the routing of calls to more than one queue; the application saves text files as *MMDDYYYY.sql*)
- For characters or words you type in the UI (for example, type your Enterprise Server IP address *http://[your Enterprise Server address]/CCMWeb/*)

### Bold

Bold typeface designates paths you select in your root directory and items you click, press, or select.

For example

1. Click **OK**.
2. Delete **50** and insert **60**.
3. Select the **Check database integrity** check box.

### UI Menu items

UI menu items you select are separated by an arrow [=>]. For example, **File=>Open** tells you to select the Open menu on the File menu.

### Note

The word **NOTE**: designates essential user information.

## REQUIRED AND OPTIONAL SOFTWARE COMPONENTS

Business Reporter Client Component Pack contains Contact Center Client software for client computers. You require administrator privileges to run this installation. You use Contact Center Client to configure your database (YourSite Explorer), monitor devices in real time (Extension State by Position monitor), and run Management Console.

Business Reporter applications have a number of required and optional applications you install on client computers. You can download these applications from Mitel Online under Support=>Software Downloads=>Contact Center Enterprise Edition or Contact Center Business Edition.

### REQUIRED COMPONENTS

In order to use Contact Center Solutions and Business Reporter applications, the following components must be installed on client computers.

- Microsoft .NET Framework enables your computer to run applications created with .NET. All client computers must have supported versions of .NET Framework installed.
- Microsoft Internet Explorer updates your browser software to the latest version. All client computers require IE 8.0 or greater.  
**NOTE:** If you use Internet Explorer 10 or 11, you must enable Compatibility View.
- Microsoft Report Viewer 2005 Redistributable Package includes Windows Forms and ASP.NET Web server controls for viewing reports designed using Microsoft reporting technology.
- Web Services Enhancements (WSE) 3.0 for Microsoft .NET is the Microsoft .NET Framework version 3.0 redistributable package that installs the common language runtime and associated files required to run applications developed to target the .NET Framework.
- Microsoft DirectX significantly enhances graphics, sound, music, and 3-D animation in Windows applications.

## OPTIONAL COMPONENTS

You can install the following application on client computers.

- Adobe Reader enables you to view documents and reports in .pdf format. You require Acrobat Reader to view the online user guide, user tutorial, reporting guide, and reports
- Microsoft Excel 2007 or greater is required to both view Business Reporter reports and automatically distribute reports for printing. Optionally, Microsoft Excel Viewer may be installed as an alternative to Microsoft Excel to view reports, but it cannot be used to automatically distribute reports for printing.
- Remote Server installs media servers and selected services on a computer other than the Enterprise Server. For more information on the services included with Remote Server installation, see the *MiVoice Business Reporter Installation Guide*.



# Chapter 2

## BUSINESS REPORTER CONCEPTS

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*Costing calls*

*Detecting toll fraud*

*Ring groups*

## BUSINESS REPORTER CONCEPTS

Business Reporter ensures businesses have a true picture of how and where their telecommunication budgets are spent. This chapter discusses how Business Reporter can be used to track phone use, reconcile carrier bills, and bill back departments, and how it costs calls and detects toll fraud.

### Tracking phone use

You can use Business Reporter to track phone use and to determine

- The average duration of calls.  
Generate the Employee Group Accounting Summary report. This report provides the average duration and cost of calls made by each employee of an employee group.
- Where most of your long-distance budget is spent, and which employees make the most and longest calls.  
Generate the Employee Accounting by Phone number/Location report. If you have added these phone numbers and names to your database (YourSite Explorer=>Phone numbers), they will also appear in the report. This report also provides you with a list of the 100 most often dialed phone numbers by employee, and the 100 longest calls by employee.
- If your telephone system is being abused, in real time  
Monitor call costs and other call statistics by extension in real time. You can set alarms, for any or all extensions, for all call statistics, including caller ID information (such as caller name and number). You can also set alarms based on call cost thresholds and toll fraud parameters. Alarm notifications alert you when event thresholds are reached. You can choose to be notified by visual changes in the monitor, sound prompts, pop ups, or email. By setting alarms based on the thresholds you define, you can monitor telephone system abuse and stop it as it occurs.

### Reconciling carrier bills

You can set up Business Reporter to detect billing errors. When you configure Business Reporter to mimic your phone carrier charges, you might notice discrepancies between your amounts and your carrier amounts.

### Billing back departments

To bill back departments, your call costing information must be accurate. If your call costing information is inaccurate, and you charge your subscribers less than you yourself are charged by the phone company, then you are losing money. Of course, you do not have to assign the same rates to subscriber calls that the phone company charges you for your calls. You can modify the rate to include a markup or intentionally provide a discount.

### Monitor telephone system use in real time

You can set alarms, for any or all extensions, for all call statistics, including caller ID information (such as caller name and number). You can also set alarms based on call cost thresholds and toll fraud parameters. Alarm notifications alert you when event thresholds are reached. You can choose to be notified by visual changes in the monitor, sound prompts, pop ups, or email. By setting alarms based on the thresholds you define, you can monitor telephone system abuse and stop it as it occurs.

## COSTING CALLS

How Business Reporter costs calls depends on whether calls are associated to a trunk group or media server, and on the direction of the calls.

### Trunk group or media server

**NOTE:** If you cost calls based on trunk groups, you must add the IP trunk from each media server to each trunk group and ensure all media servers are associated to a carrier plan.

Business Reporter can cost a call only if there is a carrier plan assigned to either the call's media server or trunk group, and if Business Reporter is programmed and enabled. After Business Reporter determines the carrier plan assigned to the call, it then determines the call direction, and then determines the call cost. (See Figure 1.)

In a clustered telephone system environment, inter switch trunks can be used to link calls between telephone systems. Intra switch trunks can be used to ensure that calls follow the best path when routing calls. For example, if you had two telephone systems, one in Toronto and one in Ottawa, calls could be routed out of the Toronto telephone system to ensure they were local calls as opposed to long distance calls. If you use intra switch trunks, there are several important configuration requirements you must make in YourSite Explorer or calls will not be reported on correctly. For complete details on configuring trunk groups that use intra switch trunks, see "Adding trunk groups" on page 118.

### Outbound calls

*Outbound calls* are outgoing calls from your company. For outbound calls, the rate charged is determined by the digit pattern. Digit patterns are defined on carrier plans. A *digit pattern* is one or more numbers used to identify and cost a call, and can be part or all of a phone number.

If a phone number has a specific call rate, you must enter the phone number (for example, 613-599-0045). When groups of phone numbers have the same call rate, you enter just those digits they have in common. For example, you enter 613-599-xxxx if the cost of the call is the same no matter what the last four digits are.

### Inbound calls

*Inbound calls* are incoming calls to your company. For inbound calls, the rate charged is determined by the Dialed Number Identification Service (DNIS) call rate. DNIS is a feature of toll-free lines that identifies the phone number a caller dials.

### Internal calls

*Internal calls* are calls that do not interact with the public telephone system, only your own. For internal calls, the rate charged is determined by the call rate assigned.

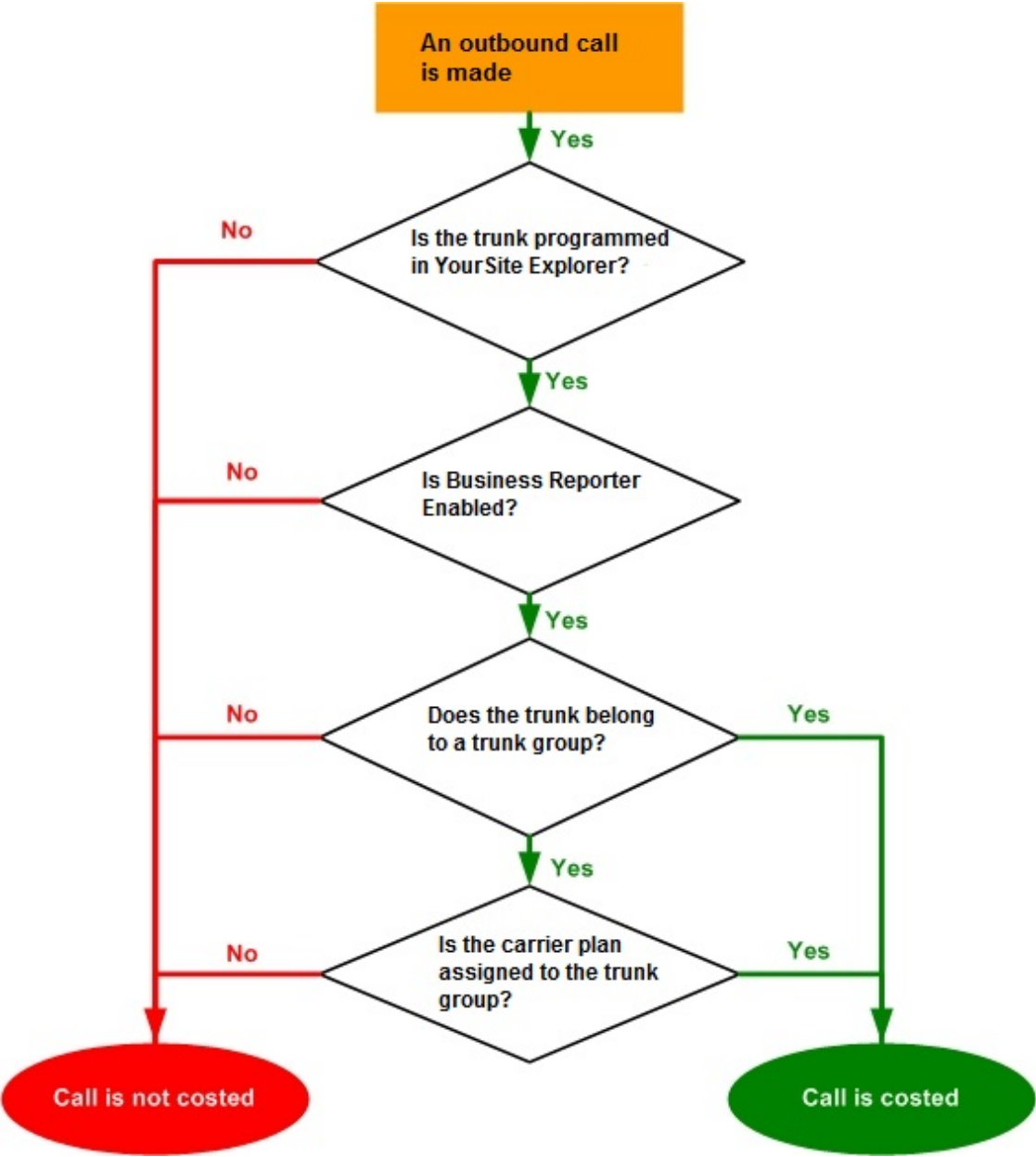


Figure 1: Determining if an outbound call can be costed

## DETECTING TOLL FRAUD

*Toll fraud* is the misuse of the telephone system. Using Business Reporter, you define what your company considers to be toll fraud. Toll fraud can be specific digit patterns, internal calls, or calls that cost more than a set rate.

### Digit patterns

When adding outbound digit patterns to a carrier plan, you can define specific ones as toll fraud. Digit patterns defined as toll fraud can consist of

- Toll charge numbers such as 1-900 calls.
- Calls to specific countries. For example, you dial 1-011-33 to call France.
- Calls to specific cities or areas. For example, you dial 1-714 to call Anaheim, California.
- Calls to individual companies or homes.

### Internal calls

You can define all (or none) of the internal calls as toll fraud.

### Calls costing more than a set rate

You can configure Business Reporter to report on all calls costing more than a pre-defined rate. For example, if you decide calls that cost more than \$10 are toll fraud, all calls that cost \$10.01 and greater are listed in toll fraud reports. The Extension and Extension Group Accounting Toll Fraud reports show the toll fraud activity by extension and extension group. The Enterprise Site Accounting Toll Fraud report shows toll fraud activity by site.

## RING GROUPS

Ring groups are a call distribution mechanism for Business Reporter that distributes calls to a pool of specific extensions.

When an incoming call rings the ring group, the member extensions configured in the ring group are rung until one extension answers. Ring groups can be programmed to offer calls to extensions using five different algorithms:

- **Ring All:** Rings all available extensions in the ring group simultaneously.
- **Terminal:** Starting from the first extension in the member list, rings the first available extension.
- **Terminal Cascade:** Starting from the first extension in the member list, rings the first available extension for the duration of the Cascade Ring Timer before calling the next available extension in the member list.
- **Circular:** Starting from the last member to handle a call, rings the next available extension in the members list
- **Circular Cascade:** Starting from the last member to handle a call, rings the next available extension in the member list for the duration of the Cascade Ring Time before calling the next available extension in the member list.

Ring groups enable a business to ensure that in settings where employees may not have a set physical location or mobile device, such as a warehouse or back office, calls can be effectively distributed to an answering extension.

Incoming calls are handled differently than ACD path queues as well. If a call comes in, it will be queued if any one of the ring group's extensions are available. Available extensions are those that are:

- Idle
- Busy (ACD, Non ACD, or Out)

If the ring group's extensions are not available, the call is overflowed immediately (if an overflow point has been configured) or receives no answer. Extensions in the following states are not available:

- Do Not Disturb
- Out of Service
- Not Present
- Reseize Timer

For more information about extension states, see "Extension states" on page 158.

# Chapter 3

## BUSINESS REPORTER PLANNING AND MANAGEMENT

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*Determining your Business Reporter  
configuration needs*

*Determining your Subscriber Services  
configuration needs*

# BUSINESS REPORTER PLANNING AND MANAGEMENT

This chapter describes common Business Reporter and Subscriber Services configuration scenarios.

## DETERMINING YOUR BUSINESS REPORTER CONFIGURATION NEEDS

Each Business Reporter configuration scenario provides

- Examples of companies suited to the configuration scenario
- Instructions on configuring Business Reporter
- A list of pertinent reports

### **Extension based costing configuration scenario**

Generally, companies configure Business Reporter so that each employee is associated with one or more extension reporting numbers that are unique to the employee. The employee uses one phone extension only to make calls. Calls are costed by employee ID and extension reporting number. See "Extension based costing configuration scenario" on page 19.

### **Account Code (PIN) costing configuration scenario**

You can configure Business Reporter so that each employee/subscriber is associated with one or more Account Code reporting numbers (PINs) that are unique to that employee/subscriber. The employee/subscriber uses a forced verified Account Code to access an outside line. Calls are costed by employee ID/subscriber ID, and Account Code reporting number. See "Account Code (PIN) based costing configuration scenario" on page 20.

### **Contact center costing configuration scenario**

You can configure Business Reporter in conjunction with Contact Center Management. If your contact center does not 'hot desk' then you configure Business Reporter so that each employee has an agent ID and extension reporting number unique to that employee. Calls are costed by employee ID, agent ID, and extension reporting number.

### **Contact center costing with 'hot desking' configuration scenario**

**NOTE:** If you use Contact Center Management in conjunction with Business Reporter and have hot desking agents programmed in Contact Center Management, you must program an extension with an identical reporting number or real-time call costing will not work.

You can configure Business Reporter in conjunction with Contact Center Management. If your contact center 'hot desks' then you configure Business Reporter so that each employee has an agent ID and Account Code reporting number that is unique to that employee. Calls are costed by employee ID, agent ID, and Account Code reporting number.

An employee who hot desks is one who does not have a dedicated work area, but rather works at whatever workstation is available. The 'hot desking' employee uses an agent ID to log on to the

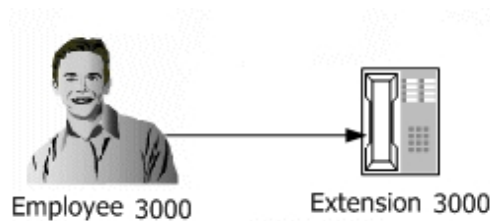


phone extension at that workstation. The extension cannot be reached while the hot desking employee is logged on. See "Contact center costing with 'hot desking' configuration scenario" on page 23.

## EXTENSION BASED COSTING CONFIGURATION SCENARIO

In the extension based costing scenario, calls are costed by extension reporting numbers. Each employee has one or more unique extension reporting numbers. Employees use only the phone extensions assigned to them. You run employee and/or extension reports to track call costs. (See Figure 2.)

To verify employees are using assigned phone extensions, you can assign a unique forced verified Account Code to each employee. See "Account Code (PIN) based costing configuration scenario" on page 20.



**Figure 2: Extension based costing**

The extension based costing scenario is the most common scenario. It suits companies that have a dedicated work area for each employee.

If each employee has only one extension reporting number, the report data in the Employee Accounting by Interval report data will be identical to that of the Extension Accounting by Interval report.

You can use Synchronization to synchronize the Business Reporter database with your telephone system. See "Configuring the YourSite database using synchronization" on page 79.

### *Reports to run*

If each employee has one extension reporting number, the Employee Accounting by Interval report data will be identical to the Extension Accounting by Interval report data.

The reports that most accurately reflect the phone costs incurred are as follows.

#### **Subscriber and Subscriber Group Accounting by Interval**

The Subscriber and Subscriber Group Accounting by Interval reports show the call activity and call cost by subscriber and subscriber group for the intervals (15-, 30-, 60-minute, day of week, day of month, or monthly) you specify. All subscriber information is displayed regardless of which phone extension is used.

#### **Employee and Employee Group Accounting by Interval**

The Employee and Employee Group Accounting by Interval reports show the call activity and call cost by employee and employee group for the intervals (15-, 30-, 60-minute, day of week, day of month, or monthly) you specify. All employee information is displayed regardless of which phone extension is used. For example, if Jeff has two extensions and you want to see what Jeff did as a

whole, you run the Employee Accounting by Interval report. If your subscriber has only one extension, you get the same information from the Extension Accounting by Interval report.

### Employee and Employee Group Accounting by Extension

The Employee and Employee Group Accounting by Extension report shows the Business Reporter data distributed across the extensions of a single employee/each employee in the group for the shift duration and days you specify. It reports the call statistics in hours, minutes, and seconds, and provides call counts. For example, if Jeff has two extensions and you want to run a report that shows what he is doing on each extension, you run the Employee Accounting by Extension report.

### Extension and Extension Group Accounting by Interval

The Extension and Extension Group Accounting by Interval reports show the call activity and call cost by extension and extension group for the intervals (15-, 30-, 60-minute, day of week, day of month, or monthly) you specify. For example, if Jeff has two extensions and you want to run a report with information on just one extension, you run the Extension Accounting by Interval report.

## ACCOUNT CODE (PIN) BASED COSTING CONFIGURATION SCENARIO

Depending on whether you are using forced Account Codes or non forced Account Codes, you can attribute an entire call, or segments of a call to particular Account Codes. You can configure forced Account Codes for employees or subscribers.

**NOTE:** When you enter a traditional Account Code, the duration of the call or call segment is attributed to the Account Code until another event (for example, entering another Account Code or transferring the call) occurs. If a person on a call forgets to enter an Account Code until late in the call, the Account Code will only be applied to the last segment of the call (after it is entered).

Account Codes can also be labeled with call Classification Codes. This option attributes the entire call duration to calls of this Account Code type, enabling supervisors to report on the entire amount of time spent on these calls.

**NOTE:** When you enter an Account Code labeled as a call Classification Code, the entire duration of the call is attributed to this Account Code even if another event occurs (for example, if a traditional Account Code is entered). This includes transfer time and time calls were handled at other extensions. If a person forgets to enter a call classified Account Code until late in the call, the Account Code is still applied to the entire call duration.

The Account Code PIN is a forced verified Account Code. You run employee, subscriber, and/or Account Code reports to track call costs. (See Figure 3.)



**Figure 3: Account code (PIN) based costing**

The Account Code (PIN) based costing scenario suits dormitories and retirement homes.

You can use Synchronization to synchronize the Business Reporter database with your telephone system. See "Configuring the YourSite database using synchronization" on page 79.

### *Reports to run*

The reports that most accurately reflect the phone costs incurred are as follows.

#### **Subscriber and Subscriber Group Accounting by Interval**

The Subscriber and Subscriber Group Accounting by Interval reports show the call activity and call cost by subscriber and subscriber group for the intervals (15-, 30-, 60-minute, day of week, day of month, or monthly) you specify. All subscriber information is displayed regardless of which Account Code is used. For example, if Jeff has two Account Codes and you want to see what Jeff did as a whole, you run the Subscriber Accounting by Interval report.

#### **Employee and Employee Group Accounting by Interval**

The Employee and Employee Group Accounting by Interval reports show the call activity and call cost by employee and employee group for the intervals (15-, 30-, 60-minute, day of week, day of month, or monthly) you specify. All employee information is displayed regardless of which Account Code is used. For example, if Jeff has two Account Codes and you want to see what Jeff did as a whole, you run the Employee Accounting by Interval report.

#### **Employee and Employee Group Accounting by Account Code**

The Employee and Employee Group Accounting by Account Code report shows the call accounting data distributed across the Account Codes of a single employee/each employee in the group for the shift duration and days you specify. It reports the call statistics in hours, minutes, and seconds, and provides call counts. For example, if Jeff has two Account Codes and you want to run a report that shows information for each Account Code, you run the Employee Accounting by Account Code report.

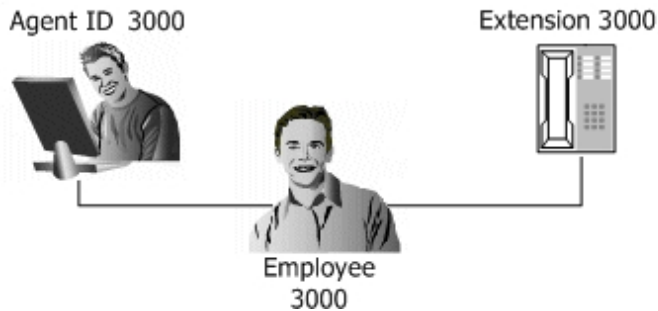
#### **Account Code Accounting by Interval**

The Account Code Accounting by Interval report shows the call activity and call performance by Account Code for the interval (15-, 30-, 60-minute, day of week, day of month, or monthly) you specify. It provides call counts, and report statistics in hours, minutes, and seconds. For example, if Jeff has two Account Codes and you want to run a report with information on only one Account Code, you run the Account Code Accounting by Interval report.

## CONTACT CENTER COSTING CONFIGURATION SCENARIO

The contact center costing scenario applies to companies that have contact centers and use Business Reporter in conjunction with Contact Center Management. Each employee has only one extension. You cost all calls by agent ID, employee ID, and/or extension reporting number. You run agent, employee, and/or extension reports to track call costs. (See Figure 4.)

If you are unsure whether each employee is using the assigned phone extension, you can assign a unique forced verified Account Code reporting number to each employee. See "Account Code (PIN) based costing configuration scenario" on page 20.



**Figure 4: Contact center costing**

You can use Synchronization to synchronize the Business Reporter database with your telephone system. See "Configuring the YourSite database using synchronization" on page 79.

### ***Reports to run***

The Agent Accounting by Interval report data is similar to that of the Employee Accounting by Interval report data. The Employee Accounting by Interval report also includes phone costs incurred while an employee is not logged on to the ACD. If the employee has one extension reporting number, the Employee Accounting by Interval report data will be identical to that of the Extension Accounting by Interval report data.

#### **Agent and Agent Group Accounting by Interval**

The reports that most accurately reflect the phone costs incurred are the Agent and Agent Group Accounting by Interval reports. These reports show the call activity and call cost by agent and agent group for the intervals (15-, 30-, 60-minute, day of week, day of month, or monthly) you specify. All agent information is displayed regardless of which extension is used.

#### **Employee and Employee Group Accounting by Interval**

The Employee and Employee Group Accounting by Interval reports show the call activity and call cost by employee and employee group for the intervals (15-, 30-, 60-minute, day of week, day of month, or monthly) you specify. All employee information is displayed regardless of which phone extension is used. For example, if Jeff has two extensions and you want to see what Jeff did as a whole, both while logged on and not logged on to the ACD, you run the Employee Accounting by Interval report.

#### **Employee and Employee Group Accounting by Extension**

The Employee and Employee Group Accounting by Extension reports show the call accounting data distributed across the extensions of a single employee/each employee in the group for the shift duration and days you specify. It reports the call statistics in hours, minutes, and seconds, and provides call counts. For example, if Jeff has two extensions and you want to run a report that shows what he is doing on each extension, both while logged on and not logged on to the ACD, you run the Employee Accounting by Extension report.

### Extension and Extension Group Accounting by Interval

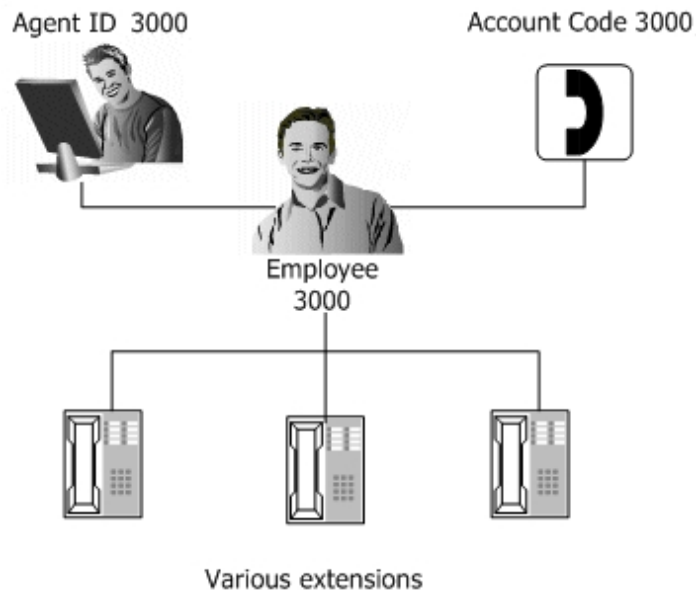
The Extension and Extension Group Accounting by Interval reports show the call activity and call cost by extension and extension group for the intervals (15-, 30-, 60-minute, day of week, day of month, or monthly) you specify. For example, if Jeff has two extensions and you want to run a report with information on just one extension, you run the Extension Accounting by Interval report.

## CONTACT CENTER COSTING WITH 'HOT DESKING' CONFIGURATION SCENARIO

**NOTE:** If you use Contact Center Management in conjunction with Business Reporter and have hot desking agents programmed in Contact Center Management, you must program an extension with an identical reporting number or real-time call costing will not work.

The contact center costing with hot desking scenario applies to companies that have contact centers with flexible and mobile employees/subscribers, and that use Business Reporter in conjunction with Contact Center Management. Employees can access more than one phone extension. Employees/subscribers enter forced verified Account Codes to access outside lines for outbound calls.

To track outbound calls, each employee is given one or more unique Account Code Personal Identification Numbers (PINs) for accessing an outside line. The Account Code PIN is a forced verified Account Code. Each employee must enter an Account Code to make an outgoing call. The cost is associated with the employee regardless of which phone extension is used. (See Figure 5.)



**Figure 5: Contact center costing with hot desking**

If you have a 3300 ICP, you can use Synchronization to synchronize the Business Reporter database with your telephone system. See "Configuring the YourSite database using synchronization" on page 79.

## *Reports to run*

The reports that most accurately reflect the phone costs incurred are as follows.

### **Employee and Employee Group Accounting by Interval**

The Employee and Employee Group Accounting by Interval reports show call activity and call cost by employee and employee group for the intervals (15-, 30-, 60-minute, day of week, day of month, or monthly) you specify. All employee information is displayed regardless of which Account Code is used. For example, if Jeff has two Account Codes and you want to see what Jeff did as a whole, both while logged on and not logged on to the ACD, you run the Employee Accounting by Interval report.

### **Employee and Employee Group Accounting by Account Code**

The Employee and Employee Group Accounting by Account Code report shows the Business Reporter data distributed across the Account Codes of a single employee/each employee in the group for the shift duration and days you specify. It reports the call statistics in hours, minutes, and seconds, and provides call counts. For example, if Jeff has two Account Codes and you want to run a report that shows information for each Account Code, you run the Employee Accounting by Account Code report.

### **Account Code and Account Code Group Accounting by Interval**

The Account Code Accounting by Interval report shows the call activity and call performance by Account Code for the intervals (15-, 30-, 60-minute, day of week, day of month, or monthly) you specify. It provides call counts, and report statistics in hours, minutes, and seconds. For example, if Jeff has two Account Codes and you want to run a report with information on only one Account Code, you run the Account Code Accounting by Interval report.

## **DETERMINING YOUR SUBSCRIBER SERVICES CONFIGURATION NEEDS**

*Subscribers* are clients or customers outside your organization to whom you provide a communication product or service. Each Subscriber Services configuration scenario provides

- Examples of companies suited to the configuration scenario
- Instructions on configuring Subscriber Services
- A list of pertinent reports

### **Bill back departments**

You can use Subscriber Services to bill back departments for their phone use and equipment rental each month. See "Billing back departments scenario" on page 25.

### **Bill back college students by dorm room**

You can use Subscriber Services to bill back students for phone use wherever it might occur across campus, and equipment rental each month. See "Billing back college students by dorm room scenario" on page 26.

### **Bill back clients on a case-by-case basis**

You can use Subscriber Services to bill customers for phone use on a case-by-case basis and show the customer the call details for each case. See "Billing back clients on a case-by-case basis scenario" on page 27.

## **BILLING BACK DEPARTMENTS SCENARIO**

In the billing back departments scenario, you cost calls by associating a particular subscriber plan with a billing option and subscribers/employees. The billing option enables you to add a monthly equipment rental charge. You associate each subscriber/employee with an extension. The subscribers/employees and the associated extensions enable you to track who made each call. You group subscribers/employees by department to enable you to track total call use and cost by department. You group employee groups by enterprise to enable you to track total call use and cost by enterprise.

The billing back departments scenario is suited to cities, university faculties, corporations, retirement/nursing facilities, and tenants (rooming houses).

You configure subscriber plans using YourSite Explorer. You associate subscribers/employees with a subscriber plan. You group them by department so that a subscriber group or employee group includes all call activity and costs for the department. You can also group all employee groups (departments) together to form a division. Call activity and cost for the entire enterprise is displayed in the division report.

### ***Reports to run***

You can generate reports that show call cost and call activity by subscriber, employee, subscriber group, employee group, or division by employee group. You generate subscriber reports if you associate subscribers to the subscriber plan. You generate employee reports if you associate employees to the subscriber plan.

### **Employee and Employee Group Billing Trace**

(Previously, the Employee Billing Trace was the Subscriber Employee Inbound/Outbound Accounting Trace Report and the Employee Group Billing Trace report was the Subscriber Accounting Top 100 Called Destinations for Employee by Cost/Count/Duration report.) This report shows subscriber calls sent to and received by the extension. It lists the call type and cost.

### **Employee and Employee Group Billing Summary**

(Previously, the Employee and Employee Group Billing Summary report was the Subscriber Employee Billing and Accounting Summary (All Calls) report or the Subscriber Employee Billing and Accounting Summary (Costed Calls Only) report (with the call cost filter set to >0).) This report provides a list of the employee calls, when the calls were made, and the associated cost, if any, of each call.

### **Employee Billing Usage and Service Charges**

(Previously, the Employee Billing Usage and Service Charges report was the Subscriber Employee Billing Usage and Service Charge Summary report.) This report provides the duration and cost of each call the employee made and lists any optional billing charges that have been applied to the subscriber plan. The report shows a subtotal of the phone use costs, a subtotal of the billing options, and a total of the two.

### **Subscriber and Subscriber Group Accounting Summary**

These reports provides a list of subscriber/subscriber group calls, when the calls were made, and the associated cost, if any, of each call.

### **Subscriber and Subscriber Group Billing Trace**

This report shows subscriber calls sent to and received by the extension. It lists the call type and cost.

### **Subscriber Billing Usage and Service Charges**

This report provides the duration and cost of each call the subscriber made and lists any optional billing charges that have been applied to the subscriber plan. The report shows a subtotal of the phone use costs, a subtotal of the billing options, and a total of the two.

### **Division Billing by Employee Group Summary**

(Previously, the Division Billing by Employee Group Summary report was the Subscriber Division Accounting by Employee Group report.) This report provides the subscriber's call counts and call costs for each employee within the employee groups that make up each division.

## **BILLING BACK COLLEGE STUDENTS BY DORM ROOM SCENARIO**

In the billing back college students by dorm room scenario, you cost calls by associating a particular subscriber plan with a billing option and subscribers/employees. The billing option enables you to add a monthly equipment rental charge. You associate each subscriber/employee with an Account Code. The Account Code enables you to accurately attribute calls to callers, wherever they occur across campus.

The Billing back college students by dorm room scenario is suited to a mobile workforce, and calls made by clients, and at universities/colleges.

You configure subscriber plans using YourSite Explorer. You associate subscribers/employees with the subscriber plan. You associate each student (subscriber/employee) with a unique Account Code Personal Identification Numbers (PINs) for accessing an outside line. The Account Code PIN is configured as a forced verified Account Code on the telephone system.

### ***Reports to run***

You can generate reports that show call cost and call activity by subscriber, employee, subscriber group, or employee group. You generate subscriber reports if you associate subscribers to the subscriber plan. You generate employee reports if you associate employees to the subscriber plan.



### **Employee and Employee Group Billing Trace**

(Previously, the Employee Billing Trace was the Subscriber Employee Inbound/Outbound Accounting Trace Report and the Employee Group Billing Trace report was the Subscriber Accounting Top 100 Called Destinations for Employee by Cost/Count/Duration report.) This report shows employee calls sent to and received by the extension. It lists the call type and cost.

### **Employee and Employee Group Billing Summary**

(Previously, the Employee and Employee Group Billing Summary report was the Subscriber Employee Billing and Accounting Summary (All Calls) report or the Subscriber Employee Billing and Accounting Summary (Costed Calls Only) report (with the call cost filter set to >0).) This report provides a list of the employee calls, when the calls were made, and the associated cost, if any, of each call.

### **Employee Billing Usage and Service Charges**

(Previously, the Employee Billing Usage and Service Charges report was the Subscriber Employee Billing Usage and Service Charge Summary report.) This report provides the duration and cost of each call the employee made and lists any optional billing charges that have been applied to the subscriber plan. The report shows a subtotal of the phone use costs, a subtotal of the billing options, and a total of the two.

### **Subscriber and Subscriber Group Billing Trace**

This report shows subscriber calls sent to and received by the extension. It lists the call type and cost.

### **Subscriber Billing Usage and Service Charges**

This report provides the duration and cost of each call the subscriber made and lists any optional billing charges that have been applied to the subscriber plan. The report shows a subtotal of the phone use costs, a subtotal of the billing options, and a total of the two.

## **BILLING BACK CLIENTS ON A CASE-BY-CASE BASIS SCENARIO**

When billing back clients (subscribers) on a case-by-case basis, you associate each subscriber with an Account Code. A new Account Code is applied to each bill. Because a client's call could be answered by one of several extensions in your company, you associate an Account Code with each call rather than an extension.

The billing back departments scenario suits law offices.

You configure subscriber plans using YourSite Explorer. You associate subscribers with a particular plan. You associate each subscriber with an Account Code for each case. For your own financial records, you might want to generate Subscriber Billing by Account Code reports to determine the cost per subscriber.

### *Reports to run*

You can generate reports that show call cost and call activity by Account Code.

#### **Subscriber and Subscriber Group Billing by Account Code**

This report provides all Account Codes used by the subscriber, call types, and the call cost. This report is useful when a subscriber has been assigned more than one Account Code.

#### **Subscriber and Subscriber Group Billing Summary**

This report provides one row for each call type and shows the number of incoming and outgoing call count per call type.

#### **Subscriber Billing Usage and Service Charges**

This report provides the duration and cost of each call the subscriber made and lists any optional billing charges that have been applied to the subscriber plan. The report shows a subtotal of the phone use costs, a subtotal of the billing options, and a total of the two.

#### **Subscriber and Subscriber Group Billing Trace**

These reports provide a list of all of the subscriber/subscriber group calls that incurred a cost, when the calls were made, and the associated cost of each call.

# Chapter 4

## GETTING STARTED WITH BUSINESS REPORTER

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*Registering Business Reporter*

*Setting up Business Reporter on the Enterprise Server*

*Setting up Business Reporter on client computers*

*Using Client Role Selector*

*Setting up user preferences*

*Setting up reports distribution*

*Providing Mitel Border Gateway functionality to remote employees*

## GETTING STARTED

After you install Business Reporter on the Enterprise Server, you must set up the Enterprise Server and client computers to use Business Reporter. This section provides basic information on post-installation procedures. For detailed information on installation and post-installation procedures, see the *Business Reporter Installation Guide*.

## REGISTERING BUSINESS REPORTER

### NOTE:

- If you have not registered your Business Reporter software, seven days after you install it you will no longer be able to log on to Business Reporter and will be required to contact Mitel to register the software. After you register your software, Mitel emails permanent license files to you. You implement these license files on the Enterprise Server to activate your software.
- Registration information is processed during regular business hours only (Monday to Friday from 8:30 A.M. to 6:00 P.M. ET).

When you initially register your software with Mitel, for 90 days you receive

- The latest Business Reporter software updates.
- Free technical support.

**NOTE:** When you purchase base products, 90 days of Software Assurance is included with the option of purchasing more. See the *Contact Center Solutions and Business Reporter System Engineering Guide* for more detailed Software Assurance information.

To register with Mitel

- Call Mitel at 1-800-722-1301 (North American customers) or your approved Mitel vendor (for customers residing in Latin America, Europe, the Middle East, Africa, and Asia Pacific). The turnaround is immediate. (Recommended)
- Visit Mitel Online, click **Products=>Applications=>Mitel MiContact Center**. Under **Related Links**, click **MiContact Center Partner Portal**. Then click **Online tools=>Software Registration** and fill out the registration form. Click **Submit**.

## ACTIVATING BUSINESS REPORTER

If you did not activate Business Reporter during installation, you can activate it now. If you have access to the Internet, you can rerun the Installation Wizard at any time to register Business Reporter online. If you do not have access to the Internet or if you cannot access our license server, you can register offline.

To activate the Business Reporter software online

1. On the Enterprise Server, navigate to the **Mitel** program folder and open **Mitel Contact Center Management Licensing**.
2. Click **Register Online**.  
The Online Registration window opens.
3. Type your 26-digit site serial number and click **Register**.

To activate the Business Reporter software offline

1. On the Enterprise Server, navigate to the **Mitel** program folder and open **Mitel Contact Center Management Licensing**.
2. Click **Register Offline**.  
The Offline Registration window opens.
3. Click the **here** link in the first step to open the directory that contains the license package.
4. Email the license package to miccsupport@mitel.com.  
Mitel will sign the license files and send them back to you.
5. After you receive the signed license files, save them to a directory.  
**NOTE:** We recommend you place the license files in the original directory.
6. Repeat steps 1-2 to open the Offline registration window.
7. Type your 26-digit site serial number.
8. Click **Browse** and specify the directory that contains your .dlsc license file.
9. Click **Apply License**.  
The license registration is complete.

### *Updating license files on the Enterprise Server*

You must update the license files on your Enterprise Server with the new license files Mitel sends you.

To implement new license files

1. On the Enterprise Server, start Windows Explorer.
2. Save the new license files in the following directory, **<drive>:\Program Files (x86) \prairieFyre Software Inc\CCM**.
3. Click **Yes** to overwrite the existing files.

## SETTING UP BUSINESS REPORTER ON THE ENTERPRISE SERVER

After you install the server software, that server becomes the Enterprise Server. You need to set up the server and client computers to use Business Reporter. To view detailed installation procedures, click Help=>Documentation and click the *Business Reporter Installation Guide* to open it.

## SETTING UP BUSINESS REPORTER ON CLIENT COMPUTERS

### **NOTE:**

- The date format for Business Reporter is tied to server settings. For example, if you configure the server to display the date as mm/dd/yyyy, when you browse to the Contact Center Management Web UI, the Business Reporter applications display the date as mm/dd/yyyy.
- The system administrator must provide all Business Reporter users with a user name and password.

To set up a client computer to use Business Reporter

1. Install Client Component Pack.
2. Use Client Role Selector to select your Contact Center Client role.

## INSTALLING THE LATEST VERSION OF CLIENT COMPONENT PACK

### NOTE:

- Microsoft .NET Framework 4.5 must be installed on your system before you install the Client Component Pack. If .NET Framework 4.5 is not installed on client machines and you are connected to the Internet, the installer will install .NET Framework 4.5. If you are not connected to the internet, you must install .NET Framework 4.5 on client machines manually. Note that Windows 8 includes .NET Framework 4.5
- The Microsoft Report Viewer 2010 Redistributable Package must be installed on all clients before you install the Client Component Pack. If Microsoft Report Viewer 2010 Redistributable Package is not installed on client machines and you are connected to the internet, the installer will install Microsoft Report Viewer 2010 Redistributable Package during the installation. If you are not connected to the internet, it must be installed manually. It can be downloaded from <http://www.microsoft.com/en-us/download/details.aspx?id=6442>.
- If you use Contact Center PhoneSet Manager or Contact Center Softphone, you must install Visual C++ Redist 2010 RTM on client machines. If connected to the internet, this will be installed automatically during the installation. You can download this application from Microsoft: <http://www.microsoft.com/en-ca/download/default.aspx>.

You can install Client Component Pack on individual client computers or servers running Citrix Terminal Services.

**NOTE:** If the client is on an external network, you can either:

- VPN to the internal network and install the Contact Center Client, or
- Copy the Contact Center Client from the server to the client using a CD or USB key
- Use an administrative procedure to silently install Client Component Pack on remote desktops  
See "Installing Client Component Pack using an administrative procedure" on page 33.

To install Client Component Pack on the client computer

1. On the client computer, start Internet Explorer and type **[http://\[your Enterprise Server IP address\]/CCMWeb](http://[your Enterprise Server IP address]/CCMWeb)**.
2. If prompted, type your user name and password and click **Submit**.
3. Click **Help=>Software downloads/Installations**.
4. Click **Client Component Pack**.  
The File Download - Security Warning window opens.
5. Click **Run**.
6. Click **Continue**.  
The Mitel Contact Center Solutions Client Component Pack Self Extractor window opens.
7. Click **Accept** to install Microsoft Visual Studio 2010 Report Viewer.

8. Click **Install** to install Microsoft WSE 3.0 Runtime, CheckForEnterpriseServerInstall, prairieFyre-Enable .Net, and prairieFyre - Client System Requirements Check. The Mitel Contact Center Solutions Client Component Pack - InstallShield Wizard opens.
9. Click **Next**.
10. After **Enterprise IP Address**, type the IP address of the Enterprise Server. Optionally, click **Test** to test the client computer connection to the Enterprise Server.
11. If your Enterprise uses SSL, select the **SSL** check box.
12. Click **Install**.  
The program features you selected are installed.
13. Click **Finish**.  
The Select role window opens. See "Using Client Role Selector" on page 35

## INSTALLING CLIENT COMPONENT PACK USING AN ADMINISTRATIVE PROCEDURE

You can install the Client Component Pack silently on remote desktops using an MSI (Microsoft Installer) administrative installation procedure. A silently installed program is a program that can be installed with no user interaction.

To install client software silently on remote desktops

1. Install the prerequisite software.
2. Locate the client\_setup\_x86\_x64.exe and extract Client Component Pack.msi.
3. Perform the .msi procedure for the administrative installation.
4. Run the silent installations.

### *Installing the prerequisite software*

Before you install client software, you must install the prerequisite software. If client computers are connected to the Internet or run Windows 8, skip step 1.

To install the prerequisite software

1. If the client computer runs Windows 7 and is not connected to the Internet, install .NET Framework 4.5 on the machine.
2. On the Enterprise Server, start Internet Explorer and type the URL **http://[the Enterprise Server IP address]/CCMWeb/**.
3. Log in to CCMWeb and click **Help**.
4. Click on the **Software downloads/Installations tab**.
5. Click **Software Downloads**.
6. Download and run **Client Component Pack**.

### *Locating the client\_setup\_x86\_x63.exe and extracting Client Component Pack.msi*

To locate the client\_setup\_x86\_x64.exe and extract Client Component Pack.msi

1. Go to the src folder located in your Contact Center Solutions Installation folder.  
**NOTE:** The default location of this folder is C:\CCM\src.
2. Open **client\_setup\_x86\_x64.exe**.
3. Open the folder that was modified the same day you extracted client\_setup.exe. The folder naming format will be xxx\_xxxx.  
**Client Component Pack.msi** will be in that folder.

### *Performing the MSI procedure for the administrative installation*

**NOTE:** For a list of programs that must be installed on each computer before you install Client Component Pack, see "Installing the prerequisite software" on page 33.

You must create a command for the administrative installation that is similar to the following example: `msiexec /a "\\Mitel Installations\Setup\Client Component Pack.msi" SSLSTATUS=0 ENTERPRISEIPADDRESS=10.1.4.12`

To perform the MSI procedure for the silent installation

1. Open the command prompt window.
2. Open the folder where the msi file is located.
3. Type **MsiExec.exe /a**.
4. Press the spacebar.
5. Drag the msi file from the folder where it is located to the command prompt window.
6. Press the spacebar.
7. Type **SSLSTATUS=**.
8. If the Enterprise Server uses a secure socket layer, type **1**. If it does not, type **0**.
9. Press the spacebar.
10. Type **ENTERPRISEIPADDRESS=**.
11. Type the Enterprise Server IP address or DNS name.
12. Press **Enter**.  
The InstallShield Wizard opens.
13. Follow the instructions of the Wizard.
14. Ensure the file is saved to a network drive.

### *Running the silent installation*

**NOTE:** Subsequent updates are done via the prairieFyre Updater Service.

To silently install Client Component Pack

1. In Windows, open the **Run** command.
2. Type "**\\<path to administrative installation package>\Client Component Pack.msi**"  
**/qb**  
Contact Center Client and the prairieFyre Updater Service are installed.



## USING CLIENT ROLE SELECTOR

The Business Reporter client installation includes Client Role Selector. It is a wizard that helps you select a role that pertains to the Contact Center Client applications the employee requires. For Business Reporter, you must have access to the real-time Extension by Position monitor, management functions, and YourSite Explorer. In order to access Management Console, you must select Administrator or Power user as your role.

- The *Administrator role* is for employees who manage the Enterprise Server.
- The *Power user role* is for employees perform the functions of a supervisor, employee, and/or administrator. To customize the client role, select Power user then select the components and applications the user needs.

You can re-run Client Role Selector on a client computer at any time to change the components and applications installed on the computer.

**NOTE:** If you want to customize the client installation, select Power User. For example, if a supervisor also performs administrative functions, select the Power User role and choose the components and applications the supervisor will need.

Table 1 lists the components and applications available for the client role installations. The list includes only the applications for which you are licensed.

**Table 1: Client role installation**

COMPONENTS/APPLICATIONS	SUPERVISOR	ADMINISTRATOR	POWER USER
Ignite	x		x
Contact Center Client		Optional	x
Flexible Reporting	x		x
Contact Center Softphone	x		x
Mitel Border Gateway Connector	x		x
Workforce Scheduling	x		x
YourSite Explorer		x	x
Salesforce.com Connector	x	x	x
Employee Portal*	x	x	x

**NOTE:** Flexible Reporting, Contact Center Softphone, Mitel Border Gateway Connector, Salesforce.com Connector, Workforce Scheduling, Employee Portal, and Multimedia Contact Center are optional applications to Contact Center Solutions that you purchase separately.

## RUNNING CLIENT ROLE SELECTOR

To run Client Role Selector:

1. If you are installing software on the client computer for the first time, go to step 2. Otherwise, click **Start=>Programs=>Mitel=>Client Role Selector**.
2. Click a client role.
3. Click **Next**.
4. Select the check boxes of the features to be installed.
  - Real-time monitors
  - Contact Center Softphone
  - Mitel Border Gateway Connector
  - Management Console
  - YourSite Explorer
  - Salesforce Integration
5. Click **Finish**.  
After the wizard installs the features you selected, the Contact Center Client log on window opens.
6. Close the Contact Center Client log on window.

## SETTING UP USER PREFERENCES

You can change your preferences at any time. They are found in CCMWeb (formerly known as the Contact Center Management website) under My options. From this menu, you can:

- Specify your language preference
- Change your password
- View your security role properties
- Configure email contacts

## SPECIFYING YOUR LANGUAGE PREFERENCE

**NOTE:** Business Reporter applications, such as YourSite Explorer and Contact Center Client, all leverage the language settings of the operating system in addition to the language preference set for Business Reporter. Ensure that if you adjust the language settings of Business Reporter, you also adjust the language settings of your operating system to match.

To specify your language preference

1. In CCMWeb, under **My options** tab, click **My preferences**.
2. After **Display this language**, select a language.
3. Click **Save**.

## CHANGING YOUR PASSWORD

To change the password for your login

1. In CCMWeb, **My options** tab, click **My password**.
2. After **Old password**, type your old password.
3. After **New password**, type your new password.
4. After **Confirm new password**, type your new password.
5. Click **Save**.

## VIEWING SECURITY ROLE PROPERTIES

You can view your security role to see which applications and devices you can access. Only employees who can access YourSite=>Configuration can change the security role properties of employees. See "Security roles" on page 148.

To view the security role associated with your login ID

- Click **My options=>My security role**.

## CONFIGURING EMAIL CONTACTS

You can create a list of email contacts and email contact groups to whom you email reports. Contact groups can contain both user-configured contacts from CCMWeb as well as all existing employees from YourSite Explorer.

**NOTE:** You must configure SMTP settings in YourSite Explorer before you can configure email contacts. See "Configuring SMTP connections to Business Reporter" on page 38.

To create a contact group

1. Add email contacts
2. Add contact groups
3. Add email contacts to the groups

### *Adding email contacts*

To add an email contact

1. In the **My options** tab menu, click **My contacts=>My email contacts**.  
Alternatively, click **My options**. In the **My contact** tab, click **My email contacts**.
2. Click **Add**.
3. After **First name**, type the first name of your contact.
4. After **Last name**, type the last name of your contact.
5. After **Email address**, type the email address of your contact.
6. To save this contact, click **Save**.
7. To save this contact and add another contact, click **Save & Add**.

## *Adding contact groups*

To add a contact group

1. In the **My options** tab menu, click **My contact=>My email contact groups**.  
Alternatively, click **My options**. In the **My contact** tab, click **My email contact groups**.
2. Click **Add**.
3. After **Name**, type the name of the contact group.
4. After **Description**, type the description of the contact group.
5. To share this contact group with other CCMWeb users, select **Shared Contact Group**.  
A shared contact group can be viewed, used, and edited by other users.
6. To save this contact group, click **Save**.
7. To save this contact group and add another contact group, click **Save & Add**.

## *Adding email contacts to contact groups*

To add an email contact to a contact group

1. In the **My options** tab menu, click **My contacts=>My email contact groups**.  
Alternatively, click **My options**. In the **My contact** tab, click **My email contact groups**.
2. Click **Members** for the contact group with which you want to associate agents.
3. If you want to add members from your contacts configured in CCMWeb, click **Contacts**.  
If you want to add members from the employees configured in YourSite Explorer, click **Employees**.  
Both contacts and employees can be added to the same contact group.
4. Under **Available contacts**, select the check boxes of the members you want to add to the group and click **Add >>**.

## SETTING UP REPORTS DISTRIBUTION

Before you can generate reports, you must

1. Configure SMTP connections to Business Reporter.
2. Configure user printer settings

## CONFIGURING SMTP CONNECTIONS TO BUSINESS REPORTER

The following configurations take place in **YourSite=>Mail servers=>Outgoing**.

Configuring an SMTP connection enables Business Reporter to send outgoing mail through a contact center's email server. The following explains how to configure an SMTP connection between Business Reporter and email servers.

**NOTE:** The following procedures require information on your business' email server. Consult the appropriate server documentation to retrieve this information.

Configuring an SMTP connection requires you to

- Add the mail server to YourSite Explorer
- Specify the server information for outgoing emails
- Specify the email account's 'From' name and address
- Optionally, request logon credentials to send outgoing mail
- Test the servers' SMTP socket connection to Business Reporter

**NOTE:** To test the connection, you must have an email address configured for yourself in the Employees page. This email address receives notification of whether the test was successful.

To add a mail server to YourSite Explorer

- Click **YourSite=>Mail servers=>Add**.

To specify the server information for outgoing emails

1. After **SMTP Server**, type the server's IP address or name.
2. Select the **Use SSL** check box if the server uses Secure Sockets Layer.
3. After **SMTP Port**, type the server's SMTP port number.  
**NOTE:** Google Apps for Business' port 465 is not supported.
4. After **Connection Timeout**, type how many seconds the system has to connect to the server before timing out.

To specify the email account's 'From' name and address

1. After **From Name**, type the name that appears on outgoing mail.  
For example, 'XYZ Company Sales'.
2. After **From Email Address**, type the email address that appears on outgoing mail.  
For example, 'xyzsales@email.com'.

To request logon credentials to send outgoing mail

1. Select the **SMTP Authentication Required** check box.
2. Enter the **Username**, **Password**, and **Domain** information for the server's email account.
3. Click **Save**.

To test the server's SMTP socket connection to Business Reporter

- Click **Test Outgoing Mail**. If an error message is received, verify that the Outgoing Server, User, and Logon information is entered accurately. To troubleshoot, the default installation location for verbose logs is C:\Users\<current user>\Documents\CCMLogs\YourSiteExplorer.txt.

## PROVIDING MITEL BORDER GATEWAY FUNCTIONALITY TO REMOTE EMPLOYEES

The Mitel Border Gateway Connector replaces what was formerly called Teleworker support for Contact Center Solutions and Business Reporter software. Using Mitel Border Gateway Version 7.1 or greater, remote employees can connect to the Enterprise Server using a VPN-like connection, and use all Contact Center Solutions and Business Reporter applications as if they were in the office.

With the Mitel Border Gateway Connector, customers can now optionally configure connections to multiple instances of the Mitel Border Gateway. When employees connect to the system using the Mitel Border Gateway Connector, they can specify which Mitel Border Gateway they will connect to. After remote employees attempt to connect to the system for the first time, a Mitel Border Gateway system administrator must approve the Mitel Border Gateway certificate from the Mitel Border Gateway web application. Once approved, remote users are connected and have access to all of the Contact Center Solutions and Business Reporter applications for which they are licensed and have the required security permissions. While active, the Mitel Border Gateway Connector is visible in the Windows system tray and displays the name of the active connection. Only one connection can be made at a time. The name of the Mitel Border Gateway connection will become the address in all application login windows and users sign in with their normal username and password.

The Mitel Border Gateway Connector offers the same trusted characteristics as with a standard Mitel Border Gateway deployment: local streaming, secure RTP, jitter buffering and packet handling QoS, and G.729 and G.711 encoding. For more information on how to configure Contact Center and Business Reporter software to support Mitel Border Gateway, see the *Business Reporter Installation Guide*.

**NOTE:**

- The Mitel Border Gateway Connector supports Mitel Border Gateway V7.1 and V8.
- The following corporate firewall ports must be open in order to take advantage of the full features and functionality provided by the Mitel Border Gateway Connector: 80, 443, 1433, 5024, 5025, 5026, 5030, 7001, 7003, 8083, 8084, 36000-36004, 35001-35007, and 42440.
- You must disable IIS and SQL Server Reporting Service services as they consume port 80, which is required for the Mitel Border Gateway Connector. Any other applications or services that consume port 80 or 443 should also be disabled or shut down.
- You cannot use the Windows Authentication sign-in model for Contact Center Solutions and Business Reporter
- Ensure the Start button is enabled at all times on the Mitel Border Gateway web application user interface or the Mitel Border Gateway Connector will fail.
- You must be logged in as an administrator on a client computer in order to configure a connection to a Mitel Border Gateway. Once the connection has been made, any user on the computer can connect using the Mitel Border Gateway Connector.

## SETTING UP PHONES FOR REMOTE AGENTS AND EMPLOYEES

If you are working at the office and select Remember my credentials when you log on to Contact Center Client, and then subsequently attempt to log on at home, your log on will fail. Contact Center Client does not recognize your office IP address when you log on remotely.

**NOTE:** Before you set up the soft phone on your client computer, ensure your network administrator has configured your soft phone as a 5020 IP phone on the telephone system.

To set up Contact Center Softphone and Contact Center PhoneSet Manager to support the Mitel Border Gateway Connector, you must

1. Register your phones for use with Mitel Border Gateway V7.1 or V8.
2. Approve the Mitel Border Gateway V7.1 or V8 certificate.
3. Log in to client computers using an administrative account and set up the connection to the Mitel Border Gateway from the Mitel Border Gateway Connector.

## REGISTERING PHONES FOR USE WITH MITEL BORDER GATEWAY

The system administrator must register your phone before you can use the Mitel Border Gateway Connector. Contact Center PhoneSet Manager treats new extensions like new phones; each time you enter a new extension you must use the dial pad to type the password (provided by your system administrator) to register the phone.

To register your phone with Mitel Border Gateway

1. Ensure you have completed the steps listed under "Configuring Mitel Border Gateway on the Mitel Application Server" in the *Business Reporter Installation Guide* and that you have added an ICP to the Mitel Border Gateway.
2. Click **Services=>MiNet Devices**.
3. Click **Add a MiNet device**.
4. For Contact Center Softphone phones, after **Device ID**, type **a1:21:00:00:xx:xx**, where xx:xx is the extension.
5. For Contact Center PhoneSet Manager phones, after **Device ID**, type the MAC address located under the agent's Mitel phone.
6. If required, specify other optional settings.
7. Click **Save**.

## RUNNING THE MITEL BORDER GATEWAY CONNECTOR

In order to use Contact Center Solutions and Business Reporter applications with Mitel Border Gateway, you must run the Mitel Border Gateway Connector and configure the connection to the Mitel Border Gateway.

**NOTE:** A user with administrative credentials must be logged in to client computers when configuring connections to the Mitel Border Gateway for the first time. After this is complete, any user can sign in to the computer, run the Mitel Border Gateway Connector, and connect to a Mitel Border Gateway.

To install and configure the Mitel Border Gateway Connector

1. If this is not the first time you have run the Mitel Border Gateway Connector, skip to step 9. Otherwise, consult your network administrator to confirm your soft phone extension number.
2. Ensure your headphone is connected.
3. Run Client Component Pack.  
See the *Business Reporter Installation Guide*.
4. If you are installing software on the client computer for the first time, go to step 5. Otherwise, open the **Client Role Selector**.

5. Click a client role.
  - Supervisor—The Supervisor role is for supervisors and managers who monitor devices, such as agents and queues, and schedule agents.
  - Agent—The Agent role is for agents who monitor themselves and/or other agents and queues.
  - Power user—The Power user role is for employees who may perform the functions of a supervisor, agent, and administrator.
6. Click **Next**.
7. Select **Mitel Border Gateway Connector** and all other options you need, such as Contact Center Softphone.
8. Click **Finish**.
9. In Windows, open the **Mitel Border Gateway Connector**.  
Ensure you are logged in to the computer with administrative credentials.
10. Click **New**.
11. After **Name**, type a name for the connection to the Mitel Border Gateway.
12. After **IP address**, type the IP address of the Mitel Border Gateway.
13. After **MAC address**
  - If you have a desk phone, type the MAC address located on the sticker under your desk phone.
  - If you have a soft phone, click **Extension**, type your soft phone extension number, and click **OK**.
14. Click **OK**.  
The connection to the Mitel Border Gateway you just created will display in the Mitel Border Gateway Connector list.

To run the Mitel Border Gateway Connector

1. Start the **Mitel Border Gateway Connector**.
2. Select a connection to a Mitel Border Gateway from the list.
3. Optionally, enable the **Connect automatically** checkbox.  
Enabling this checkbox will automatically connect you to the configured Mitel Border Gateway when you launch the Mitel Border Gateway Connector.
4. Click **Connect**.  
A message displays stating 'Waiting for certificate approval'. If the request is rejected, contact your system administrator to approve the certificate.  
  
Once your certificate has been approved, you can begin using all Contact Center Solutions and Business Reporter applications remotely as if you were in the office. Any user configured with administrative credentials on the computer can change the Mitel Border Gateway connection settings and delete connections from the Mitel Border Gateway Connector at any time.



## APPROVING THE MITEL BORDER GATEWAY CERTIFICATE

The Mitel Border Gateway system administrator must approve the Mitel Border Gateway V7.1 or V8 certificate before agents and employees can use the Mitel Border Gateway Connector.

To approve the Mitel Border Gateway certificate

1. Log on to the Mitel Border Gateway server.
2. In the left pane under **Security**, select **Certificate Management**.  
The Manage Certificates window opens.
3. Under **Queued CSRs**, select the certificate that needs approval.
4. Select **Approve** or **Revoke**.

# Chapter 5

## BUSINESS REPORTER SERVICES AND DATABASE ADMINISTRATION

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*Backing up data*

*Management Console*

## SERVICES AND DATABASE ADMINISTRATION

This chapter includes a description of how to back up data and of the functions available in Management Console (updating server IP addresses, running the maintenance routine immediately, summarizing data, creating a support package, controlling services, and converting Toolbox and Contact Center Solutions data files to Mitel data files).

### BACKING UP DATA

We recommend backing up Enterprise Server data on a regular basis as a preventive measure in case of events that could cause loss of data and necessitate system restoration. The frequency of backups depends on how important the data is to your business. If losing one week of data is acceptable, then backing up once a week is sufficient. If losing more than one day of data is unacceptable, then a daily backup strategy should be implemented.

**NOTE:** We strongly recommend storing backup files in a location outside of the Enterprise Server in order to maintain essential data in the case of a hardware failure or catastrophic event. We recommend you back up the SQL server data files, YourSite Database configuration data files, and raw telephone system data files to an off-board media type (DVD, CD, tape, alternate network drive).

The data files contained in the following default folders should be backed up using your corporate backup solution. Suggested backup tools include Symantec Backup Exec and Microsoft System Center Data Protection Manager:

- **<drive>:\Program Files (x86)\prairieFyre Software Inc\CCM\BackupFiles** - This folder contains the nightly .xml backups of configuration data and IVR Routing and Multimedia Contact Center workflows and prompts that are created during nightly maintenance.
- **<drive>:\Program Files (x86)\prairieFyre Software Inc\CCM\DataDirectory** - This folder stores all raw telephone system data from the media servers. Using this data you can re-summarize your raw data to enable reporting. This folder also contains the Multimedia repository for all media, excluding voice.

In the event of server failure, you can restore your company history and configuration with

- A backup copy of .xml files.
- A backup copy of the SQL server data files.
- A backup copy of the Enterprise Server configuration data.
- The raw telephone system data files stored on the local hard drive.

### BACKING UP .XML FILES

The maintenance routine automatically backs up an .xml file of the YourSite database every night. This backup file is stored in the directory: <drive>:\Program Files (x86)\prairieFyre Software Inc\CCM\Backup Files. The maintenance routine keeps an .xml file for each of the last 30 days maintenance ran.

To back up or restore the .xml files

1. Start **Contact Center Client**.
2. Click **Tools=>Management=>Configuration**.
3. Click **Back up/Restore configuration data**.
4. Follow the steps in the Backup and Restore Wizard to back up or restore the database.

## BACKING UP SQL SERVER DATA FILES

You back up SQL Server data files to ensure you can replace corrupted or lost data in the event of media problems, user errors, hardware failures, and natural disasters. Please review the Microsoft procedure for creating a recovery model that controls the backup and restoration operations for a database.

### *Understanding SQL Server recovery models*

The following section details SQL Server recovery models and how they relate to backups and disk space usage. There are three recovery models available for use with SQL Server:

1. Simple
2. Full
3. Bulk logged

For detailed information on backing up SQL Server through SQL Server Management Studio, see <http://msdn.microsoft.com/en-us/library/ms187510.aspx>.

For a complete overview of SQL Server recovery models, see [http://msdn.microsoft.com/en-us/library/ms175987\(SQL.90\).aspx](http://msdn.microsoft.com/en-us/library/ms175987(SQL.90).aspx)

By default, SQL Server Express uses the Simple recovery model. Retail versions of SQL Server use the Full recovery model. There are two things you must consider when deciding which recovery model to use:

1. The importance of the data being stored in the SQL Server database.
2. The amount of disk space used by the transaction log file.

The only way to recover a SQL Server database is to restore it from a SQL Server backup. The type of recovery model you use impacts the ability to restore the database.

The Simple recovery model is recommended for customers who do not have an IT department upon which to rely for regular backups and who believe the summarization process is sufficient to re-generate historical data. There are several things that should be considered when using the Simple recovery model:

- The log file does not continually grow and is truncated each time a successful transaction is completed.
- When the log file is 80% full, the log will automatically clear out old transactions and rewrite the log file with the newer transactions.
- Point-in-time recovery is not supported with this model and the database can be restored only from the last full or differential backup.
- This model is ideal when the data in the database is not considered mission critical, is being backed up periodically, or can be restored from another means, such as summarization.

The Full recovery model is recommended for customers who have an IT department that can manage scheduled backups. There are several things that should be considered when using the Full recovery model:

- The log file will grow until a transaction log backup is successfully completed against the SQL Server database. Transaction logs can be applied to full database backups to ensure point-in-time recovery, up to the time when the last transaction log backup was taken.
- Point-in-time recovery is supported with this model
- This model requires a regular backup schedule and sufficient disk space to house the log file as it grows between backups.

Frequency and scope of configuration changes may be a suitable indicator in determining which recovery model to use. If configuration changes are infrequent and point-in-time recovery is not critical, the Simple recovery model may be sufficient. However, when using the Simple recovery model, we highly recommend that SQL Server backups are performed after any significant configuration changes have been made to the database.

Regardless of the recovery model used, it is strongly recommended that the data files collected by the Business Reporter applications are backed up on a regular basis, as these files are used in the summarization process to re-generate historical data.

## BACKING UP ENTERPRISE SERVER CONFIGURATION DATA

**CAUTION:** Restoring the YourSite database deletes all of the current database table entries and replaces them with the entries defined at the time of your last database backup. Any changes made to the database in the interim are lost.

Backing up and restoring Enterprise Server configuration data protects your data in case you program the database incorrectly, or a careless user reconfigures it. Mitel recommends you perform this backup weekly, in addition to regular database maintenance. If required, you can later recover the YourSite database data exclusively, rather than restoring the entire SQL database.

**NOTE:** As a security measure, if backed up data is restored on an Enterprise Server with a different IP address than the Enterprise Server it was backed up on, all mail server incoming and outgoing usernames and passwords will be blank in YourSite Explorer. Administrators must manually re-enter mail server incoming and outgoing usernames and passwords.

To back up or restore the YourSite database

1. Start **Contact Center Client**.
2. Click **Tools=>Management=>Configuration**.
3. Click **Back up/Restore configuration data**.
4. Follow the steps in the Backup and Restore Wizard to back up or restore the database.

For any additional information contact Mitel technical support at 1-800-722-1301 (North American customers) or your approved Mitel vendor (for customers residing in Latin America, Europe, the Middle East, Africa, and Asia Pacific).

## BACKING UP RAW TELEPHONE SYSTEM DATA FILES

To back up raw telephone system data files

1. On the Enterprise Server, right-click **Start=>Explore**.
2. Copy the <drive>:\Program Files (x86)\prairiefire software inclCCM\DataDirectory folder to the desktop, a network share, or optionally store it on a CD.

## MANAGEMENT CONSOLE

The Management Console application resides in Contact Center Client. Using Management Console, you can administer the database, perform maintenance functions, create support packages, and update your Business Reporter software.

Management Console consists of the following menus:

- Configuration
- Maintenance
- Support
- System

## OPENING MANAGEMENT CONSOLE

You open Management Console in Contact Center Client. The Console is available to users whose security permissions permit them to use Management Console. See Figure 6 for the options available in Management Console.

To open Management Console

1. Open **Contact Center Client**.
2. If prompted, type your user name and password.
3. Verify the Enterprise Server IP address.
4. Click **Log on**.
5. In the ribbon, click **Tools=>Management**.
6. Access the Configuration, Maintenance, Support, and System options by clicking on the applicable icon in the Console.

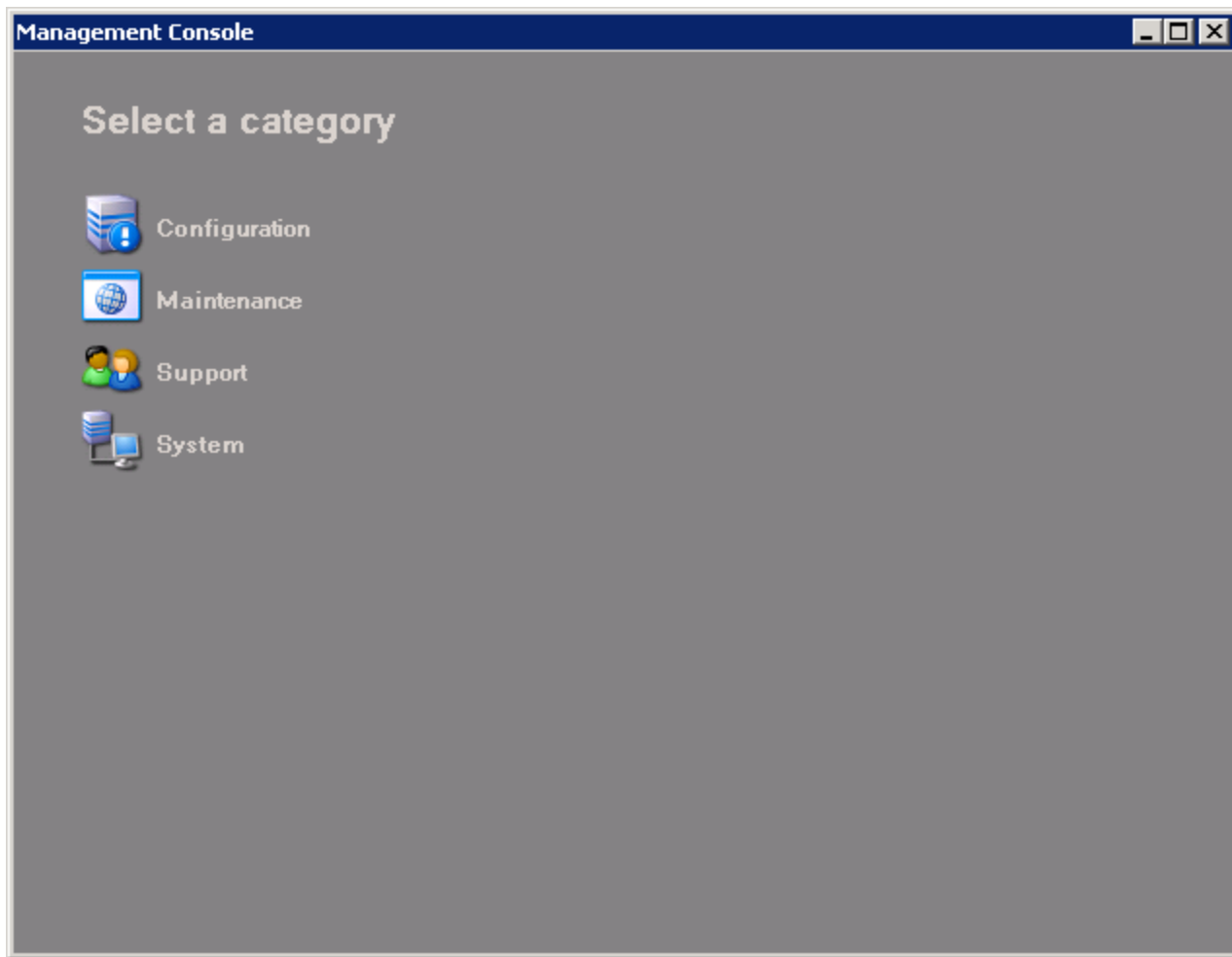


Figure 6: Management Console

## CONFIGURATION

The Configuration menu enables you to update the server IP address.

### *Updating server IP addresses*

To apply Enterprise Server or SQL Database Server IP address changes to all Business Reporter applications, you use the Update Server IP Address Wizard.

To apply the IP address change to all Business Reporter applications

1. Click **Configuration**.
2. Click **Update server IP address**.
3. Follow the steps in the wizard to apply the IP address change universally.

## MAINTENANCE

Using the Maintenance menu, you can

- Run the maintenance routine
- Summarize data

### *Running the maintenance routine immediately*

Business Reporter runs the prairieFyre Maintenance Alarm Dispatcher service by default at 2:00 A.M. However, you can manually invoke the prairieFyre Maintenance Alarm Dispatcher service at any time with the Run maintenance command.

To run the maintenance routine

1. Click **Maintenance**.
2. Click **Run maintenance**.  
A message notifies you that processing is complete.

### *Summarizing data*

The Summarize Data Wizard uploads historical telephone system data to the SQL database for a specific date range.

If you run a report and notice that data for a particular device is missing from the report output, verify the device is programmed in the telephone system and in the YourSite database. If you determine the device is missing from the database, add it to the database and use the Summarize command to update Collector Service and the SQL database with the complete raw telephone system data (stored on the local hard drive). You can then produce reports on the device.

#### **NOTE:**

- When a summarize is performed the devices not programmed in the telephone system or YourSite database are identified and logged to an XML file located in the Logs directory. The files are named as in the following example, summarizeInspection[29-01-2007][29-01-2007][29-01-2007].xml, where the first date is the current date, the second is the start date of the summarize, and the third is the end date of the summarize.
- If you attempt to summarize data and there is no data for that date an error opens. Please select another date.

To summarize data

1. Click **Maintenance**.
2. Click **Summarize data**.
3. Follow the steps in the Summarize Data Wizard to summarize the data.

## SUPPORT

Using the Support menu, you can

- Create an Enterprise Server support package
- View contact information



### Creating an Enterprise Server support package

You can package your Enterprise Server telephone system records and YourSite configuration data to send to Mitel for troubleshooting issues using the Support Package Wizard. The Support package formats your data in a way that helps to resolve any problems.

To create an Enterprise Server support package

1. In **Management Console**, click **Support**.
2. Click **Create support package**.
3. Follow the steps in the Support Package Wizard to package your telephone system records and YourSite configuration data.
4. Click **Finish**.

### *Viewing contact information*

Should you need to contact Mitel for support, contact information is provided in Management Console.

To view contact information

1. Click **Support**.
2. Click **View contact information**.

## SYSTEM

Using the System menu, you can

- Control services
- Convert data files

### *Controlling services*

Services Manager controls all Business Reporter services and mandatory system services. A complete list of these services displays in the Services Manager.

To control services

1. Click **System**.
2. Click **Services Manager**.
3. Select the service to be controlled.
4. Right-click the service.  
The right-click menu opens. This enables you to control the service the following ways:
  - Start
  - Stop
  - Pause
  - Resume
  - Restart
  - Refresh
  - Restart All Running Services
5. Select the action to be performed.

## Converting data files

The Data file conversion tool enables you to convert Toolbox data files to Mitel data files. This enables you to restore all historical data from competitor products when changing your solution to Business Reporter.

1. Click **System**.
2. Click **Data file conversion tool**.  
**NOTE:** The path must be accessible from the server. We recommend you use a Universal Naming Convention (UNC) share.
3. Click **Next**.  
 The data file conversion will then process.
4. Click **Finish** to complete the data file conversion.

## Converting Inter-Tel data

The Inter-Tel database import tool enables customers with historical CSM data (collected using either a 5000 or 3300 media server) to convert their data when migrating to Contact Center Solutions Business, Workgroup, or Enterprise Edition. The import tool is designed to process data from either Access or DB2 databases. Telephone system information, such as agents and extensions will be imported and all historic records will be converted into ACD and SMDR files. A historical media server will be created, allowing you to retain data for reporting purposes.

Historical media servers enable

- Historical reporting for queues, agents, and extensions
- Forecasting
- ACD and SMDR Inspector functionality
- Auditor functionality

Inter-Tel summary-based options, such as service level and spectrum values, can be modified in YourSite Explorer. Summarize is performed on an on-demand basis from Management Console in Contact Center Client. Historical media servers have no real-time functionality. All devices associated with historical media servers are historical by default and cannot be edited or used to collect any new data.

### NOTE:

- If the CSM server that houses the DB2 database is offline or not accessible through the network, you must install and configure a DB2 Server on the host machine. After installing the DB2 Server, restore the DB2 databases onto this server. You will access the databases here using the import tool.
- For Access databases, the import tool requires the following files: System.mdw, config.mdb, and one or any combination of the following: Ha<MMYYYY>.mdb, Hc<MMYYYY>.mdb, Haday.mdb, Hcdays.mdb, Hamonth.mdb, Hcmmonth.mdb. For Version 4.11 or earlier, select cvgwcfg.mdb instead of config.mdb.
- You should run, save, and store a copy of your CSM reports before decommissioning your CSM server.
- Hunt groups and extensions in CSM convert into paths, agent groups, and agents when migrating to Contact Center Solutions.

To convert Inter-Tel data

1. Open the Inter-Tel Import Tool, which is found in the <InstallDir>CCM/Applications folder.
2. **Under Database Source**, select either **Microsoft Access** or **DB2**.
3. If DB2 is selected, in the **CSM Databases** text field, type the IP address of the machine where the DB2 database resides and the name of the DB2 database using the following format: <IP Address>\<Database Name>, and enter the login credentials of a DB2 Administrator on the host machine.
4. If Microsoft Access is selected, after **CSM Databases**, click **Browse** and browse to the location of the files to import/convert.
5. Click **OK**.
6. After **Start Date**, select the start date for the data you want to import.
7. After **End Date**, select the end date for the data you want to import.  
The Detected Inter-Tel Version will update based on the version you are running.
8. If you want to retain historic Inter-Tel data for reporting purposes, ensure the **Create historic media server** check box is selected.  
This option is selected by default. The files will be imported into <installation drive>:\Program Files (x86)\prairieFyre Software Inc\CCM\DataDirectory. You can optionally choose to import the files to an alternate location, and not create a historical media server, by selecting the Target for Import check box. See step 11.
9. If you have multiple, interconnected 5000 media servers that are configured through a CT Gateway, select the **Synchronized system uses CT Gateway** check box.  
**NOTE:** if the Create historic media server check box is enabled, the Synchronized system uses CT Gateway option will be disabled.
10. If you want to summarize the data immediately after the conversion, select the **Summarize on completion** check box.  
This option is selected by default.
11. Optionally, to generate data files without creating a media server in the database, beside the **Target for Import** field, click **Browse**, and select a location to which you want to import the data.  
The Target for Import option is not available if you selected the Create historic media server check box.
12. Click **Import**.

# Chapter 6

## BUSINESS REPORTER CONFIGURATION

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*YourSite Explorer*

*Enterprise setup*

*Adding media servers*

*Configuring YourSite database devices*

*Subscriber Services configuration*

*Business hour schedules*

*Monitoring and alarming subsystem*

*Security roles*

*Validating YourSite Explorer configuration*

## CONFIGURATION

You must configure Business Reporter before you are able to report on call activity.

You configure devices in the following order. (See Figure 7.)

1. In YourSite Explorer, under YourSite, add devices in the following order:
  - Sites, see "Adding sites" on page 66.
  - Media servers, see "Adding media servers" on page 66.
  - Employees and employee groups (optional), see "Adding employees" on page 96.
  - Subscribers and subscriber groups (optional), see "Adding subscribers" on page 131.
  - Extensions and extension groups, see "Adding extensions" on page 114.
  - Queues and queue groups, see "Adding queues" on page 109.
  - Trunks and trunk groups, see "Adding trunks" on page 117.
  - DNIS and DNIS groups (optional), see "Adding DNIS" on page 118.
  - Account Codes (optional), see "Adding Account Codes" on page 119.
  - Phone numbers and phone number groups (optional), see "Adding phone numbers" on page 122.
2. In YourSite Explorer, under Business Reporter, add Business Reporter components in the following order:
  - Call types, see "Adding call types" on page 123.
  - Time slots, see "Adding time slots" on page 124.
  - Call rates, see "Adding call rates" on page 124.
  - Carrier plans, see "Adding carrier plans" on page 126.
  - Add digit patterns to carrier plans and associate call types and call rates to the digit patterns, see "Adding outbound digit patterns" on page 127.
  - Assign carrier plans to media servers and/or trunk groups, see "Associating carrier plans to media servers and/or trunk groups" on page 129.
3. In YourSite Explorer=>Alarms, specify alarm settings. See "Monitoring and alarming subsystem" on page 138.
4. In YourSite Explorer=>YourSite, create schedules that specify the business hours of your operation to be used for media servers and alarms, see "Creating and modifying schedules" on page 136.
5. On CCMWeb, under YourSite=>Security, restrict user access to specific areas of CCMWeb. See "Security roles" on page 148.

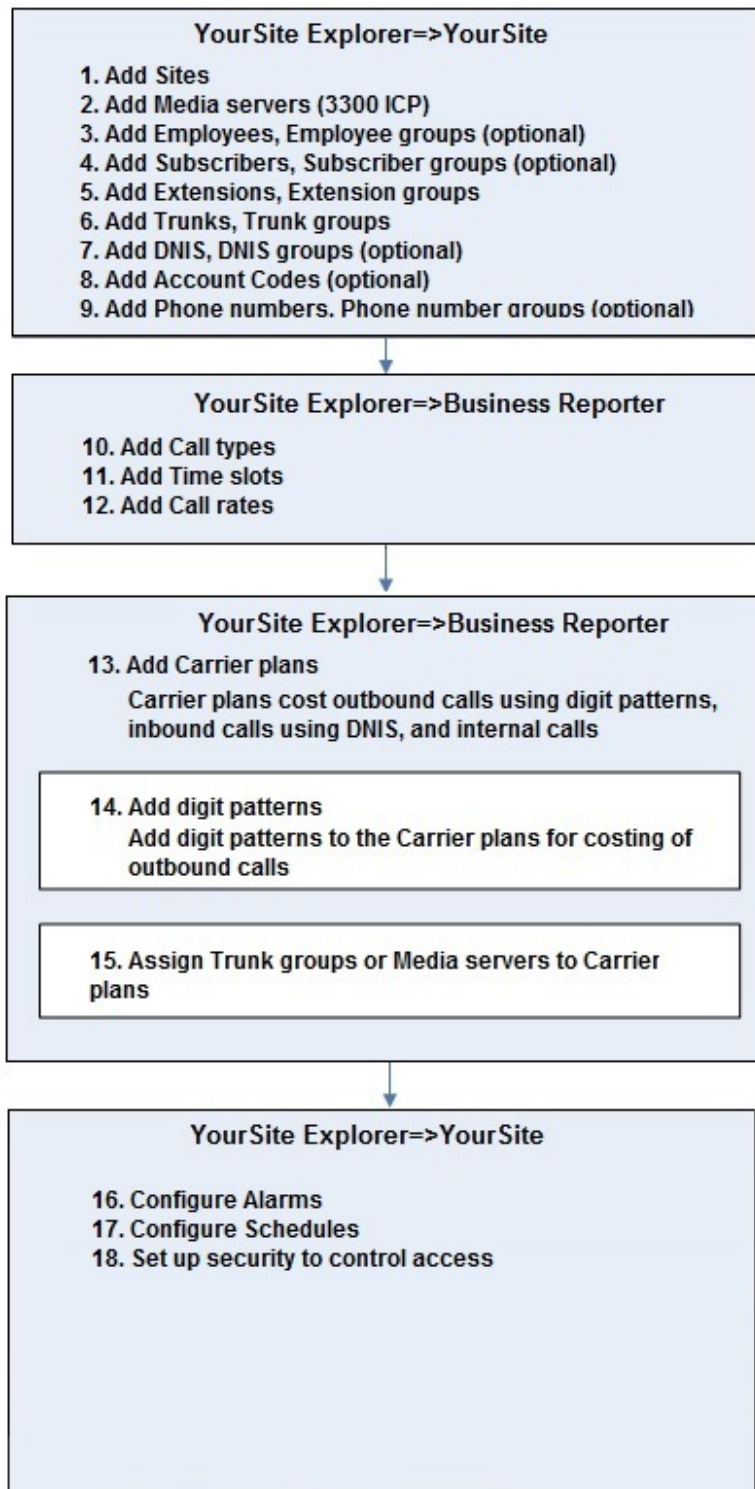


Figure 7: Business Reporter configuration flowchart

## YOURSITE EXPLORER

YourSite Explorer streamlines configuration. For example, you can

- Multiselect devices and change their attributes in one step.
- View group membership information on the same window as the devices are listed.
- View multiple windows of devices simultaneously and tab between them.

### NOTE:

- Only one set of pending configuration changes can be saved at any time. If another user saves changes to the same element of YourSite Explorer that you are updating, you receive an error message when attempting to save your changes. In these instances you must refresh YourSite Explorer after the other user's changes have been saved. You may then re-enter and save your changes. We recommend you save your configuration changes frequently, in order to avoid losing work.
- YourSite Explorer enables you to have multiple device tabs open simultaneously. However, as a best practice, we recommend you only have the device tabs open that you are currently using.
- We recommend you avoid modifying large data sets from within YourSite Explorer as performance levels will be negatively affected. As a best practice, all large dataset modifications should be made on the telephone switch directly and synchronized back to Contact Center Management. If you prefer to perform modifications inside YourSite Explorer, we recommend you partition the changes into smaller chunks of data.

## STARTING YOURSITE EXPLORER

**NOTE:** Launching client-side applications from the task bar causes them to bypass the Updater Service process. To ensure successful updates from the Enterprise Server, after an upgrade close all client-side applications for 15 minutes or reopen them from the Start menu/Start screen.

To start YourSite Explorer

1. Open **YourSite Explorer**.
2. If prompted, type your **Username** and **Password** and verify the **Enterprise Server** IP address.
3. If you use Secure Socket Layer, select the **SSL** check box.
4. Optionally, select the **Remember my credentials** check box.
5. Click **Log in**.

## *YourSite Explorer Start Page*

The YourSite Explorer Start Page is a startup resource that provides links to both information resources for getting started as well as system information for Contact Center Solutions. By default, if enabled, the Start Page opens automatically with each new session of YourSite Explorer.

The Start Page has two tabs: Getting Started and System Information.

- **Getting Started**—provides configuration overviews for Contact Center Solutions and includes the following tabs:
  - **Welcome**—details the contents of both the Getting Started tab and the System Information tab
  - **Contact Center Management**—overview of Contact Center Management configuration
  - **Business Reporter**—overview of Business Reporter configuration
  - **Workforce Scheduling**—overview of Workforce Scheduling configuration for employees and schedules  
**NOTE:** You must be licensed for Workforce Scheduling to view this tab.
  - **IVR Routing**—overview of IVR Routing configuration  
**NOTE:** You must be licensed for IVR Routing to view this tab.
- **System Information**—provides documentation as well as system and license information and includes the following tabs:
  - **Documentation**—provides links to Contact Center Solutions and Business Reporter documentation
  - **About**—provides system information, custom reports, and contact information for Mitel
  - **Alarms**—provides information on currently active Contact Center Management alarms, with links to corresponding Mitel Knowledge Base articles

## *Configuring the YourSite Explorer Start Page*

You can configure the Start Page to open automatically when you start YourSite Explorer. You can also configure whether or not the Start Page automatically loads in the View tab of YourSite Explorer.

To prevent the Start Page from opening automatically

1. Start **YourSite Explorer**.
2. On the **Start Page**, clear the **Show page on startup** checkbox.

To configure whether the Start Page opens in the View tab

1. Click **YourSite=>View**.
2. To load the Start Page automatically on startup, select the **Show start page** check box.

## *Searching*

When you perform searches in YourSite Explorer, you can filter on specific criteria to narrow the search. YourSite Explorer searches on criteria you type into the Search box. The search result will consist of all instances of the search item. For example, if you ran a search for *ext*, your search result could contain: extension, text, and next time.



After you perform an initial search, you can type additional criteria in the box to narrow the search. If no words or numbers match your search request, the resultant list will be blank.

YourSite Explorer can search several variables for devices. For example, for the following devices, the following variables can be searched

- Employees, employee groups—first and last name
- Extensions, extension groups—reporting number
- Trunks, trunk groups, DNIS, DNIS groups, Account Codes, divisions—name and reporting number
- Phone numbers, phone number groups—search on information found in all columns except Created by, Created date, Last modified by, or Last modified.

To search for a specific word or number

- Select a device, and, in the **Search** box, type the word or number.

### *Paging*

Paging enables you to specify the number of items to be included per page. You can reduce the page size to increase the application speed. By default, the page size allows for 100 items. When changing the page size, you must close and re-open the device window.

To change the number of items viewed per page

1. In YourSite Explorer, on the ribbon, click **Business Reporter**.
2. Click the **View** tab.
3. After **Page size**, select number of items to be viewed per page.
4. Click **Save**.

### *Filtering*

The filtering bar enables you to access records alphabetically and numerically.

To filter records alphabetically

- On the filter bar, click the letter with which the record begins.

To filter numerically

- On the filter bar, click **#** to view records that start with numbers 0 through 9.

To reset filtering

- On the filter bar, click **All** to view all records.

You can filter and then search within the filtered records. For example, click *F* to filter for all records that start with the letter *F*. Then type *th* to search within that list for any record with *th*.

### *Customizing the user interface*

You can customize the user interface by minimizing aspects of it, changing the order of the columns, changing column options, and adjusting the page size. This customization is referred to as a profile. Your profile is associated with the user name you use to access YourSite Explorer. Each time you close YourSite Explorer, your profile is automatically saved. When you reopen YourSite Explorer using the same user name, the user interface displays your profile.

## *Minimizing aspects of the user interface*

To add space to the user interface so you can view additional rows of data, you can minimize the following window elements.

- **Filter bar**  
The filter bar is the bar on which the alphabet is displayed
- **Page bar**  
The page bar is located above the filter bar. The page number is displayed on the left side of the page bar
- **Ribbon**  
The ribbon is located at the top of the user interface. The ribbon includes Home, View, and Configuration tabs, and enables you to add devices and change the view (horizontal or vertical). Ribbon attributes change depending on the area you are viewing

To hide the filter bar

1. In YourSite Explorer, on the ribbon, click the **View** tab.
2. Click **Business Reporter**.
3. Clear the **Show filter bar** check box.

To hide the page bar

1. In YourSite Explorer, on the ribbon, click the **View** tab.
2. Click **Business Reporter**.
3. Clear the **Show page bar** check box.

To minimize the ribbon

1. In YourSite Explorer, on the ribbon, click **the Customize Quick Access Toolbar**.
2. Click **Minimize the ribbon**.  
The ribbon at the top of YourSite Explorer is hidden.

## *Selecting the first record of each list*

You can save time by configuring YourSite Explorer to automatically select the first record on a page.

To select the first record of each list

1. In YourSite Explorer, on the ribbon, click the **View** tab.
2. Click **Business Reporter**.
3. Select the **Select first record** check box.

## *Changing the order of the columns*

You can reorder columns in either of two ways. You can drag a column heading to a different position on the table, or you can change column order using Column options. See "Changing column options" on page 61.

To drag column headings

1. With the device window open, select the column heading to be moved.
2. Drag it to a different position on the table.

### *Changing column options*

You can adjust the width and order of columns, and hide or show columns in device windows.

To adjust column width

1. Drag the column to the left or right to adjust its width.
2. Click **OK**.

To hide a column

1. Right-click a column heading.  
The Column options window opens.
2. Select **Column options**.
3. Select the column heading to be hidden.
4. Click <<.
5. Click **OK**.

To change the order of columns

1. Right-click a column heading.  
The Column options window opens.
2. Select **Column options**.
3. Select the column heading to be moved.
4. Use the arrows to change the order of the column headings.  
The top column displays first in the device window.
5. Click **OK**.

### *Duplicating devices in YourSite Explorer*

Devices in YourSite Explorer can be copied and pasted to create duplicate devices for the configuration of a resilient contact center. A copied device has the same configuration as the original and any unique fields must be changed to new values before the copied device can be saved. Duplicated devices will duplicate the membership of the original, so that a duplicate queue, for example, would have the same agent group members as the original queue.

#### **NOTE:**

- Embedded RAD messages on 3300 media servers may not be copied as they need to be saved locally on that 3300 media server.
- YourSite Explorer does not support copying and pasting devices using CTRL+C and CTRL+V.

To duplicate a device in YourSite Explorer

1. Select a device or range of devices.
2. In the ribbon, click the **Home** tab.
3. Click **Copy**.
4. Click **Paste**.
5. For any copied device, put new values into fields that must be unique to a single device.
6. Click **Save**.

Alternatively, to duplicate a device in YourSite Explorer

1. Right-click on the device and select **Copy**.
2. Right-click and click **Paste**.
3. For any copied device, put new values into the fields that must be unique to a device.
4. Click **Save**.

## *Making multiple changes*

In one action, you can edit common information across multiple devices of the same type. If, for example, you recently set up your system to be resilient, you must configure your employees as resilient. You assign resiliency to multiple employees by selecting multiple employees and then selecting the This employee is resilient check box.

You can change information that is common across multiple devices only. For example, you cannot change Name and Reporting number across multiple employees because they are specific to each device item.

When you edit common information across multiple devices of the same type, but the devices have different options selected, text boxes show as blank, combo boxes are blank, option buttons are cleared, and check boxes are filled.

You can make multiple changes to

- Employees
- Trunk groups
- DNIS

## *Changing the YourSite Explorer view*

You can select from two window orientations: horizontal or vertical. The horizontal view displays information in a horizontal layout. The vertical view displays information in a vertical layout.

When you close YourSite Explorer and then restart it, Business Reporter displays the view and device windows that were open the last time you used YourSite Explorer.

To select a particular view

1. On the ribbon, click **View**.
2. Click **Business Reporter**.
3. Select **Horizontal** or **Vertical**.

## *Importing and exporting data*

You can import or export call types, call rates, or carrier plans in .xml format to Business Reporter. The import/export tool overwrites call types, rates, and carrier plans only, and will not affect any other configuration (including subscriber plans). Importing and exporting data works similar to the backup and restore functionality for Business Reporter devices and is designed primarily for dealers to configure the software for customers with similar configurations. However, it does not work similar to .csv import functionality, and customer and dealers wanting to import a specific set of data (such as call rates) are recommended to use the .csv import tool. For details on .csv imports, see "Importing a range of devices using a .csv file" on page 95.

To import a file

1. In YourSite Explorer, on the ribbon, click the **Configuration** tab.
2. Click **Business Reporter**.
3. Click **Import**.
4. Locate the file to be imported.
5. Click **Open**.  
The file is imported.
6. Click **Save**.

To export a file

1. In YourSite Explorer, on the ribbon, click the **Configuration** tab.
2. Click **Business Reporter**.
3. Click **Export**.
4. Locate the file to be exported.
5. Click **Open**.  
The file is exported.
6. Click **Save**.

### *Submitting feedback*

YourSite Explorer includes a feedback form for users to indicate areas of the application they like or dislike, highlight problems they experienced, or to provide suggestions for future YourSite Explorer development.

To submit YourSite Explorer Feedback

1. In the YourSite Explorer ribbon, click the **File** tab.
2. Click **Feedback**.
3. Select a category for your feedback.
4. Under **Comments**, enter your feedback.
5. If you want to provide your feedback a rating, click on the **star** buttons.  
Clicking on the left side of a star gives a .5 of a star, while clicking on the right side of a star gives a full star.
6. If you want to clear the form, click **Reset**.
7. Click **Send**.

## ENTERPRISE SETUP

For all telephone system types, you set up your enterprise structure in YourSite Explorer.

To set up your enterprise structure

1. Specify enterprise settings.
2. Add a site.
3. Add media servers to the site.

You must understand the following terms to set up your enterprise structure.

- **Enterprise**  
The *enterprise* is all of the contact center sites that comprise your company.
- **Site**  
A *site* is an office location with one or more media servers. It can be the office where the Business Reporter Enterprise Server is installed or a branch office.
- **Media server**  
The *media servers* are the means by which customers communicate with you.

## STARTING BUSINESS REPORTER

To start Business Reporter on the Enterprise Server or on a client computer

1. Start Internet Explorer and type your Enterprise Server IP address **http://[your Enterprise Server IP address]/CCMweb/**.
2. Click **Favorites=>Add to Favorites** to add the Enterprise Server IP address to your list of favorite addresses.
3. Click **OK**.
4. Click **Favorites**, locate the Business Reporter entry (at the bottom of the list) and drag it to the top of the list.
5. Optionally click **Make Home Page** to set the Enterprise Server IP address as your home page.
6. If prompted, type your user name and password and click **Submit**.

## CONFIGURING ENTERPRISE SETTINGS

When programming the enterprise, you configure Enterprise Server general settings, global system language settings, some maintenance services, and email settings for alarm notifications). The Enterprise Server is the computer on which Contact Center Management is installed.

### *Configuring the Enterprise Server settings*

To configure the Enterprise Server settings

1. Click **YourSite=>Enterprise**.
2. In the Enterprise tab, type the **Name** of the Enterprise.
3. Verify the IP address/DNS name of the Enterprise Server. If the IP address is incorrect, after **IP address/DNS name**, type the IP address of the Enterprise Server.  
**NOTE:** If you want to change the Enterprise IP address, use the Contact Center Client Update Server IP Wizard. See "Updating server IP addresses" on page 49.
4. After **Real-time port**, type the real-time port number.  
The default real-time port is 5024.  
The real-time port is used to communicate real-time events.
5. After **Auditor port**, type the Auditor port number.  
The default Auditor port is 5025.  
The Auditor port is used to run Auditor events.
6. After **MiTAI proxy server port**, type the MiTAI proxy server port number.  
The default MiTAI proxy server port is 5026.

7. If you want Lifecycle reports, select the **Enable LifeCycle reports** check box.
8. If you use Secure Socket Layer, select the **This server uses Secure Socket Layer (SSL)** check box.
9. If you want to be notified when your warranty is about to expire, select the **Display warranty warning and expiration message** check box.
10. If you do not want client applications to be automatically updated, clear the **Auto update client applications** check box.  
By default, client applications are updated automatically.
11. Click **Save**.

### *Configuring enterprise maintenance functions*

To configure enterprise maintenance functions

1. Click **YourSite=>Enterprise**.
2. Click the **Maintenance** tab.
3. After **Zip files older than**, select the number of days after which you want to zip data files.
4. After **Purge reports older than**, select the age after which reports will be discarded.
5. After **Delete maintenance logs older than**, select the age after which maintenance logs will be discarded.
6. After **Delete configuration backup files older than**, select the age after which configuration backup files will be discarded.
7. After **Time Maintenance Service runs**, select the time the maintenance service summarizes data.  
The maintenance service is set to run at 2:00 A.M. by default. Select a time for the maintenance manager to run when your contact center is closed or is the least busy.
8. After **Purge Life cycle reports older than**, select the age after which Life cycle reports will be discarded.
9. Click **Save**.

### *Configuring email settings*

You configure email settings so you are notified by email about Enterprise Server and real-time performance issues.

To configure email settings

1. Click **YourSite=>Enterprise**.
2. Click the **Email settings** tab.
3. After **Mail Server address**, select the IP address of the SMTP Mail Server.
4. After **Email notification interval minutes**, select the duration (in minutes) after which you will be notified when an alarm occurs.
5. After **Send Enterprise Server alarms to the following address(es)**, type the email address of the employee(s) who will receive the email notification.
6. Click **Save**.

## ADDING SITES

A site is an office location with one or more media servers. It can be the office where the Enterprise Server is installed or a branch office.

Your site structure determines how you view statistics and reports. When you set up your site structure, you specify site and media server information. When you add a site, you add the name of the site and the time zone. By making each site distinct, you can restrict user access to sites. For more information on restricting user access, see "Configuring security roles" on page 151. The site's language determines the default language setting for employees associated to it. Changing the site's language will change the language setting for employees associated to it.

Administrators can also restrict the site's use of Contact Center Client's Chat Integration, which enables employees to chat with each other in Contact Center Client. Prior to Version 7.0, there was an option to use Microsoft Lync as the default chat client instead of Contact Center Chat. In Version 7.0 and greater, YourSite Explorer automatically detects if you have Lync Server and enables it as the default chat client. If your contact center is a mixed environment where some users have Lync and others do not, you may want to use Contact Center Chat to ensure all employees can communicate. For information on using Contact Center Chat in an environment with Lync on some systems, see the following Mitel Knowledge Base article:  
<http://micc.mitel.com/kb/KnowledgebaseArticle52084.aspx>

To add a site

1. Click **YourSite=>Site**.
2. Click **Add**.
3. After **Site Name**, type the name of the site.
4. After **Time Zone**, select the time zone and closest location from the drop-down list.
5. After **Site Language**, select the site language from the drop-down list.
6. To disable Contact Center Client Chat Integration, clear **Chat Enabled**.
7. Click **Save**.

## ADDING MEDIA SERVERS

**NOTE:** The SX-200, Axxess, and 5000 media servers are not supported with Version 7.1, except as historical media servers. When upgrading to Version 7.1, SX-200 media servers, along with their associated extensions, agents, agent groups, queues, trunks, and trunk groups, are set to historical. Axxess and 5000 media servers must be marked as historical before upgrading to Version 7.1 to retain historical data.

You must give each media server a distinct name when setting up your site to distinguish between the various types of media for management and reporting purposes.

To verify the media server types and the number of employees for which you are licensed, in CCMWeb click Help=>About your Mitel applications or access the System Information tab in the Start Page of YourSite Explorer.

When you first install Business Reporter, a 3300 ICP media server is added to YourSite Explorer by default. If you do not plan to use this server, we recommend you delete it to avoid receiving unnecessary alarms or error messages.



You select your media servers from the following media server types and add them to your site.

### 3300 IP Communications Platform (ICP)

The 3300 ICP system streams SMDR over TCP/IP.

See "Adding 3300 ICP media servers" on page 67.

## ADDING 3300 ICP MEDIA SERVERS

You must first add the 3300 ICP media server and then configure its location settings, telephone system settings, data summary options, data collection settings, MiTAI options and, optionally, write-back functionality and call recording.

### NOTE:

- As a best practice, we recommend you perform Full Synchronization after adding and configuring a media server in YourSite Explorer and before configuring telephone system settings for the media server. For more information on synchronization, see "Configuring the YourSite database using synchronization" on page 79. For information on performing synchronization, see "Performing synchronization" on page 82.
- If you are adding media servers as part of a new installation, we recommend you perform synchronization after all media servers have been added. For more information, see the *Business Reporter Installation Guide*.

Prior to Version 7.0, media servers could be one of three types: Enterprise Node, which is a standard media server, Agent/extension gateways, which did not file queue data to SQL, and Queueing gateways, which did not file agent or extension data to SQL. As of Version 7.0 and greater, all media servers are Enterprise Node by default.

When upgrading to Version 7.1, agent and extension gateways and Queueing gateways are converted into Enterprise Nodes. Agent and Extension gateways will have queues created for them. Converted Queueing gateways will have employees, agents, and extensions created for them.

To add a 3300 ICP media server

1. In YourSite Explorer, click **YourSite=>Media servers**.
2. Click **Add=>3300 ICP**.
3. After **Name**, type the name of the media server.

### NOTE:

- To distinguish between the various types of media for management and reporting purposes, you must name each media server distinctly when setting up your site.
  - The Media server ID field will be populated with a unique number after the media server has been saved.
4. After **Site**, select the site where the media server resides.
  5. After **Computer name**, select the computer where the server resides.
  6. The field after **Telephone System Version** is read-only and is automatically populated after synchronizing with the telephone system. It describes the active software load version on the telephone system.

7. To be informed of media server alarms, select the **Enabled for alarms** check box.  
**NOTE:** Selecting this check box will inform you of media server alarms via RSS and email. For more information, see "Monitoring and alarming subsystem" on page 138.
8. The **SDS Mode** check box is automatically selected, if applicable, after synchronizing with the telephone system.  
**NOTE:** In a network or cluster of elements, the System Data Synchronization (SDS) feature keeps programming data, such as Interconnect Handling Restrictions, Feature Access Codes, and Class of Service Options, identical at each element.
9. If you have hot desking agents, select the **Uses hot desking agents** check box.  
**NOTE:**
  - If this is selected, all created agents will be hot desking agents. You cannot mix hot desking and standard agents.
  - 'Uses hot desking agent' is enabled by default. It is recommended that Workgroup Edition only use hot desking agents.
10. Select **Licensed for Business Reporter** if you are applying for a Business Reporter license.  
**NOTE:** This check box is selected by default when you add a 3300 ICP media server and have remaining Business Reporter media server licenses. If you are licensed for Contact Center Management and Business Reporter, you must select 'Licensed for Business Reporter' to have access to Business Reporter. If you are not licensed for a product, you will not be able to select the check box for that product.
11. If you want to designate the media server for historical reporting use only, click **Make historical**.  
 Making a media server historical terminates all active licenses for devices associated with that media server. Historical data is retained on the media server but no new data is collected.
12. After **IP address /DNS name**, specify the IP/DNS address of the media server.
13. After **Username**, type the username used to connect to the telephone system.
14. After **Password**, type the password used to connect to the telephone system.
15. After **Confirm password**, type the password used to connect to the telephone system.
16. Click the **Test Connection** button to test the connection between the media server and the Enterprise Server.  
 This connection is required to ensure Synchronization functionality.
17. Click **Save**.
18. Configure the location settings.  
 See "Configuring location settings for 3300 ICP media servers" on page 68.

### *Configuring location settings for 3300 ICP media servers*

To configure location settings for a 3300 ICP media server

1. Click the **Location** tab.
2. After **Country**, click the **Browse** button and select the country where the media server is located.
3. After **Area**, click the **Browse** button and select the appropriate area code for the media server's location.

4. After **Minimum digits to dial locally**, specify the minimum number of digits required for a local external call.  
**NOTE:** Digits less than the minimum are treated as internal calls.
5. After **Maximum digits to dial locally**, specify the maximum number of digits required for a local external call.  
**NOTE:** Digits exceeding the maximum are treated as long distance external calls.
6. After **Outbound dialing prefix**, specify the number dialed to access an outside line.
7. Configure the data summary options for the 3300 ICP.  
See "Configuring data summary options for 3300 ICP media servers" on page 69.

### *Configuring data summary options for 3300 ICP media servers*

Contact centers operating over midnight should have 'This enterprise operates 24 hours a day' selected for the media server. This option provides more accurate reporting over midnight and determines when and how agent shifts are opened and closed after midnight.

If this option is selected, the system automatically closes and re-opens agent shifts at midnight. All agents remain logged into the system. Agent shift reporting is uninterrupted over this period.

If this option is not selected, the system closes agent shifts after the last agent event before midnight. The system re-opens agent shifts after the first agent events after midnight. All agents remain logged into the system. Agent shift reporting is not extended between the time agent shifts close and the time they re-open.

To configure data summary options for a 3300 ICP media server

1. Click the **Data summary options** tab.
2. To generate trace reporting, select the **Inbound/Outbound/Make Busy Trace reporting** check box.
3. If your business operates over midnight, select **This enterprise operates 24 hours a day**.
4. To track outbound calls that were not answered, select the **Credit unanswered outbound calls** check box.
5. If you want to display when calls ring at extensions, select the **Monitor Agent Ringing state** check box.
6. After **Digits dialed prefix**, type the digits that must precede a telephone number to make an outbound call.
7. After **Digits dialed postfix**, type the digits that must follow a telephone number to make an outbound call.
8. After **Maximum MiTAI monitors**, specify the maximum number of MiTAI monitors.
9. Skip the **ACD Options** section. Agent ACD options do not apply to Business Reporter users.
10. Under **ACD Options**, to store ACD redundant events, select the **File all ACD stream redundant events** check box.
11. If you do not consider ACD real-time sequence errors as record errors, select the **Ignore ACD real-time sequence errors as record errors** check box.
12. Configure Data collection settings.  
See "Configuring data collection settings for a 3300 ICP" on page 70.

## *Configuring data collection settings for a 3300 ICP*

**CAUTION:** Selecting the TCP, Enterprise Manager (OPS Manager), or Simulation tabs will change the media server's data collection mode. Ensure that you select the tab for the appropriate data collection mode. Be aware that Simulation mode halts data collection and is used for demonstration purposes only. We do not recommend you run media servers in simulation mode. However, if you want to simulate media server real-time data collection and reporting, see the following Mitel Knowledge Base article: <http://micc.mitel.com/kb/KnowledgebaseArticle51207.aspx>

To configure data collection settings for a 3300 ICP media server

1. Click the **Data collection** tab.
2. If you do not use Enterprise Manager (OPS Manager), click **TCP**. Otherwise, skip to step 8.
3. After **SMDR**, type the SMDR port number of the media server.
4. If you will be entering ACD information, select the **ACD** check box and type the ACD port number of the media server.  
This is optional. If you are running Business Reporter in conjunction with Contact Center Solutions, you need to provide ACD information.
5. If you use Traffic Analysis, select the **Traffic Analysis** check box and type the Traffic Analysis port number of the media server.
6. After **Data Alarm Timeout Minutes**, select the duration of the time lapse in minutes from when the data stops streaming to when you want the alarm to display.  
**NOTE:** In a resilient environment, SMDR and ACD data timeout alarms may trigger unnecessarily. To prevent this, set Data Alarm Timeout Minutes to zero.
7. After **Notify me during these business hours**, click the Search button, select a schedule that reflects the hours of operation for the media server, and click **OK**.
8. If you use Enterprise Manager (OPS Manager), click **Enterprise Manager (OPS Manager)**.
9. After **IP address/DNS name**, type either the IP address or the DNIS name of the Enterprise Manager (OPS Manager) computer.
10. After **FTP port**, type the FTP port number.
11. After **FTP user name**, type the FTP user name to gain access to Enterprise Manager (OPS Manager).
12. After **FTP password**, type the FTP password to gain access to Enterprise Manager (OPS Manager).
13. After **Remote directory to data files**, type the directory path where the data from the telephone system is stored by Enterprise Manager (OPS Manager).
14. Configure the media server's MiTAI options.  
See "Configuring MiTAI options for 3300 ICP media servers" on page 71.

## *Configuring MiTAI options for 3300 ICP media servers*

To configure MiTAI options for a 3300 ICP media server

1. Click the **MiTAI Options** tab.
2. After **Maximum messages per second**, select the number of messages per second from the drop-down list.  
The default number of messages is 10 per second. The higher the version of MiTAI, the greater the number of messages per second.
3. After **MiTAI auto-synchronization will occur at**, select the time from the list that you want Automatic Synchronization to run.
4. After **Specify the port used for the MiTAI data stream**, type the port number used for the MiTAI data stream.
5. To enable write-back functionality, see "Enabling write-back functionality" on page 71.

## *Enabling write-back functionality*

For changes that you make to the configuration settings in YourSite Explorer to be written back to the telephone switch, you must enable the read/write option in YourSite Explorer.

To enable write-back functionality

1. In YourSite Explorer, click **YourSite=>Media servers**.
2. Select the media server for which you want to enable read/write functionality.
3. On the ribbon, click the **Telephone System** tab.
4. In the **Settings** section, select **Read/Write**.
5. Configure the telephone system settings for the media server.  
See "Configuring telephone system settings for 3300 ICP media servers" on page 71.

## *Configuring telephone system settings for 3300 ICP media servers*

To configure telephone system settings for a 3300 ICP media server

1. Click the **Telephone system settings** tab.
2. Click **System options**.
3. After **Feature access code for silent monitoring**, type the feature access code used for silent monitoring, as programmed on the 3300 ICP telephone system.  
**NOTE:** The feature access code for silent monitoring must be unique and up to four digits in length. Do not use \* and # alone to define feature access codes.
4. If applicable, after **Replacement Access Code**, enter the replacement access code programmed on the telephone system.
5. If applicable, after **Registration Access Code**, enter the registration access code programmed on the telephone system.
6. After **ACD Make Last Agent Unavailable on No Answer**, select Yes by default.  
**NOTE:** In MCD 5.0, this telephone system setting is called 'ACD Auto Logout Last Agent on No Answer'. In MCD 6.0, this telephone system setting is called 'ACD Make Last Agent Unavailable on No Answer'.
7. After **ACD Real-Time Events Feature Level**, set the value to 1.
8. After **ACD Make Busy Walk Away Codes**, select Yes by default.

9. Click **SMDR options**.
10. If applicable, correct the SMDR Options settings.  
For the SMDR Options settings list, see Table 2.
11. Click **Class of Service** and select a Class of Service number.  
The properties for the selected Class of Service are shown in the right-hand pane.
12. After **Default type**, enter the Class of Service type.
13. After **Comment**, enter a description for the Class of Service.
14. Select **Yes** for the following Class of Service options:
  - **HCI/CTI/TAPI call control allowed**  
Selecting Yes enables the softphone extensions and IVR Routing ports to be controlled by the host computer.
  - **HCI/CTI/TAPI monitor allowed**  
Selecting Yes enables an HCI monitor to be initiated against softphone extensions and IVR Routing ports.
  - **SMDR external**  
Selecting Yes enables trunking SMDR.
  - **SMDR internal**  
Selecting Yes enables SMDR internal records to be generated.
15. After **Call forward delay**, enter the amount of time to wait before forwarding a call.
16. After **Call forward no answer timer**, enter the amount of time to wait for a forwarded call to be answered.
17. Select **Yes** or **No** for the following additional Class of Service options:  
**NOTE:** You will receive a warning in YSE if you choose a Class of Service option that is not recommended.
  - **Message waiting**  
This option permits a phone to enable and disable message waiting notification on another phone.
  - **Message waiting audible tone notification**  
This option enables message waiting notifications to take the form of a tone every time the phone goes off-hook.
  - **Do not Disturb**  
This option enables users to change their Do not Disturb status and prevents the phone from ringing on incoming calls.
  - **Do not Disturb permanent**  
This option sets the phone permanently in Do not Disturb.
  - **Public network access via DPNSS**  
This option enables devices to originate calls to directory numbers on the PSTN.  
Selecting 'No' disables network access.
  - **Suppress simulated CCM after ISDN progress**  
This option prevents the PBX from sending an answer message to a party calling on an ISDN trunk, preventing systems using MiTAI or HCI to play ringback or call processing tones when the call is answered.  
**NOTE:** Enable this option on end nodes only. Do not enable this option on transit nodes.

- **Recorded announcement device**  
This option enables RAD ports to play recorded messages for one-way, outgoing audio.
  - **Accept hot desk login**  
This option enables a hot desk login on a device.
  - **Voice mail port**  
This option enables the voice mail system to uniquely identify the party that is receiving a message.
  - **External hotdesk user – answer confirmation**  
This option forces an external hotdesk user to press a DTMF key to answer incoming calls.
18. After **Answer Plus Message Length Timer**, specify an amount of time to apply to MCD RAD messages. The time specified should equal the time it takes for the RAD message to play.
  19. After **Answer Plus Expected Off-hook Timer**, specify the amount of time the RAD can be off-hook and not playing messages before it requires servicing and is removed.
  20. Click **Class of Restriction**.
  21. Select a Class of Restriction.  
The properties for the selected Class of Restriction are shown in the right-hand pane.
  22. After **Do you want this Class of Restriction to be the default setting?**, select **Yes** or **No**.
  23. After **Classes of Restriction for the group**, enter the Class of Restriction numbers to include in the group.  
You may specify a range of numbers. Separate numbers using dashes or commas. For example, 1 through 9 may be entered as 1-9, or a combination of individual numbers and ranges may be entered as 1,2,3,7-10,13.  
**NOTE:** Class of Restriction numbers must be entered in ascending order within each group.
  24. Click **Cluster Setting**.
  25. If this media server is part of a Mitel cluster, under **Cluster setting**, select the **This media server is part of a Mitel cluster** check box.
  26. If this media server is part of a Mitel cluster, after **Cluster ID**, type the cluster ID.  
The cluster ID can be found on the telephone system.
  27. If this media server is part of a Mitel cluster, after **Cluster name**, select the cluster name.
  28. If this media server is part of a Mitel cluster, after **Cluster ID Digits**, type the digits used to identify the cluster.  
**NOTE:** After synchronization, cluster settings will automatically align with the telephone system settings and these fields will auto-populate.
  29. Click **Save**.
  30. If you want to enable call recording, see "Call recording" on page 75.

**Table 2: SMDR Option Settings**

<b>SMDR OPTION</b>	<b>VALUE</b>
Extended digit length	Yes
MCD - Report transfers	All
Network format	Yes
Report Account Codes	Yes
Report incoming calls	Yes
Report internal calls	Yes
Report meter pulses	No
Report outgoing calls	Yes
SMDR record transfer	Yes
System identification	Yes
Time change report	Yes
24-hour time reporting	Yes
ANI/DNIS/ISDN/CLASS number delivery reporting	Yes
OLI node ID format for incoming trunk calls	
Extended time to answer	Yes
Standardized network OLI	Yes
Standardized call ID format	Yes
Suite services reporting	No
Report internal unanswered calls	No
SMDR extended reporting level 1	Yes
SMDR extended reporting level 2	Yes
Report attendant name	Yes
Account Code number for internal calls	Yes
Path reporting number for internal ACD2 calls	Yes
SMDR Meter Unit Per Station	No



### *Call recording*

Business Reporter offers 24/7 call recording by integrating with OAISYS Tracer, dvsAnalytics Encore, or Red Box Quantify call recording software. For enhanced call security, Business Reporter also integrates with the Mitel Secure Recording Connector service to facilitate the recording of Mitel encrypted voice streams by third party software. OAISYS Tracer can optionally be used in conjunction with the Mitel Secure Recording Connector service. dvsAnalytics Encore and Red Box Quantify must be used in conjunction with the Mitel Secure Recording Connector service. For information, see "Configuring the Mitel Secure Recording Connector service" on page 75.

For specific information regarding supported third-party versions, see the relevant support statements in the *Contact Center Solutions and Business Reporter System Engineering Guide*.

### *Configuring the Mitel Secure Recording Connector service*

Business Reporter integrates with Mitel Border Gateway's Secure Recording Connector service, which facilitates the recording of Mitel encrypted voice streams by third-party call recording equipment. In order to use Contact Center Softphone in conjunction with the Mitel Secure Recording Connector service, you must complete the configuration process described below.

#### **NOTE:**

- Before you can configure call recording in YourSite Explorer, you must configure the Secure Recording Connector service in Mitel Border Gateway. For Mitel Border Gateway configuration information, see the *Mitel Border Gateway Installation and Maintenance Guide*.
- If multiple Mitel Border Gateways are used in a clustered environment to take advantage of load balancing and the soft phone is connected to the primary Secure Recording Connector when that connector goes offline, the soft phone will re-connect as determined by the cluster. New soft phones will attempt to connect to the first Mitel Border Gateway configured in YourSite Explorer, then try the second Mitel Border Gateway configured in YourSite Explorer and as a final attempt, try registering with the media server itself. If it registers with the media server, call recording will not be possible.

For soft phone balancing in a Secure Recording Connector service environment to function properly, you must alter a configuration file on the Mitel Border Gateway server. If you do not, you will have to restart Contact Center Client and the soft phone in the event of a failover. For instructions on how to make alterations, contact Mitel Technical Support at 1-800-722-1301 or [miccsupport@mitel.com](mailto:miccsupport@mitel.com) (North American customers). For customers residing in Latin America, Europe, the Middle East, Africa, and Asia Pacific, contact your approved Mitel vendor.

To configure the Secure Recording Connector service

1. In YourSite Explorer, under **Enterprise**, click **Media servers**.
2. Select a 3300 ICP media server from the list.
3. Click the **Call recording options** tab.
4. Under **Mitel Secure Recording**, after **IP address 1**, type the primary IP address of the Secure Recording Connector.

5. If you use multiple Secure Recording Connectors, type the IP address of the secondary Secure Recording Connectors after **IP address 2**.  
If the soft phone fails to connect to the primary Secure Recording Connector, it will attempt to connect to the secondary. If that fails, then soft phone will use the IP address of the media server programmed in the data collection field. If it uses the IP address of the media server, call recording will not be possible.
6. Click **Save**.

### *Configuring call recording integration*

Contact Center Solutions offers 24/7 call recording by integrating with OAISYS Tracer, dvsAnalytics Encore, or Red Box Quantify call recording software.

Using the OAISYS Tracer, Business Reporter can optionally record calls based on pre-defined schedules. With OAISYS Tracer, call recording can be temporarily started or stopped in Contact Center Client to ensure customer confidentiality or to create a record of volatile or sensitive calls. See "Recording calls" on page 281.

Indirect recording is not supported with Contact Center Client Softphone.

When a call recording is complete, a hyperlink to the recording is appended to call-specific Lifecycle reports. For more information about Lifecycle reporting, see the *Business Reporter Reports Guide*.

#### **NOTE:**

- OAISYS Tracer, dvsAnalytics Encore, and RedBox Quantify call recording integration is supported for use with the Mitel 3300 ICP only.
- Before you can configure call recording in YourSite Explorer, you must configure your OAISYS Tracer, dvsAnalytics Encore, or RedBox Quantify by following the recommended installation and configuration guidelines included with these products. Contact your OAISYS, dvsAnalytics, or RedBox approved vendor for all setup and troubleshooting issues.
- Contact OAISYS, dvsAnalytics, or RedBox for information on integrating call recording with the Mitel Secure Recording Connector.
- Ensure call recordings are working properly for all configured extensions before activating the call recording integration in YourSite Explorer.
- If you use the Mitel Secure Recording Connector and Contact Center Softphone, you must enter the IP addresses of the Mitel Secure Recording Connector in YourSite Explorer.

To configure OAISYS call recording integration

1. In YourSite Explorer, under **Enterprise**, click **Media servers**.
2. Select a media server from the list.
3. Click the **Call recording options** tab.
4. Under **Call recording provider options**
  - After **Recorder type**, select **OAISYS** from the drop-down list.
  - After **OAISYS server address**, type the IP address of the call recorder.
  - After **OAISYS server port**, specify the port of the call recorder.
  - After **Username**, type the username to log into the call recorder.
  - After **Password**, type the password to log into the call recorder.

5. Click **Save**.

Call recordings are enabled and can be accessed from hyperlinks in call-specific Lifecycle reports.

To configure dvsAnalytics Encore

1. In YourSite Explorer, under **Enterprise**, click **Media servers**.
2. Select a media server from the list.
3. Click the **Call recording options** tab.
4. Under **Call recording provider options**
  - After **Recorder type**, select **dvs Encore** from the drop-down list.
  - After **Encore Web API address**, type `http://<Encore Server IP address>/WebAPI/ECAPI.svc`
5. Click **Save**.

Call recordings are enabled and can be accessed from hyperlinks in call-specific Lifecycle reports.

To configure Red Box Quantify

1. In YourSite Explorer, under **Enterprise**, click **Media servers**.
2. Select a media server from the list.
3. Click the **Call recording options** tab.
  - After **Recorder type**, select **Red Box Recorder**.
  - After **Recorder IP Address**, type the IP address of the call recorder.
  - After **Username**, type the username of the call recorder
  - After **Password**, type the password of the call recorder.
4. Click **Save**.

Call recordings are enabled and can be accessed from hyperlinks in call-specific Lifecycle reports.

## MANAGING HISTORICAL MEDIA SERVERS

Media servers that are no longer in active use can be set as historical to retain data on the media servers associated devices. Historical data is retained on the media server but no new data is collected. When a media server is set to historical, it terminates all active licenses for devices associated with that media server. These historical devices are preserved for historical reporting.

**NOTE:** The SX-200, Axxess, and 5000 media servers are not supported with Version 7.1, except as historical media servers. When upgrading to Version 7.1, SX-200 media servers, along with their associated extensions, agents, agent groups, queues, trunks, and trunk groups, are set to historical. Axxess and 5000 media servers must be marked as historical before upgrading to Version 7.1 to retain historical data.

Associated devices affected by setting a media server to historical include

- Agents
- Agent groups
- Queues
- Extensions
- Hunt groups

A historical media server is enabled for

- Historical reporting for associated devices
- Forecasting
- ACD and SMDR Inspector functionality

Once made historical, a media server cannot be returned to active service. A historical media server cannot be edited and can only be deleted.

To set a media server as historical

1. Under **Enterprise**, click **Media Servers**.
2. Select a media server
3. In the **General** tab, click **Make Historical**.
4. Click **OK**.

To delete a historical media server

1. Under **Enterprise**, click **Media Servers**.
2. Select a historical media server.
3. Click **Delete**.

## DELETING MEDIA SERVERS

**CAUTION:** If you delete a media server, you will delete all of the devices associated to the media server.

To delete a media server

1. In **YourSite Explorer**, click **Media servers**.
2. Select the media server you want to delete.
3. Click **Delete**.  
A window opens with the message 'All of the data associated with this media server will be permanently deleted. Are you sure you want to delete this media server?'
4. Click **OK**.

## CONFIGURING YOURSITE DATABASE DEVICES

You can configure the YourSite database in the following ways:

- **Synchronization**  
If you have a 3300 ICP, you can synchronize the YourSite database with the trunks and extensions programmed on the telephone system using Synchronization. You can perform Synchronization on individual telephone systems or all telephone systems in your enterprise. See "Configuring the YourSite database using synchronization" on page 79.
- **Active Directory synchronization**  
If you specified the Windows Authentication model during the Contact Center Management / Business Reporter Configuration Wizard, you can synchronize your system with Active Directory at any time from within YourSite Explorer. When you run Active Directory synchronization, employees in YourSite Explorer are synchronized with users in Active Directory groups. If you use Windows Authentication and Active Directory synchronization, users will not be prompted to authenticate themselves with a username and password when they start Contact Center Solutions and Business Reporter applications.
- **Quick Setup**  
To add a range of extensions, trunks, DNIS numbers, and Account Codes, you can use Quick Setup to configure your system. See "Configuring devices and device groups using Quick Setup" on page 88.
- **Manual configuration**  
You can choose to configure devices manually. See "Configuring devices manually" on page 96.

## CONFIGURING THE YOURSITE DATABASE USING SYNCHRONIZATION

Synchronization functionality differs depending on the telephone system in use.

### Synchronization for the 3300 ICP

YourSite Explorer enables you to configure and write 3300 ICP queues, agent skill groups, and agents (including skill level), and validate/edit contact center related Class of Service, Class of Restriction, System Options, and SMDR Options settings using synchronization.

This enhanced functionality enables you to configure Contact Center Solutions applications from your desktop. Validation of device and assignment form settings ensures quality data collection and accurate reporting. After running synchronization, Class of Service and Class of Restriction settings programmed in the telephone system can be edited in YourSite Explorer.

During synchronization, administrators can preview device changes, identify devices that should be excluded from synchronization, and manage the business rules related to synchronization of device names and associated device creation.

While synchronizing data, the telephone system continues to operate without experiencing downtime. After synchronization is complete, the Contact Center Client applications open on agent desktops will be refreshed with a device update. A report is then generated to summarize the results of synchronization. We highly recommend that you correct invalid programming, as detailed on the Telephone system settings tab of media servers in YourSite Explorer, immediately.

In Mitel 3300 release MCD 4.0 SP4, configuring your network using SDS Directory synchronization mode is optional. Customers can continue to operate in the Classic mode, with OPS Manager if operating in a clustered environment. In Mitel 3300 release MCD 5.0 or greater, configuring your network using SDS Directory synchronization mode is mandatory for all sites operating with 20 nodes or less.

### **Classic mode synchronization**

Using YourSite Explorer and the 3300 ICP in Classic mode, you can add, edit, and delete standard agents, agent groups, and queues, as well as ACD related Class of Service (COS), Class of Restriction (COR), SMDR Options, and System Options. When not in a clustered environment, you can also continue to add hot desk agents and all synchronization device names. Adding hot desk agents in a clustered environment requires the use of Mitel OPS Manager.

### **SDS Directory synchronization mode**

Using YourSite Explorer and the 3300 ICP in SDS Directory synchronization mode, you can add, edit and delete standard and hot desk agents, agent groups, queues, trunks, trunk groups, and extensions, synchronize device names, as well as ACD related Class of Service (COS), Class of Restriction (COR) SMDR options and System Options in both a single site and in a clustered environment. When operating in SDS Directory synchronization mode, you can configure Network ACD queue setup on the 3300 ICP without any manual configuration previously required using Mitel OPS Manager.

#### **NOTE:**

- You can only use synchronization to synchronize the YourSite database with resilient, Network ACD, and clustered telephone systems if you are using 3300 ICP Release MCD 4.0 SP4 or greater, with the SDS Directory synchronization option enabled on all of the telephone systems in your enterprise.
- If you edit the feature access code used for silent monitoring on the media server, you must also manually edit the feature access code on the telephone system. The feature access code entered in YourSite Explorer must be identical to that on the telephone system and be valid for use with silent monitoring.

### ***Preparing for synchronization***

**NOTE:** Only Mitel telephones that are programmed on the IP Multiline set assignment form will synchronize with the YourSite database. For details on the phones that are supported, please refer to your Mitel 3300 ICP documentation.

Before you perform synchronization for the 3300 ICP

- Ensure the 3300 ICP is V8.x or greater. You can only use synchronization to synchronize the YourSite database with resilient, Network ACD, and clustered telephone systems if you are using 3300 ICP Release MCD 4.0 SP4 or greater, with the SDS Directory synchronization option enabled on all of the telephone systems in your enterprise.

- Ensure that you have completed programming the 3300 ICP and created a username and password for synchronization (on the 3300 ICP User Authorization Profile form). The 3300 ICP User Authorization Profile must include Application Access and System Admin Access. Desktop Admin and Group Admin options can be disabled. These steps must be completed for all 3300 ICPs in your Enterprise.
- Ensure your MiXML service is started by navigating to the Control Panel in Windows and selecting 'MiXML'. Verify that port 18000 is entered on the Settings tab and click Start.
- Ensure that your Windows or Corporate firewall is not blocking the following ports
  - SOAP: 18000 (HTTPS)
  - UDP: 53
  - TCP: 7011
  - TCP: 22
  - TCP: 443 (SSH)
- Configure the user name and password for each of the 3300 ICP media servers in YourSite Explorer.  
See the *Business Reporter Installation Guide*.
- If you have multiple NICs on your Enterprise Server, you must specify the NIC to use for synchronizing data to the telephone system. To do this, navigate to the Control Panel in Windows and select 'MiXML'. After NIC IP Address specify the primary NIC to be used to send back data to the telephone system.
- If you are running 3300 ICP Release 9.x or earlier, resilient Network ACD, and clustered telephone systems must be programmed using OPS Manager, RDNs, and cluster element IDs. 3300 ICPs programmed with Remote Agent Subgroups and ARS are not supported. Contact Center Management clusters and cluster element IDs must match what is programmed on the telephone system.

### *Specifying synchronization settings*

YourSite Explorer enables you to specify the synchronization settings, read options, and write options used by synchronization. When you select a media server in YourSite Explorer, the following synchronization options are available from the ribbon, on the Telephone system tab:

- **Settings**
  - **Disabled**  
This option will fully disable synchronization.
  - **Read**  
This option will read devices programmed on your telephone systems and synchronize them with the YourSite database.
  - **Read/Write**  
This option will read the devices programmed on your telephone systems and synchronize them with the YourSite database and enable devices programmed in YourSite Explorer to be written to the telephone systems.
- **Read Options**
  - **Create employees with new agent**  
For every new agent added to the YourSite database, a new employee will be created and associated with the agent.

- **Create employees with new extensions**  
For every new extension added to the YourSite database, a new employee will be created and associated with the agent.
- **Use telephone system device names**  
Override device names programmed in YourSite Explorer with the device names configured on the telephone system.
- **Default employee license**  
The default employee license for Business Reporter only customers is None.
- **Default queue business hour schedule**  
Select the business hour schedule to be applied when synchronizing queues added on the telephone system.
- **Write Options**
  - **Update telephone directory names**  
Override telephone directory names with agent, agent group, queue, and extension names configured in YourSite Explorer.  
**NOTE:** If you use MCD 4.0 with Enterprise Manager (OPS Manager) configured, we recommend you disable the 'Update telephone directory names' option.

## *Performing synchronization*

There are two ways to perform synchronization:

- **Full synchronization**  
Running full synchronization will synchronize the devices programmed on the telephone system and enable you to review all devices, and optionally exclude any devices, before committing changes to YourSite Explorer.
- **Telephone system settings synchronization**  
Running telephone system settings synchronization will read the current telephone system settings and enable you to view any errors or warnings related to the telephone system configuration.

### **NOTE:**

- You can only use synchronization to synchronize the YourSite database with resilient, Network ACD, and clustered telephone systems if you are using 3300 ICP Release 10.0 (MCD 4.0 SP4) or greater, with the SDS Directory synchronization option enabled on all of the telephone systems in your enterprise.
- As a best practice, we recommend all new installations run Full synchronization to ensure the telephone systems in your enterprise are synchronized with the YourSite database and that there are no critical telephone system programming errors.
- You must program your 3300 ICPs and perform synchronization before you can configure telephone system assignment form options in YourSite Explorer.
- We recommend you do not exchange the reporting number of one device with that of another device.
- Synchronization will not synchronize a device being added to the YourSite database with the telephone system if the device has the same reporting number as an existing device with a different dialable number.



- If you run synchronization for a 3300 ICP containing a queue added on the telephone system, that queue is assigned your default queue business hour schedule. If you have not specified a default queue business hour schedule, the default 24/7 schedule is assigned to the queue. For information on setting the default queue business hour schedule, see "Specifying synchronization settings" on page 81.
- If you are synchronizing a single telephone system, agents and queues must be programmed on the same telephone system. Single node synchronization can disassociate agents and queues if agents and queues reside on separate telephone systems.
- If you are running 3300 ICP Release 9.x or earlier and you synchronized your network ACD assignments and/or resilient agents using OPS Manager, you must synchronize all of the 3300 ICPs in your enterprise. Otherwise, agent group and queue group associations will be lost.

To perform full synchronization

1. In YourSite Explorer, under **Enterprise**, click **Media servers**.
2. Select a 3300 ICP media server from the list.
3. Click the **Telephone system** tab.
4. In the ribbon, specify the settings to use with synchronization.  
See "Specifying synchronization settings" on page 81.
5. In the ribbon, click **Run**.  
The Synchronization window opens.
6. Select the media servers to synchronize.
7. Ensure **Full synchronization** is selected.
8. If this is the first time you have run synchronization, click **Synchronize** and continue to step 11. If you have already run full synchronization, click **Next**.
9. Optionally, select the telephone system media servers and devices to include with synchronization.  
All media servers and devices are selected by default.
10. Specify how you would like to proceed with synchronization:
  - **Synchronize**—selecting this option will synchronize the devices programmed on the telephone system and enable you to review all entries and optionally exclude any devices before committing them to YourSite Explorer. If you select this option, continue to step 11.
  - **Save settings**—selecting this option will save the device settings you specified to be used for the next scheduled or on-demand synchronization. If you select this option, the synchronization window will close.
  - **Cancel**—selecting this option will cancel the synchronization. No changes will be made to the YourSite database or the telephone systems. If you select this option, the synchronization window will close.
  - **Auto commit**—selecting this option and clicking Synchronize will synchronize the devices programmed on the telephone systems and automatically commit them to YourSite Explorer. There will be no opportunity for you to review the entries and optionally exclude any devices before committing them to YourSite Explorer.

11. When the synchronization report displays, you have the following three options:

- **Commit**—selecting this option will commit the specified changes and synchronize telephone system devices with YourSite Explorer.
- **Cancel**—selecting this option will cancel the specified changes. No devices will be synchronized and the synchronization window will close.
- **Edit**—selecting this option will rerun synchronization and enable you to modify the devices to be included in synchronization. If you select this option, return to step 9.

If this is the first time you have run synchronization, any telephone system errors and warnings will display in the synchronization report. You can correct any errors or warnings found in this report by clicking Edit, clicking the Telephone system settings tab and changing the telephone systems settings to the recommended settings. If this is not the first time you have run synchronization, the synchronization window will close once it is complete and you can review any telephone system setting errors and warnings on by selecting a media server in YourSite Explorer and clicking the Telephone system settings tab.

To perform telephone system synchronization

1. In YourSite Explorer, under **Enterprise**, click **Media servers**.
2. Select a 3300 ICP media server from the list.
3. Click the **Telephone system** tab.
4. In the ribbon, specify the settings to use with synchronization. See "Specifying synchronization settings" on page 81.
5. In the ribbon, click **Run**.  
The Synchronization window opens.
6. Select the media servers to synchronize.
7. Ensure **Telephone system settings** is selected.
8. Click **Synchronize**.  
The Synchronization report window opens and displays the progress and status of the synchronization. Once synchronization is complete, any telephone system errors and warnings will display in the synchronization report. You can correct any errors or warnings found in this report by clicking Edit, clicking the Telephone system settings tab and changing the telephone systems settings to the recommended settings.

### *Ring Group synchronization*

YourSite Explorer can synchronize ring groups with your telephone system, but there are several exclusions. Business Reporter supports only Prime DN's as members of the ring group. When synchronizing with the telephone system, YourSite Explorer only synchronizes with Prime DN members of ring groups. If your synchronization settings are set to Read, synchronization skips unsupported members on the telephone system when synchronizing with YourSite Explorer. If your synchronization settings are set to Read/Write, then synchronization will delete unsupported members during writeback to the telephone system.

Ring groups and their attributes and members can be added, modified, and deleted in YourSite Explorer, but the following ring group attributes are not synchronized into YourSite Explorer:

- Local-only DN
- Ring Group Type
- Predictive Overflow
- Average Call Duration Minutes/Seconds
- Absent/Present for members

## ACTIVE DIRECTORY SYNCHRONIZATION

You can synchronize your system with Active Directory at any time from within YourSite Explorer. Active Directory is a directory service created by Microsoft that is used for managing a domain. Active Directory Synchronization will align Active Directory security groups and users with Contact Center Solutions and Business Reporter employees and employee groups within selected organizational units.

At any time, you can optionally re-synchronize or reset all client computers running Contact Center Solutions and Business Reporter applications and refresh them with the latest configuration changes. Re-synchronizing will send a delta of the latest configuration changes to client computers, while resetting will completely drop client computer configurations and send the latest configurations from YourSite Explorer.

When you run Active Directory synchronization, employees and employee groups in YourSite Explorer are synchronized with users in Active Directory groups. Existing employees can also be associated with specific Active Directory users.

To run Active Directory synchronization

1. In YourSite Explorer, under **YourSite**, click **Enterprise** or **Employees**.
2. On the ribbon, click **Active Directory**.
3. Under **Sync frequency (hh:mm)**, select how often you want automatic synchronization to occur.
4. Click **Select Sync paths**.  
The Select paths to sync window opens.
5. Click > or < to add or remove Active Directory entities from the Active Directory tree on the left to the selected items list on the right and click **OK**.  
The list of selected items on the right includes the Active Directory entities that will be synched.
6. Under **Security Role**, click the **Browse** button and select a default security role to apply to newly created employees.
7. Click **OK**.
8. Under **Sites**, click the **Browse** button and select a default site to apply to newly created employees.
9. Click **OK**.
10. Click **Run**.  
Active Directory synchronization is initiated and pertinent information is updated in YourSite Explorer.

To send recent configuration changes to client computers

1. In YourSite Explorer, under **YourSite**, click **Enterprise** or **Employees**.
2. On the ribbon, click **Tools**.
3. Click **Re-synchronize clients**.

To completely reset client computers with the latest YourSite database configuration information

1. In YourSite Explorer, under **YourSite**, click **Enterprise** or **Employees**.
2. On the ribbon, click **Tools**.
3. Click **Reset clients**.

To associate an existing employee with an Active Directory user.

1. In YourSite Explorer, under **YourSite**, click **Employee**.
2. Select the employee you want to associate with an Active Directory user.
3. On the ribbon, click **Active Directory**.
4. Click **Pick user**.
5. Select a user from the Active Directory tree and click **OK**.
6. Click **Save**.

## EDITING TELEPHONE SYSTEM ASSIGNMENT FORMS

After you run Synchronization for the 3300 ICP in YourSite Explorer, you can edit a subset of contact center related 3300 ICP SMDR Options, Class of Service, and Class of Restriction assignment forms. Any changes made to the telephone system assignment forms in YourSite Explorer are written to the telephone system when a user clicks Save.

After running synchronization, if the 3300 ICP System options, SMDR options, Class of Service options, or Class of Restriction assignment forms are incorrectly configured, alerts will display describing modifications that need to be made to achieve accurate telephone system settings. Alerts are ranked according to severity to display in the following order of importance: errors, warnings, and then informational messages. Only one message can display at a time in the information bar.

In addition, you can automatically repair certain configuration errors by clicking the Fix it button in the information bar where errors, warnings, and information messages display. If the alert that is currently displayed in the information bar is not able to be resolved by the Fix it button, the button will not display. If the Fix it button displays, clicking it will automatically fix the warning or error that is displaying in the information bar as well as fixing any other current warning or error that is enabled to be automatically repaired.

**NOTE:** You must have read/write capabilities enabled in YourSite Explorer before running synchronization if you want to receive these alerts. See "Specifying synchronization settings" on page 81.

### *Editing SMDR options*

Using YourSite Explorer, you can edit a subset of contact center related SMDR options. YourSite Explorer displays the recommended value for these SMDR options.

To edit SMDR Options

1. In YourSite Explorer, in the left pane, click **YourSite**.
2. Under **Enterprise**, click **Media servers**.
3. Under **Media servers**, select a 3300 ICP media server.
4. Click the **Telephone system settings** tab.
5. In the left pane, click **SMDR options**.
6. Specify the SMDR options.
7. Click **Save**.

### *Editing Class of Service options*

Using YourSite Explorer, you can edit a subset of contact center related Class of Service options. YourSite Explorer displays the recommended value for these Class of Service options.

#### **NOTE:**

- When first provisioning or changing Class of Service Work Timer values, you must synchronize with your telephone system. See "Performing synchronization" on page 82.
- If you are using ring groups, it is recommended that you configure a default Class of Service for ring groups.

To edit Class of Service options

1. In YourSite Explorer, in the left pane, click **YourSite**.
2. Under **Enterprise**, click **Media servers**.
3. Under **Media servers**, select a 3300 ICP media server.
4. Click the **Telephone system settings** tab.
5. In the left pane, click **Class of Service**.
6. Under **Name**, select the Class of Service to edit.
7. In the right pane, after **Default type**, select a default class of service. Alternatively, select **None** and, after **Comment**, type a description for the Class of Service.
8. Specify the remainder of system options for each Class of Service.  
**NOTE:** Class of Service Work Timer durations are dependent upon your telephone system.
  - MCD 5.0 and greater – 4 hours maximum
  - MCD 4.x or earlier – 10 minutes maximum
9. Click **Save**.

## *Editing Class of Restriction options*

Using YourSite Explorer, you can edit a subset of contact center related Class of Restriction options.

To edit Class of Restriction options

1. In YourSite Explorer, in the left pane, click **YourSite**.
2. Under **Enterprise**, click **Media servers**.
3. Under **Media servers**, select a 3300 ICP media server.
4. Click the **Telephone system settings** tab.
5. In the left pane, click **Class of Restriction**.
6. Under **Number**, select the Class of Restriction to edit.
7. After **Do you want this Class of Restriction to be the default setting**, click **Yes** or **No**.
8. After **Classes of restriction for the group**, enter the Class of Restriction numbers to include in the group.  
A range of numbers may be specified. Separate numbers using commas or dashes. For example, 1 through 9 may be entered as 1-9 or a combination of individual numbers and ranges may be entered as 1,2,3,7-10,13.  
**NOTE:** Class of Restriction numbers must be entered in ascending order within each group.
9. Click **Save**.

## CONFIGURING DEVICES AND DEVICE GROUPS USING QUICK SETUP

You can use Quick Setup to add ranges of the following devices and device groups:

- Employee groups and employee divisions
- Extensions, extension groups, and extension divisions
- Trunks and trunk groups
- DNIS and DNIS groups
- Account Codes and Account Code groups
- Subscriber groups

### *Extension Quick Setup*

To add a series of extensions

1. In YourSite Explorer, in the left pane, click **YourSite**.
2. Under **Devices**, click **Extensions**.
3. Click **Quick Setup**.
4. In the **Active number from** and **Active number to** boxes, type a range of device numbers.
5. If you want to add a prefix or postfix to this range of device numbers, after **Name prefix** and/or **Name Postfix** type the prefix and/or postfix.
6. On the **General** tab, select a media server and a failover media server for the extension.
7. To enable Business Reporter reporting for the extension, select the **Cost this extension** check box.

8. If you want to create an employee for each extension, on the **Employee associations** tab, select the **Create an employee ID for each extension** check box.  
**NOTE:** Select this check box only if you have not already added employee IDs to the database.
9. After **Start the employee IDs at**, type the first employee ID to associate to the extension number range.
10. After **Increment the employee IDs by**, type the increment by which the employee IDs will increase.
11. Click **Run**.

### *Trunk Quick Setup*

To add a series of trunks

1. In YourSite Explorer, in the left pane, click **YourSite**.
2. Under **Devices**, click **Trunks**.
3. Click **Quick Setup**.
4. In the **Active number from** and **Active number to** boxes, type a range of device numbers.
5. To add a prefix or postfix to this range of device numbers, after **Name prefix** and/or **Name postfix** type the prefix and/or postfix.
6. On the **General** tab, select a media server.
7. Click **Run**.

### *Trunk group Quick Setup*

**NOTE:** If you cost calls based on trunk groups, IP trunks from each media server must be added to each trunk group.

To add a series of trunk groups

1. In YourSite Explorer, in the left pane, click **YourSite**.
2. Under **Devices**, click **Trunk groups**.
3. Click **Quick Setup**.
4. In the **Active number from** and **Active number to** boxes, enter a range of device numbers.
5. To add a prefix or postfix to this range of device numbers, after **Name prefix** and/or **Name postfix** type the prefix and/or postfix.
6. On the **General** tab, after **Media server**, click the **Browse** button and select the media server associated with the trunk.
7. If this trunk group uses an intra switch trunk, select the **Intra switch** check box.
8. If you do not want to cost calls using this trunk, select the **Do not cost calls** check box.
9. Click **Run**.

### *DNIS Quick Setup*

To add a series of DNIS

1. In YourSite Explorer, in the left pane, click **YourSite**.
2. Under **Devices**, click **DNIS**.
3. Click **Quick Setup**.

4. In the **Active number from** and **Active number to** boxes, type a range of device numbers.
5. To add a prefix or postfix to this range of device numbers, after **Name prefix** and/or **Name postfix** type the prefix and/or postfix.
6. On the **General** tab, after **Associate the devices to this media server**, select a media server.
7. After **Short Abandon**, type the Short Abandon threshold for the DNIS.
8. After **Service Level**, type the Service Level time for the DNIS.
9. Click **Run**.

### *Account Code Quick Setup*

To add a series of Account Codes

1. In YourSite Explorer, in the left pane, click **YourSite**.
2. Under **Devices**, click **Account Codes**.
3. Click **Quick Setup**.
4. In the **Active number from** and **Active number to** boxes, type a range of device numbers.
5. To add a prefix or postfix to this range of device numbers, after **Name prefix** and/or **Name postfix** type the prefix and/or postfix.
6. To create an employee for each Account Code, on the **Employee Associations** tab, select the **Create an employee ID for each Account Code** check box.  
**NOTE:** Select this check box only if you have not already added employee IDs to the database.
7. After **Start the employee IDs at**, type the first employee ID number to associate to the Account Code range.
8. After **Increment the employee IDs by**, type the increment by which the employee ID numbers will increase.
9. Click **Run**.

### *Device group Quick Setup*

To add a series of employee, extension, DNIS, or Account Code groups or divisions

1. In YourSite Explorer, in the left pane, click **YourSite**.
2. Under **Devices**, click the device name.
3. Click **Quick Setup**.
4. In the **Active number from** and **Active number to** boxes, type a range of device numbers.
5. To add a prefix or postfix to the range of device numbers, after **Name prefix** and/or **Name postfix** type the prefix and/or postfix.
6. Click **Run**.



## *Subscriber group Quick Setup*

You must configure subscribers first before you configure subscriber groups.

To add a series of Subscriber groups

1. In YourSite Explorer, in the left pane, click **Business Reporter**.
2. Under **Business Reporter**, click **Subscriber Groups**.
3. Click **Quick Setup**.
4. In the **Active number from** and **Active number to** boxes, enter a range of device numbers.
5. To add a prefix or postfix to this range of device numbers, after **Name prefix** and/or **Name postfix** type the prefix and/or postfix.
6. Click **Run**.

## CONFIGURING DEVICES USING .CSV FILES

You can import devices to YourSite Explorer using comma-separated value (.csv) files. The following device types are currently supported for use with the YourSite Explorer .csv import tool: employees, employee groups, employee divisions, extensions, extension groups, extension divisions, trunks, trunk groups, DNIS, DNIS groups, call rates, and Account Codes.

A .csv file is used for the digital storage of data structured in a table of lists form, where each associated item (member) in a group is in association with others also separated by the commas or tabs of its set.

There are two ways to create .csv files: Notepad or Microsoft Excel. We recommend making .csv files in Excel, as adding and editing a large number of entries at once using auto-fill functions is much simpler and more convenient than using Notepad.

Alternatively, you can also import tabbed delimited text files created in Excel. Tabbed delimited text files are almost identical to .csv files, but use tabs to differentiate data fields instead of commas.

**NOTE:** When creating .csv files, you must save the file as either a .csv or .txt file. Simply renaming an Excel file or changing a file type extension to .csv will not work and you will be unable to import device data into YourSite Explorer.

Figure 8 and Figure 9 provide two examples of how .csv files can be formatted. The following figures display Microsoft Excel .csv formatting and Notepad .csv formatting. Both .csv examples contain the following data: first name, last name, employee login ID, and media server.

**NOTE:** To import configuration options that display in the YourSite Explorer grid view as a check box, you must enter True or False as the field data.

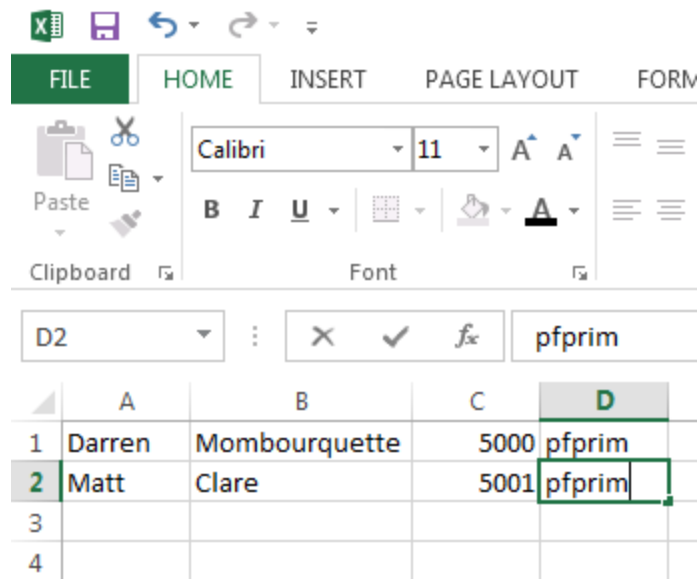


Figure 8: Microsoft Excel .csv formatting example

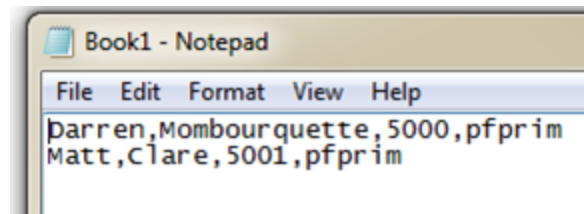


Figure 9: Notepad .csv formatting example

### *Fields required for successful .csv imports*

Table 3 details the fields that are required in order to successfully import devices into YourSite Explorer using a .csv file.

**NOTE:** Data must be entered in .csv files using the exact order detailed in Table 3 below. Failure to import data in the order specified will result in import errors.

**Table 3: Mandatory device fields for .csv imports**

DEVICE	MANDATORY FIELDS	OPTIONAL FIELDS
Employees	Reporting number, Last name, First name	Username, Password, Email address, Middle name, Suffix, Scheduling license, Nickname, Full time, Site, Is a supervisor, Activated, Supervisor, Security role, Use employee email for report distribution, Fax number, Hire date, Preferred printer, Birth date, Print locally, Business phone number, Emergency contact phone number, Emergency contact relationship, Emergency contact name, Country, ZIP or postal code, Street address, City, State or province, Pager number, Phone number, Is active, Employee license, Supervisor license, Phone type license, Integrated client license, Licensed for Screen Pop
Employee groups	Name, Reporting number	N/A
Employee divisions	Name, Reporting number	N/A
Queue groups	Name, Reporting number	Is Unified, Is Virtual
Extensions	Name, Reporting number, Media server	Extension type, Failover media server, Server Name, Workflow, Real-time, MiTAI enabled, Licensed, Notes, Is general business hot desking
Extension groups	Name, Reporting number	N/A
Extension divisions	Name, Reporting number	N/A
Trunks	Name, Reporting number, Media server	N/A
Trunk groups	Name, Reporting number	Media server, Do not cost calls, Carrier plan, Intra switch
DNIS	Name, Reporting number, Media server	Short Abandon, Service Level, Carrier plan, Call type, Call rate
DNIS groups	Name, Reporting number	N/A
Account Codes	Name, Reporting number	Use as classification code

Table 3: Mandatory device fields for .csv imports (continued)

DEVICE	MANDATORY FIELDS	OPTIONAL FIELDS
Do Not Disturb Reason Codes	Name, Reporting number	N/A
Call types	Name	N/A
Rates	Name	Cost boundary percent surcharge, cost boundary duration, boundary crossing surcharge, surcharge per call, round to cost interval, CostPerMinute, CostInterval, FirstCost, FirstCostInterval, SubsequentCostIncrement, SubsequentCostInterval
Subscribers	Name, Reporting number,	Subscriber plan
Subscriber groups	Name, Reporting number	N/A

## IMPORTING CALL RATES AND DIGIT PATTERNS

When importing call rates and digit patterns, please ensure you follow the best practices:

- Other than Rate name, no fields are mandatory
- Charge bands have the following fields for import:
  - Cost Per Minute (decimal value)
  - Cost Interval (time in seconds or hh:mm:ss format)
  - First Cost (decimal value)
  - First Cost Interval (time in seconds or hh:mm:ss format)
  - Subsequent Cost Increment (decimal value)
  - Subsequent Cost Interval (time in seconds or hh:mm:ss format)
- In order to import rates and charge bands, you must have configured a default timeslot that covers a 24/7 time period
- Ensure there are no gaps or overlaps in times or the .csv import tool will not complete successfully
- Time durations can be imported in either hh:mm:ss or second format, but they must be consistent, and a single .csv file cannot contain both time duration formats

- Do not include Cost Per Minute along with First Cost or Subsequent Cost Increment in the same .csv file
- Do not include Cost Interval along with First Interval or Subsequent Cost Interval in the same .csv file
- When importing digit patterns, you must select the correct level on the digit pattern tree in YourSite Explorer before importing device data

For more information and sample .csv files, browse to <installation directory>\Program Files (x86)\prairieFyre Software Inc\CCM\Support\Business Reporter CSV\Samples For Rate With Charge Band.

### *Importing a range of devices using a .csv file*

Before you attempt to import a device using a .csv file, ensure

- The .csv file contains data for all of the fields required to save a device in YourSite Explorer as detailed in the following table.
- If a device requires a dependency to be specified, for example specifying a media server is required in order to save an employee, the dependency must already exist in YourSite Explorer. The Import Wizard cannot create new dependencies and will fail if the dependency does not already exist in the database.

To import a range of devices using a .csv file

1. In YourSite Explorer, under **Devices**, click the name of the device you will add using a .csv file.
2. Click **Import**.
3. After **Select file type**, specify whether the .csv file uses **Comma separated values** or **Tab separated values**.
4. After **Select file**, click **Browse** and specify the location of the .csv file.
5. Under **Options**, specify how the Import Wizard will handle duplicate items.  
If duplicates are found:
  - **Overwrite entries if duplicates are found** will use the .csv file as the master and overwrite duplicate entries in the YourSite database with data in the .csv file.
  - **Skip duplicate entries during import** will retain data configured in YourSite Explorer as the master and import any new data entries from the .csv file into the YourSite database.
  - **Do not import if duplicates are found** will scan the .csv and YourSite database for duplicates. If duplicates are found in either the .csv or the YourSite database, the import is cancelled and no data is imported to the YourSite database.
6. Click **Next**.
7. On the **Field Mappings** window, map the fields in the **Available columns** list to the **Selected columns** list using the arrow buttons, so they display in the same order as they do in your .csv file.
8. Click **Next**.
9. When the import has completed, click **Finish**.  
**NOTE:** If the import fails, the Import Wizard will notify you of whether the YourSite database or .csv file contained the duplicate(s) and which row(s) of the .csv file contained the error(s) that resulted in the failure. Fixing these errors will allow devices to be successfully imported.

## CONFIGURING DEVICES MANUALLY

**CAUTION:** Print a copy of your telephone system assignment forms to use as a guide for programming YourSite Explorer. The numbers you enter in YourSite for extensions, trunks, and Account Codes must be identical to those of the telephone system.

### *Adding employees*

You add employees to the YourSite database so you can generate reports on employee activities. When you add employees, you must add a user name and password for employees who need to use CCMWeb, YourSite Explorer, and Contact Center Client. If you want to generate reports on employee groups, you must add them to the database and associate employees with them.

Adding an employee requires you to:

- Add an employee
- Configure general employee information
- Configure employee licensing
- Modify employee Workload  
**NOTE:** Modifying employee Workload is only required if the employee is licensed for Multimedia Contact Center.
- Manage the media types an employee can handle
- Configure user account information

Optionally, you can:

- Assign non-ACD extensions and Account Codes
- Configure employee personal information
- Configure employee scheduling preferences for Workforce Scheduling

To add an employee

1. In YourSite Explorer, in the left pane, click **YourSite=>Employees**.
2. Click **Add**.  
Continue to "Configuring general employee information" on page 96.

### *Configuring general employee information*

The following procedures explain how to:

- Configure general information for an employee
- Configure Lync attributes for an employee  
**NOTE:** Lync attributes are only available if you have Lync Server installed.

The following procedures take place in YourSite=>Employees.

To configure general information for an employee

1. Select an employee and click the **General** tab.
2. After **First name**, type the employee's first name.  
**NOTE:** Changes to the first name will carry over to any of the employee's associated agents and extensions.
3. Optionally, after **Middle name**, type the employee's middle name or initial.
4. After **Last name**, type the employee's last name.  
**NOTE:** Changes to the last name will carry over to any of the employee's associated agents and extensions.
5. Optionally, after **Suffix**, type the employee name suffix.
6. Optionally, after **Nickname**, type the employee's nickname.  
**NOTE:** In Multimedia Contact Center, nicknames may be used in chat sessions with customers.
7. Optionally, after **Activated**, enter the date the employee became an active part of the enterprise.  
By default, the activated date is set to the current date.  
**NOTE:** You must provide the date the employee became an active part of the enterprise if you want to generate administrative employee reports, or if you have Workforce Scheduling and will schedule employees based on seniority, or will manage time off entitlements and business rules based on time off allocation.
8. After **Employee ID**, enter a unique employee ID number for the employee.
9. After **Email**, enter the employee's email address.  
**NOTE:** If the employee will use Contact Center Chat with Lync, you must enter the Lync SIP email address in the email field.
10. Click **Save**.
11. If this is a new employee and you are using Microsoft Lync Server, continue to the procedure below, otherwise continue to "Configuring Employee Licensing" on page 97.

### *Configuring Employee Licensing*

The following procedures explain how to:

- Configure employee licensing for Enterprise Edition
- Configure employee licensing for Business Edition
- Configure employee licensing for Workgroup Edition

The following configuration takes place in YourSite=>Employees.

To configure licensing information for an employee.

1. Select an employee and click the **Licensing** tab.
2. Under **Employee License**, select **None**.
  - A designation of **None** enables the employee to run Business Reporter employee and extension reports on employees who are associated with costed extensions. See "Adding extensions" on page 114. If this is a non-ACD user, when configured with an Integrated Client license, the user will have access to CCMWeb and Contact Center Client for Contact Center PhoneSet Manager. Associated extensions can be viewed in

real time, either for general business purposes or Business Reporter (if associated extensions are configured to be call costed).

**CAUTION:** If data exists for an employee who was previously licensed but is currently unlicensed, that data can be accessed in reports. However, if a summarization is done after the employee is no longer licensed, there is a risk that the collected data could be lost.

**NOTE:** Basic, Standard, Advanced, and Premium employee licenses are only available to Business Reporter customers who also own Contact Center Enterprise Edition or Workgroup Edition. Business Reporter customers who also own Contact Center Business Edition choose between Reporting or Desktop employee licensing.

- **Basic employee:** is reported on historically, viewed in real time, and has access to real-time monitors. Users also have access to CCMWeb My Options page to configure user options, such as language preference.
- **Standard employee:** includes all Basic employee features and functionality and has access to Interactive Contact Center, Enterprise Presence and Chat, and Contact Center PhoneSet Manager.
- **Advanced employee:** includes all Standard employee features and functionality as well as Contact Center Management and Interactive Contact Center resiliency (requires a Network license), choice of CTI Toolkit Client, or Salesforce Client (requires a Salesforce.com Connector), and Contact Center Screen Pop.
- **Premium employee:** includes all Advanced employee features and functionality plus access to Ignite and multimedia routing for all media types.

**NOTE:** Only one employee license can be selected for each employee. You cannot license an employee if no licenses remain.

3. If the employee is a supervisor, depending on licensing, under Supervisor license select from None, Advanced, or System Administrator supervisor.

- **None:** is used for general business extensions.
- **Advanced supervisor:** has access to the following: CCMWeb (reporting, forecasting, and My Options), Flexible Reporting (if a Standard Starter Pack or greater is owned), Contact Center Client for real-time monitoring, YourSite Explorer (read access only), and Ignite (review and search through the Ignite repository, excluding contacts in queue).

**NOTE:** Supervisors requiring the ability to handle contacts in Ignite or search contacts in queue require a Premium employee license.

- **System Administrator:** (or **Desktop supervisor** if you own Contact Center Business Edition and Business Reporter) has full access to Business Reporter software for the purposes of configuration and network and system administration, and access to Ignite for reviewing and searching the Ignite repository.

**NOTE:** Only one type of supervisor license can be selected for each employee.

4. Under **Phone type license**, depending on licensing, select from **Mitel desk phone** or **Softphone and/or Mitel desk phone**.

- **Mitel desk phone:** select this option if the employee will use a Mitel desk phone. This is the default option.
- **Softphone and/or Mitel desk phone:** select this option if the employee will use and is licensed for Contact Center Softphone.



**NOTE:** The Contact Center Softphone and/or Mitel desk phone option is available to Business Reporter customers who also own Contact Center Enterprise Edition with Advanced or Premium employees. Non-ACD Business Reporter employees and Contact Center Business Edition with ACD agents must select 'Licensed for Integrated Client' to have access to Contact Center PhoneSet Manager, CTI Developer Toolkit Client, or Salesforce.com Client functionality.

5. If this employee is a non-ACD employee who needs access to Contact Center PhoneSet Manager, CTI Developer Toolkit Client, or Salesforce.com Client, under **Integrated client license**, select **Licensed for integrated clients**. Integrated client license is a prerequisite for Contact Center Softphone. Salesforce.com Connector is required to activate Salesforce.com Client.
6. If this employee is a non-ACD employee who needs access to screen pop, under **Screen Pop license**, select **Licensed for Screen Pop**. Integrated Client is a prerequisite for Screen Pop. Ignite screen pop does not require this license.
7. Click **Save**.  
If this is a new employee with Premium licensing, continue to "Adding employee Workload" on page 99. Otherwise, continue to "Managing the media types an employee can handle" on page 102.

### *Adding employee Workload*

Employees handling multimedia contacts must be associated with a Workload.

When employees become licensed for Multimedia Contact Center, administrators must manually assign them a Workload. Workloads define the maximum number of contacts that multimedia agents can handle and specify which media types employees can handle concurrently.

When an employee reaches their maximum Workload for a media type, their agent is put into Make Busy with the Overloaded reason code. When an employee is Overloaded, the employee will not be offered inbound contacts for that media type. This state is automatically removed when they are no longer at their maximum Workload. Employees in Ignite who have reached their maximum concurrent contacts in one type of media are still able to pick contacts from the corresponding media's queues and receive transfers from other agents.

A default Workload is provided with Multimedia Contact Center. The default Workload can be modified, but not deleted. Figure 10 shows the default Workload.

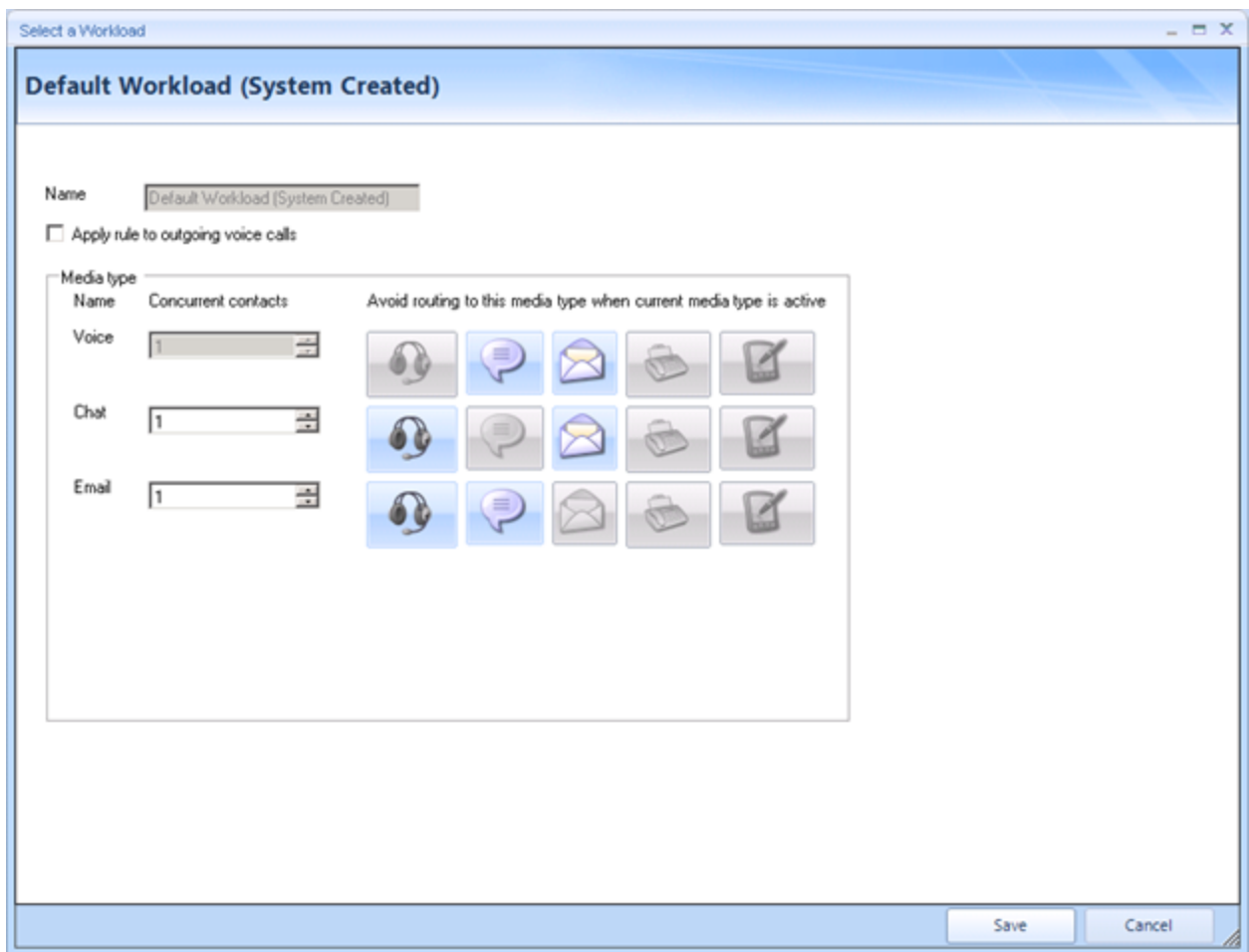


Figure 10: Default Workload

There are two areas of configuration required for Workloads for each media type:

- **Concurrent contacts:** This column of drop-down menus allows an administrator to set how many contacts of each type of media an employee can handle concurrently.
- **Avoid routing to this media type when current media type is active:** This matrix enables administrators to prevent certain media types from being offered to employees when they are handling a higher priority of media. When an employee is handling a media that filters another kind of media, the employee's agents for the blocked media are set into Make Busy. The disallowing of media is reciprocal, so that if Chat is disabled when handling Voice, then Voice would be disabled when handling Chat.

**NOTE:**

- Agents can still receive transferred contacts of the disallowed media type.
- Media icons are present for SMS media, but are disabled as this media type is not supported in Version 7.1. The icons will be enabled when support for this media type is added in a later release.

The following configuration takes place in YourSite=>Employees.

The following procedures explain how to:

- Associate a Workload to an employee
- Associate a new Workload to an employee
- Edit an existing Workload
- Delete a Workload

**NOTE:** We recommend disassociating a Workload from all employees before deleting it.

To associate an employee with a Workload

1. Select an employee and click the **Workload** tab.
2. After **Workload Descriptor**, click the **Browse** button.
3. Select a **Workload**.  
Alternatively, if you want to create a new Workload to associate to the employee, click **Add**.
4. Click **OK**.
5. Click **Save**.  
If this is a new employee, continue to "Managing the media types an employee can handle" on page 102.

To add a new Workload to an employee

1. Select an employee and click the **Workload** tab.
2. After **Workload Descriptor**, click the **Browse** button.
3. Click **Add**.
4. Type a **Name** for the Workload.
5. To apply the Workload to outgoing voice calls, select **Apply rule to outgoing voice calls**.
6. For each media type, under **Concurrent contacts**, select the maximum number of connections of that media type that can be handled concurrently.
7. For each media type, click the icons of the media you do not want employees to concurrently handle when handling that type of media.
8. Click **Save**.

To edit an existing Workload

1. Select an employee and click the **Workload** tab.
2. Click the **Browse** button.
3. Select a Workload and click **Edit**.
4. When you are done modifying the Workload, click **Save**.

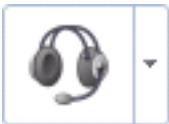


To delete a Workload

1. Select an employee and click the **Workload** tab.
2. Click the **Browse** button.
3. Click **Delete**.
4. Click **OK**.

### *Managing the media types an employee can handle*

Employees handle media through their associated agents. The General tab of an employee contains icons representing each media type that has a configured media server. When an icon is selected, an agent of that media type is automatically created and associated to the employee. If an employee is a member of an agent group that has been enabled for multimedia using the Unified Queue Group Wizard, they will automatically be enabled to handle the new media types. Table 4 contains an explanation of which icons correspond to which media type.

**Table 4: Media icons**

MEDIA TYPE	MEDIA ICON
Voice	
Chat	
Email	

**NOTE:** Employees must be licensed to handle non-voice media. See "Configuring Employee Licensing" on page 97.

When you remove the employee's ability to handle non-voice media, the employee's agents are made historical, but become active again if the employee is re-enabled to handle that non-voice media. Multimedia agents can be deleted to be removed entirely from the system.

The following procedures explain how to:

- Enable an employee to handle voice media
- Enable an employee to handle voice media using an existing agent
- Edit an employee's voice agent
- Enable an employee to handle multimedia
- Remove a voice agent from an employee
- Remove an employee's ability to handle a type of media
- Delete a multimedia agent

The following configuration takes place in YourSite=>Employees.

To enable an employee to handle voice media

1. Select an employee and click the **General** tab.
2. Under **Enable ACD for this Media Type**, click the Voice icon.
3. Optionally, change the agent's **First name**.

4. Optionally, change the agent's **Last name**.
5. Optionally, after **Agent login ID**, enter the reporting number for the voice agent.
6. After **Media server**, click the **Browse** button.
7. Select a media server and click **OK**.
8. If you want to disable real-time monitoring and data collection for this agent, select **Disable real-time monitoring and data collection on this device**.
9. If a 3300 media server was selected, after **COS**, select a Class of Service from the list.
10. If a 3300 media server was selected, optionally, after **COR**, select a Class of Restriction from the list.
11. If a 3300 media server was selected, if you want to add a failover media server, after **Failover media server**, click the **Browse** button.
12. Select a media server and click **OK**.
13. Click **Save**.

To enable an employee to handle voice media using an existing agent

1. Select an employee and click the **General** tab.
2. Under **Enable ACD for this Media Type**, click the down arrow beside the Voice icon and click **Associate existing voice agent**.
3. Select an unassigned agent and click **OK**.
4. Click **Save**.

To edit an employee's voice agent

1. Select an employee and click the **General** tab.
2. Under **Enable ACD for this Media Type**, click the down arrow beside the Voice icon and click <agent ID>=>**Edit**.
3. When you are finished editing the voice agent, click **Save**.
4. Click **Save**.

To enable an employee to handle multimedia

1. Select an employee.
2. Under **Enable ACD for this Media Type**, click the media icons to select which media this employee can handle.
3. Click **Save**.

To remove a voice agent from an employee

1. Select an employee and click the **General** tab.
2. Click the down arrow beside the Voice icon and click <agent ID>=>**Delete**.
3. Select the delete option:
  - **Make the device historical**—sets the agent as historical, but leaves it associated to this employee
  - **Disassociate the device**—disassociates the agent so it can be used with another employee
  - **Remove the device from the system**—deletes the agent
4. Click **OK**.
5. Click **Save**.

To remove an employee's ability to handle a type of media

1. Select an employee.
2. Under **Enable ACD for this Media Type**, click the enabled media icon.
3. Click **Save**.

To delete a multimedia agent

1. Select an employee.
2. Click the down arrow beside the media icon and click **Delete**.
3. Click **Save**.

### *Configuring employee user account information*

It is recommended that user accounts be configured after security roles are configured. See "Security roles" on page 148.

The following procedures explain how to:

- Configure user account information for an employee
- Configure an employee's report distribution

The following configuration takes place in YourSite=>Employees.

To configure user account information for an employee

1. Select an employee
2. Click the **User Account** tab.
3. Type the employee's **Username**.
4. Type the employee's **Password**.
5. After **The employee will reside at this site**, click the **Browse** button.
6. Select a site.  
**NOTE:** The site determines the employee's default language. Employees can change their language settings in CCMWeb.
7. Click **OK**.

8. If you want to change the employee's language, select a language from the **Language** drop-down menu.

**NOTE:** Business Reporter applications, such as YourSite Explorer and Contact Center Client, leverage the language settings of the operating system in addition to the language preference set for Business Reporter. Ensure that if you change the language settings of Business Reporter, you change the language settings of the operating system to match.

9. After **Security role**, click the **Browse** button.
10. Select a security role.

The default **Local Administrator** allows employees full access to all of the Contact Center Solutions applications and devices (to which the contact center is licensed) except for Write Back for synchronization.

The default **Enterprise Administrator** allows employees the same access as the Local Administrator, but includes Write Back for synchronization.
11. Click **OK**.
12. Click **Save**.

If this is a new employee

  - To configure an employee's report distribution, continue to the procedure below.
  - To configure non-ACD extensions and Account Codes, continue to "Assigning non-ACD extensions and Account Codes for employees" on page 106.
  - To configure employee personal information, continue to "Configuring employee personal information" on page 107.

To configure an employee's report distribution

1. Type the file path of the **Network printer**.

You must configure the network printer as the default printer on the Enterprise Server. The printer path name is case sensitive.
2. If you want the employee's reports to print from their desktop printer, select **Send printed report to the employee's desktop printer**.
3. If you want to use the employee's email address for report distribution, select **Use the employee's email address for report distribution**.
4. Click **Save**.

If this is a new employee

  - To configure non-ACD extensions and Account Codes, continue to "Assigning non-ACD extensions and Account Codes for employees" on page 106.
  - To configure employee personal information, continue to "Configuring employee personal information" on page 107.

### *Assigning non-ACD extensions and Account Codes for employees*

You can optionally assign non-ACD extensions and Account Codes to employees. If you are using Business Reporter, Account Codes assigned to employees enable reporting on that Account Code to see the outbound costs associated to that employee. Account Codes can only be associated to one employee.

The following procedures explain how to:

- Create a new extension and associate it with the employee
- Associate an existing extension
- Edit an existing associated extension
- Create an Account Code to associate to the employee
- Associate an existing Account Code
- Edit an existing associated Account Code

The following configuration takes place in YourSite=>Employees.

To create a new extension and associate it with the employee

1. Select an employee and click the **Devices** tab.
2. Click the **Extension** button.  
Alternatively, click the down arrow beside Extension and click Add.
3. To configure the new extension, see "Adding extensions" on page 114.
4. Click **Save**.  
If this is a new employee, when you are done assigning non-ACD extensions or Account Codes, continue to "Configuring employee personal information" on page 107.

To associate an existing extension

1. Select an employee and click the **Devices** tab.
2. Click the down arrow beside **Extension** and select **Associate existing**.
3. Select an extension and click **OK**.  
The extension name is automatically populated with the employee's name.  
By default, the extension type is voice softphone, which emulates a 5020 IP set.  
By default, the extension reporting number/dialable is populated with the employee's business phone.
4. Click **Save**.  
If this is a new employee, when you are done assigning non-ACD extensions or Account Codes, continue to "Configuring employee personal information" on page 107.

To edit an existing associated extension

1. Select an employee and click the **Devices** tab.
2. Click the down arrow beside the **Extension** button and click <extension>=>**Edit**.
3. When you are finished editing the extension, click **Save**.
4. Click **Save**.  
If this is a new employee, when you are done assigning non-ACD extensions or Account Codes information, continue to "Configuring employee personal information" on page 107.



To create an Account Code to associate to an employee

1. Select an employee and click the **Devices** tab.
2. Click the **Account Code** button.
3. If you want to change the Account Code name, type a **Name**.
4. If you want to change the Account Code reporting number, type the **Reporting number**.
5. If you want to use this Account Code as a Classification Code, select **Use as a Classification Code**.
6. Click **Save**.

If this is a new employee, when you are done assigning non-ACD extensions or Account Codes, continue to "Configuring employee personal information" on page 107.

To associate an existing Account Code

1. Select an employee and click the **Devices** tab.
2. Click the down arrow beside **Account Code** and select **Associate existing**.
3. Select an Account Code and click **OK**.
4. Click **Save**.

If this is a new employee, when you are done assigning non-ACD extensions or Account Codes, continue to "Configuring employee personal information" on page 107.

To edit an existing associated Account Code

1. Select an employee and click the **Devices** tab.
2. Click the down arrow beside the **Account Code** button and click <Account Code>=>Edit.
3. When you are finished editing the Account Code, click **Save**.
4. Click **Save**.

If this is a new employee, when you are done assigning non-ACD extensions or Account Codes, continue to "Configuring employee personal information" on page 107.

### *Configuring employee personal information*

To configure employee personal information

1. Select an employee and click the **Details** tab.
2. Enter the employee's personal information in the relevant fields.
3. Click **Save**.

## *Adding employee groups*

After adding employees, you add employee groups and associate employees to these groups. Employee groups enable you to report on specific groups of employees.

The following procedures explain how to:

- Add an employee group
- Associate an employee with an employee group
- Remove an employee from an employee group

To add an employee group

1. Click **Multimedia=>Employee groups**.
2. Click **Add**.
3. Type the employee group's **Name**.
4. Type the **Employee group ID**.
5. Click **Save**.

To associate an employee with an employee group

1. Click **Multimedia=>Employee groups**.
2. Select an employee group from the list.
3. On the **Membership** tab, under **Available** members, select an employee and click > to move the employee to the **Selected members** list.
4. Click **Save**.

To remove an employee from an employee group

1. Click **Multimedia=>Employee groups**.
2. Select an employee group from the list.
3. On the **Membership** tab, under **Selected members**, select an employee and click < to move the employee to the **Available members** list.
4. Click **Save**.

## *Adding employee divisions*

An employee division is composed of one or more employee groups. You add employee divisions to the YourSite database so you can generate reports on employee division activities.

In order to add employee divisions you must have first created employee groups. See "Adding employee groups" on page 108.

To add an employee division

1. In YourSite Explorer, in the left pane, click **YourSite**.
2. Under **Devices**, click **Employee Divisions**.
3. Click **Add**.
4. Type a **Name** and **Reporting number** for the employee division.
5. On the ribbon, click **Save**.

To associate an employee group with an employee division

1. In YourSite Explorer, in the left pane, click **YourSite**.
2. Under **Devices**, click **Employee Divisions**.
3. Select an employee division from the list.
4. On the **Membership** tab, under **Available members**, select an employee group and click > to move the employee group to the **Selected members** list.
5. On the ribbon, click **Save**.

### *Adding queues*

Business Reporter supports ring group queues, which route calls to pools of extensions. For information on non-ring group queue configuration, see the *Contact Center Solutions User Guide*.

### *Adding ring groups*

With Business Reporter, you can configure ring groups, with the following limitations:

- Ring groups are supported for MCD 7.0+
- Clustered ring groups are not supported. Ring groups, their extensions, interflow points, and IVR ports which transfer to ring groups must all be on the same media server.
- Only Prime DN's and Hot Desk Users are supported as members of ring groups

It is recommended that ring groups have a default Class of Service configured on the 3300 media server. For more information, see "Editing Class of Service options" on page 87.

If you are licensed for IVR Routing, ring groups are not supported for callback or UPIQ workflows, subroutines, and related activities.

When an administrator adds a ring group, they

- Configure general ring group queue information
- Configure ring group business hours
- Configure ring group membership
- Configure queue spectrum settings for ring groups
- Configure ring group 3300 ICP options

To add a ring group queue

1. Click **YourSite=>Queues**.
2. Click **Add** and select **Ring group**.
3. Continue to "Configuring general information for ring group queues" on page 109.  
**NOTE:** New ring group queues cannot be saved until the name, reporting number, and media server have been configured for the queue.

### *Configuring general information for ring group queues*

The following procedures outline how to:

- Configure common ring group queue information
- Set the ring group service level objectives
- Set the ring group handling times

The following procedures take place in YourSite=>Queues.

To configure common ring group queue information

1. Select a queue and click the **General** tab.
2. Type a **Name** for the queue.
3. After **Reporting number**, type the ring group's dialable number.  
**NOTE:** The reporting number cannot be changed after saving the ring group.
4. After **Media server**, click the **Browse** button.
5. Select the media server and click **OK**.  
**NOTE:** The media server cannot be changed after saving the ring group.
6. After **Failover media server**, click the **Browse** button.
7. Select the Failover media server and click **OK**.
8. If you do not want the queue to be viewed in Contact Center Client and Ignite, select **Disable real-time monitoring and data collection on this device**.
9. Click **Save**.  
If this is a new ring group, continue to the procedure below.

To set the ring group service level objectives

1. Select a ring group and click the **General** tab.
2. Specify the **Service Level goal** and **Service Level time** for the ring group.
3. Click **Save**.  
If this is a new ring group, continue to the procedure below.

To set the ring group handling times

1. Select a ring group and click the **General** tab.
2. After **Short Handle less than**, type the duration that will define a call as a short handle call.  
For example, type 00:00:03 to define a short handle call as one that lasts less than 3 seconds.  
Short talk calls are included in call statistics.
3. After **Short abandon less than**, type the duration that will define an abandoned call as 'Abandoned (Short)'.  
For example, type 00:00:05 to define a short abandon call as one that is abandoned in less than 5 seconds.
4. Click **Save**.  
If this is a new ring group, continue to "Configuring business hours for ring groups" on page 110.

### *Configuring business hours for ring groups*

The following procedures explain how to:

- Configure the business hours for a ring group
- Apply a ring group's business hours to all queues on the same media server  
**NOTE:** The business hours are applied to all ring groups and ACD path voice queues on the same media server.

The following procedures take place in YourSite=>Queues.

To configure the business hours for a ring group

1. Select a ring group and click the **Business Hours** tab.
2. After **Business-hour schedule**, click the **Browse** icon.
3. Select a schedule and click **OK**.
4. If you want to restrict the production of real-time statistics and reports to only during business hours, select the **Generate real-time statistics and reports only within the business hours selected check box**.
5. Click **Save**.  
If this is a new ring group, continue to "Configuring membership for ring groups" on page 111.

To apply a ring group's business hours to all queues on the same media server

1. Select a ring group and in the ribbon, click the **Queue Tools** tab.
2. Select **Apply business hours to all**.

### *Configuring membership for ring groups*

Extensions or hot desking users must be assigned to a queue to handle ring group calls. Depending on how the ring group is configured to distribute calls, calls will be offered to extensions in their order in the member list.

**NOTE:** All voice softphone extensions created in YourSite Explorer have the MCD setting 'ACD Enabled' applied when written back to the telephone system. ACD enabled extensions can be added as members of ring groups, but they cannot be made present in the ring group. This is a restriction imposed by MCD. If a hot desking agent logs into an ACD extension, they will go out of service and not be updated in the real-time monitors. 'ACD Enabled' can be removed from extensions in MCD. For more information, consult your Mitel documentation.

Ring group extension members must be located on the same node as the ring groups. Ring groups do not support multi-node configurations.

The following procedures explain how to:

- Associate an extension to a ring group queue
- Remove an extension association from a ring group queue

The following procedures take place in YourSite=>Queues.

To associate an extension with a ring group

1. Select a ring group queue from the list and click the **Membership** tab.
2. Under **Available members**, select an extension and click > to move the extension to the **Selected members** list.  
Depending on the algorithm selected, calls will be offered to a ring group's extensions using the order in the Selected members list.  
**NOTE:** To ensure accurate reporting, hot desking users should be made members of the same ring groups as the extensions to which they log in.
3. To adjust the order of selected members, select an extension and click ^ or v.
4. Click **Save**.

To remove an extension association from a ring group

1. Select a ring group from the list and click the **Membership** tab.
2. Under **Available members**, select an extension and click < to move the extension to the **Selected members** list.
3. Click **Save**.

### *Configuring queue spectrum settings for ring groups*

Queue spectrum reports provide valuable information on how calls are dispersed in your business. The answer, abandon, interflow, and talk statistics will be distributed across the queue spectrum reports in the time intervals you specify.

If you apply your queue spectrum settings on all queues on a media server, they are applied to both ring groups and ACD path voice queues.

The following procedures take place in YourSite=>Queues.

To configure queue spectrum settings for a ring group

1. Select a ring group and click the **Queue Spectrum** tab.
2. Select the spectrum value(s) you want to include in reports and specify thresholds for each. All threshold values are in seconds.  
**NOTE:** Ringing spectrum does not apply to ring groups.
3. Click **Save**.

To apply a ring group's queue spectrum settings to all queues on the same media server

1. Select a ring group and in the ribbon, click the **Queue Tools** tab.
2. Select **Apply queue spectrum to all**.

### *Configuring ring group settings for ring group queues*

Ring group specific queue settings are configured in the 3300 ICP Options tab.

The following procedures take place in YourSite=>Queues.

To configure the ring group settings for a ring group queue

1. Select a queue and click the **3300 ICP Options** tab.
2. After **Ring Algorithm**, select the ring groups call distribution algorithm from the following:
  - **Ring All**: Rings all available extensions in the ring group simultaneously.
  - **Terminal Cascade**: Starting from the first extension in the member list, rings the first available extension for the duration of the Cascade Ring Timer before calling the next available extension in the member list.
  - **Terminal**: Starting from the first extension in the member list, rings the first available extension.
  - **Circular**: Starting from the last member to handle a call, rings the next available extension in the members list.
  - **Circular Cascade**: Starting from the last member to handle a call, rings the next available extension in the member list for the duration of the Cascade Ring Time before calling the next available extension in the member list.
3. After **COS**, select a Class of Service for the ring group.  
If you have configured a default Class of Service for ring groups, the default ring group Class of Service will be automatically applied.
4. If you selected a Cascade algorithm, after **Cascade Ring Timer**, set the time a call will ring an extension before ringing the next member extension in the ring group.
5. After **Call Queued Timer**, set the maximum time a call will remain in queue for a ring group before redirecting to the overflow point.
6. After **Call Ringing Timer**, set the maximum time a call will ring an extension before the call is redirected to the overflow point.
7. After **Call Coverage Service Number**, enter a configured Call Coverage Service Number.
8. If you want to redirect incoming calls to another directory number if the ring group extensions do not answer, after **Overflow Point**, type the dialable number for the overflow destination.  
The Overflow Point can be any Prime DN destination, such as an extension or queue.  
**NOTE**: If a traditional agent logs into the overflow point, calls will never be offered
9. Click **Save**.

### *Adding queue groups*

Administrators can group queues for common purposes. Business Reporter supports Reporting queue groups, which group queues together for reporting and viewing their activities in real-time.

### *Adding Reporting queue groups*

Reporting queue groups enable administrators to run reports on activities for the grouped queues and view queue group activities in real-time.

The following procedures explain how to:

- Add a Reporting queue group
- Associate a queue to a Reporting queue group
- Remove a queue from a Reporting queue group

To add a Reporting queue group

1. Click **YourSite=>Queue groups**.
2. Click **Add=>Reporting**.
3. Type a **Name**.
4. Type a **Reporting number**.
5. Click **Save**.

To associate a queue to a Reporting queue group

1. Click **YourSite=>Queue groups**.
2. Select a Reporting queue group from the list.
3. On the **Membership** tab, under **Available members**, select a queue and click > to move the queue to the **Selected members** list.
4. Click **Save**.

To remove a queue from a Reporting queue group

1. Click **YourSite=>Queue groups**.
2. Select a Reporting queue group from the list.
3. On the **Membership** tab, under **Selected members**, select a queue and click < to move the queue to the **Available members** list.
4. Click **Save**.

### *Adding extensions*

You add extensions to the YourSite database so you can generate reports on extension activities and view extension performance in real time. If you want to generate reports on extension groups, you must add them to the database and associate extensions with them. You license Business Reporter based on the total number of extensions you want to cost in your enterprise.

When you perform Synchronization, YourSite Explorer is configured to mirror the phone set extension numbers/base directory numbers (DNs) on the 3300 ICP. If you have traditional agents that can sit at multiple locations within your organization, hot desking agents, or general business hot desking extensions, we recommend you give these base extensions generic names based on the position of the physical DN (for example, Base DN: Floor 2, Desk 1). We recommend only general business hot desking extensions assigned to specific hot desking users be given user-based names (for example, Hot desking extension: John, Smith). If you have traditional ACD agents who sit at the same desk every day, or traditional extension phone sets that belong to single users, we recommend that the base DN be configured with the user's names.



**NOTE:** If you use Contact Center Management in conjunction with Business Reporter and have hot desking agents programmed in Contact Center Management, you must program an extension with an identical reporting number or real-time call costing will not work.

When read/write is enabled on a media server, changes made to extensions may be written back to the media server depending on the type of extension being changed. Changes made by adding or deleting the following extension types are written back to the media server:

- App server port
- Hot desk user
- Outbound port 5020 IP
- Messaging port 5020 IP
- RAD port 5020 IP
- UPIQ port 5020 IP
- Voice softphone

Changes made by adding or deleting the following extension types are not written back to the media server:

- Attendant console
- Auto-attendant
- Voice
- Voice mail

For extensions that already exist on the media server, edits to any extension type in YourSite Explorer will update the Name and Class of Service of that extension on the media server.

For information about enabling read/write on the media server, see "Enabling write-back functionality" on page 71.

**NOTE:** All voice softphone extensions created in YourSite Explorer have the MCD setting 'ACD Enabled' applied when written back to the telephone system. Extensions enabled for ACD can be made a member of a ring group, but are unable to make themselves present in ring groups. If an extension is to be used in a ring group, use MCD to clear the 'ACD Enabled' setting. For more information, consult your Mitel Communications Director documentation.

The following procedures explain how to:

- Add an extension
- Enable a Hot Desk User for external hot desking

To add an extension

1. Click **YourSite=>Extensions**.
2. Click **Add**.
3. After **Name**, enter a name for the extension.
4. After **Reporting/Dialable number**, enter the extension's dialable number.
5. After **Media server**, click the **Browse** button.
6. Select a media server and click **OK**.
7. After **Failover media server**, click the **Browse** button.
8. Click **OK**.

9. Select the **Class of Service** for the media server, from the drop-down list.
10. After **Notes**, enter any other information for administrators about the extension.
11. Select the **Disable real-time monitoring and data collection on this device** check box if you do not want to enable the extension to be set with a MiTAI monitor, viewed in Contact Center Client, and use Contact Center Softphone or Salesforce.com Connector. By default, this check box is not selected.
12. To license this extension, select **License this Extension** check box.  
Unlicensed extensions will not be updated in Contact Center Client real-time monitors.  
Unlicensed extensions cannot be reported on and cannot be costed with Business Reporter.
13. Click **Save**.

To enable a Hot Desk User for external hot desking

1. Click **YourSite=>Extension**.
2. Select a Hot Desk User extension and select **External hot desk user enabled**.  
Extensions that are enabled as external hot desk users can handle non-ACD calls while logged in externally.
3. After **External dialing prefix**, type the dialing prefix for the external device to which calls will be routed.
4. After **External dialing number**, type the dialing number for the external device to which calls will be routed.
5. Click **Save**.

### *Adding extension groups*

Extension groups are groups of extensions. You add extension groups and then associate extensions with these groups. You add extension groups to the YourSite database so you can generate reports on extension group activities.

In order to add extension groups you must have first created extensions. See "Adding extensions" on page 114.

To add an extension group

1. In YourSite Explorer, in the left pane, click **YourSite**.
2. Under **Devices**, click **Extension groups**.
3. Click **Add**.
4. Type a **Name** and a **Reporting number** for the extension group.
5. On the ribbon, click **Save**.

To associate an extension with an extension group

1. In YourSite Explorer, in the left pane, click **YourSite**.
2. Under **Devices**, click **Extension groups**.
3. Select an Extension group from the list.
4. On the **Membership** tab, under **Available members**, select an extension and click > to move the extension to the **Selected members** list.
5. On the ribbon, click **Save**.

### *Adding extension divisions*

Extension divisions are groups of extension groups. You add extension divisions and then associate extension groups to these divisions. You add extension divisions to the YourSite database so you can generate reports on extension division activities.

In order to add extension divisions you must have first created extension groups. See "Adding extension groups" on page 116.

To add an extension division

1. In YourSite Explorer, in the left pane, click **YourSite**.
2. Under **Devices**, click **Extension Divisions**.
3. Click **Add**.
4. Type a **Name** and a **Reporting number** for the extension division.
5. On the ribbon, click **Save**.

To associate an extension group to an extension division

1. In YourSite Explorer, in the left pane, click **YourSite**.
2. Under **Devices**, click **Extension Divisions**.
3. Select an Extension division from the list.
4. On the **Membership** tab, under **Available members**, select an extension group and click > to move the extension group to the **Selected members** list.
5. On the ribbon, click **Save**.

### *Adding trunks*

You add trunks to the YourSite database so you can generate reports on trunk activities. If you want to generate reports on trunk groups, you must add them to the database and associate trunks with them.

#### **NOTE:**

- If you want to report on SMDR information for SIP trunks you must ensure your SMDR tag is numbered. Please see the *Business Reporter Installation Guide*.
- If you cost calls based on trunk groups, you must add the IP trunk from each media server to each trunk group and ensure all media servers are associated to a carrier plan.
- We recommend you name trunks and trunk groups in a way that helps you identify them as either SIP or TDM trunks, enabling the trunk type to be easily identified in reports.

To add a trunk

1. In YourSite Explorer, under **YourSite**, click **Trunks**.
2. Click **Add**.
3. Type a **Name** and a **Reporting number** for the trunk.
4. Click the **Browse** button and select a **Media server** to associate with the trunk.
5. On the ribbon, click **Save**.

## *Adding trunk groups*

You add trunk groups and then associate trunks with the trunk groups.

### **NOTE:**

- If you have Traffic Analysis and/or Business Reporter and use the same trunk group numbers across multiple telephone systems, you must associate each trunk group with a media server.
- We recommend you name trunks and trunk groups in a way that helps you identify them as either SIP or TDM trunks, enabling the trunk type to be easily identified in reports.

If you have Traffic Analysis and/or Business Reporter and use the same trunk group numbers across multiple telephone systems, you must associate each trunk group with a media server.

To add a trunk group

1. In YourSite Explorer, in the left pane, click **YourSite**.
2. Under **Devices**, click **Trunk groups**.
3. Click **Add**.
4. Type a **Name** and a **Reporting number** for the trunk group.
5. Click ... and select a **Media server** to associate with the trunk group.
6. Click ... and select a **Carrier plan** to associate with the trunk group.
7. If you use intra switch trunks, enable the **Intra switch** check box.
8. If you do not want to cost calls, select the **Do not cost calls** check box.
9. On the ribbon, click **Save**.

## *Associating trunks with trunk groups*

To associate a trunk with a trunk group

1. In YourSite Explorer, in the left pane, click **YourSite**.
2. Under **Devices**, click **Trunk groups**.
3. Select a trunk group from the list.
4. On the **Membership** tab, under **Available members**, select a trunk and click > to move the trunk to the **Selected members** list.
5. On the ribbon, click **Save**.

## *Adding DNIS*

Dialed Number Identification Service (DNIS) is a feature of toll-free lines that identifies the telephone number the caller dials.

To add a DNIS

1. In YourSite Explorer, in the left pane, click **YourSite**.
2. Under **Devices**, click **DNIS**.
3. Click **Add**.
4. Specify DNIS identification information and click the **Browse** button to select the media server for the DNIS.

5. After **Carrier Plan**, **Call Type**, and **Call rate**, click the **Browse** button to select a carrier plan, call type, and call rate.
6. On the ribbon, click **Save**.

### *Adding DNIS groups*

After adding DNIS, you can create DNIS groups and then associate DNIS numbers for specific businesses or product lines to those groups.

To add a DNIS group

1. In YourSite Explorer, in the left pane, click **YourSite**.
2. Under **Devices**, click **DNIS groups**.
3. Click **Add**.
4. Type a **Name** and a **Reporting number** for the DNIS group.
5. On the ribbon, click **Save**.

### *Associating DNIS to DNIS groups*

To associate a DNIS with a DNIS group

1. In YourSite Explorer, in the left pane, click **YourSite**.
2. Under **Devices**, click **DNIS groups**.
3. Select a DNIS group from the list.
4. On the **Membership** tab, under **Available members**, select a DNIS and click > to move the DNIS to the **Selected members** list.
5. On the ribbon, click **Save**.

### *Adding Account Codes*

Account Codes can be verified, non-verified, or forced.

- **Verified and Non-Verified Account Codes**

Verified and Non-Verified Account Codes allow callers to complete a call without entering a code. These codes are used to categorize calls or portions of calls. You define Account Codes in the YourSite database to generate reports for specific departments, services, and companies. For example, an agent who receives calls for three catalog companies enters Account Code 01 for calls to company X, Account Code 02 for calls to company Y, and Account Code 03 for calls to company Z. When you configure the Account Codes, Business Reporter generates reports on the number, origin, and handling of calls for each of the departments, services, or companies.

- **Forced Account Codes**

Both Verified and Non-verified Account Codes can be forced. With Forced Verified Account Codes, you must enter the Account Code as soon as the phone is off-hook. With Forced Non-verified Account Codes, you must enter the Account Code after you dial the phone number.

For example, you might have 03 programmed on the telephone system as the trunk access code for calling England. Before you make a call to England, you must preface the telephone number with the Account Code 03, otherwise the call will not go through. To report on these verified Account Codes, you define them in the YourSite database.

**NOTE:**

- If you will use Forced Account Codes and have a Make Busy button programmed on your Mitel phone set, you must remove the Make Busy button, or Forced Account Codes will not work with Contact Center PhoneSet Manager.
- If a Forced verified Account Code is not entered in before Work Timer expires, then a -1 Non Compliant Code will be automatically assigned to the call.

You can add Account Codes for individual departments, projects, and services. You can tag calls with Account Code numbers and generate reports on them.

Business Reporter works with verified and non-verified Account Codes that you configure in your telephone system.

To add an Account Code

1. In YourSite Explorer, in the left pane, click **YourSite**.
2. Under **Devices**, click **Account Codes**.
3. Click **Add**.
4. Type a **Name** and **Reporting number** for the Account Code.
5. On the ribbon, click **Save**.

### *Adding Account Code groups*

After adding Account Codes, you can create Account Code groups and then associate Account Codes to these groups.

To add an Account Code group

1. In YourSite Explorer, in the left pane, click **YourSite**.
2. Under **Devices**, click **Account Code Groups**.
3. Click **Add**.
4. Type a **Name** and **Reporting number** for the Account Code group.
5. On the ribbon, click **Save**.

### *Associating Account Codes with Account Code groups*

To associate an Account Code with an Account Code group

1. In YourSite Explorer, in the left pane, click **YourSite**.
2. Under **Devices**, click **Account Code groups**.
3. Select an Account Code group from the list.
4. On the **Membership** tab, under **Available members**, select an Account Code and click > to move the Account Code to the **Selected members** list.
5. On the ribbon, click **Save**.

### *Adding Account Code categories*

In businesses that use a large number of Account Codes, Account Code categories can be used to provide a hierarchical and grouped listing of the Account Codes available to agents and employees from the soft phone toolbar within Contact Center Client. You configure Account Code categories from within YourSite Explorer. Once you have configured Account Codes, they can be nested under specific Account Code categories. An Account Code can only be in one category. Call Classification Codes, which are treated the same way as Account Codes, can optionally be nested in Account Code categories. Account Code category availability to agents and employees can optionally be controlled using Contact Center Management / Business Reporter security. When Account Code categories are enabled, Contact Center Management / Business Reporter reports will display the Account Code category path (for example, Sales=>Automotive=>Tires).

To enable Account Code categories

1. In YourSite Explorer, in the left pane, click **YourSite**.
2. Under **Devices**, click **Account Codes**.
3. In the ribbon, click the **Configuration** tab.
4. Enable the **Display Account Codes in categories** checkbox.

To add an Account Code category

1. In YourSite Explorer, in the left pane, click **YourSite**.
2. Under **Devices**, click **Account Codes**.
3. In the ribbon, click the **Configuration** tab.
4. Ensure the **Display Account Codes in categories** checkbox is enabled.
5. Click **Edit categories**.  
The Account Code category designer displays.
6. Using the Account Code category designer, add and name Account Code categories in the left pane and then add the Account Codes you have configured, which display in the left pane to the custom categories.  
Account Code categories are sorted by category name and Account Code reporting number. Account Code categories will display in soft phone toolbars exactly as you have designed them in the Account Code category designer. If you have Account Code categories enabled, but do not assign Account Codes to categories, leaving them in the right pane of the designer, these Account Codes will not be available in the soft phone toolbar.

### *Adding Do Not Disturb Reason Codes*

Interactive Contact Center, an optional application, enables supervisors who have a 3300 ICP telephone system to control the availability of extensions and ring groups.

To add a Do Not Disturb Reason Code

1. Click **YourSite** and, under **Devices**, click **Make Busy Reasons**.
2. Click **Add**.
3. Type a **Name** and **Reporting number** for the Do Not Disturb Reason Code.
4. Click **Save**.

## *Adding phone numbers*

Phone numbers are used for running reports in Business Reporter. The phone number device enables you to

- Add area codes/city codes, city exchange information, and contacts.
- Edit location information that displays in reports.

**NOTE:** Area codes you want to use in Contact Center Solutions to provide data to agents, route calls to appropriate end points, and use to report on contact center functions should be added as ANI. For more information on ANI, see "Adding phone numbers" on page 122.

When adding a phone number to the database, you select

- **Area/City code** when you are adding or updating the area code for a province/state/city  
For the phone number 613-599-0045, 613 is the area code.
- **City exchange** when you are adding a new exchange  
For the phone number 613-599-0045, 599 is the city exchange (Kanata).
- **Contact** when you are adding a phone number with contact information  
For the phone number 613-599-0045, 5990045 is the contact.

To add a phone number area/city code

1. In YourSite Explorer, under **YourSite**, click **Phone numbers**.
2. Click **Add=>Add an area/city code**.
3. Select a country and type an area/city name and area code.  
An area can be a city, region, province, or state.
4. On the ribbon, click **Save**.

To add city exchange information

1. In YourSite Explorer, under **YourSite**, click **Phone numbers**.
2. Click **Add=>Add a city exchange**.
3. After **Country name**, select a country.
4. After **Area/City name**, select a city, region, province, or state (for example, Greater Toronto Area).
5. After **City name**, type the name of a city or suburb (for example, Thornhill).
6. After **City exchange**, type a city exchange number (for example, 231).  
For the phone number 416-231-5555, 231 is the city exchange.
7. On the ribbon, click **Save**.

To add phone number contact information

1. In YourSite Explorer, under **YourSite**, click **Phone numbers**.
2. Click **Add=>Add a contact**.
3. After **Country name**, select a country.
4. After **Area/City name**, select a city, region, province, or state (for example, Washington).
5. After **City name**, select a city or suburb (for example, Des Moines).



6. Type a contact name and number.  
This information displays in the Phone Number Accounting Trace and Phone Number Group Accounting Trace reports.
7. If you want to hide the contact name and number in reports select the **Hide the name and number in reports** check box.  
The hidden phone numbers appear as 10 zeros and the name/location field is blank.
8. On the ribbon, click **Save**.

### *Adding phone number groups*

You can associate Phone numbers with Phone number groups. Phone number groups are added in YourSite Explorer and then Phone numbers are associated with them.

To add a Phone number group

1. In YourSite Explorer, in the left pane, click **YourSite**.
2. Under **Devices**, click **Phone number groups**.
3. Click **Add**.
4. Type a **Name** and **Reporting number** for the Phone number group.
5. On the ribbon, click **Save**.

To associate a Phone number with a Phone number group

1. In YourSite Explorer, in the left pane, click **YourSite**.
2. Under **Devices**, click **Phone number groups**.
3. Select a phone number group from the list.
4. On the **Membership** tab, under **Available members**, select a Phone number and click > to move the Phone number to the **Selected members** list.
5. On the ribbon, click **Save**.

### *Adding call types*

A *call type* describes the type of call, whether it is local, long distance, or international. You can create a new call type or select from the default call types. Default call types include local, long distance, and international and are based on the country you select during installation. You can rename all call types, including default call types.

You add call types for geographical regions and business needs. Each digit pattern is associated with a call type and call rate.

**NOTE:** You cannot delete a call type that is associated to a carrier plan or a subscriber plan. To delete a call type, you must remove the call type from the plan, then under Call types, select the call type and press Delete.

To add a call type

1. In YourSite Explorer, under **Business Reporter**, click **Call types**.
2. Click **Add**.
3. After **Name**, type the name of the call type.
4. On the ribbon, click **Save**.

## *Adding time slots*

### **NOTE:**

- Time slots can be configured for any time of the day, but they cannot span time periods from one day to the next (for example, from Monday at 8:00 PM to Tuesday at 4:00 AM).
- To delete a time slot that is associated to a charge band on a call rate, you must remove the time slot from any associated charge bands, then under Time slots, select the time slot and click Delete.

A *time slot* describes the days and hours that a rate for a call is active. Using a time slot, you can configure different rates for different time periods. For example, you can create rates for discounted mornings and evenings, while maintaining regular costs for business hours.

To add a time slot

1. In YourSite Explorer, in the left pane, click **Business Reporter**.
2. Click **Time slots**.
3. Click **Add**.
4. Specify the name, days of week, and start and end times for the time slot.
5. If you want to automatically create charge bands based on default timeslots when generating new call rates, select **Use as default**.
6. On the ribbon, click **Save**.

## *Adding call rates*

**NOTE:** To delete a call rate that is associated to a carrier plan or a subscriber plan, you must remove the call rate from the plan, then under Call rates, select the rate, and click Delete.

A *call rate* is the amount your company charges you per call. Call rates are composed of charge bands, which are composed of time slots. Charge bands represent the rate your carrier charges you during the time period specified by the associated time slot. After call rates are defined, digit patterns can be associated with a call type and a call rate.

**NOTE:** In order to cost calls accurately, ensure your call rates match those of your carrier.

You can define the following call costs associated to call rates:

- **Duration**—the duration after which a surcharge is applied to a call
- **Crossing surcharge**—a flat rate applied to the call after the duration boundary is crossed
- **Crossing percentage surcharge**—a percentage markup added to the total cost of a call once the duration boundary is crossed
- **Surcharge per call**—an additional charge applied to calls regardless of their duration
- **Round to Cost Interval**—when enabled, rounds the call cost to the cost interval associated to the charge band of the current call. If not enabled, the call will be costed in real time.

You can define the costs for your charge bands by modifying the following fields:

- **Cost per minute**—the cost of the call on a per minute basis
- **Cost interval**—the interval at which the call is costed
- **First cost**—the rate applied to the first segment of a call to the first cost interval  
The first increment is always charged at the full first cost, regardless of whether the call exceeds the first interval or not
- **First cost interval**—the duration of the first segment of a call, to which the First cost is applied
- **Subsequent cost increment**—the cost applied to subsequent segments of the call
- **Subsequent cost interval**—the duration of the subsequent call segments after the first cost interval

**NOTE:** The First cost, First cost interval, Subsequent cost increment, and Subsequent cost interval fields will automatically populate after you specify the Cost per minute and Cost interval fields. You can, however, alter these fields to suit your needs.

Example 1:

- Cost per minute = \$1.00  
A 40 second call will cost \$1.00

Example 2:

- First cost = \$0.1667/min
- Cost interval = 0:00:10  
A 45 second call will cost \$0.75.

Example 3:

- First cost = \$1/min
- Subsequent cost increment/Subsequent cost interval = \$0.10/1 minute
- Round to Cost Interval is not selected  
A four minute and 45 second call will cost \$1.46

Example 4:

- First cost = \$1/min
- Subsequent cost increment/Subsequent cost interval = \$0.30/1 minute
- Round to Cost Interval is selected  
A four minute and 45 second call will cost \$1.50

To add a call rate

1. In YourSite Explorer, in the left pane, click **Business Reporter**.
2. Click **Rates**.
3. Under Rates, click **Add**.
4. Specify the name, surcharge per call, Round to Cost Interval, and boundary settings.
5. Under Charge Bands, click **Add**.
6. Under **Time slot**, click the **Browse** button and select a Time Slot to define the Charge band.  
**NOTE:** Charge bands must cover 24 hours of a day for the full 7 days of the week without overlapping.
7. On the ribbon, click **Save**.

### *Adding carrier plans*

A carrier plan is used to determine the cost of your calls. It represents an agreement you have with a phone carrier about the call rates you are charged for your phone service. Carrier plans enable you to cost outgoing calls using digit patterns, cost incoming calls using DNIS rates, and cost internal calls by assigning rates. Carrier plans are assigned to media servers and/or trunk groups to cost the calls from these devices.

Business Reporter attempts to cost outbound calls at the trunk group level first. If it cannot cost the call there, then it costs at the media server level. It costs inbound calls based on the rates associated with DNIS.

#### **NOTE:**

- You must add outbound, inbound, and internal information before you can save the carrier plan.
- Carrier plans must be saved before importing digit patterns. (See "Adding outbound digit patterns" on page 127.)

#### **CAUTION:**

- In YourSite Explorer, you must configure call types, time slots, and call rates before you add carrier plans. Do not add devices when you are configuring carrier plans or you could lose carrier configuration data.
- When you configure a carrier plan, you must complete all required fields (for outbound, inbound, and internal information) before you are able to save.

To add a carrier plan

1. In YourSite Explorer, under **Business Reporter**, click **Carrier plans**.
2. Click **Add**.
3. After **Name**, specify the name.
4. After **Minimum duration to cost**, select the duration in seconds.
5. Click the **Outbound** tab.
6. Under **Outbound**, specify a call type and call rate.  
**NOTE:** If Business Reporter cannot match a digit pattern to a call, it will cost the call at the Outbound rate. Typically, use Outbound to specify the local rate.
7. Click the **Inbound** tab.

8. Under **Inbound**, specify the call type and call rate for DNIS numbers.  
**NOTE:** If no DNIS numbers are selected, the call will be costed based on the Inbound information.
9. Click **Internal**.
10. Under **Internal**, click the **Browse** button and select the call type and call rate to associate the DNIS numbers to the internal information.
11. On the ribbon, click **Save**.  
You can now add digit patterns to the carrier plan manually or by .csv import.

### *Adding outbound digit patterns*

You add digit patterns to cost outbound calls.

To cost outbound calls, Business Reporter uses a digit tree comprised of digit patterns. A digit pattern is part or all of the digits dialed. Because all North American long distance calls begin with a 1, you can use 1 as the digit pattern to cost all North American long distance calls. You then add any exceptions to the digit pattern. For example, if you call the Caribbean from New York City, you will be charged a different long distance rate than the North American long distance rate. Because the Caribbean digits dialed begin with 1-768, you can nest 768 under 1 in the digit pattern tree. You must assign call rates and call types to digit patterns to cost outbound calls.

The following characters are valid:

- Explicit: 0 to 9, \* and #
- Wild card: x or X

When you add Xs in the digit pattern, they explicitly define the number of digits for the digit pattern. If a specific number of digits determines the cost of a call, you use the wild card X as the place holder for the digits. For example, if a ten-digit phone number that ends with a 7 needs to be costed a certain way, you must enter the digit pattern xxxxxxxxx7. If no X appears in the digit pattern, the number is explicit. If you add a digit pattern that does not include Xs, there is no restriction to the digits dialed.

To view the list of calls made using restricted digit patterns, you generate the following reports:

- Extension and Extension Group Accounting Toll Fraud reports  
These reports show the toll fraud activity by extension and extension group.

To view the list of calls made using restricted digit patterns in the Phone Number and Phone Number Group Accounting Trace by Phone Number reports, you must first configure them in YourSite Explorer under YourSite=>Phone numbers. The reports will list all instances, if any, of that phone number.

Digit patterns can be added manually or by .csv import. You can modify and reimport the .csv files to reference the rates for your carrier plans.

**NOTE:** You must configure the call types and call rates used by the .csv file before you can import digit patterns.

To add a digit pattern to a carrier plan manually

1. In YourSite Explorer, under **Business Reporter**, click **Carrier plans**.
2. Select the carrier plan to which you are adding a digit pattern.
3. Click the **Outbound** tab.  
**NOTE:** You can nest digit patterns. For example, 001 may represent international calls. If you want to nest specific country codes under 001, click the 001 digit pattern in the tree and add digit patterns beneath it.
4. In the outbound tree, right-click the digit pattern under which you are adding another digit pattern and select **New**.  
 A blank digit pattern window opens.
5. Type the digit pattern and press **Enter**.
6. After **Call type**, select a call type.
7. After **Call rate**, select a call rate.
8. After **Toll fraud**, select the check box if calls with this digit pattern are treated as toll fraud.  
 See "Adding inbound call information" on page 129.
9. On the ribbon, click **Save**.

To add a digit pattern to a carrier plan by .csv import

1. In the left pane, under **Business Reporter**, click **Carrier plans**.
2. Select the carrier plan to which you are adding a digit pattern.
3. Click the **Outbound** tab.
4. Select **Outbound** and click **Import**.  
 The import wizard opens.
5. Select the file type to import.
6. Browse to the location of your .csv file.  
 Default digit patterns for each region are located on the Enterprise Server in the Contact Center Solutions installation directory under src\Support. The default installation directory is C:\CCM\src\Support.
7. In the options window, select the appropriate result if duplicate digit patterns are imported.
8. Click **Next**.  
 The field mappings window opens.
9. Add and map the available columns in the wizard to the columns in your .csv file.  
**NOTE:** You must place the selected columns in the order that reflects the contents of your .csv file. For example, if digit patterns are the first column in your .csv file, you must ensure that digit patterns are the first item in your selected columns list.
10. Click **Next**.  
 The wizard imports the .csv file.

### *Adding inbound call information*

You must assign call rates and call types to cost inbound calls.

To add inbound call information to a carrier plan

1. In YourSite Explorer, under **Business Reporter**, click **Carrier plans**.
2. Select the carrier plan to which you are adding inbound call information.
3. Click the **Inbound** tab.  
The Inbound tab lists all of the DNIS found in the YourSite database.
4. Select a DNIS.
5. After **Call type**, click the **Browse** button and select a call type.
6. After **Call rate**, click the **Browse** button and select a call rate.  
See "Adding internal call information" on page 129.

### *Adding internal call information*

You must assign call rates and call types to cost internal calls.

**NOTE:** If you select the Toll fraud check box, all internal calls will be considered toll fraud.

You can define all internal calls as toll fraud. To view a comprehensive list of internal calls, after you have defined internal calls as toll fraud, generate the appropriate reports:

- Extension and Extension Group Accounting Toll Fraud report  
These reports show the toll fraud activity by extension and extension group.

To add internal call information to a carrier plan

1. In YourSite Explorer, under **Business Reporter**, click **Carrier plans**.
2. Select the carrier plan to which you are adding internal call information.
3. Click the **Internal** tab.
4. After **Call type**, click the **Browse** button and select a call type.
5. After **Call rate**, click the **Browse** button and select a call rate.
6. After **Toll fraud**, select the check box if all internal calls are treated as toll fraud.  
See "Associating carrier plans to media servers and/or trunk groups" on page 129.

### *Associating carrier plans to media servers and/or trunk groups*

**NOTE:** If you cost calls based on trunk groups, all media servers must be associated to carrier plans.

Business Reporter attempts to cost outbound calls at the trunk group level first. If it cannot cost the call there, then it costs at the media server level.

Ensure you assign the carrier plan you configured in YourSite Explorer to the media servers and/or trunk groups by carrier.

To associate carrier plans to media servers and/or trunk groups

1. In YourSite Explorer, under **Business Reporter**, click **Carrier plans**.
2. In the **Carrier plans** window, under **Name**, select the carrier plan to be associated to a media server or trunk group.
3. Click the **Media servers** or **Trunk groups** tab.
4. Under **Available members**, select the member to be added to **Selected members**.
5. Click > to move the selected member to the Selected members list.
6. On the ribbon, click **Save**.

### *Specifying toll fraud settings*

You can configure toll fraud for calls

- That exceed a specific amount (for example, \$5.00) - you configure this on the ribbon
- To specific phone numbers - you configure this in the outbound digit tree
- To specific countries or area codes - you configure this in the outbound digit tree
- To toll charge numbers - you configure this in the outbound digit tree
- That are internal - you configure this on the Internal tab of the carrier plan  
See "Adding internal call information" on page 129.

### *Specifying the call cost threshold*

Toll fraud can be defined as calls that exceed a pre-set call cost threshold. For example, you can define the specified call cost threshold as \$20.00. If an employee were to make a call that cost \$20.01 or more, the call would be defined as toll fraud.

To specify the call cost threshold

1. In YourSite Explorer, on the ribbon, click the **Configuration** tab.
2. Click **Business Reporter**.
3. After **Call cost threshold**, define the threshold over which calls are considered toll fraud.
4. On the ribbon, click **Save**.

### *Defining toll fraud*

Toll fraud can be defined as

- Calls to a restricted country (for example, calls to Australia use the country code 61)
- Calls to restricted phone numbers (for example, your employees' home phone numbers)
- Calls to restricted area codes (for example, you know your business does not deal with Alaska, so any call with the area code 907)
- Toll charge calls (any calls with the digits 1900)

To define toll fraud

1. In YourSite Explorer, under **Business Reporter**, click **Carrier plans**.
2. Click the **Outbound** tab to set toll fraud for outgoing calls, or the **Internal** tab to set toll fraud for internal calls.
3. Select the digit pattern to be defined as toll fraud.



4. Select the **Toll fraud** check box.
5. On the ribbon, click **Save**.

## SUBSCRIBER SERVICES CONFIGURATION

Subscriber Services is an optional application to Business Reporter. Using Subscriber Services, you can create customized plans to cost subscriber calls. Because the plans are customizable, you can bill back some subscribers a fraction of the cost of their calls and others you can mark up the cost of the calls. Using Subscriber Services you can also add surcharges for the billing period.

### CONFIGURING DEVICES MANUALLY

You configure subscribers, subscriber groups, billing options, and subscriber plans in YourSite Explorer.

#### *Adding subscribers*

When you add subscribers to the database, you must associate an extension or an Account Code to the subscriber.

To add a subscriber

1. In YourSite Explorer, under **Business Reporter**, click **Subscribers**.
2. Click **Add**.
3. After **Name**, type the name of the subscriber.
4. After **Reporting number**, type the subscriber reporting number.
5. Optionally, after **Subscriber plan**, click the **Browse** button and select the plan.
6. You can add subscribers to a subscriber plan now or later.  
See "Adding subscriber plans" on page 132.
7. On the **Extension** tab, under **Available members**, select the member to be added to the **Selected members**.
8. Click > to add the selected member to the Selected members list.
9. On the **Account Code** tab, under **Available members**, select the member to be added to the **Selected members**.
10. Click > to add the selected member to the Selected members list.
11. On the ribbon, click **Save**.

#### *Adding subscriber groups*

To add a series of subscriber groups

1. In YourSite Explorer, under **Business Reporter**, click **Subscriber Groups**.
2. Click **Add**.
3. After **Name**, type the name of the subscriber group.
4. After the **Reporting number**, type the subscriber group reporting number.
5. Click the **Membership** tab.

6. Under **Available members**, select the member to be added to the **Selected members**.
7. Click > to add the selected member to the Selected members list.
8. On the ribbon, click **Save**.

### *Adding billing options*

Billing options are applied to subscriber plans so that you can apply surcharges. Surcharges can occur daily, weekly, monthly, yearly, or once as a flat rate. Billing options include the ability to generate percentage markups. For example, if you have a weekly charge of \$5.00 and run your subscriber report monthly (four weeks), the total surcharge on the report is \$20.00.

**CAUTION:** The billing frequency of surcharges is always rounded up. For example, if you generate a report that spans eight days, and you have selected a weekly charge of \$5.00, the report will show a charge of \$10.00 because eight days is rounded up to two weeks.

To add a billing option

1. Under **Business Reporter**, click **Billing options**.
2. Click **Add**.
3. After **Name**, type the name of the surcharge.
4. After **Description**, optionally type the description of the surcharge.
5. After **Frequency**, select the occurrence of the surcharge (by report period, day, week, month, or year).
6. Under **Service Charge Types**, select a billing option.
  - If you selected **Surcharge amount**, type the amount of the surcharge.
  - If you selected **Simple percent markup**, type the percent to markup. Optionally, to add the percent markup to the bill subtotal, select **Apply to subtotal**.  
**NOTE:** When Apply to subtotal is selected, the percent markup is applied to the billing usage and service charges subtotal. If Apply to subtotal is not selected, the percent markup is applied to billing usage only.
7. On the ribbon, click **Save**.

### *Adding subscriber plans*

You configure the following options in the subscriber plans.

#### **Minimum duration to cost**

You can specify the seconds after which a subscriber plan applies to a call. For example, if the minimum duration to cost is 10 seconds, the subscriber plan applies to calls over 10 seconds only. This plan will not charge subscribers for calls under 10 seconds.

**NOTE:** If the Minimum duration to cost value is \$0.00, the subscriber plan will apply to the entire cost of the call.

#### **Percentage markup**

You can charge the subscriber a percentage of the rate per call. The percentage can be marked up (for example, 50%) or discounted (for example, -10%).

### Fixed cost markup

You can charge the subscriber a fixed amount per call based on the rate. If the carrier charges \$1.00, the fixed amount can be marked up (for example, \$2.00) or discounted (for example, (\$0.50)).

### Fixed cost

You can apply a flat rate per call. This cost will override all other subscriber costs. For example, the fixed cost can be \$2.00 per call. That rate includes the cost and the markup or discount.

### Cost ceiling

**NOTE:** If the cost ceiling value is Unlimited, no cost ceiling applies and the subscriber plan will apply to the entire cost of the call.

You can specify a cost ceiling when you do not want to charge a subscriber more than a specific amount. For example, if the cost ceiling is \$50.00, a subscriber will not be charged more than \$50.00 for a call.

### Billing options

Billing options are applied to subscriber plans so that you can apply surcharges. Surcharges can occur daily, weekly, monthly, yearly, or once as a flat rate. For example, if you have a weekly charge of \$5.00 and run your subscriber report monthly (four weeks and three days), the total surcharge on the report is \$25.00.

### CAUTION:

- In YourSite Explorer, you must configure call types, time slots, call rates, billing options, employees, and subscribers before you add subscriber plans. Do not add devices when you are configuring subscriber plans or you could lose subscriber configuration data.
- When you configure a subscriber plan, you must complete all required fields (for outbound, inbound, and internal information) before you are able to save.

You configure subscriber plans to help you determine the cost of calls made by subscribers or employees, and to charge a markup/discount for each call or a markup/discount of a summary.

To configure a subscriber plan

1. In YourSite Explorer, under **Business Reporter**, click **Subscriber plans**.
2. Click **Add=>Basic**. Otherwise, click **Add=>Advanced** and select a carrier plan from the list. For a basic subscriber plan, the subscriber rates are based on the rates of the carrier plan associated to the subscriber's or employee's extension and/or Account Code. For an advanced subscriber plan, the subscriber rates are based on the altered rates of the carrier plan you selected from the list.
3. After **Name**, type the name of the subscriber plan.
4. After **Minimum duration to cost**, specify the threshold above which the subscriber plan applies to the call. For example, if the minimum duration to cost is 10 seconds, when the 10 second threshold is met or surpassed the subscriber plan applies. The subscriber plan does not apply to calls under 10 seconds. If the Minimum duration to cost value is \$0.00, the subscriber plan applies to the entire cost of the call.

5. After **Fixed cost markup**, select the markup/discount as a dollar amount added to/subtracted from the rate.  
**NOTE:** If you specify a percent markup, Business Reporter applies the percent markup to the rate and then applies the fixed cost markup to the rate.  
 A fixed cost markup refers to a fixed amount added to the cost of a call. If the rate is 5 cents per minute + \$2, the \$2 is the fixed markup.
6. After **Fixed cost**, select the cost.  
 A fixed cost calls is charged a fixed amount that does not depend on the duration of the call. If the cost is \$5 per call, then \$5 is the fixed cost. Fixed costs override all other costs.
7. After **Percent markup**, select the markup/or discount as a percent of the rate.
8. To charge subscribers a maximum amount per call, after **Cost ceiling**, type a value.  
 If the cost ceiling value is \$0.00, no cost ceiling applies and the subscriber plan applies to the entire cost of the call.
9. Under **Available members**, select the member to be added to the **Selected members**.
10. Click > to add the selected member to the Selected members list.
11. Click the **Billing options** tab.
12. Under **Available members**, select the member to be added to the **Selected members**.
13. Click > to add the selected member to the Selected members list.
14. Optionally, add outbound, inbound and internal call information. Add this information only if you plan to adjust the carrier plan rate.  
 See "Adding outbound digit patterns" on page 127.  
 See "Adding inbound call information" on page 135.  
 See "Adding internal call information" on page 129.
15. On the ribbon, click **Save**.

### *Adding outbound digit patterns*

Ensure you configure the outbound call types and call rates you need for your subscriber plan before you begin.

To add a digit pattern to a subscriber plan

1. Under **Business Reporter**, click **Subscriber plans**.
2. Select the subscriber plan to which you are adding a digit pattern.
3. Click the **Outbound** tab.
4. In the outbound tree, click the digit pattern under which you are adding another digit pattern.
5. On the **Outbound** tab, click **Add**.
6. Type the digit pattern.
7. Press **Enter**.
8. After **Call type**, click the **Browse** button and select an outbound call type from the list.
9. After **Call rate**, click the **Browse** button and select the call rate from the list.
10. On the ribbon, click **Save**.

### *Adding inbound call information*

Ensure you configure the DNIS call types and call rates you need for your subscriber plan before you begin.

To add inbound call information to a subscriber plan

1. Under **Business Reporter**, click **Subscriber plan**.
2. Select the subscriber plan to which you are adding inbound call information.
3. Click the **Inbound** tab.
4. After **Call type**, click the **Browse** button and select a DNIS call type from the list.
5. After **Call rate**, click the **Browse** button and select the call rate from the list.
6. On the ribbon, click **Save**.

### *Adding internal call information*

Ensure you configure the internal call types and call rates you need for your subscriber plan before you begin.

To add internal call information to a subscriber plan

1. Under **Business Reporter**, click **Subscriber plan**.
2. Select the subscriber plan to which you are adding internal call information.
3. Click the **Internal** tab.
4. After **Call type**, click the **Browse** button and select an internal call type from the list.  
If the call type you require is not listed here, you must create it before you can select it and save the digit pattern.  
See "Adding call types" on page 123.
5. After **Call rate**, click the **Browse** and select the call rate from the list.
6. On the ribbon, click **Save**.

## BUSINESS HOUR SCHEDULES

Your contact center software performs certain tasks during business hours and other tasks after business hours. You create schedules so that Business Reporter knows your business' hours of operation, and so you can apply these hours of operation to devices. You can create yearly or seasonal schedules.

For example, Multimedia Contact Center can send 'business hour' auto-response messages to customers contacting you during business hours, and 'after hours' auto-response messages to customers contacting you after hours. Applying a schedule to a Multimedia Contact Center workflow tells the system when to send each type of message.

Business Reporter ships with two default schedules: The default 24/7 schedule for businesses that operate 24 hours a day, seven days a week, and the default Monday to Friday 9:00 AM to 5:00 PM schedule. You can modify these schedules according to your business needs. You can also create schedule exclusion lists, which enable you to omit days such as national holidays from schedules. See "Managing schedule exclusion lists" on page 137.

The following procedures tell you how to

- Create and modify schedules
- Manage schedule exclusion lists

## CREATING AND MODIFYING SCHEDULES

The schedules you create do not expire. The weekly schedule configuration applies week after week until you change the schedule or apply a different schedule to the device. You can exclude specific dates from the schedule for national holidays.

To create a schedule

1. Select **YourSite=>Schedules**.
2. Click **Add**.
3. After **Name**, a descriptive name for the schedule.
4. To apply a schedule exclusion list, click the **Browse** button.
5. Select an exclusion list to apply and click **OK**.  
**NOTE:** The Schedule exclusion list specifies days to be omitted from the schedule. To create a schedule exclusion list, or to edit an existing schedule exclusion list, see "Managing schedule exclusion lists" on page 137.
6. After **Start time**, type the business day start time for each day of the week.
7. After **End time**, type the business day end time for each day of the week.
8. After **Disable for day**, select the check box for each day your business is closed.
9. Click **Save**.

To modify a schedule

1. Select **YourSite=>Schedules**.
2. Select the schedule to modify.
3. After **Name**, type a new name for the schedule. For example, 'Monday to Friday 8:00 AM to 6:00 PM'.
4. After **Schedule exclusion list**, click the **Browse** button.
5. Select a schedule exclusion list to apply to the schedule and click **OK**.  
**NOTE:** The Schedule exclusion list specifies days to be omitted from the schedule. To create a schedule exclusion list, or to edit an existing schedule exclusion list, see "Managing schedule exclusion lists" on page 137.
6. After **Start time**, type the new business day start time for each day of the week.
7. After **End time**, type the new business day end time for each day of the week.
8. After **Disable for day**, select the check box for day your business is closed.
9. Click **Save**.

## *Managing schedule exclusion lists*

Schedule exclusion lists enable you to omit days from schedules you create. For example, you can use a schedule exclusion list to omit national holidays from a yearly schedule.

The following procedures show you how to

- Create and apply new exclusion lists to schedules
- Apply existing exclusion lists to schedules
- Remove exclusion lists from schedules
- Edit and remove dates from schedule exclusion lists
- Delete exclusion lists from YourSite Explorer

**NOTE:** To edit or delete a list you must first select a schedule with an exclusion list already applied to it. You can then access schedule exclusion lists, and the buttons for editing and deleting lists, by clicking 'Manage schedule exclusion list'.

To create and apply a new exclusion list to a schedule

1. Click **YourSite=>Schedules**.
2. Click **Add**.
3. Click **Manage schedule exclusion list**.
4. After **Name**, type the name of the exclusion list.  
**NOTE:** To create a new list for a schedule with an exclusion list already applied to it, click 'Add' and follow steps 4 onward.
5. On the calendar, click the dates to exclude from the schedule.
6. Click **Save**.
7. To apply the exclusion list to the selected schedule, click **Apply**. Otherwise, close the schedule exclusion list designer window.
8. Click **Save**.

To apply an existing exclusion list to a schedule

1. Click **YourSite=>Schedules**.
2. Select the schedule to which you will apply a schedule exclusion list.
3. After **Schedule exclusion list**, click the **Browse** button.
4. Select a schedule exclusion list and click **OK**.
5. Click **Save**.
6. Repeat these steps for other schedules to which you will apply the exclusion list.

To remove an exclusion list from a schedule

1. Click **YourSite=>Schedules**.
2. Select the schedule from which you will remove a schedule exclusion list.
3. After **Schedule exclusion list**, click the **Clear** button.
4. Click **Save**.

To edit and remove dates from an exclusion list

1. Click **YourSite=>Schedules**.
2. Select a schedule with an exclusion list applied to it and click **Manage schedule exclusion list**.
3. Click **Edit**.
4. To add new dates, select the dates from the calendar.
5. To remove dates, select the dates from the list and click **Remove**.
6. To remove all dates, click **Clear**.
7. Click **Save**
8. To apply changes to the schedule, click **Apply**.

To delete an exclusion list from YourSite Explorer

1. Click **YourSite=>Schedules**.
2. Select a schedule with the exclusion list to delete.  
**NOTE:** If you are deleting exclusion lists as part of clean-up, select any schedule with an exclusion list applied to it and follow the steps below.
3. Click **Manage schedule exclusion list**.
4. From the drop-down list, select the exclusion list you want to delete.
5. Click **Delete**.
6. Click **Save**.

### *Applying schedules*

You apply schedules you create in YourSite Explorer=>Schedules to media servers.

You can apply the schedules you create to

- Media servers.  
See "Adding media servers" on page 66.
- Alarms.  
See "Monitoring and alarming subsystem" on page 138.

## MONITORING AND ALARMING SUBSYSTEM

Business Reporter uses a centralized alarming system configured in YourSite Explorer. The Maintenance Alarm Dispatcher service is located on the Enterprise Server and performs server maintenance activities as well as controlling all alarming in the network. Alarm notifications are sent for each device that is triggering an alarm and is distributed in the following ways:



- **Email:** Summary emails are sent to valid email subscribers and list all current, active alarm statuses as well as a list of alarms that triggered the alert.
- **RSS:** An RSS feed is published on the server and can be subscribed to by any RSS reader that has been given access to the server.
- **SNMP:** A count of alerting alarms for each category can be viewed in an SNMP manager.
- **Start Page:** A list of currently active Contact Center Management alarms with a Knowledge Base article list of descriptions, severities, impacts on contact centers, and troubleshooting information can be viewed on the Start Page of YourSite Explorer. (See "YourSite Explorer Start Page" on page 58.)

By default, alarms are configured to expire after 24 hours.

The Server Monitoring Agent is a standalone service that is deployed on each server in the enterprise. It monitors performance counter values based on alarm configuration, collects external alarm data from services, and notifies the prairieFyre Maintenance Alarm Dispatcher service when alarm states surpass configured thresholds.

Alarms may also be viewed with the Enterprise Status icon and RSS feed link, located in the lower-right corner of the YourSite Explorer and Contact Center Client windows and in the upper-right corner of CCMWeb. In order to view the Enterprise Status icon and RSS feed link in all of the applications in which they are present, we recommend you log in as an Administrator.

The Enterprise Status icon is a circular, colored status indicator. The color indicates the highest level of severity for all alarms currently alerting (Normal = Green, Minor = Yellow, Major = Orange, Critical = Red, Unknown = Gray). If you subscribe to the RSS feed and your RSS reader is open, you will be notified with changes to alarm states. If you don't subscribe to the RSS feed, you can click the RSS feed link and view active alarms in your default browser.

In addition to receiving notification of alarms, you can quickly view Enterprise status and active alarms using the YourSite Explorer Start Page's Alarms tab. The Alarms tab consists of two panes: the Feed Preview and the Mitel Knowledge Base pane. The Feed Preview contains an RSS feed of the active alarms. The Mitel Knowledge Base pane contains a table of contents linking to relevant Knowledge Base (KB) articles for each alarm. Each KB article contains a description of the reason for the alarm, the severity of the alarm, the impact on contact centers, and troubleshooting steps.

If you have multiple servers and you want to be able to determine which server is emailing an alarm, you can set up a unique 'From' address for the emails delivered from the Contact Center Management server in the 'From Name' field of the Outgoing tab in the mail server configuration window in YourSite Explorer.

Alarms are categorized based on the type of data they analyze. There are three types of alarms:

- **Performance counter and Registered services performance counter alarms:** based on performance counters
- **Media server alarms:** independently tracked for each media server
- **General alarms:** all other alarms

The following procedures explain how to

- Configure Performance counter and Registered services performance counter alarms
- Configure Media server alarms
- Configure General alarms
- Disable or enable alarms
- Temporarily disable ('Snooze') alarms

These configurations take place in **YourSite=>Alarms**.

To configure Performance counter and Registered services performance counter alarms

1. Select the **Performance counter** or **Registered services performance counter** alarm you want to configure and click the **General** tab.
2. To specify an SNMP category in which the alarm displays, after **Category**, select a category type from the drop-down list.
3. Set **Minor**, **Major**, and **Critical thresholds** and **threshold alert delays** for the alarm.  
**NOTE:** Thresholds determine the severity of the alarm when the specified condition is met. The threshold alert delays determine the how long an alarm state is active before an alarm is triggered and notification is sent.
4. To disable a threshold, from the drop-down list next to the threshold select **Disabled**.
5. To be notified when the alarm value changes, select the **Realert on value change** check box.
6. Click the **Actions** tab.
7. To send subscribers emails of alarms when the alarm is triggered, under **Email action**, select the **Enabled** check box.
8. Click **Browse** and select a **Business hours**: schedule to apply to the alarm.
9. To receive notifications of critical alarms, outside of business hours, select the **Ignore business hours for critical alerts**: check box.
10. Click **Save**.

To configure Media server alarms

1. Select the **Media server** alarm you want to configure and click the **General** tab.
2. To specify an SNMP category in which the alarm displays, after **Category**, select a category type from the drop-down list.
3. After **Severity**, select the level of severity to apply to this alarm (Minor, Major, or Critical).
4. After **Alert delay**, select how long the alarm state is active before an alarm is triggered and notification is sent.
5. To disable the alarm for specific media servers, after **Disable media servers**:, click the ... button, select the media server from the **Select disabled media servers** window, and click **OK**.
6. To clear a disabled media server selection, click **Clear**.
7. Click the **Actions** tab.
8. To send subscribers emails of alarms when the alarm is triggered, under **Email action**, select the **Enabled** check box.

9. Click the **Browse** button and select a **Business hours:** schedule to apply to this alarm.
10. To receive notifications of critical alarms, outside of business hours, select the **Ignore business hours for critical alerts:** check box.
11. Click **Save**.

To configure General alarms

1. Select the **General** alarm you want to configure and click the **General** tab.
2. To specify an SNMP category in which the alarm displays, after **Category**, select a category type from the drop-down list.
3. After **Severity**, select the level of severity to apply to this alarm (Minor, Major, or Critical).
4. After **Alert delay**, select how long the alarm state is active before an alarm is triggered and notification is sent.
5. Click the **Actions** tab.
6. To send subscribers emails of alarms when the alarm is triggered, under **Email action**, select the **Enabled** check box.
7. Click the **Browse** button and select a **Business hours:** schedule to apply to this alarm.
8. To receive notifications of critical alarms, outside of business hours, select the **Ignore business hours for critical alerts** check box.
9. Click **Save**.

To disable or enable an alarm

1. To disable an alarm, select the alarm and click the **General** tab.
2. Click **Disable**.
3. Click **Save**.
4. To re-enable an alarm, select the alarm and click the **General** tab.
5. Click **Enable**.
6. Click **Save**.

To temporarily disable ('Snooze') an alarm

1. Select the alarm to disable and select the **General** tab.
2. Click **Snooze** and, from the drop-down list, select how long the alarm will be disabled.
3. To customize the snooze duration, from the **Snooze** drop-down list select **Custom...** and set the date and time at which the alarm reactivates.
4. Click **Save**.

## VALIDATING ALARMS

Some alarms require the system to be validated before the alarms will clear. The Validate button must be clicked after the values have been corrected, otherwise the alarm will not be cleared until nightly synchronization. The alarm may not clear with nightly synchronization if the value is still wrong. See "Validating YourSite Explorer configuration" on page 153.

Consult the alarm's Knowledge Base article for validation information.

## ENABLING SNMP AGENT FOR ALARMS

Contact Center Solutions/Business Reporter includes an SNMP agent that enables you to monitor Contact Center Solutions/Business Reporter alarms through an SNMP manager. Contact Center Solutions/Business Reporter SNMP agent integrates with the Windows SNMP service and requires that a Windows SNMP Service be added and configured on the Enterprise Server.

The Contact Center Solutions/Business Reporter SNMP agent is primarily configured for traps only, but also responds to Get-request messages for trap messages.

SNMP Agent provides information on nine categories of alarms:

- General Category Alarm
- Data Collection Alarms
- Server Resource Alarm
- Communication Alarm
- License Violation Alarm
- IVR Alarm
- Reporting Alarm
- Performance Alarm
- Configuration Alarm

The value reported for each alarm category is the highest severity of alarm currently triggered in that category.

### *Configuring Windows SNMP service for the SNMP agent*

Contact Center Solutions and Business Reporter requires the use of the Windows SNMP service for the Contact Center Solutions SNMP agent.

The following procedures outlines how to:

- Install the Windows SNMP services (Windows Server 2008 R2 and Windows Server 2012 and 2012 R2)
- Configure Windows SNMP service for the SNMP agent

To install the Windows SNMP services (Windows Server 2008 R2)

1. Start the **Server Manager**.
2. Under **Features Summary**, click **Add Features**.  
The Add Features Wizard opens.
3. Select the following services:
  - SNMP Services
    - SNMP Service
    - SNMP WMI Provider
4. Click **Next**.
5. Click **Install**.
6. Click **Close**.

To install the Windows SNMP services (Windows Server 2012 and 2012 R2)

1. Start the **Server Manager**.
2. Click **Manage=>Add Roles and Features**.  
The Add Roles and Features Wizard opens.
3. Select **Role-based or feature-based installation** and click **Next**.
4. Select **Select a server from the server pool** and select the **Enterprise Server**.
5. Click **Next**.
6. Click **Next**.
7. Select the following services:
  - SNMP Service
    - SNMP WMI Provider
8. Click **Add Features**.
9. Click **Next**.
10. Click **Install**.
11. Click **Close**.

To configure Windows SNMP service for the SNMP agent

1. If you do not have SNMP Service installed on your server, install it using the **Add/Remove Program**, **Add Features**, or **Add roles and features** function of your Window server.
2. After the installation has completed, navigate to **Services**.
3. Right-click on **SNMP** and select **Properties**.
4. Select the **Traps** tab.
5. Under **Community name**, type a community name, such as **Public**, and click **Add to list**.
6. Under **Trap destinations:**, click **Add**.
7. Under **Host name, IP or UPX address:**, type the destination for Contact Center Solutions SNMP Agent traps.
8. Click **Add**.
9. Select the **Security** tab.
10. Click **Add**.
11. In the **Community rights** drop-down list, select **READ WRITE**.
12. Under **Community name:**, type **Public**.
13. Select the **Log On** tab.
14. Under **Log on as:**, select **Local System Account**.
15. Click **OK**.

**NOTE:** After setting up your SNMP Agent, it is recommended you test it using an appropriate tool to confirm that it has been configured correctly.

### *SNMP MIB summary*

Table 5 and Table 6 summarize object information from the MIB. The MIB is located in <drive>] /CCM/Services/MaintenanceAlarmDispatcher/Snmp.

**Table 5: prairieFyre sub-tree**

OBJECT TYPE	OBJECT IDENTIFIER
enterpriseAlarms	prairieFyre 1
enterpriseAlarms	prairieFyre 2
enterpriseAlarms	prairieFyre 3

**Table 6: MIB enterpriseAlarms sub-tree summary**

OBJECT TYPE	SYNTAX INTEGER	MAX ACCESS	DESCRIPTION	OBJECT IDENTIFIER
manufacturer	manufacturer	read-only	Mitel Networks Contact Center Suite	enterpriseAlarms 1
overridingSystemAlarm	unknownAlarm(0) noAlarm(1) minorAlarm(2) majorAlarm(3) criticalAlarm(4)	read-only	This is the cumulative total of all reporting active alarms and should be viewed as the overriding alarm state that the Mitel suite is now reporting.	enterpriseAlarms 2
generalCatagoryAlarm	unknownAlarm(0) noAlarm(1) minorAlarm(2) majorAlarm(3) criticalAlarm(4)	read-only	When a software entity raises an alarm not covered in the following list then it is categorized as a general alarm.	enterpriseAlarms 3
dataCollectionAlarm	unknownAlarm(0) noAlarm(1) minorAlarm(2) majorAlarm(3) criticalAlarm(4)	read-only	One of the Media Controller Data Link Connections within the Mitel Enterprise is offline. This could be a connection to a PBX or an email server or some other controller of a media transaction that is configured to be connected to the Mitel suite.	enterpriseAlarms 4

Table 6: MIB enterpriseAlarms sub-tree summary (continued)

OBJECT TYPE	SYNTAX INTEGER	MAX ACCESS	DESCRIPTION	OBJECT IDENTIFIER
serverResourceAlarm	unknownAlarm(0) noAlarm(1) minorAlarm(2) majorAlarm(3) criticalAlarm(4)	read-only	One or more software services in the Mitel suite is reporting an unusual consumption of computer resources. This may a result of an exceptionally high CPU consumption or running low on physical memory, for example. This may require a service restart to resolve.	enterpriseAlarms 5
communicationsAlarm	unknownAlarm(0) noAlarm(1) minorAlarm(2) majorAlarm(3) criticalAlarm(4)	read-only	One or more service endpoints is reporting an error in its control channel with an associated endpoint. This may be a socket or WCF channel or may be an MSMQ error that is preventing normal process flow in the Mitel software suite.	enterpriseAlarms 6



Table 6: MIB enterpriseAlarms sub-tree summary (continued)

OBJECT TYPE	SYNTAX INTEGER	MAX ACCESS	DESCRIPTION	OBJECT IDENTIFIER
licenseViolationAlarm	unknownAlarm(0) noAlarm(1) minorAlarm(2) majorAlarm(3) criticalAlarm(4)	read-only	The prairieFyre Enterprise Licensing Manager is reporting that the installation is violating or has attempted to exceed enforced license limits for their installation. This may be configuring the YSE services for features or capacity they have not purchased.	enterpriseAlarms 7
ivrAlarm	unknownAlarm(0) noAlarm(1) minorAlarm(2) majorAlarm(3) criticalAlarm(4)	read-only	The Routing services for IVR Routing are reporting an alarm, which may be due to media ports being out of service or an inability to load a workflow.	enterpriseAlarms 8

Table 6: MIB enterpriseAlarms sub-tree summary (continued)

OBJECT TYPE	SYNTAX INTEGER	MAX ACCESS	DESCRIPTION	OBJECT IDENTIFIER
reportingAlarm	unknownAlarm(0) noAlarm(1) minorAlarm(2) majorAlarm(3) criticalAlarm(4)	read-only	The reporting engine is reporting an error that implies it cannot generate a requested report due to a system inoperability error. This may be a corrupt report template or could be a transaction error on the retrieval of SQL data to fill the report.	enterpriseAlarms 9
performanceAlarm	unknownAlarm(0) noAlarm(1) minorAlarm(2) majorAlarm(3) criticalAlarm(4)	read-only	One or more of the service endpoints in the Mitel suite is reporting an overload condition	enterpriseAlarms 10
configurationAlarm	unknownAlarm(0) noAlarm(1) minorAlarm(2) majorAlarm(3) criticalAlarm(4)	read-only	One or more of the service endpoints in the Mitel suite is reporting an error when loading configuration data.	enterpriseAlarms 11

## SECURITY ROLES

You create security roles if you want to restrict employees from specific devices and Contact Center Solutions application areas that their licensing would otherwise enable them to access.

You create security roles to restrict employees from specific devices and Business Reporter application areas.

**NOTE:** In order for you to assign security roles, your account must be associated to a security role that has 'May manage security' enabled.

Contact Center Solutions has two default security settings:

- **Local administrator**—allows employees full access to all of the Business Reporter applications and devices, except Write Back for synchronization.
- **Enterprise administrator**—includes access to Write Back, for synchronization, and all local administrator duties.

Employee access to applications is limited by their security role and their licensing. An employee's security role defines the application areas an employee can access and licensing limits what applications an employee can access. For example, an employee with the Enterprise administrator security role but no supervisor license would not be able to access YourSite Explorer.

When you install Contact Center Solutions, a default user is created. This ensures there is at least one account with which you can access YourSite Explorer.

When you install Business Reporter, a default user is created. This assures you there is at least one account with which you can access YourSite Explorer.

The default user name and password are

- Username: \_admin
- Password: \_password
- Security Role: Enterprise Administrator

Security roles have two components.

- **Basic**  
Basic security controls user access to specific areas of Business Reporter.
- **Advanced**  
Advanced security controls user access to customized lists of devices, real-time monitors, profiles, reports, sites, and users

## CREATING AND APPLYING SECURITY ROLES

You can create security roles that have a number of combinations of basic and advanced authorizations applied to them. For example, you can create a security role with minimal security restrictions, granting users access to as many Contact Center Management reports and applications as you designate. You do this by leaving the security components listed under the Advanced tab set to 'Not restricted'. Alternatively, you can create a security role that has full access to some Business Reporter application areas but is restricted from accessing other reports and devices.

To create and apply a security role, you must

1. Ensure employees are configured in the YourSite database.
2. Create security lists (If you intend to use advanced security).
3. Configure basic security.
4. Optionally, configure advanced security.
5. Assign the security role to one or more employees.

## CREATING SECURITY LISTS

You can use advanced security to restrict user access to sites, reporting, and real-time functions.

Before you can specify advanced security, you must create security lists (device lists, real-time monitor lists, report lists, site lists, and user lists). Each list must contain the devices, real-time monitors, reports, sites, and users to which employees are granted access.

You use the following security lists to define advanced security:

- **Device list**—Device lists specify devices for which employees may view real-time information. You create device lists to restrict access to statistics on specific employees. For example, you might want a manager to view certain employees only (specific device - Kanata employees). The device list must contain the device (employee group - in this case, Kanata employees) to which the user may gain access. Devices include Account Code Group, Agent group, DNIS group, Employee Division, Employee group, Extension Division, Queue group, Team, Trunk Group, Voice extension group, and Voice mail extension group.
- **Report list**—You create report lists to restrict users from viewing specific report types. For example, you might want managers to view employee reports only (specific report category). The report list must contain the reports the user may run. If you do not assign a report list to the employee, then the employee will see every YourSite group and team when running reports and monitoring real-time activities (unless basic security is assigned to that employee that does not permit the employee to gain access to any reports).
- **Profile list**—You create a profile list to restrict users from managing specific real-time monitor profiles.
- **Site list**—You create a site list to restrict users to accessing only certain sites.
- **Real-time monitor list**—The real-time monitor list specifies real-time monitors to which you are granted access. You create a real-time monitor list to restrict access to particular real-time monitors. The real-time monitor list must contain the monitors that the user will access.
- **User list**—You create a user list to restrict a user from chatting online with certain employees. The user list must contain the employees with which the user may chat. For example, you might want managers to chat online with only the employees they supervise. If Jane manages Bill, Sue, and George, then you assign Jane an advanced security role that permits Jane to chat with Bill, Sue, and George (the user list would contain Bill, Sue, and George).
- **Card design list**—You create a card design list to restrict users from managing card designs (card designs specify the information displayed on extension real-time monitors).

The security list configuration page is rendered from CCMWeb within YourSite Explorer. To ensure proper configuration functionality, ensure that CCMWeb has been added as a Trusted Site. Failure to add CCMWeb as a Trusted Site may result in the security list configuration page being disabled.

If you are using Windows Authentication, you must also enable the following browser settings:

- Under Internet Options=>Security, enable 'Automatic logon with current user name and password'
- Under Internet Options=>Advanced, enable 'Enable Integrated Windows Authentication'

To create a security list

1. Under the **Enterprise** pane, click **Security list**.
2. Select the security list you want to create and click **Add**.
3. Type the list **Name**.
4. Type the list **Description**.
5. Click the **Members** tab.
6. If you are creating a device or reports list, after **Filter by**, select a category to narrow the items that display in the list (for example, Employee group).
7. Select the check boxes of the members you want to include in the list.
8. Click **Save**.

To delete a security list

1. Under the **Enterprise** pane, click **Security list**.
2. Select the security list you want to create and click **Delete**.

## CONFIGURING SECURITY ROLES

You can configure basic security to restrict user access to specific areas of CCMWeb and the Contact Center Client, YourSite Explorer, Workforce Scheduling, Employee Portal, and Ignite applications. For example, if you want to restrict users from viewing Contact Center Client and Enterprise Configuration, then you must create a security role with those characteristics.

Table 7 describes the specific setting options for YourSite Explorer synchronization for basic security.

**Table 7: YourSite Explorer synchronization - security setting options**

OPTION	DESCRIPTION
No access	If <i>No Access</i> is enabled you cannot configure Enterprise settings or devices in YourSite Explorer.
Allow Read Access	<i>Allow Read Access</i> enables you to read Enterprise and device configuration settings in YourSite Explorer.
Allow Read/Write Access	<i>Allow Read/Write Access</i> enables you to read Enterprise and device configuration settings in YourSite Explorer and write them to the YourSite database.
Allow Full Control	<i>Allow Full Control</i> enables you to read Enterprise and device configuration settings in YourSite Explorer, write them to the YourSite database, and write back devices programmed in YourSite Explorer to the telephone system.

You can configure advanced security to restrict access to reports, real time and Interactive Contact Center statistics, Chat, sites, and real-time monitors. Advanced security options often require that appropriate security lists be made.

Many advanced security role options require the creation of a security list before the role can be configured. Using these lists, you define a security role. See "Creating security lists" on page 150.

After you create device security lists you can create an advanced security role that restricts access to reports, real-time statistics, ChatLine, sites, and real-time monitors.

Security roles are assigned to employees in their User account tab. See "Configuring employee user account information" on page 104.

The security roles configuration page is rendered from CCMWeb within YourSite Explorer. To ensure proper configuration functionality, ensure that CCMWeb has been added as a Trusted Site. Failure to add CCMWeb as a Trusted Site may result in the security roles configuration page being disabled.

If you are using Windows Authentication, you must also enable the following browser settings:

- Under Internet Options=>Security, enable 'Automatic logon with current user name and password'
- Under Internet Options=>Advanced, enable 'Enable Integrated Windows Authentication'

To add a security role

1. In the **Enterprise** pane, click **Security** role.
2. Click **Add a role**.
3. Type a **Role name**.
4. Type a **Role description**.
5. On the **Basic** tab, clear the check boxes of the items the user is not permitted to use. If required, click the **Advanced** tab and specify advanced security.
6. Click **Save**.

To verify the properties of a security role

1. In the **Enterprise** pane, click **Security role**.
2. Click **View** adjacent to the security role for which you want to view properties. You can assign the security roles to new users and to existing users.

To edit a security role

1. In the **Enterprise** pane, click **Security** role.
2. Click **Edit** beside the name of the security role you want to edit.
3. Make the desired changes to the security role.
4. Click **Save**.  
**NOTE:** Users who are currently logged on will not be affected by changes made to their associated role until the next time they log on.

## VIEWING YOUR SECURITY ROLE PROPERTIES

Users with access to YourSite Explorer can view their own security role properties and determine the application areas to which they have access. Only employees with access to YourSite=>Configuration can change the security role properties of employees.

To view the security role properties for your login credentials in YourSite Explorer

- Under **Enterprise**, click **My Role Allowed**.

To view the security role properties for your login credentials in CCMWeb

- Click **My Options=>My Security Role**.

## ASSIGNING SECURITY ROLES TO EMPLOYEES

**NOTE:** Users who are currently logged on will not be affected by changes made to their associated role until the next time they log on.

To assign a security role to an employee

1. Select an employee
2. Click the **User Account** tab.
3. After **Security role**, click the **Browse** button.
4. Select a security role.  
The default **Local Administrator** allows employees full access to all of the Contact Center Solutions applications and devices (to which the contact center is licensed) except for Write Back for synchronization.  
The default **Enterprise Administrator** allows employees the same access as the Local Administrator, but includes Write Back for synchronization.
5. Click **OK**.
6. Click **Save**.

## VALIDATING YOURSITE EXPLORER CONFIGURATION

The Validate button manually triggers a validation of your contact center system configuration by going through Class of Service system options, SMDR options, agent groups, voice queues, and media servers, firing or clearing alarms as appropriate. Validation automatically takes place with the synchronization that occurs during nightly maintenance, but manual validation is required to clear some alarms.

To validate YourSite Explorer configuration

1. In YourSite Explorer, click the **Tools** tab.
2. Click the **Validate** button.

# Chapter 7

## BUSINESS REPORTER REAL-TIME MONITORS

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*Contact Center Client*

*Troubleshooting real-time issues*



## REAL-TIME MONITORS

Using the telephone system, the Enterprise Server continuously updates the real-time applications with telephone system data, and simultaneously updates connected clients through Transmission Control Protocol-Internet Protocol (TCP/IP). Contact Center Client real-time monitors are automatically updated to reflect device and device group changes made in YourSite Explorer. Supervisors and agents are provided with point-and-click access to real-time performance statistics for their contact center, enabling them to identify issues in contact center performance and see who is available to answer or assist with calls.

Employees view real-time voice statistics and the phone availability of general business employees on the Extension State by Position monitor in Contact Center Client.

In addition to real-time monitors, Contact Center Client includes the following application areas:

- **Management Console**  
Using Management Console you can restart services, administer the database, and perform maintenance functions. See "Management Console" on page 48.
- **Contact Center Chat**  
Contact Center Client provides instant messaging capabilities. Contact Center Chat provides the online chat presence of employees, including Online, Offline, and Away. Employees can view the availability and presence of other employees before they transfer calls or send online chat messages. With Lync Server 2010 or 2013, Contact Center Chat integrates with Lync to provide enhanced presence. See "Using Contact Center Chat" on page 192.

The following optional applications and features reside in Contact Center Client:

- **Contact Center PhoneSet Manager and Contact Center Softphone**  
Contact Center PhoneSet Manager and Contact Center Softphone are optional applications that enable employees to use their desktop computers as IP-based phones.  
See "Contact Center PhoneSet Manager and Contact Center Softphone" on page 252.
- **Contact Center Screen Pop**  
Contact Center Screen Pop is an optional application that launches applications or webpages. In addition, it enables agents to automatically receive caller and account information via pop-ups on their computer monitors every time they receive calls.  
See "Using Contact Center Screen Pop" on page 287.
- **Contact Center Chat with Lync**  
With the addition of Lync Server 2010 or 2013, employees and supervisors use Microsoft Lync as their default instant messaging client. The presence of all company employees is natively delivered in Contact Center Client. Contact center employees can view the presence of both internal and external contacts to determine if they are available to communicate. In addition to Available, Offline, and Away, employees see In a Meeting, Busy, In a call, Do Not Disturb, Be Right Back, and other presence indicators.

Lync Server 2010 and Lync Server 2013 extend the capabilities of Contact Center Chat enabling employees to communicate with people who are

- In the same company, but are not using Contact Center Client
- In the same company, but are not on the same intranet
- External to the company, where the companies in which they work have a Lync Server environment and use Lync
- External to the company, communicate over the public Internet, and use popular instant message services (MSN, AIM, Yahoo!)

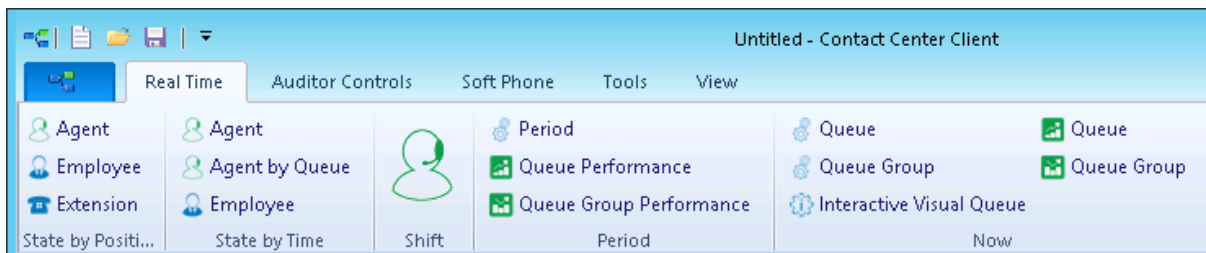
In a Microsoft Lync environment, you can take advantage of other forms of communication: computer voice calls, video conferencing, white boarding, and desktop sharing capabilities. Communication with MSN, AIM and Yahoo! is typically limited to instant messaging only.

## CONTACT CENTER CLIENT

### NOTE:

- By default, all employees can view the Extension State by Position monitor and devices in Contact Center Client.
- The number of extensions logged on at any time must be consistent with your software license.

Contact Center Client uses ribbons for device and monitor control. (See Figure 11.)



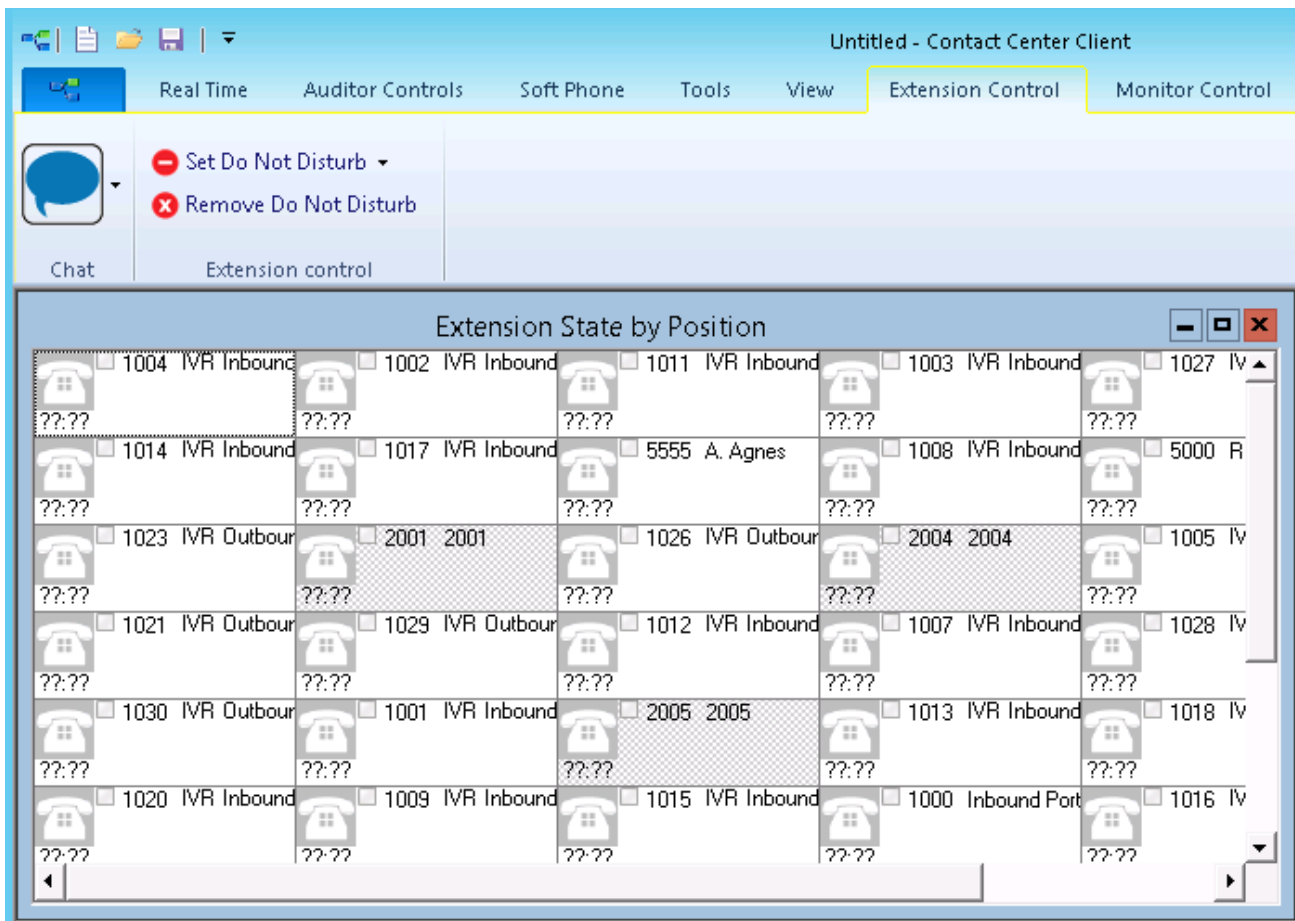
**Figure 11: Contact Center Client ribbon**

Some tabs that display in the ribbon are dependent upon which monitor is active. These are referred to as context sensitive tabs. When you enable context sensitivity for monitors, the associated context sensitive tab for the active monitor automatically becomes the active tab. See Table 8 for a list of the associated context sensitive tabs for each monitor. See Figure 12 for an example of context sensitivity enabled for the Extension State by Position monitor. Note that the Extension and Monitor Control tabs display in the ribbon.

**NOTE:** The options that display in the Contact Center Client ribbon are dependent upon your individual security settings. Options which you are not given access to will not display.

**Table 8: Context sensitivity options display per monitor**

MONITOR	ASSOCIATED CONTEXT SENSITIVE TABS
Extension State by Position	Extension and Monitor Control tabs
Extension Now	Monitor Options tab
Queue by Period	Monitor Options tab
Queue Now	Monitor Options tab
Queue Group Now	Monitor Options tab



**Figure 12: Context sensitivity example - Extension Control tab**

## STARTING CONTACT CENTER CLIENT

You start Contact Center Client to access real-time functionality. After starting Contact Center Client, you can choose to minimize it to either the system tray or the taskbar, depending on your operating system.

**NOTE:** Launching client-side applications from the task bar causes them to bypass the Updater Service process. To ensure successful updates from the Enterprise Server, after an upgrade close all client-side applications for 15 minutes or reopen them from the Start menu/Start screen

To start Contact Center Client

1. Open **Contact Center Client**.
2. If prompted, type your user name and password and verify the Enterprise Server IP address.
3. If you use Secure Socket Layer, select the **SSL** check box.
4. Optionally, select the **Remember my credentials** check box.
5. Click **Log in**.

To display Contact Center Client in the taskbar

1. In Contact Center Client, click the **Contact Center Client** tab.
2. Click **Options**.
3. Clear the **Hide when minimized** check box and click **OK**.  
Contact Center Client, when minimized, will display in the taskbar.
4. To save the profile, click the Contact Center Client icon button and click **Save as**.
5. Type a **Name** for the profile and click **OK**.  
The profile is saved and will automatically be applied each time you open Contact Center Client.

When device associations to device groups are changed in YourSite Explorer (add, delete, rename), these changes will be automatically made in Contact Center Client real-time monitors saved with user profiles

## EXTENSION STATES

**NOTE:** If your Contact Center Client becomes disconnected from the server, upon re-connection the extension states will automatically be synchronized with the server.

Table 9 lists the extension states and their corresponding icons.

**Table 9: Extension states**














TERM	ICON	MEANING
Ringing		Call is ringing on the extension and waiting to be handled
Idle		Extension is waiting to receive a call
Non ACD		Extension is involved in an incoming call or an internal extension-originated call
Non ACD Hold		Extension has placed an incoming call or an internal extension-originated call on hold
Outbound Call		Extension is on an outgoing call
Outbound Hold		Extension has placed an outgoing call on hold
Forwarded to		Extension has set all incoming calls to be forwarded to an alternate answer point
Camp on		Extension is on a call and an incoming call is camped on (waiting to be answered)
Off Hook		Extension's phone is off the hook, so cannot receive calls
Do Not Disturb		Extension has activated Do Not Disturb and is not available to receive calls
Logged Off		Extension is not currently logged on and is unavailable to take calls
System Idle		An extension put into Idle by a supervisor

Table 9: Extension states (continued)

TERM	ICON	MEANING
Unknown		Extension has not generated any activity since Contact Center Solutions was started

## UNDERSTANDING CONTACT CENTER CLIENT FEATURES

You can perform the following tasks on the monitors by either right-clicking within the monitor or selecting options via the Contact Center Client ribbon:

- Open monitors
- Dock monitors
- Add and remove device IDs
- Sort monitor devices
- Rearrange cells
- Set monitor dimensions
- Freeze and unfreeze columns
- Hide and show columns
- Filter device variables
- Set alarms
- Clear alarms
- Define monitor styles
- Group data
- Print monitors
- Arrange windows
- Modify the view
- Build marquee monitors to broadcast statistics and messages
- Chat online with other employees

### *Contact Center Client options*

The following options apply to real-time monitors.

#### **Call recording**

On the Extension by Position monitor, the Call recording option enables you to start, stop, and restart call recording at any time during a call. See "Recording calls" on page 281.

#### **Clear alarms**

The Clear alarms command clears any current performance variable threshold alarms.

#### **Set alarms**

The Set alarms command specifies performance thresholds for queues, agents, and extensions.

### **Add/Remove devices**

The Add/Remove devices command adds or removes devices or device groups from the monitor. If you add extension, they are added to the bottom of the monitor.

### **Set table dimensions**

On the Extension State by Position monitor, the Set table dimensions command adds or deletes columns or rows. If you delete devices, they are deleted them from the lower-right side of the monitor.

### **Size table to frame**

On all monitors, the Size table to frame command adjusts the table to fit within the frame

### **Sort monitor**

On the Extension State by Position monitors, the Sort monitor by name, state, or extension command sorts employees by name, state and time in state, or extension.

Note that you cannot drag and drop devices between monitors.

### **Filter device variables**

On the Extension Now monitor, the Filter device variables command filters the data based on conditions you specify and displays a subset of data on the monitor.

### **General**

On all monitors, under Properties, the General option specifies the monitor name and enables the horizontal and vertical scroll bars.

On the extension monitors, you can also display tool tips, display a pattern upon failover, and display instant messaging online presence indicators.

### **Print monitor**

The Print monitor command prints the current monitor.

### **Enable grouping**

Under Properties, the Enable grouping option displays a grouping panel to which users can drag columns. The grouping order determines the order in which the rows display. The Enable grouping option affects all monitors that contain columns.

### **Column order**

Under Properties=>Layout, the Column order option hides or displays individual columns, and specifies the order of columns across the monitor.

### **Monitor style**

Under Properties=>Layout, the Monitor style option specifies styles and skins (sets of styles) for the monitor, and the Card design option specifies how information is displayed in the cells of agent, employee, and extension monitors.

**Cascade**

When you right-click a monitor tab, under Windows, the Cascade command distributes active monitors down and across the Contact Center Client window.

**Tile vertically**

When you right-click a monitor tab, under Windows, the Tile vertically command distributes active monitors across the Contact Center Client window.

**Tile horizontally**

When you right-click a monitor tab, under Windows, the Tile horizontally command distributes active monitors down the Contact Center Client window.

**Dock Contact Center Client**

When you right-click a monitor tab, under Windows, the Dock Contact Center Client command docks Contact Center Client at the top, bottom, left, or right of your desktop.

**Always on top**

When you right-click a monitor tab, under Windows, and select the Always on top command, Contact Center Client always displays on your desktop on top of all other open applications.

**View**

The View command hides or displays the main menu, status bar, real-time monitors, and email, chat, and voice legends.

## VIEWING QUEUE STATISTICS

**NOTE:**

- You can see queue statistics during business hours as long as the business schedule you configure in YourSite Explorer is consistent with your company's hours of operation. You assign business-hours schedules to queues W in YourSite Explorer=>Queues=>Business Hours.

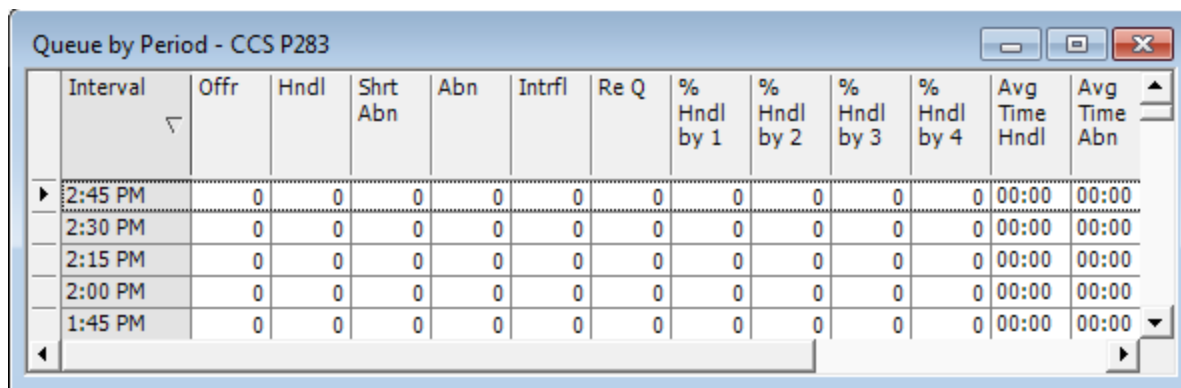
The following monitors display queue statistics:

- Queue by Period
- Queue Now
- Queue Group Now

***Queue by Period***

The Queue by Period monitor collates queue statistics by 15-minute intervals over a 24-hour period. The monitor refreshes each time there is a change in a statistic and each 15-minute interval. The Queue by Period monitor always displays the current 15 minute interval at the top of the monitor. You can specify which columns of statistics are displayed, rearrange columns, and sort individual columns in ascending or descending order. (See Figure 13.)





Interval	Offr	Hndl	Shrt Abn	Abn	Intrfl	Re Q	% Hndl by 1	% Hndl by 2	% Hndl by 3	% Hndl by 4	Avg Time Hndl	Avg Time Abn
2:45 PM	0	0	0	0	0	0	0	0	0	0	00:00	00:00
2:30 PM	0	0	0	0	0	0	0	0	0	0	00:00	00:00
2:15 PM	0	0	0	0	0	0	0	0	0	0	00:00	00:00
2:00 PM	0	0	0	0	0	0	0	0	0	0	00:00	00:00
1:45 PM	0	0	0	0	0	0	0	0	0	0	00:00	00:00

Figure 13: Queue by Period

*Queue by Period column heading definitions*

Table 10 describes the Queue by Period column headings.

**NOTE:**

- If the overflow point for a ring group is an extension with a hot desking agent/user logged into it, a call will not be pegged as interflowed.
- External calls to ring groups that overflow to an ACD path voice queue and are then answered by an agent are not counted as Unavailable in real-time monitors.
- External calls to ring groups that overflow to an ACD path voice queue and are then answered by an agent are not counted as interflowed in real-time monitors.
- Internal calls to ring groups that overflow due to ring or queue timer are pegged as abandons in real-time monitors, but are pegged as interflows in reports.
- Internal calls to ring groups that overflow to an ACD path voice queue and are answered by an agent are pegged as abandoned in real-time monitors. If you run Summarize, they will be counted as interflowed.
- Internal calls that are blind transferred to a ring group and then answered by a ring group are not counted as an ACD call.

Table 10: Queue by Period column headings

TERM	ABBREVIATED NAME	MEANING
Interval time	Interval	The 15 minute interval of time
Offered	Offr	The total number of calls offered to the queue during the 15-minute interval
Handled	Hndl	The total number of calls answered by members during the 15-minute interval
Short Abandoned	Shrt Abn	During the 15-minute interval, the total number of calls abandoned before the short abandon time configured against the queue in YourSite Explorer
Abandoned	Abn	The total number of calls abandoned during the 15-minute interval before being answered by members
Interflowed	Intrfl	The total number of calls interflowed during the 15-minute interval
Requeued	Re Q	The total number of calls re-queued during the 15- minute interval <b>NOTE:</b> This statistic displays information for ACD paths only. Statistics for Ring Groups will display as '0'.
% Handled by 1-4	% Hndl by 1-4	A count of all of the calls answered by the first, second, third, and fourth answer points during the 15-minute interval <b>NOTE:</b> This statistic displays information for ACD paths only. Statistics for Ring Groups will display as '0'.
#Handled by 1-4	# Hndl by 1-4	The number of calls answered by the first, second, third, and fourth answer points during the 15-minute interval <b>NOTE:</b> This statistic displays information for ACD paths only. Statistics for Ring Groups will display as '0'.
Total Conversation Time	Ttl Conv Time	The total time members spent talking to callers during the 15-minute interval
Average Conversation Time	Avg Conv time	The average time members spent talking to callers during the 15-minute interval

Table 10: Queue by Period column headings (continued)

TERM	ABBREVIATED NAME	MEANING
Average Time to Handle	Avg Time Hndl	The average amount of time callers waited in queue before members answered their calls during the 15-minute interval
Average Time to Abandon	Avg Time Abn	The average amount of time callers waited in queue during the 15-minute interval before they abandoned their calls
Average Time to Interflow	Avg Time Intrfl	The average amount of time callers waiting in queue during the 15-minute interval before being interflowed
Service Level % Today	Scv Lvl % Tday	During the 15-minute interval, the percentage of calls answered within the Service Level Time specified for the queue
% Handled	% Hndl	During the 15-minute interval, the percentage of calls answered compared to the total number of calls offered to the ACD queue for the day
Wrap Up	Wrap Up	The total time the agent spent in the Work Timer state during the 15-minute interval <b>NOTE:</b> This statistic displays information for ACD paths only. Statistics for Ring Groups will display as '0'.
Make Busy	Make Busy	The total time the agent spent in the Make Busy state during the 15-minute interval <b>NOTE:</b> This statistic displays information for ACD paths only. Statistics for Ring Groups will display as '0'.
Occupancy	Occp	The total time the queue members spent in an occupied state during the 15-minute interval (occupied state excludes idle time)

## Queue Now and Queue Group Now

The Queue Now monitor enables supervisors to view queue statistics in real time, as well as expand individual queues in the monitor to view statistics on each queue's associated member agents or extensions. When you expand the Queue Now monitor to display the Name column, the monitor also displays member presence in the queue. Presence is indicated by a colored star in the Present column. A green star indicates the member is present in the queue. A gray star indicates the member is not present in the queue. A grey row indicates that the member is not logged in (for agents and hot desk users) or out of service (for extensions).

The Queue Group Now monitor enables supervisors to view aggregated statistics for Reporting, Virtual, and Unified queue groups in real-time, as well as expand individual queue groups in the monitor to view statistics for the queue group's associated queues.

On the Queue Now monitor, you can specify which columns of statistics are displayed, rearrange columns, and sort individual columns in ascending or descending order. You can expand a queue and view statistics on the members associated with the queue. (See Figure 14.)

**NOTE:** Prior to Version 7.1, Queue Now monitors displayed the agent groups belonging to the queues with agent group statistics. As of Version 7.1, this functionality has been removed. Instead, queue members are grouped by agent group.

Queue Now

Queue

Members

Agt Grp

Queue Status	Media server	Queue #	Name	Contact Wtg	Long Wtg	Avail	ACD	Idle	Non ACD
ACD	3300 ICP	P999	Training...	0	00:00	0	0	0	0

State

Name

Agt Grp

Present

Media Server

Reporting

Extn #

Log In

Agt Grp

Agt Grp : Documentation Team - 6 item(s)

	Ella Manthurvedi	Docum	★	3300 I	9001		
	Floyd Mantha	Docum	★	3300 I	9000		
	Fio Renn	Docum	★	3300 I	4444		
	Ella Manthurvedi	Docum	★	3300 I	9001		
	Floyd Mantha	Docum	★	3300 I	9000		
	Fio Renn	Docum	★	3300 I	4444		

ACD	3300 ICP	P300	Sales	0	00:00	0	0	0	0
ACD	3300 ICP	P301	Support	0	00:00	0	0	0	0

Figure 14: Queue Now

**NOTE:**

- Contact Center Client updates Longest Waiting statistics every fifteen seconds, or more frequently as records are received from the telephone system.
- Contact Center Client obtains the Contacts Waiting, Longest Waiting, and Agents Available statistics from the ACD data stream. If the telephone system has not updated Contact Center Management with ACD real-time statistics within the last 90 seconds, question marks display in place of these statistics.
- The Average Handling Time is the Average Conversation Time plus the Average Hold Time. If the call is put on hold, transferred, or conferenced, these times are added to the Average Handling time value.
- Queue Now and Queue Group Now statistics that do not support Ring Groups will show '0' instead.

### *Queue Now and Queue Group Now column heading definitions*

Table 11 describes the real-time and over-the-business-day Queue Now and Queue Group Now queue and queue group statistics.

**NOTE:**

- If the overflow point for a ring group is an extension with a hotdesking agent/user logged into it, a call will not be pegged as interflowed
- External calls to ring groups that overflow to an ACD path voice queue and are then answered by an agent are not counted as Unavailable in real-time monitors
- External calls to ring groups that overflow to an ACD path voice queue and are then answered by an agent are not counted as interflowed in real-time monitors
- Internal calls to ring groups that overflow due to ring or queue timer are pegged as abandons in real-time monitors, but are pegged as interflows in reports.
- Internal calls to ring groups that overflow to an ACD path voice queue and are answered by an agent are pegged as abandoned in real-time monitors. If you run Summarize, they will be counted as interflow.
- Internal calls that are blind transferred to a ring group and then answered by a ring group are not counted as an ACD call.

**Table 11: Queue Now and Queue Group Now queue statistic column headings**

<b>TERM</b>	<b>ABBREVIATED NAME</b>	<b>MEANING</b>
Queue Status	Queue Status	The current status of the queue—either ACD or Do Not Disturb
Queue Number	Queue #	The queue's reporting number
Queue Group Number	Queue Group #	The queue group reporting number (Queue Group Now only)
Media Server	Media Server	The queue's media server
Queue Name	Name	The queue or queue group name
Contacts Waiting	Contacts Wtg	The current number of contacts in queue waiting for a member to become available, including those listening to silence, music, or recorded announcements
Longest Waiting	Long Wtg	The current duration, in minutes and seconds, of the contact waiting the longest in queue or queue group
Available (Queue Now) Agents Available (Queue Group Now)	Avail Agts Avail	The total number of members logged in and not in Do Not Disturb, Make Busy, Work Timer, Reseize Timer, or Unknown
ACD	ACD	The current number of members handling ACD contacts
Idle	Idle	The current number of members logged on and ready to receive contacts
Non ACD	Non ACD	The current number of members handling non-ACD calls (voice only)
Outbound	Out	The current number of members on outgoing calls (voice only)
Unavailable	Unavail	The current number of members in Do Not Disturb, Make Busy, Work Timer, Ringing, or Unknown
Offered	Off	The total number of contacts offered to the queue / queue group
Handled	Hndl	The total number of ACD contacts handled by members

Table 11: Queue Now and Queue Group Now queue statistic column headings (continued)

TERM	ABBREVIATED NAME	MEANING
Abandoned	Abn	<p>The total number of contacts abandoned before being answered by members</p> <p><b>NOTE:</b> Abandoned does not peg short abandons as abandoned contacts while the Abandoned column in the Interactive Visual Queue monitor displays all abandoned contacts. Because of this difference, you may notice discrepancies between the abandoned call information in these two monitors.</p>
Interflowed	Intrfl	<p>The total number of ACD contacts interflowed. Interflow is a mechanism that directs a contact waiting in queue to another answer point.</p> <p><b>NOTE:</b> If a contact waiting in queue is redirected before the queue's short abandon time has elapsed, the queue is pegged with a Queue Unavailable count rather than an Interflowed count. In order for the Interflowed peg to occur, the redirection must occur after the short abandon time has elapsed.</p>
Requeued	Re Q	<p>The total number of ACD contacts requeued</p> <p><b>NOTE:</b> This statistic displays information for ACD paths only. Statistics for Ring Groups will display as '0'.</p>
Average Time to Handle	Avg Time Hndl	The average time it takes for the contact to be taken out of queue (answered or picked) by a member
Average Time to Abandon	Avg Time Abn	The current average amount of time customers wait in queue before abandoning contacts
Average Conversation Time	Avg Conv Time	The current average time members spent communicating (talking, chatting, or replying) with contacts
Service Level %	Svc Lvl %	<p>For a queue, this is the percentage of contacts handled within the queue's Service Level Time value over the day</p> <p>For a queue group, this is the lowest percentage of contacts handled within the queue's Service Level Time value over the day across all queues</p>

Table 11: Queue Now and Queue Group Now queue statistic column headings (continued)

TERM	ABBREVIATED NAME	MEANING
% Handled	% Hndl	For a queue, this is the percentage of contacts handled compared to the total number of contacts offered to the queue for the day
		For a queue group, this is the lowest percentage of contacts handled compared to the total number of contacts offered to the queue for the day across all queues
% Handled by 1-4	% Hndl by 1-4	For a queue, this is the percentage of all of the contacts answered by the first, second, third, and fourth agent groups
		For a queue group, this is the highest percentage of all of the contacts answered by the first, second, third, and fourth agent groups <b>NOTE:</b> This statistic displays information for ACD paths only. Statistics for Ring Groups will display as '0'.
Total Conversation Time	Ttl Conv Time	The current total time members spend talking to callers
Total Queue Unavailable	Ttl Q Unavail	The total number of times during the day that contacts are rerouted because the queue is in Do Not Disturb or has no members logged in
Current Queue Unavailable	Curr Q Unavail	The current number of contacts are rerouted because no members are logged in or the queue is in Do Not Disturb. Once the queue becomes available, this value resets to 0
Offered Last Hour	Offr Last Hour	The total number of contacts offered to the queue during the last hour of business
Time to Handle Last Hour	Time Hndl Last Hour	The time contacts waited in queue during the last hour of business before being handled by a member
% Handled Last Hour	% Hndl Last Hour	For a queue, this is the percentage of contacts handled in the last hour of business, compared to the total number of contacts offered to the ACD queue for the day
		For a queue group, this is the lowest percentage of contacts handled in the last hour of business, compared to the total number of contacts offered to the ACD queue for the day



**Table 11: Queue Now and Queue Group Now queue statistic column headings (continued)**

TERM	ABBREVIATED NAME	MEANING
Service Level % Last Hour	Svc Lvl % Last Hour	For a queue, this is the percentage of contacts answered or picked within your Service Level Time value in the last hour For a queue group, this is the lowest percentage of contacts answered or picked within your Service Level Time value in the last hour
Handled Last Hour	Hndl Last Hour	The total number of contacts handled by members during the last hour of business
Abandoned Last Hour	Abn Last Hour	The total number of contacts abandoned during the last hour of business
Interflowed Last Hour	Intrfl Last Hour	The total number of contacts interflowed during the last hour of business. Interflow is a mechanism that directs a contact waiting in queue to another answer point
Unavailable Last Hour	Unavail Last Hour	The total number of times, in the last hour of business, contacts were rerouted because the queue they tried to access was in Do Not Disturb or had no members logged in See Current Queue Unavailable
Average Handling Time Last Hour	Avg Hndl Last Hour	The average duration of contacts from member pick up to client hang up (including hold time) during the last hour of business
Offered Last 15 Minutes	Offr Last 15 Min	The total number of contacts offered to the queue in the last 15 minutes of business
Time to Handle Last 15 Minutes	Time Hndl Last 15 Min	The time contacts waited in queue during the last 15 minutes of business before being handled by a member
% Handled Last 15 Minutes	% Hndl Last 15 Min	For a queue, the percentage of contacts answered in the last 15 minutes of business, compared to the total number of contacts offered to the ACD queue for the day For a queue group, the lowest percentage of contacts answered in the last 15 minutes of business, compared to the total number of contents offered to the ACD queue for the day

**Table 11: Queue Now and Queue Group Now queue statistic column headings (continued)**

<b>TERM</b>	<b>ABBREVIATED NAME</b>	<b>MEANING</b>
Service Level % Last 15 Minutes	Svc Last % Last 15 Min	For a queue, this is the percentage of contacts answered or picked within your Service Level Time value in the last 15 minutes of business  For a queue group, this is the lowest percentage of contacts answered or picked within your Service Level Time value in the last 15 minutes of business
Handled Last 15 Minutes	Hndl Last 15 Min	The total number of contacts handled by members during the last 15 minutes of business
Abandoned Last 15 Minutes	Abn Last 15 Min	The total number of contacts abandoned during the last 15 minutes of business
Interflowed Last 15 Minutes	Intrfl Last 15 Min	The total number of contacts interflowed during the last 15 minutes of business. Interflow is a mechanism that directs a contact waiting in queue to another answer point.
Unavailable Last 15 Minutes	Unavail Last 15 Min	The total number of times, in the last 15 minutes of business, contacts were rerouted because the queue they tried to access was in Do Not Disturb or had no agents logged in  See Current Queue Unavailable
Average Handling Time Last 15 Minutes	Avg Hndl Last 15 Min	The average handling duration of contacts from contact pickup to contact completion, including hold time, during the last 15 minutes of business
% Abandoned	% Abn	For a queue, this is the percentage of contacts that were abandoned ( $\% \text{ Abandoned} = \text{Contacts Abandoned} \div \text{Contacts Offered}$ )  For a queue group, this is the highest percentage of contacts that were abandoned ( $\% \text{ Abandoned} = \text{Contacts Abandoned} \div \text{Contacts Offered}$ )
% Abandoned Last Hour	% Abn Last Hour	For a queue, this is the percentage of contacts that were abandoned in the last hour of business  For a queue group, this is the highest percentage of contacts that were abandoned in the last hour of business

**Table 11: Queue Now and Queue Group Now queue statistic column headings (continued)**

TERM	ABBREVIATED NAME	MEANING
% Abandoned Last 15 Minutes	% Abn Last 15 Min	For a queue, this is the percentage of contacts that were abandoned in the last 15 minutes of business  For a queue group, this is the highest percentage of contacts that were abandoned in the last 15 minutes of business
Wrap Up	Wrap U	The total time that agents spent in the Work Timer state  <b>NOTE:</b> This statistic displays information for ACD paths only. Statistics for Ring Groups will display as '0'.
Make Busy	Make Busy	The total time that agents spent in the Make Busy state  <b>NOTE:</b> This statistic displays information for ACD paths only. Statistics for Ring Groups will display as '0'.
Occupancy	Occp	The total time that members spent in an occupied state (occupied state excludes idle time)
# Handled by 1-4	# Hndl by 1-4	The number of contacts answered by the first, second, third, and fourth agent groups  <b>NOTE:</b> This statistic displays information for ACD paths only. Statistics for Ring Groups will display as '0'.
Logged Out	Logged out	The number of members associated with the queue but not logged in to the system  <b>NOTE:</b> For Ring Groups, this statistic displays either the number of extensions out of service or hot desk users logged out.
Members Not Present	Not Present	The number of members that are logged into the telephone system, but not present in the queue being monitored

Table 12 describes the real-time and over-the-business-day Queue Now and Queue Group Now member statistics.

**Table 12: Queue Now and Queue Group Now member statistic column headings**

<b>TERM</b>	<b>MEANING</b>
Name	The name of the member being monitored. The icon beside the name indicates the media type the member handles
Present	Indicates whether the member is present in the queue Presence is indicated by a colored star. A green star indicates the agent or extension is present in the queue. A gray star indicates the agent is not present in the queue
Media Server	The media server to which the member is associated
Reporting	The reporting number of the member being monitored. For agents and hot desk users, this is the login ID. For extensions, this is the extension dialable.
Extn#	The base extension where the member logged in (voice agent or hot desk user only)
Log In	The first login of the member's shift. <b>NOTE:</b> This statistic displays information for ACD path members only and is not calculated for Ring Group members.
Last Event Received	The most recent time an member event occurred
Shift Time	The total elapsed time logged for the member, calculated based on the difference between log in and last event received <b>NOTE:</b> This statistic displays information for ACD path members only and is not calculated for Ring Group members.
DND Time	The duration of time where Do Not Disturb was the overriding state for the member
MKB Time	The duration of time where Make Busy was the overriding state for the member <b>NOTE:</b> This statistic displays information for ACD paths only. Statistics for Ring Groups will display as '0'.
Wrap Up Time	The duration of time where Wrap Up Time was the overriding state for the member. Wrap up time does not include any time spent making or taking contacts during the wrap up timer. <b>NOTE:</b> This statistic displays information for ACD paths only. Statistics for Ring Groups will display as '0'.
ACD Time	The duration of ACD contacts handled, from member pickup to completion (not including hold time)
Hold ACD Time	The duration of time ACD contacts spent on hold

**Table 12: Queue Now and Queue Group Now member statistic column headings  
(continued)**

TERM	MEANING
Non ACD Time	The duration of non-ACD contacts handled, from member pickup to completion (not including hold time) (voice only)
Hold Non ACD Time	The duration of time non-ACD contacts spent on hold
Out Time	The duration of time members spent handling outbound calls (voice only)
Out Hold Time	The duration of time outbound calls spent on hold, for members (voice only)
DND Cnt	The number of times the member entered the Do Not Disturb state
MKB Cnt	The number of times the member entered the Make Busy state <b>NOTE:</b> This statistic displays information for ACD paths only. Statistics for Ring Groups will display as '0'.
ACD Cnt	The number of ACD contacts handled by the member
Shrt ACD Cnt	The number of ACD contacts handled by the member where the handle time was less than the Short Handle parameter
Hold ACD Cnt	The number of times ACD contacts were placed on hold (voice only)
Non ACD Cnt	The number of non-ACD contacts handled by the member (voice only)
Hold Non ACD Cnt	The number of times non-ACD contacts were placed on hold
Out Cnt	The number of outbound calls made by the member (voice only)
Out Hold Cnt	The number of times outbound calls were placed on hold (voice only)
Avg Handl	The average amount of time queue members spent handling ACD contacts (ACD Time divided by ACD Count, excluding ACD Hold Time)
Agt Grp	The agent group to which the agent belongs <b>NOTE:</b> This statistic displays information for ACD paths only. Statistics for Ring Groups will display as '0'.
Occupancy	The duration of time the member spent processing contacts
Contacts per Hour	The total ACD contact count minus the ACD short handle count, divided by the shift time for the member
On failover	Indicates whether the primary media server is offline and has failed over to the secondary media server (voice only)

**Table 12: Queue Now and Queue Group Now member statistic column headings  
(continued)**

TERM	MEANING
Unavail%	The percentage of time for the shift that the member was in Do Not Disturb, Make Busy, and Work Timer states
Not Present Time	The duration of time the member was logged into but not present in an agent group or ring group
External Handle Duration	The duration of time the member spent handling external calls (voice only)
External Inbound Count	The number of incoming external calls (voice only) <b>NOTE:</b> This statistic displays information for ACD paths only. Statistics for Ring Groups will display as '0'.
External Outbound Count	The number of outgoing external calls (voice only) <b>NOTE:</b> This statistic displays information for ACD paths only. Statistics for Ring Groups will display as '0'.

## VIEWING EXTENSION AVAILABILITY

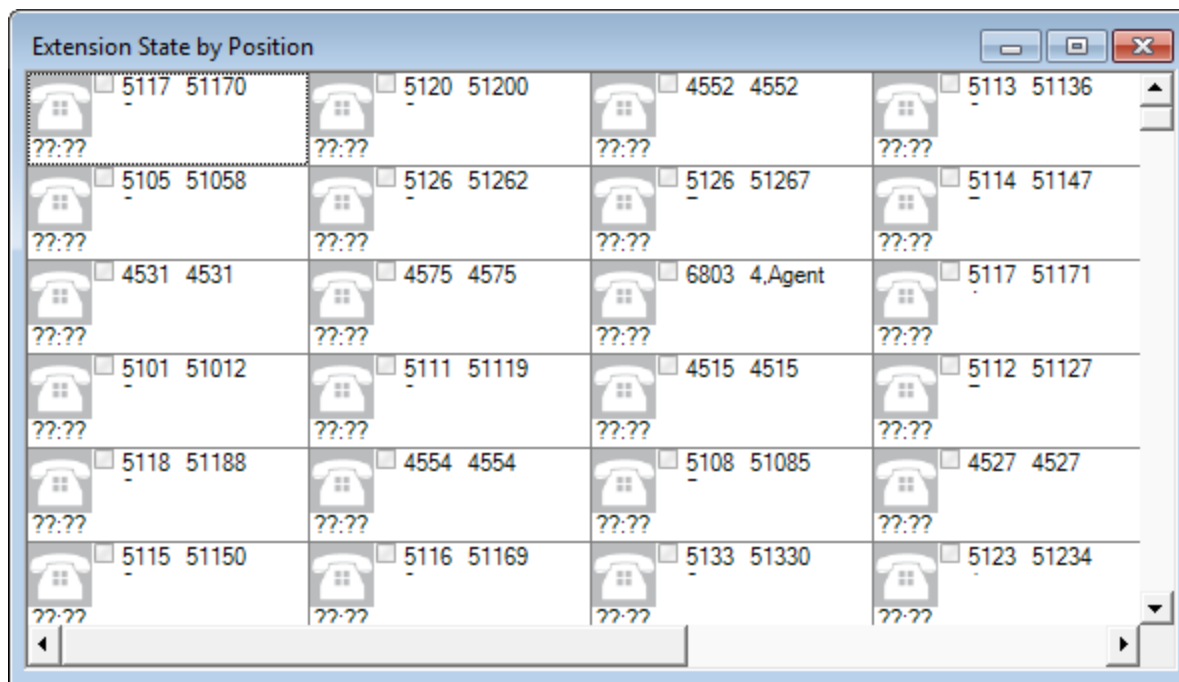
**NOTE:** Users who will use the Extension by Position monitor must have the Class of Service HCI settings enabled.

In your business, you may be monitoring

- General business, traditional extensions (non-contact center employees) who sit at the same desks each day, are assigned their own desk phone extensions, and do not log on to their phones (their phones are programmed with their personal settings and are always active)
- General business, hot desking extensions (non-contact center employees) who log on to any phone in the enterprise with a virtual extension configured with their personal settings. When the employee logs on the extension becomes active. When the employee logs off of the extension it goes out of service. (See Figure 15.)

The following monitors are available for viewing extensions:

- Extension State by Position
- Extension Now



**Figure 15: Extension State by Position**

You can set up your real-time monitor profile to include two or more Extension by Position monitors: one with cells that are arranged to show the whereabouts of employees in your contact center, and another that shows the status of general business extensions: active/inactive, inbound/outbound.

When a phone is out of service, the extension and employee cells in real-time monitors are grayed out. The out of service state applies to phones that are not connected to the network, remote employees that have lost their Internet connection, phones that are physically disconnected or malfunctioning, or employees that are not logged into their soft phone.

#### **Extension Inbound**

*Extension Inbound* refers to a general business extension on an inbound call.

#### **Extension Outbound**

*Extension Outbound* refers to a general business extension on an outbound call.

#### **General business, traditional extensions who sit at the same desks each day**

If you have general business, traditional extensions who sit at the same desks each day, you use the Extension State by Position monitor to view where they are sitting in the contact center. After you add their extensions to the monitor, you can arrange the cells to match the layout of your business, or arrange them alphabetically or by department.

When a general business employee is in Idle, the cell for the employee's phone extension in the Extension State by Position monitor displays the employee's name and extension number, and the General business active icon. When the employee is on an incoming/outgoing call, the cell displays the Extension Inbound/Extension Outbound icon, the employee's name and extension number, and the time in state. If the Caller ID card design is selected, you will also see the caller name and phone

number. Either card enables you to readily determine the online and phone availability of general business subject matter experts.

### **General business hot desking employees who sit at different desks each day**

General business, hot desking extensions can log on to any phone in the enterprise and access their personal settings. When adding extensions to the Extension State by Position monitor, you can arrange them alphabetically or by department.

When an employee is logged on, the monitor cell displays the General business active icon and the employee's name and extension. When the employee is on an incoming/outgoing call, the cell displays the Extension Inbound/Extension Outbound icon and the time in state. If the Caller ID card design is selected, you will also see the caller name and phone number. When the employee logs off, the monitor cell is grayed out (inactive).

### ***Extension State by Position***

The Extension State by Position monitor provides real-time information in cells that you can arrange to mirror your floor plan: you can view phone extensions by their physical position. In addition, this monitor enables you to view the current status of general business extensions. Card designs enable you to customize the information displayed in the cells. See "Selecting and customizing card designs" on page 189.

When a phone is out of service, the extension and employee cells in real-time monitors are grayed out. The out of service state applies to phones that are not connected to the network, Teleworker employees that have lost their Internet connection, phones that are physically disconnected or malfunctioning, or employees that are not logged into their soft phone.

When you first open the extension monitor, you can select a card design:

- The Classic card displays the state, time in the state, presence, employee name, employee ID, and extension number and presence.
- The Caller ID card displays the caller name and number (ANI), the number the caller/employee dials for incoming/outgoing calls (DNIS), and caller collected digits (requires IVR Routing Collect Caller Entered Digits), such as account numbers, the state, time in the state, presence, employee name, employee ID, and extension number.
- The Call Cost card displays the same statistics as the Caller ID card, with the addition of call cost statistics.
- Custom cards you create and share display customized agent/employee/extension and/or caller information.

Caller ID information is displayed when

- Extensions are in the following real-time states: Inbound and Outbound

You can set alarms for all statistics and for caller ID information, such as the caller name and number.

**NOTE:** Before you can select the Caller ID card on the Add devices window of the extension monitor, you must make the card available. To do so, right-click an open monitor, select the Caller ID card under Properties, Layout=>Card design and click Apply.






## Extension Now

The Extension Now monitor enables supervisors to view extension statistics in real time. The Extension Now monitor provides visibility to extensions. If an agent logs into an extension displayed in this monitor, the extension will go out of service and will not be updated in real time. In the Extension Now monitor, you can specify which columns of statistics are displayed, rearrange columns, and sort individual columns in ascending or descending order. (See Figure 16.)

**NOTE:** Extensions must be licensed to display statistics.

Extension Now

Ext Stat	Media Server	Name	Reporting	Last Event Recd	ACD Time	ACD Hold Time	Non ACD Time	Non ACD Hold Time	Out Time	Out Hold Time	DND Time	DND Count
▶ 	3300 ICP	2005	2005	5:11 PM	00:01:43	00:01:08	00:03:05	00:00:00	00:00:08	00:00:00	00:02:29	2
	3300 ICP	2001	2001	5:11 PM	00:02:37	00:01:02	00:02:36	00:00:00	00:01:08	00:00:00	00:08:32	2
	3300 ICP	2002	2002		00:00:00	00:00:00	00:00:00	00:00:00	00:00:00	00:00:00	00:00:00	0

**Figure 16: Extension Now monitor**

## Extension Now column heading definitions

Table 13 describes the real-time and over-the-business-day Extension Now extension statistics.

**Table 13: Extension Now extension statistic column headings**

TERM	MEANING
Ext Stat	The current status of the extension
Media Server	The extension's media server
Name	The extension name
Reporting	The extension's reporting number <b>NOTE:</b> The extension reporting number is also its dialable number.
Last Event Recd	The most recent time an extension event occurred
ACD Time	The duration of ACD (ring group) contacts handled, from extension pickup to completion (not including hold time)
ACD Hold Time	The duration of time ACD (ring group) contacts spent on hold
Non ACD Time	The duration of non-ACD contacts handled, from extension pickup to completion (not including hold time)
Non ACD Hold Time	The total time for non-ACD calls put on hold
Out Time	The number of outbound calls made by the extension
Out Hold Time	The duration of time outbound calls spent on hold for extensions

**Table 13: Extension Now extension statistic column headings (continued)**

<b>TERM</b>	<b>MEANING</b>
DND Time	The duration of time where Do Not Disturb was the overriding state for the extension
DND Count	The number of times the extension entered the Do Not Disturb state
ACD Cnt	The total number of ACD (ring group) calls answered by the extension
Shrt ACD Cnt	The total number of ACD (ring group) calls answered by the extension that lasted less than the Short Handle parameter
Hold ACD Cnt	The number of times the extension put ACD (ring group) calls on hold
Non ACD Cnt	The total number of non-ACD calls answered by the extension
Non ACD Hold Cnt	The number of times non-ACD calls were put on hold
Out Cnt	The total number of outgoing calls the extension made
Out Hold Cnt	The total number of times the extension put outgoing calls on hold
Calls Per Hour	The average number of incoming ACD calls answered by the extension per hour since the extension was logged in
On Failover	Indicates whether or not the extension has failed over to the secondary media server
Not Present Time	The duration of time the extension was in service but not present in a ring group
Avg Handl	The average amount of time the extension spent handling ACD contacts (ACD Time divided by ACD Count, excluding ACD Hold Time)
Occp	The total time the extension spent in an occupied state (occupied state excludes idle time)

## VIEWING WEBPAGES

While using Contact Center Client, you can view webpages using the Web browser monitor.

To view a webpage within Contact Center Client

1. Click the **Real Time** tab in the Contact Center Client ribbon.
2. Click the **Web** icon.  
The Web Browser Properties window opens.
3. After **Monitor title**, type a name for the monitor.
4. After **Start URL**, type the address of the website to view.  
**NOTE:** The website address must begin with http:// or you will not be able to view the monitor.
5. Optionally, select a value for the Web Browser **Refresh Rate**.
6. Click **OK**.

## VIEWING AND CUSTOMIZING THE MONITOR

### NOTE:

- Contact Center Client has a tabbed interface for managing and arranging windows. You can dock multiple Extension State by Position monitors, displaying them on overlapping tabbed panels to maximize real estate. This enables you to readily navigate between monitors.
- You can save threshold settings and display characteristics you define for monitors. When you click File=>Save, Contact Center Client saves all open monitors under one profile name. You can click File=>Open to open another profile, or File=>New to create a new profile.

### *Opening monitors*

To open a monitor in Contact Center Client

1. In the Contact Center Client ribbon, click **Real time** to view the Contact Center Client monitor icons.
2. In the **State by Position** column on the ribbon, click **Agent**.  
This selects the Agent State by Position monitor and the Add/Remove device IDs window opens.  
See Figure 17.
3. Under **Agent groups**, select agent groups to monitor and/or under **Agents**, select agents to monitor.
4. Under **Card designs**, select a card design.  
Card designs specify the information displayed on agent, employee, and extension monitors.
5. Click **OK**.

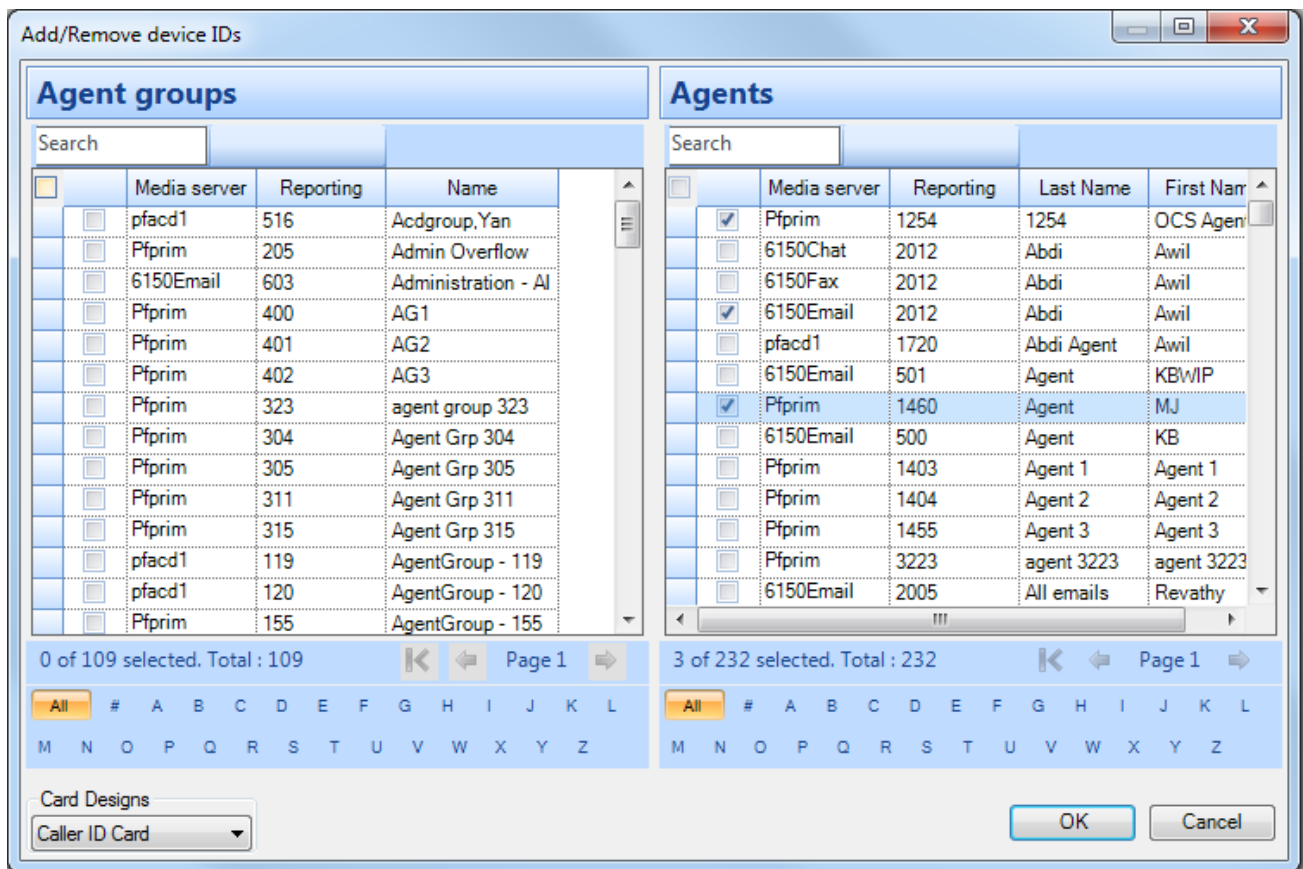


Figure 17: Add/Remove devices

### Docking monitors

You can dock monitors and readily navigate between them. You can dock a monitor to the top, bottom, left, or right of another monitor. Alternatively, you can dock a monitor on the top, bottom, left, or right side of the Contact Center Client window. You can dock monitors on top of one another, displaying them on overlapping tabbed panels to maximize real estate.

To dock a monitor on top of another monitor

1. Right-click the title bar of an open monitor and select **Dock**.
2. Repeat step 1 for all open monitors.
3. Click the title bar of a monitor and drag the monitor on top of a second monitor placing your cursor in the center of the four-headed arrow that displays.  
See Figure 18.

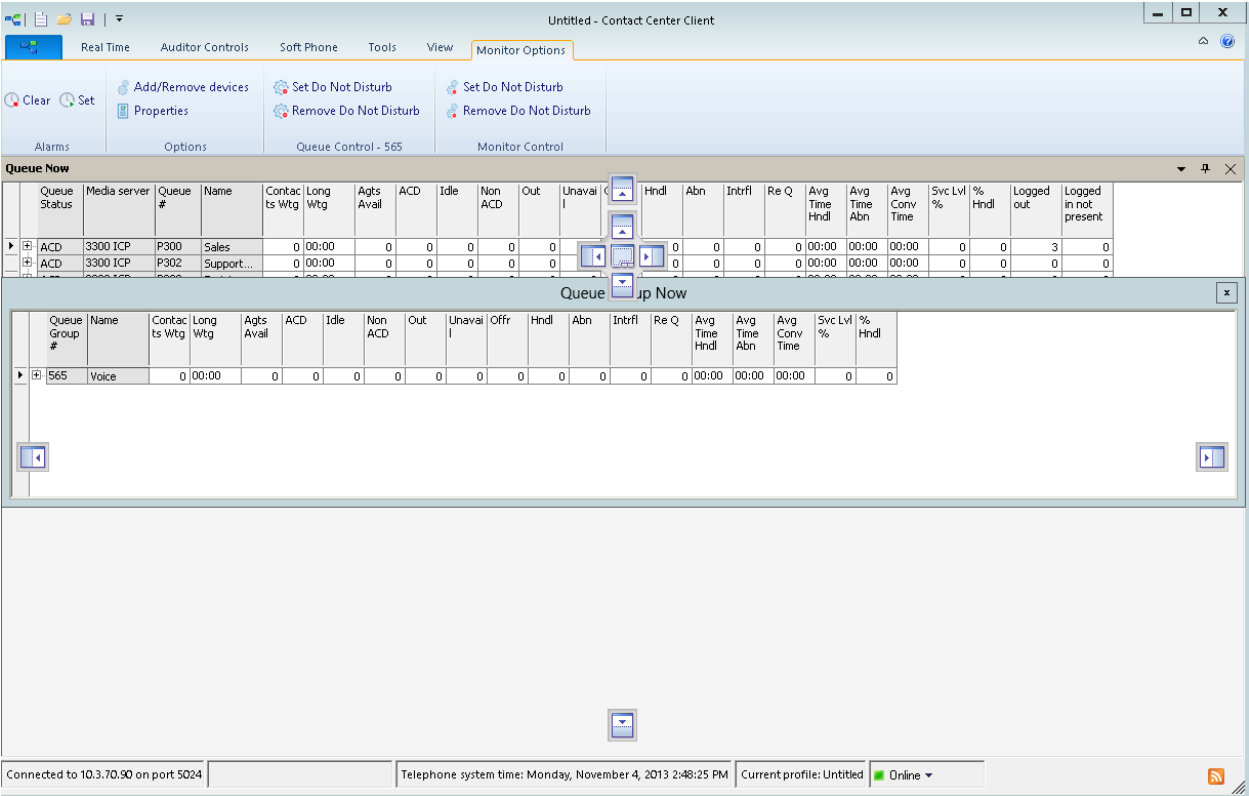


Figure 18: Docking monitors

4. Release the mouse button.  
Your monitors are displayed on overlapping tabbed panels.  
See Figure 19.

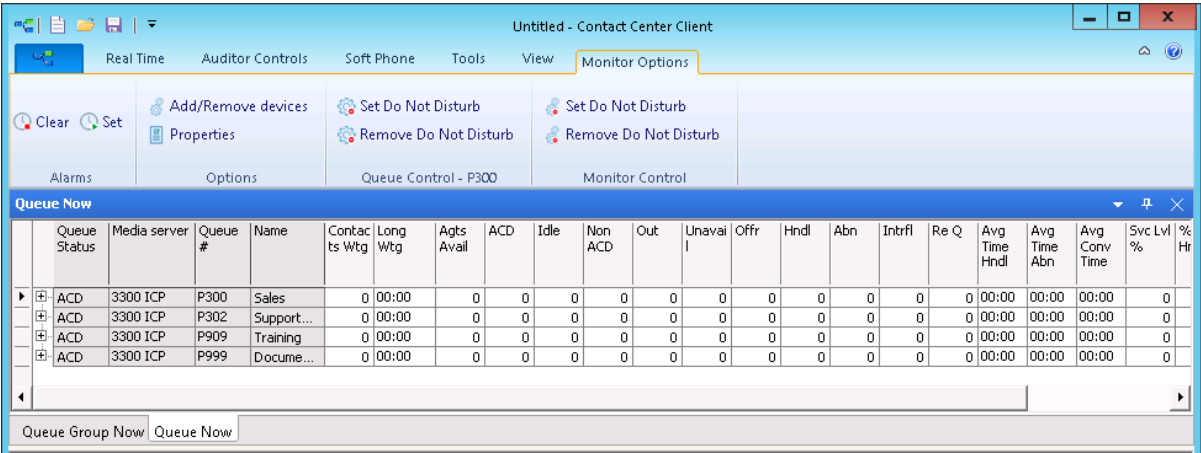


Figure 19: Docked monitor

## *Adding and removing devices*

You can add and remove devices from the Extension State by Position monitor.

To add devices to the bottom of a monitor

1. Right-click an open monitor and click **Add/Remove devices**.
2. Under **Extension groups**, select additional extension groups to add to the monitor, or under **Extensions**, select additional extensions to add to the monitor.
3. Click **OK**.  
On the Extension State by Position monitors a blank row of cells separates the original extensions from those you just added. To remove the blank row you must sort the monitor.  
See "Sorting monitor devices" on page 184.

To remove devices from a monitor

1. Right-click an open monitor and click **Add/Remove devices**.
2. Under **Extensions**, clear the check boxes of the extensions to be removed.
3. Click **OK**.

## *Sorting monitor devices*

When you select devices to display on a monitor, you can specify the devices be sorted by ID or name (alphabetically) in ascending or descending order. When the monitor opens, the devices display in the order you selected.

To sort the devices displayed on a monitor

- In the left pane of the **Add/Remove devices** window, click **Media server** to sort the members by media server, click **Name** to sort the members alphabetically, or click **Reporting** to sort the members by ID, in either ascending or descending order.

You can sort information by extension on the Extension by Position monitor.

## *Rearranging cells*

You can rearrange cells on the Extension State by Position monitor.

To rearrange cells

- On an open monitor, drag a cell to a different position on the monitor.

## *Setting monitor dimensions*

You can specify the numbers of rows and columns of cells to display on the Extension by Position monitor. You can then adjust the table to fit within the monitor frame.

To set table dimensions

1. Right-click a monitor and click **Set table dimensions**.
2. After **Columns**, type a number.
3. After **Rows**, type a number.
4. Click **OK**.  
Columns or rows are added or deleted from the monitor. You can redistribute the cells using a drag-and-drop operation.

To size the table to fit the frame

- Right-click on the Extension by Position monitor and select **Size table to frame**.

## SETTING ALARMS

You can define alarms in Contact Center Client to alert you about specific events occurring on your telephone system that you deem inappropriate, as they occur. These activities include toll fraud and exceeding call cost thresholds you define. Using these alarms, you can monitor telephone system abuse and stop it as it occurs.

Client alarms are specific to each computer. To notify you that toll fraud or call costing thresholds are being exceeded, you can configure alarms so

- Monitor cells and statistics change color.
- A pop-up notification opens on your desktop.
- A sound prompt, such as a beep or .wav file, plays.
- You are notified by email.
- Contact Center Client opens on top of all open applications.

To set alarms for real-time monitors

1. Determine whether you want to monitor all extensions, or some extensions.
2. Add performance variables to monitor.
3. Specify alarm threshold (where applicable).
4. Specify method of alarm notification.

### *Adding alarm thresholds*

There are two ways to add alarm thresholds to extensions in Business Reporter. You can add alarm thresholds to all extensions or to specific extensions.

1. Right-click a monitor and click **Set alarms**.  
Alternatively, select an open monitor and click Set alarms in the Alarms column, found in the Monitor or Chart Options tab in the Contact Center Client ribbon.

The Set alarms window open.

**NOTE:** You can select the **Apply the alarm thresholds to all devices displayed on the monitor** check box to apply the threshold settings for performance variables across all queues or agents. Alternatively, you can select **Apply the alarm thresholds to a specific list of devices** to apply the threshold settings for a performance variable to a list of queues or agents.

2. Under **Devices**, select one or more queues or agents or select the **Select all** check box to select all queues or agents.
3. In the **Performance variables** list, select a variable.
4. Under **Alarm Thresholds**, click **Add threshold** and type a value for the upper boundary of the threshold.  
The lower boundary cannot be modified. The lower boundary of the next threshold is always slightly greater than the upper boundary of the previous threshold.
5. Click **OK**.

### *Adding alarm thresholds to all extensions*

To add an alarm threshold to all extensions in order to be notified of telephone system abuse

1. Right-click a monitor and click **Set alarms**.  
The Set alarms window appears.
2. Select the **Apply the alarm thresholds to all devices displayed on the monitor** check box.  
Any new extensions added after selecting this option will inherit the alarm rules.
3. In the **Performance variables** list, select a variable.  
**NOTE:** Skip step 5 if defining alarms for toll fraud. Toll fraud thresholds are defined during configuration in YourSite Explorer. See "Specifying toll fraud settings" on page 130.
4. Under **Alarm Threshold**, click **Add Threshold** and type a value for the upper boundary of the threshold.  
The lower boundary cannot be modified. The lower boundary of the next threshold is always slightly greater than the upper boundary of the previous threshold.
5. Click **OK**.  
For instructions on how to define the appearance and sounds generated by alarms, see "Defining alarm notification settings" on page 187.

### *Adding alarm thresholds to specific extensions*

To add an alarm threshold to a specific extension in order to be notified of telephone system

1. Right-click a monitor and click **Set alarms**.  
The Set alarms window appears.
2. Select the **Apply the alarm thresholds to a specific list of devices** check box. Click **Yes** when prompted by the warning window.  
Any new extensions added after selecting this option will not inherit the alarm rules.
3. In the **Devices** window, select the extension to which you want to add alarm monitors or click the **Select all** check box to select all the extensions on the list.  
**NOTE:** Hold the **CTRL** key down when selecting extensions to select multiple extensions.
4. In the **Performance variables** list, select a variable.  
**NOTE:** Skip step 5 if defining alarms for toll fraud. Toll fraud thresholds are defined during configuration in YourSite Explorer. See "Specifying toll fraud settings" on page 130.



5. Under **Alarm Threshold**, click **Add Threshold** and type a value for the upper boundary of the threshold.
6. The lower boundary cannot be modified. The lower boundary of the next threshold is always slightly greater than the upper boundary of the previous threshold.
7. Click **OK**.  
For instructions on how to define the appearance and sounds generated by alarms, see "Defining alarm notification settings" on page 187.

### *Defining alarm notification settings*

You can define the alarm notifications to alarm you when certain event thresholds are reached. The following section explains how to change the various options available to signify an alarm.

### *Defining alarm colors*

To define an alarm color

1. For the alarm threshold for which you want to specify colors, under **Background**, click the arrow.  
A color palate appears.
2. Select a color.
3. Under **Font color**, click the arrow.  
A color palate appears.
4. Select the font color for the alarm threshold.
5. Click **OK**.

### *Defining alarm sound notification*

To define an alarm sound notification

1. For the alarm threshold for which you want to be notified by a sound, under **Sound**, select the check box.  
The Sound window appears.
2. Specify the alarm triggering properties.
3. Specify the sound you want played when the alarm is triggered.
4. Click **Save**.

### *Defining alarm pop-up window notification*

To define a pop-up window notification

1. For the alarm threshold for which you want to be notified by a pop-up window, under **Pop-up**, select the check box.  
The Pop-up window appears.
2. After **Duration**, type the number of seconds you want the pop-up alarm to be displayed when threshold conditions are satisfied.
3. If you want to display the pop-up alarm on top of all of the other applications, select the **Keep this message visible on mouse over** check box.
4. Optionally, click the **Format font** button to specify font attributes for the pop-up alarm message.

5. In the text box, type the message for the performance threshold and click the **Add variable** button to insert performance variables.
6. Click **Save**.

### *Bringing Contact Center Client to the top during an alarm*

To specify Contact Center Client appear to the front, on top of all other open applications, when a performance threshold is satisfied

- For the alarm threshold for which you want to be notified, under **Bring to front**, select the check box.

### *Defining alarm email notification*

To define an alarm email notification

1. For the alarm threshold for which you want to be notified, or notify others by email, under **Email**, select the check box.  
The Email window appears.
2. After **Distribution**, specify which contacts are to be notified by email when threshold conditions are satisfied.
3. See "Emailing reports" on page 206.
4. After **Subject**, type the subject of the email to be sent (for example, type Toll Fraud occurring on an outbound call!).
5. In the message box, type the body of the email.
6. Click **Save**.

Consider the alarm threshold programming in Figure 20. When an extension is on a long distance call and has spent less than two dollars, the cell housing remains white. When the extension has spent between two and five dollars, the cell turns orange. When the extension has spent more than five dollars, the cell turns red. In addition, audible alarms and pop-up alarms appear.

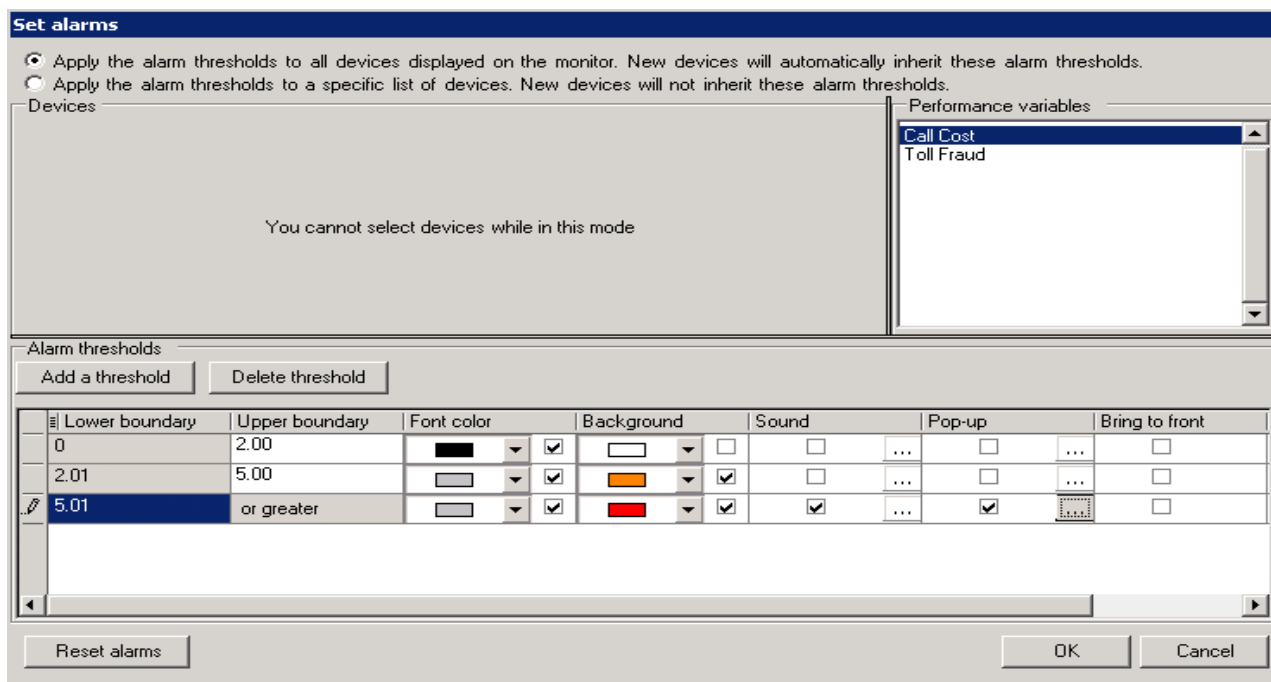


Figure 20: Set alarms window

## Removing alarms

To remove an alarm

- Right-click the monitor and click **Clear alarms**.

## Selecting and customizing card designs

When you first open an agent, employee, or extension monitor, you can select a card design on the Add/Remove device IDs window:

- The Classic card displays the agent state, time in the state, presence, agent/employee name, agent login ID/employee ID, and extension number (or queue name for voice agents on ACD or on ACD Hold) and presence.
- The Caller ID card displays the caller name and number (ANI), the number the caller/employee dials for incoming/outgoing calls, (DNIS) caller collected digits (requires IVR Routing Collect Caller Entered Digits), such as account numbers, the state, time in the state, presence, agent/employee name, agent login ID/employee ID, and extension number (or queue name for voice agents on ACD or on ACD Hold).
- The Call Cost card displays the same statistics as the Caller ID card, with the addition of call cost statistics.
- Custom cards you create and share

The Caller ID card is the default card design. You can use this card design, or select the Classic card or a customized card. You can create new card designs or copy existing card designs and modify them. For example, you can add or remove text and variables from cards and rearrange the information displayed. You can share card designs with other employees. When you select a card design for an agent, employee, or extension monitor, it is applied to all monitors of that type.

To select a card design profile

1. Right-click the monitor and click **Properties**.
2. Click **Layout=>Card design**.
3. Under **Profile name**, select a profile.
4. Click **OK**.

To customize cards

1. Under **Card design**,
  - If you want to create a card design, click **New**.
  - If you want to edit an existing card design, select a card design and click **Edit**.
  - If you want to create a card design based on the Caller ID card or the Classic card, select either card and click **Copy**.
2. On the **New card design** window, type the name of the new card design.
3. If you want to share the design with other employees, select **Share design**.
4. Click **OK**.
5. Select the card and click **Edit**.  
See Figure 21.
6. After **State**, select a state for the card design.  
You can use the same card design for all states or you can customize cards for specific states.
7. Under **Fields**, select a field type and drag and drop it to the card design.
8. If you want to resize the field, click the field and use your pointer to move or resize the field.
9. If you want to change the properties for a field, click the field and change the properties in the right pane of Card Designer.
10. If you want to change the size of the card design preview, after **Zoom**, select a different magnification value from the list.
11. Add additional fields to the card.
12. Select **Copy to** if you want to copy the current design to the card of a different state.
13. Click **OK**.  
The new card design displays on the Card design list.
14. Click **OK**.

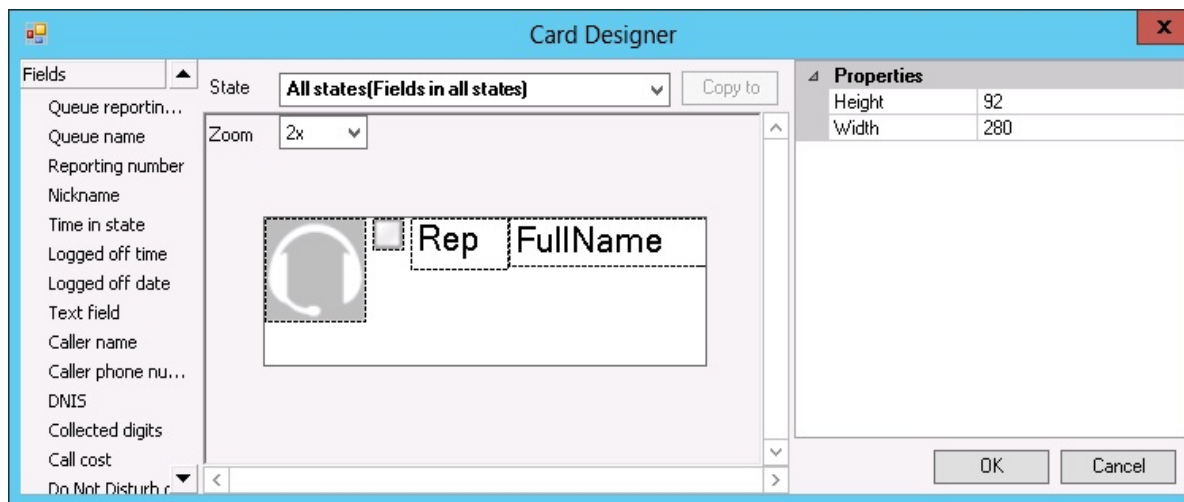


Figure 21: Card Designer window

## Adding text to card designs

You can use a text box to add custom text to a card.

To edit text that you have added to a card

1. Select the text box.  
Properties displays on the right.
2. Under **Properties**, in the box to the right of **Text**, type the text to be added to the card.
3. Click **OK**.
4. Click **OK**.

## Defining monitor styles

You can customize the appearance of individual monitor elements. For example, you can configure the font size and color of column headings or apply a skin of predefined colors and font attributes to the entire monitor.

To customize the appearance of monitor elements

1. Right-click an open monitor and click **Properties**.
2. Click **General=>General settings**.
3. If you want to change the title of the monitor, after **Title**, type a name.
4. If you want to scroll horizontally on the monitor, select the **Enable horizontal scroll bars** check box.
5. If you want to scroll vertically on the monitor, select the **Enable vertical scroll bars** check box.
6. If you want to group monitor headings, select the **Enable grouping** check box.
7. If you want to apply a skin to the monitor, click **Layout=>Monitor style**.

8. Click **Load style** and select a skin.
9. Otherwise, under **Properties**, manually configure the column settings, column font, row settings, and row-alternate settings.
10. Click **OK**.

## USING CONTACT CENTER CHAT

Contact Center Client provides instant messaging capabilities. It provides the online chat presence of employees, including Online, Offline, and Away.

Using Contact Center Chat, you can communicate essential information to one or more extensions, extension groups, or supervisors quickly and securely. You can coach employees and send timely messages, such as asking an employee to delay going on break when it is busy.

### NOTE:

- You must have a security role that does not restrict you from gaining access to Contact Center Chat.
- You must log on to Contact Center Client in order to send and receive online messages.
- When you receive a message it is displayed immediately on top of all open windows.
- Contact Center Chat requires server to client hostname resolution to properly function.

Contact Center Chat is enabled by default. If you want to disable Contact Center Chat in YourSite Explorer, you do so in YourSite=>Site=>Chat Settings. For more information, see "Adding sites" on page 66.

### NOTE:

- In order to use Enterprise / Presence Chat integration, you must enable Contact Center Chat and have Lync open and running.
- To integrate Lync with Presence, 'Synchronize my Lync presence with my ACD state' must be enabled in Soft phone configuration. For more information on configuring Soft Phone, see "Opening the soft phone" on page 256.
- If Contact Center Chat is disabled for a particular site all employees associated to that site will be unable to communicate with each other using Contact Center Client.

## *Sending a Contact Center Chat message*

You can right-click a cell and click Send instant message to send an online message to that extension.

To send a chat message

1. Double-click your presence indicator in Contact Center Client's Status Bar.  
Contact Center Chat opens. (See Figure 22.)

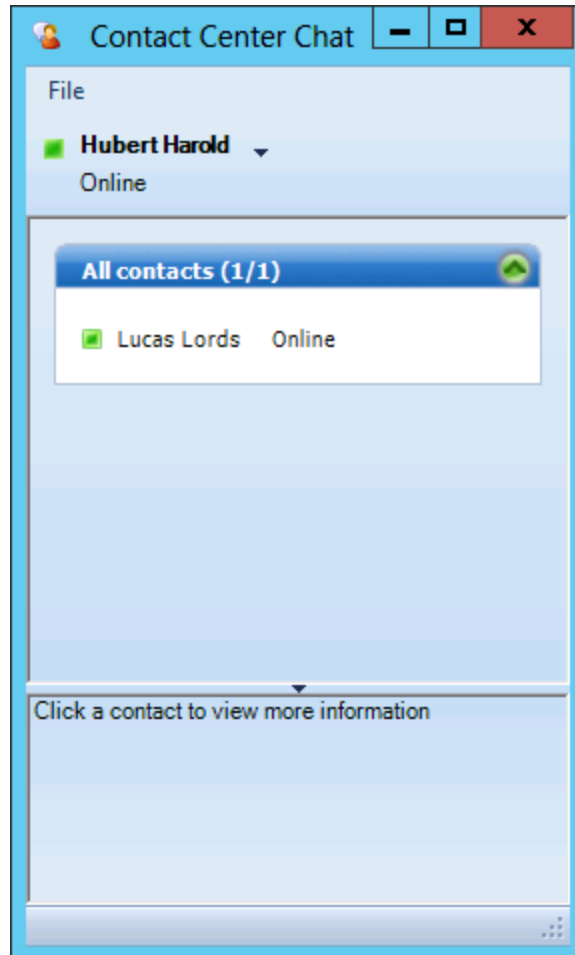


Figure 22: Contact Center Chat

2. Right-click a contact and select **Send an instant message**.  
Alternatively, double-click the contact.  
The Conversation window opens.
3. Type a message.
4. Click **Send**.

To send a chat message while viewing the Extension State by Position monitor

1. Right-click a cell in an open monitor and click **Send instant message**. Alternatively, double-click the presence indicator in the agent, employee, or extension's cell in the monitor.  
**NOTE:** If Send instant message is not listed as an option, the employee has not been associated with the extension.  
The Conversation window displays.
2. Type a message.
3. Click **Send**.

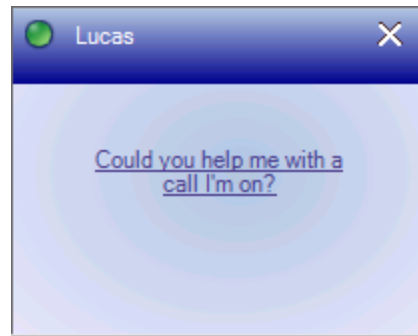
## *Adding someone to a conversation*

To add someone to a conversation

1. On the Conversation window, click the **Add Participants** button to join this conversation icon.
2. Double-click a contact to add the contact to the conversation.
3. Click **Send**.

## *Responding to a Contact Center Chat message*

Employees can receive Contact Center Chat messages only if they are logged on to Contact Center Client. When someone sends a Contact Center Chat message to you, the Conversation window opens and a desktop notification appears in the bottom-right of your monitor. The desktop notification shows the name and presence of the employee contacting you and their message. Figure 23 illustrates a chat notification.



**Figure 23: Desktop Chat notification**

To respond to a chat message

1. Type a message.
2. Click **Send**.  
Contact Center Chat sends your response to all chat session participants.

## USING CONTACT CENTER CHAT WITH LYNC

**NOTE:** In order to use Contact Center Chat with Lync, an employee's email address, as configured in YourSite Explorer under Employee, must be the same as the SIP address configured in Lync Server 2010 or Lync Server 2013.

With the addition of Lync Server 2010 or Lync Server 2013, employees use Lync Client as their default instant messaging client. The presence of all company employees is natively delivered in Contact Center Client. Employees can view the presence of both internal and external contacts to determine if they are available to communicate. In addition to Available, Offline, and Away, employees see In a Meeting, Busy, In a call, Do Not Disturb, Be Right Back, and other Lync presence indicators.



**NOTE:**

- In order to use Contact Center Chat with Lync, an employee's email address, as configured in YourSite Explorer under Employee, must match their Lync client sign-in address.
- In order to use Contact Center Chat with Lync, you must enable Contact Center Chat and have Lync open and running.
- To integrate Lync presence with ACD states "Synchronize my Lync presence with my ACD state" must be enabled in Soft phone configuration. When this option is selected an agent's state changes in sync with Lync presence. For example, setting your presence in Lync to Do Not Disturb will set the agent into a Do Not Disturb state in Contact Center Client. Setting the Lync presence to Away will set the ACD agent state to Make Busy. For more information on configuring Soft Phone, see "Opening the soft phone" on page 256.

Table 14 provides details on the presence indicators that are available when Contact Center Client is used in conjunction with Lync Client and Mitel Enterprise Presence / Chat integration.

**Table 14: Lync presence indicator icons**













2013 PRESENCE ICON (LARGE)	2013 PRESENCE ICON (SMALL)	STATUS TEXT	DESCRIPTION
		Available	The contact is online and can participate in conversations. Users can manually set this status, but the next automatic state change will override this setting.
		Busy	<p>The contact is available, but is engaged by another activity. Busy contacts will not be routed ACD calls, but may receive non-ACD calls. Possible activities include the following:</p> <p><b>In a Call</b>—the contact is in a phone, voice, or video conversation.</p> <p><b>In a Meeting</b>—the Outlook calendar shows that the contact has a scheduled meeting.</p> <p>Users can manually set this status.</p>
		Do Not Disturb	The contact is engaged by another activity and is unavailable. Contacts in Do Not Disturb will neither receive ACD or non-ACD calls. Users can manually set this status.

Table 14: Lync presence indicator icons (continued)

2013 PRESENCE ICON (LARGE)	2013 PRESENCE ICON (SMALL)	STATUS TEXT	DESCRIPTION
		Away / Inactive  Be Right Back  Off Work	<p>The contact is likely unavailable. Possible reasons include the following:</p> <p>The contact's computer has been idle for more than the away time period setting (5 minutes by default).</p> <p><b>NOTE:</b> By default, the transition from Available to Inactive occurs after 5 minutes. Then, after five more minutes, the status changes to Away if there is still no activity on the computer.</p> <p>The contact's Outlook calendar or Out of Office Assistant indicates that they are out of the office.</p> <p>The contact is temporarily unavailable</p> <p><b>NOTE:</b> As soon as activity is detected on the contact's computer, Lync automatically resets the presence status to the appropriate state.</p> <p>The contact has locked their computer.</p> <p>The contact has manually set their presence to Away or Be Right Back.</p> <p>Users can manually set this status.</p> <p><b>NOTE:</b> When a user manually sets themselves as Away, they are still available to receive calls, such as from a transfer.</p>
		Offline	<p>The contact is not available. Possible reasons for this include the following:</p> <p>The contact has manually set their presence status to Appear Offline.</p> <p>The contact has not signed into Lync.</p> <p>The contact has blocked you from seeing their presence status.</p> <p>Lync is not running on the contact's computer.</p>
		Presence unknown	<p>Lync cannot determine the status of the contact. This status is typically displayed because the contact's presence status is unavailable to Lync, such as for a contact who is part of an organization that is not a federated partner.</p>

## *Sending an instant message*

On an employee monitor, you can right-click an employee's cell and click Send instant message to send an online message to the employee. You can also send instant messages using Microsoft Lync. Using Lync, you can send instant messages to individuals or multiple contacts. After initiating a conversation, you can invite additional contacts to the conversation. For instruction in using Lync, consult your Lync documentation.

To send an instant message while viewing agents on an agent, employee, or extension monitor

- Right-click a cell in an open monitor and click Send instant message.  
A Lync Conversation window opens.

## HOT DESKING

When an employee is configured as a hot desking employee, the employee can sit at any extension on the network and log on to the extension. After the employee is logged on, the employee takes control of the extension. The employee's Contact Center Client and soft phone real-time profile settings are available. Any previous associations with the extension are taken out of service. When an employee logs off, the employee disconnects from the extension and the default settings for the extension are restored automatically.

## EXTERNAL HOT DESK AGENTS

External hot desk agents can work remotely using, for example, a standard PSTN analog telephone or a cellular telephone. External hot desk agents are similar to regular hot desk agents with additional configuration available to specify external number information. To access external hot desk agent functionality you must configure the following options in the User and Device Configuration form for the 3300 ICP:

- **External Hot Desking Enabled:** Select 'Yes' to enable external hot desk agent functionality.
- **External Hot Desking Dialing Prefix:** Type the prefix digit(s) required to dial out to the external hot desk device.
- **External Hot Desking Number:** Type the telephone number of the external hot desk device. This number will be used by the telephone system to route ACD calls to the external hot desk agent.  
**NOTE:** The combined length of the external dialing prefix and external number cannot exceed 26 digits.

An agent ID can be associated to only one external dialing number. If an external hot desk agent will use more than one external device for handling calls they must be associated to one agent ID for each external dialing number.

An external hot desk agent can either log in externally or internally. When they log in internally (locally) the telephone system recognizes them as a standard hot desk agent. When they log in externally the telephone system recognizes them as an external hot desk agent.

**WARNING:** If an external hot desk agent is using a personal phone to handle calls, incoming calls that are not answered could reach their personal voicemail.

**NOTE:**

- 3300 ICP release MCD 5.0+ is required to access external hot desk agent capabilities.
- External hot desk agent functionality is only supported for use with hot desk agents, not traditional ACD agents.

The following options are available for external hot desk agent login:

- Log in locally from a MiNET phone: agent displays as a regular hot desk agent
- Log in locally from an analog, cellular, or MiNET phone and connect through a loopback trunk: agent displays as an external hot desk agent
- Log in externally from an analog or cellular phone: the agent ID is registered as an external pivot device number and the external number dialing that has been configured in the telephone system is overlaid on this external pivot device number. The external number is then used by the telephone system to deliver ACD calls to the external hot desk agent. The agent displays as an external hot desk agent.

**NOTE:** An external hot desk agent can also log in externally by directly contacting a specific trunk configured for this purpose. In this case, the agent would not need to log in via Contact Center Client. For more information, log into Mitel Edocs, open the Mitel Communications Director System Administration Help Tool, and browse to 'External Hot Desking - Operation'.

## TROUBLESHOOTING REAL-TIME ISSUES

Note the following procedures for Contact Center Client, Interactive Contact Center, and Contact Center Chat with Lync.

### INTERACTIVE CONTACT CENTER AND RESILIENCY

When the collector is started while the telephone system is in resilient fail-over mode, Interactive Contact Center device control will not function. Should this happen, the Do Not Disturb status of the queue in the Queue Now monitor will not update.

### ENABLING CONTACT CENTER CHAT WITH LYNC

If you want to use Lync as your default instant messaging client and view enhanced presence on real-time monitors, you must enable Contact Center Chat with Lync.

**NOTE:** For Contact Center Chat with Lync to function correctly, employees configured in YourSite Explorer must be configured with the Lync (SIP) email address in the Employee email field. See "Adding employees" on page 96.

To enable Contact Center Chat with Lync

1. In YourSite Explorer, click **YourSite=>Site**.
2. After **Chat settings**, select the **Chat Enabled** check box.

# Chapter 8

## BUSINESS REPORTER REPORTS

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*Report filtering*

*Lifecycle reports*

*Call types versus call rates*

*Reporter*

*Scheduled reports*

*Reporting Inbox*

*Displaying report properties*

## REPORTS

The Reporter application provides detailed telecommunication statistics on your enterprise. You can use Reporter to produce on-demand reports and automated, scheduled reports. You can generate reports for a variety of intervals, for example by day of the week or by 15, 30, or 60 minute intervals. You can create presentation-quality tables in Microsoft Excel or Adobe Acrobat .pdf format.

The raw media server data is analyzed with respect to the YourSite Explorer configuration. The statistical data is then written to Structured Query Language (SQL). This statistical data populates the reports.

You can view reports in Excel or Adobe .pdf format. Microsoft Excel 2007 or greater is required to both view Business Reporter reports and automatically distribute reports for printing. Optionally, Microsoft Excel Viewer may be installed as an alternative to Microsoft Excel to view reports, but it cannot be used to automatically distribute reports for printing. Whether you will be viewing reports in .pdf or Excel, you must set up contacts and contact groups to which you will email reports.

## REPORT FILTERING

The report filtering feature helps you to further define and customize report data output. After you create a filter, you use it to generate scheduled reports. You can filter using a variety of variables, depending on the type of report you generate.

For example, for the Employee Accounting Trace report, you can filter by the following information. (See Figure 24.)

- Call direction (incoming or outgoing)
- Account Code
- Phone number
- DNIS
- Trunk
- Call duration
- Call cost
- Call type (The call types displayed here are based on the call types configured in YourSite Explorer=>Business Reporter=>Call Types.)

Figure 24: Reporter Filter tab

## LIFECYCLE REPORTS

Lifecycle reports provide detailed information on all of the events related to the life of a specific call, from the moment the call enters the telephone system to call termination. You can generate Lifecycle reports on selected items and devices, and can filter Lifecycle reports by a number of criteria. If you have clustered your enterprise into a single site, you can run a Lifecycle report on site to report on your entire enterprise. Lifecycle reports also include call notes and links to call recordings. For detailed information on configuring Lifecycle reports, see the *Business Reporter Installation Guide*.

## CALL TYPES VERSUS CALL RATES

Call types in pre-V5.4 reports were assigned specific call rates. In V6.0, call types are for description only. For outbound calls, the rate is determined by digit patterns. For inbound calls, the rate is determined by DNIS. For internal calls, the rate is determined by the rates assigned to the calls. Call rates do not appear in reports. You must go to your carrier plan or subscriber plan to determine the call rates assigned.

## REPORTER

Using the Reporter application, you can generate on-demand reports with which to monitor call activity.

You can restrict access to any or all reports with advanced security roles using reports lists. See "Security roles" on page 148.

# REPORT TYPES

We recommend you generate several reports to determine those that best suit your business needs. For a complete description of report types and fields, see the *Mitel Business Reporter Reports Guide*.

Business Reporter Voice reports include

- Queue reports
- Extension reports
- Trunk reports

Business Reporter Carrier reports include

- Account Code reports
- ANI reports
- Extension reports
- Trunk reports
- Employee reports
- Employee Division reports
- DNIS reports
- Phone number reports
- Subscriber reports
- Enterprise reports
- Extension Division reports

Business Reporter Subscriber Services report types include

- Employee reports
- Employee Division reports
- Subscriber reports

Business Reporter Traffic Analysis report types include

- Traffic Attendant reports
- Traffic DTMF Receiver reports
- Traffic Route reports
- Traffic Trunk reports

# REPORTER OPTIONS

The complete list of Reporter options follows.

- **Report type**—specifies the report name.
- **Start date and End date**—specify the range of dates used in the report. You can pick any calendar date as the start date and any date later in the calendar year as the end date.
- **Create one report for each day in the selected date range**—creates an individual report for each day in the selected range of days.
- **Start hour and End hour**—specify the hours of the day included in the report.



- **Interval**—specifies the report period: by 15-, 30-, or 60-minute intervals, by day of the week, by day of the month, or by month.
- **Days to include**—specifies the days of the week to include in the report.
- **Report mode**—gives you the option of a default report that spans one day, or an over-midnight report that spans two days. (For example, an over-midnight report can cover from 10:00 P.M. on day one to 10:00 A.M. on day two. It cannot exceed a time span of 24 hours.)
- **Report output language**—specify the output language of the report.
- **Render Type**—specify whether the report generates as an Excel file or a PDF.
- **Email the report to** —emails the report spreadsheet and associated graph to the email address selected in the email o list. You add contacts and contact groups to the email to list under the My options menu.

## SETTING UP CONTACTS AND CONTACT GROUPS

You can create a list of email contacts and email contact groups to whom you email reports. Contact groups can contain both user-configured contacts from CCMWeb as well as all existing employees from YourSite Explorer.

**NOTE:** You must configure SMTP settings in YourSite Explorer before you can configure email contacts. See "Configuring SMTP connections to Business Reporter" on page 38.

Before you generate a report, if you want to email that report, you must set up

- My email contacts, which includes personal email addresses
- My email contact groups, which includes mailing lists comprised of employees and My email contacts

### *Setting up email contacts for emailing reports*

To add an email contact

1. In the **My options** tab menu, click **My contacts=>My email contacts**.  
Alternatively, click **My options**. In the **My contact tab**, click **My email contacts**.
2. Click **Add**.
3. After **First name**, type the first name of your contact.
4. After **Last name**, type the last name of your contact.
5. After **Email address**, type the email address of your contact.
6. To save this contact, click **Save**.
7. To save this contact and add another contact, click **Save & Add**.

### *Setting up email contact groups for emailing reports*

If you intend to email the report to more than one recipient you must add the recipients to a mailing list and then associate the recipients with a group.

To set up groups for emailing reports

1. In the **My options** tab menu, click **My contact=>My email contact groups**.  
Alternatively, click **My options**. In the **My contact tab**, click **My email contact groups**.
2. Click **Add**.
3. After **Name**, type the name of the contact group.

4. After **Description**, type the description of the contact group.
5. To share this contact group with other CCMWeb users, select **Shared Contact Group**.  
A shared contact group can be viewed, used, and edited by other users.
6. To save this contact group, click **Save**.
7. To save this contact group and add another contact group, click **Save & Add**.

To add an email contact to a contact group

1. In the **My options** tab menu, click **My contacts=>My email contact groups**.  
Alternatively, click **My options**. In the **My contact** tab, click **My email contact groups**.
2. Click **Members** for the contact group with which you want to associate agents.
3. If you want to add members from your contacts configured in Contact Center Management, click **Contacts**.
4. If you want to add members from the employees configured in YourSite Explorer, click **Employees**.
5. Under **Available contacts**, select the check boxes of the members you want to add to the group and click **Add >>**.

## GENERATING ON-DEMAND REPORTS

**NOTE:** You can only report on extensions that are licensed for Business Reporter. The number of extensions you license in YourSite Explorer must be consistent with your software license. .

To generate an on-demand report

1. Generate the report.
2. Print or email the report.

## GENERATING REPORTS

You generate reports in the following manner. These steps explain how to run a Voice Queue Group Performance by Member report.

**NOTE:**

- Some reports are stored in SQL data tables as devices instead of intervals. Reports stored as devices cannot be run for a specific time range and can only be run 24-hour periods. If the Start Hour and End Hour options in CCMWeb are disabled, the report can be generated for 24-hour periods only.
- If you run a report that results with *Data Limit Exceeded* in the inbox, you must re-run the report using a shorter time span.

To generate a report

1. Click **Reporter=>Voice=>Queue reports**.  
The Basic tab opens.  
See Figure 25.
2. After **Report type**, select the **Queue Group Performance by Period** report.
3. After **Queue group**, click one or more queue group.  
Hold down the <Shift> key or <Ctrl> key to select more than one queue group.
4. After **Start date** and **End date**, specify the start and end dates for the report.  
**NOTE:** If you want one report that spans two days (for example, from December 3 at 9 P.M. to December 4 at 5 A.M.), then make the Start date and the End date the date the shift begins (December 3). If you make the Start date the date the shift begins (December 3) and the End date the date the shift ends (December 4), you will generate a report that spans three days (December 3 from 9 P.M. to December 5, 5 A.M.). The time span for each shift cannot exceed 24 hours.
5. If you want to create a separate report for each day in the date range you selected, select the **Create one report for each day in the selected date range** check box.
6. After **Start hour** and **End hour**, specify the start and end hours for the report.  
**NOTE:** If you are running reports with the Over midnight Report mode option, the time span between the Start hour and the End hour cannot exceed 24 hours.
7. After **Interval**, specify the time interval in which the statistics will display in the report.
8. After **Days to include**, select the days of the week to include in the report.
9. If your contact center does not operate 24 hour a day, after Report mode, click **Default**.
10. If you want to run a report over midnight, after **Report Mode**, click **Over midnight**.  
The Over midnight report mode is most appropriate for 24-hour contact centers.
11. After **Report output language**, select the language used in the report output.
12. After **Render type**, specify how you will view reports, either in Excel or .pdf format.
13. Click the **Filter** tab.  
**NOTE:** The Filter tab is available with select reports only.
14. Specify the filtering options to include in the report. Separate multiple values with commas.  
For example: Queue = P100,P200,P300.
15. Click the **Distribution** tab.
16. If you want to email the report, select the **Email the report to** check box and specify to whom you will email the report:
  - A contact group, select the **this contact group** check box, and select a group
  - One contact only, select the **this contact** check box, and select a contact
  - One employee only, select the **this employee** check box and select an employee
  - A contact that is not listed, select the **this email address** check box, and type the email address

You add contacts and contact groups to the Email to list under My options=>My contacts.

17. If you want to print the report, select the **Print the report** check box.
18. Click **Submit**.  
The Report submitted screen opens.
19. Click **View Report Inbox**.  
The Report Inbox window opens, listing all created reports.
20. Click **View** to open a report.  
The report opens in the format you specified.

Figure 25: Reporter: Basic Tab

## Emailing reports

To email a report

1. In an active report, click the **Distribution** tab.
2. Select the **Email the report to** check box and specify to whom you will email the report:
  - A contact group, select the **this contact group** check box, and select a group
  - One contact only, select the **this contact** check box, and select a contact
  - One employee only, select the **this employee** check box, and select an employee
  - A contact that is not listed, select the **this email address** check box, and type the email address

You add contacts and contact groups to the Email to list under My options=>My contacts.
3. Click **Submit**.  
The Report submitted screen opens.
4. Click **View Report Inbox**.
5. When the email icon beside the report changes to **Complete**, the report has been emailed.

## *Printing reports*

To print a report

1. In an active report, click the **Distribution** tab.
2. Select the **Print the report** check box.
3. Click **Submit**.  
The Report submitted screen opens.
4. Click **View Report Inbox**.
5. When the print icon beside the report changes to **Complete**, the report has been emailed.

## SCHEDULED REPORTS

You use Scheduled Reports to automate the generation of reports.

### SCHEDULED REPORTS OPTIONS

To create a scheduled report you must complete the following options:

- *Schedule name* is a user defined name to describe the contents of the schedule.
- *Schedule will run* specifies how often the schedule will be generated.
- *At* defines when the scheduled report will be generated.
- *Reports time span* defines the dates of report activity to appear in the report.
- *Email the report to* defines the email contact group to which the report is sent.
- *Print the report* indicates the scheduled report will be printed every time it is generated.

### GENERATING SCHEDULED REPORTS

**NOTE:** You can generate reports on licensed employees only. The number of employees you license in YourSite Explorer must be consistent with your software license.

To generate a scheduled report, you must follow these steps:

1. Create a report schedule.
2. Add reports to the schedule.

## *Creating report schedules*

**NOTE:** If you select printing and mailing options, Reporting Service prints and emails *all* of the reports included in the schedule on the date the system runs the reports.

You can create report schedules for Business Reporter reports.

## Creating Business Reporter Report schedules

To create a schedule for Business Reporter reports

1. Click **Reporter=>Scheduled Reports**.
2. In the **Report Schedules** tab, click **Next>>**.  
See Figure 26.

The screenshot shows the 'Scheduled Reports' interface with the 'Manage schedule' sub-tab active. The title bar indicates 'Active schedule (Creating new schedule)'. The interface has three tabs: 'Properties' (selected), 'Distribution', and 'Reports'. The 'Properties' tab contains the following fields:

- Schedule name:** A text input field.
- Schedule will run:** A dropdown menu currently set to 'Every day'.
- at:** A time input field currently set to '00:00'.
- Reports time span:** A dropdown menu currently set to 'Current day'.
- Schedule will run next on:** A label indicating the next run time, currently showing '(Creating new schedule)'.

At the bottom of the interface, there is a navigation bar with links: 'Scheduled Reports menu', 'Manage schedule', and 'Add a report'. On the right side of this bar are three buttons: 'Save', 'Execute now', and 'Delete'.

**Figure 26: Scheduled Reports: Properties tab**

3. After **Schedule name**, type a schedule name.
4. After **Schedule will run**, select the schedule frequency, for example, every day, every Wednesday, or the start of month.  
When you select the day, all of the reports associated with the schedule will be generated that day, every week.
5. After **at**, click the time of day the schedule will be activated.  
For example, if you select Wednesday at 14:30, all the reports associated with this schedule will be generated every Wednesday at 2:30 P.M.  
**NOTE:** Reports are based on the data in the SQL database. We recommend you schedule your reports to run *after* the nightly maintenance routine runs, that is, after 2:00 A.M., to ensure the reports are based on the entire day's raw telephone system data.
6. After **Reports time span**, select a time span.  
If you select *Year to date*, the report output includes all days from 1 January to the present date. If you select *From given start date to current date* option you will produce reports for your fiscal year.
7. Click the **Distribution** tab.  
See Figure 27.

Scheduled Reports » Manage schedule Active schedule (Creating new schedule)

**Properties**
**Distribution**
Reports

**Email the report to**

☐ this contact group

☐ this contact

☐ this employee

☐ this email address

**Print the report**

☐ Print the report

Scheduled Reports menu | Manage schedule | Add a report Save Execute now Delete

**Figure 27: Scheduled Reports: Distribution tab**

8. To email the report, select the corresponding **Email the report to** check box, and select the email recipients.  
**NOTE:** You add contacts and contact groups to the email to list under **My options=>My contacts**.
9. Click **Save**.  
The date of when the schedule will next run will appear after **Schedule will run next on**.
10. Add the reports to be generated using the schedule you just created.  
See "Adding Business Reporter reports to schedules" on page 209.

### *Adding Business Reporter reports to schedules*

**NOTE:**

- Before you can add reports to schedules, you must create and save the schedules
- You can select the time interval for reporting by 15-, 30-, or 60-minute intervals, by day of the week, by day of the month, or by month for interval reports only.

To add a report to a Report Schedule

1. In **Reporter=>Scheduled Reports**, select the **Report Schedules** tab, select a schedule and click **Edit schedule**.
2. Click **Add a report**.
3. Select a report category.
4. Select a report type.
5. Follow the steps in "Generating reports " on page 204 for the Basic tab to set up the report.
6. Click **Submit** to add the report to the schedule.

## *Generating scheduled reports immediately*

To generate your scheduled reports at a specific time (other than immediately), you specify the date and time they will be generated when you create the schedule. See "Creating report schedules" on page 207.

To generate scheduled reports immediately

1. Click **Reporter=>Scheduled Reports**.
2. Under **Work with an existing schedule**, select the schedule to be generated.
3. Click **Execute schedule now**.  
The Execute schedule now window opens.
4. In the **Start date** and **End date** calendars, click a start date and end date the report will generate.
5. Click **Submit**.  
The reports associated with the schedule are generated immediately and placed in your Report Inbox.

## REPORT INBOX

The Report Inbox application displays the on-demand and scheduled reports generated under your user name over the past 30 days. Inbox manager deletes reports from your Inbox by date range.

### **NOTE:**

- In Report Inbox, if the report status is *Pending* for an extended period of time, start Client Component Pack Manager and confirm the Enterprise Server IP address and your user name and password are correct.
- In Report Inbox, if *Data Limit Exceeded* opens, re-generate the report using a shorter time span.

Report Inbox includes

- *Today's reports* displays all of the reports generated today under your user name.
- *Yesterday's reports* displays all of the reports generated yesterday under your user name.
- *All of your reports* displays all of the reports generated under your user name over the last 30 days.
- *Inbox Manager* deletes reports from your Inbox by date range.

## REPORTER INBOX OPTIONS

The Report Inbox has the following options.

### **Report type**

The Report type field lists the report name.

### **Media server**

The Media server field defines the media server against which you are generating the report.



### Reporting number

If you are creating a Queue Group report, then the *Reporting* field specifies the reporting number of the Queue Group. If you are creating a Queue report, then the *Reporting* field specifies the reporting number of the queue.

### Name

If you are creating a Queue Group report, then the *Name* field specifies the name of the Queue Group. If you are creating a Queue report, then the *Name* field specifies the name of the Queue.





















### Request date

The Request date field is the date and time the report was generated.

### Status

The Status field confirms if your report is ready. When a *Complete* icon appears in the status field the report is waiting in your Report inbox. When a *Pending* icon appears, the report is not ready. A *No data* icon means no records are available for the parameters you specified. A *Failed* icon means the report did not generate. If a report fails, the Reporting Service logs errors in the NT Event log. Table 15 describes the status indicator icons

**Table 15: Report status indicators**

STATUS	EXCEL ICON	PDF ICON
Complete		
Pending		
No Data		
Failed		
Email Complete		
Email Pending		
Email Failed		
Printing Complete		
Printing Pending		
Printing Failed		

### View

The View command displays reports generated in Microsoft Excel.

### Delete

The Delete command deletes reports from your report inbox.

## DISPLAYING REPORT PROPERTIES

To display report properties

1. Click **View Report Inbox** (upon submitting a report) or click **Report Inbox=> Today's reports**.  
Your personal report inbox appears. It contains all of the reports generated under your user name for the interval selected.  
**NOTE:** Using the Report properties information, you can avoid regenerating reports for the same information and you can quickly check the report variables you selected for each report.
2. Under **Report type**, click the report name.  
A window appears that displays the parameters you defined for the report.

## VIEWING REPORTS

The Report Inbox application displays all of the on-demand, scheduled, and forecast reports generated under your user name.

To view report details

1. Click **View Report Inbox** (upon submitting a report) or click **Report Inbox=>Today's reports**.
2. Select the **Automatically refresh this page every 10 seconds** check box to automatically update the Status column.  
The Status column indicates if your reports are ready:
  - Complete—the report is waiting in your report Inbox
  - Pending—the report is not ready
  - No data—no records were available for the parameters you specified
  - Data limit exceeded—the time span selected was too great. Select a shorter time span and rerun the report
  - Failed—the report did not generate. If a report fails, the Report writer logs errors in the event log. Re-submit regenerates the report
3. Click **View** to view the report.

## EDITING REPORTS IN EXCEL

You can graph specific data by highlighting one or more columns of data in the Excel spreadsheet and using the Excel Chart Wizard. For more information, see Microsoft Excel Help.

## DELETING REPORTS

The prairieFyre Maintenance Alarm Dispatcher service deletes any reports that are 30 days or older from your Report Inbox. You must save any reports you want to retain beyond 30 days to your hard drive or network directory.

Report Writer uses the following criteria to determine a report's age. For on-demand reports, the request date governs the report's age. For scheduled reports, the date the system generates the report governs the report's age. Inbox manager does not delete reports you schedule to generate in the future.

To delete all of the reports submitted on a given date

1. Click **Report Inbox=>Inbox manager**.
2. Select fixed dates or a date range for deleting reports.
3. Select the status types.
4. Click **Delete**.

The Inbox manager deletes all of the reports submitted on the dates you specified.

## CONFIGURING USER PRINTER SETTINGS

You can configure reports to print on either a network or a local printer, for each employee.

To configure user printer settings

1. In YourSite Explorer, click **Employee**.
2. Select an employee and click the **User account** tab.
3. Type the file path of the **Network printer**.  
You must configure the network printer as the default printer on the Enterprise Server. The printer path name is case sensitive.
4. If you want the employee's reports to print from their desktop printer, select **Send printed report to the employee's desktop printer**.
5. If you want to use the employee's email address for report distribution, select **Use the employee's email address for report distribution**.
6. Click **Save**.

## TROUBLESHOOTING REPORTING ISSUES

Common reporting troubleshooting issues are described below.

### *Troubleshooting missing data*

**NOTE:** You can run reports on licensed employees only.

If you run a report and notice that the data for a device is missing from the report output, verify the device is programmed in the telephone system and in YourSite Explorer. If you determine the device is missing from the database, add it to the database and use the Summarize Data command (in the Management Console application) to update the prairieFyre Services and the SQL database with the complete telephone system data stored on the local hard drive. You can then produce reports on the device.

To summarize data

1. Open **Contact Center Client**
2. If prompted, type your user name and password.
3. Click **Log on**.
4. On the ribbon, **Tools=>Management**.
5. Click **Maintenance=>Summarize data**.
6. Follow the steps in the Summarize Data Wizard to summarize the data.

### *Troubleshooting Reporting Service*

Why is Reporting Service not emailing or printing my reports?

- Ensure the SMTP connections are correctly configured.
- Ensure the printer settings are correctly configured.
- View the log file for Reporting Service at <installation drive>:\Program Files (x86)\prairieFyre Software Inc\CCM\Logs\Reporting.log to find out why reports are not being printed/emailed the way you expect in the installation/Log file.

# Chapter 9

## BUSINESS REPORTER DATA-MINING TOOLS

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*SMDR Inspector*

## DATA-MINING TOOLS

SMDR Inspector is a flexible data-mining tool that searches through SMDR data according to your search variables.

**NOTE:** For SMDR Inspector to function effectively when using Internet Explorer 9 as your browser, you must add Contact Center Management to the Internet Explorer Trusted Sites category and set the Internet security to medium. See the *Business Reporter Installation Guide*.

## SMDR INSPECTOR

SMDR Inspector searches through SMDR data to find specific telecommunication events. The search follows a wild card format. Your specifications do not have to be exact. You can make the search as inclusive or exclusive as you wish. The results are placed in an easy-to-interpret grid that can be printed or saved to file. You can verify that your reports are valid by conducting searches against raw telephone system data.

### STARTING SMDR INSPECTOR

To start SMDR Inspector on the client computer

1. Click **Tools** in the Contact Center Client ribbon.
2. In the **Data Mining** column, click **Inspectors** to open the Data Inspectors tool.

### RUNNING SEARCHES IN SMDR INSPECTOR

When you run a search, SMDR Inspector searches through the raw telephone system data on the local hard drive. Each search requires the following information:

#### Select dates/Delete dates

The Select dates button specifies the date range within which to search. The Delete dates button deletes days within the range you selected. The date is displayed month first, then day, then year.

#### Select media servers

The Select media servers check boxes specify the origin of the data used in the search. You can perform searches on phone activity.

In addition to the date and media server options, SMDR Inspector has the following search criteria tabs.

- Call parties
- Call types
- Options

#### *Call parties criteria for searches*

The Call parties criteria helps you to find call events such as the calls an extension received (Called party), the calls an extension made (Calling party), or the extension the call was transferred to (Third party). (See Figure 28.)

<b>Select dates</b> <div> <div>Select dates</div> <div>Delete dates</div> </div> <div> Date  9/27/2004  9/28/2004  9/29/2004  9/30/2004  10/1/2004  10/2/2004  10/3/2004  10/4/2004 </div>		<b>Select media servers</b> <div>Media server</div> <div> <input checked="" type="checkbox"/> 3300ICP  <input type="checkbox"/> 6160 </div>	
<b>Digits dialed</b> <div> Digits dialed  ANI digits  DNIS digits  Account codes </div>		<b>Call parties</b> <div> Calling party  Called party  Third party </div>	
<b>Outbound calls</b> <div>Final destination digits</div>		<b>Call identification</b> <div> Call ID  Sequence ID  Associated ID </div>	
<div> Call parties   Call types   Options </div>			
<a href="#">How do I perform a search?</a>		<div> <div>Reset criteria</div> <div>Stop search</div> <div>Start search</div> </div>	
SMDR Inspector criteria		SMDR Inspector results	

Figure 28: SMDR search criteria - Call parties tab

The Call parties tab search options are as follows.

### Digits dialed

The Digits dialed box specifies the queue number of the queue that picks up the call (for inbound calls).

The ANI digits box specifies the area code and telephone number for an inbound call. The search results contain records that match the data the user typed in the ANI field.

The DNIS digits box specifies the phone number the caller dialed. The DNIS could be product specific, or it could specify demographic variables or marketing targets.

The Account Code box specifies the Account Code number used in the search. Employees enter Account Code numbers to tag inbound and outbound calls.

### Outbound calls

The Outbound calls box specifies telephone number the employee dials (for outbound calls).

### **Call parties**

The Calling party box specifies the extension or agent number (for an outbound call), or the trunk number (for an inbound call) used in the search.

The Called party box specifies the answering extension or agent number (for an inbound call), or the trunk number (for an outbound call) used in the search.

The Third party box searches for call records on the extension number used in a transfer.

### **Call identification**

The Call identification box specifies the Mitel call IDs assigned to a call segment.

The Sequence ID box specifies the sequence number assigned to the call record by the telephone system.

The Associated ID box specifies the number attached to associated data records of the call assigned by the telephone system.

### ***Call types criteria for searches***

The Call types tab displays the types of calls the extension receives, for example, abandoned, interflowed, requeued, unavailable, or outbound calls. (See Figure 29.)



<b>Select dates</b> <div> <div>Select dates</div> <div>Delete dates</div> </div> <div> Date  10/6/2004  10/7/2004  9/27/2004  9/28/2004  9/29/2004  9/30/2004  10/1/2004  10/2/2004 </div>		<b>Select media servers</b> <div>Media server</div> <div> <input checked="" type="checkbox"/> 3300ICP  <input type="checkbox"/> 6160 </div>
<b>Call types</b> <input type="checkbox"/> Answer - ACD <input type="checkbox"/> Answer - Non-ACD <input type="checkbox"/> Abandon <input type="checkbox"/> Interflow <input type="checkbox"/> Requested <input type="checkbox"/> Unavailable <input checked="" type="checkbox"/> Outbound	<b>Call completion</b> <input checked="" type="checkbox"/> (A)nswer supervision <input checked="" type="checkbox"/> (B)usy call <input checked="" type="checkbox"/> (E)rror by caller <input checked="" type="checkbox"/> (T)AFAS answered <input checked="" type="checkbox"/> (I)nternal call <input checked="" type="checkbox"/> Blank	<b>Attendant involved</b> <input type="radio"/> Yes <input type="radio"/> No <input checked="" type="radio"/> Both <b>Transfer/Conference</b> <input checked="" type="checkbox"/> Unsupervised transfer (T) <input checked="" type="checkbox"/> Conferenced (C) <input checked="" type="checkbox"/> Supervised transfer (X) <input checked="" type="checkbox"/> Blank <b>Speed call/Forward</b> <input checked="" type="checkbox"/> Speed (S) <input checked="" type="checkbox"/> Forward (F) <input checked="" type="checkbox"/> Blank <b>System ID</b> <div>0</div>
<div> <div>Call parties</div> <div>Call types</div> <div>Options</div> </div> <div> <a href="#">How do I perform a search?</a> <div>Reset criteria</div> <div>Stop search</div> <div>Start search</div> </div> <div> SMDR Inspector criteria   SMDR Inspector results </div>		

Figure 29: SMDR search criteria - Call types tab

The Call types tab search options are as follows.

### Call types

The *Call types* check boxes specify one or more categories of calls used in the search. The telephone system generates an Unavailable (Queue unavailable calls) event record when a caller dials a queue and the queue is not available (in DND) or there are no agents logged on to handle the call.

### Answer supervision

The *Answer supervision* check box searches for instances where calls were answered by the called party. If you have answer supervision and you make an outbound call but the called party does not answer (you hang up) then an SMDR record is generated with no duration. If you do not have answer supervision then no SMDR record is generated at all.

### **Busy call**

The *Busy call* check box searches for call records on queues or extensions the caller dials but finds busy.

### **Error by caller**

The *Error by caller* check box searches for call records on numbers the caller dials that are not recognized by the telephone system.

### **TAFAS answered**

The *TAFAS Answered* check box searches for call records that involve calls manually picked up by agents at alternate extensions. In a TAFAS answered call, an employee hears another employee's phone ring and dials a number to pick up the call.

### **Internal call**

The *Internal call* check box searches for call records on calls between employees that do not involve trunks.

### **Blank**

The *Blank* check box searches for call records that have no data in the Call completion box. That is, when the check box is selected, the search output contains records where there is nothing recorded in the Call completion box.

### **Attendant involved**

The *Attendant involved* options specify whether or not call records for calls involving an automated attendant are used in the search.

### **Transfer/Conference**

The *Transfer/Conference* check box searches for records on transferred or conferenced calls.

### **Speed call/Forward**

The *Speed call/Forward* check boxes search for call records involving a speed dial and/or conference function. When the Blank check box is selected, the search output contains records where there is nothing recorded in the Speed or Fwd check boxes.

### **System ID**

The *System ID* check box searches for call records that pertain to a specific telephone system. In a multi-site enterprise, you program each telephone system with a 3-digit system ID number. You can distinguish records by their system ID number. The telephone system appends it to all of the SMDR records.

## ***Options criteria for searches***

When you click Tools=>Inspectors=>SMDR Inspector, the Options tab opens. The Option criteria work in conjunction with the Call parties criteria and the Call types criteria to narrow down the search. (See Figure 30.)

The screenshot shows the 'Options' tab of the SMDR Inspector application. It contains several sections for configuring search criteria:

- Select dates:** A list of dates from 10/6/2004 to 10/2/2004. Buttons for 'Select dates' and 'Delete dates' are present.
- Select media servers:** A list with '3300ICP' (checked) and '6160' (unchecked).
- Time ranges:** 'Start at' is set to 18:00:00 and 'End at' is set to 23:59:59.
- Time to answer:** 'From' and 'To' are both set to 0.
- Call duration:** 'From' is 0:0:0 and 'To' is 1000:59:59.
- Exception records:** Both 'Error records' and 'Information records' are checked.
- Output record count:** 'Maximum output rows to display' is set to 10000.

At the bottom, there are tabs for 'Call parties', 'Call types', and 'Options' (which is active). Below the tabs is a link 'How do I perform a search?'. On the right are buttons for 'Reset criteria', 'Stop search', and 'Start search'. At the very bottom are tabs for 'SMDR Inspector criteria' and 'SMDR Inspector results'.

**Figure 30: SMDR search criteria - Options tab**

The Options tab search options are as follows.

#### **Time ranges**

The Time ranges boxes specify the time interval used for the search.

#### **Call duration**

The Call duration boxes specify a range of values for the Call duration statistic used in the search.

#### **Time to answer**

The Time to answer boxes specify a range of values for the Time to answer statistic used in the search. For example, if you select a time to answer of 240 to 999 seconds, the search records include calls that were answered by an agent after waiting at least 240 seconds to be answered.

### Exception records

The Collector Service tags telephone system records that contain errors with an *E* (telephone system 1) or *e* (telephone system 2). You select the Error records check box to include these records in the search output.

The Collector Service writes a log record to the data stream upon start up. It tags the log record with an *I* to indicate it is an information record. You select the Information records check box to include log records in the search output. SMDR Inspector displays the error and information search result records on the Exception Records tab.

In companies that have two telephone systems, the Collector Service tags records from the second telephone system with an *S*. You specify the COM ports used by your telephone systems on the Data collection tab in YourSite Configuration.

### Output record count

The Output record count specifies the maximum number of rows of records to display.

### *SMDR search results information*

The SMDR Search results tab shows the search results for Call parties, Call types, and Options searches. Table 16 describes the SMDR information the SMDR Search results tab provides.

**Table 16: SMDR search results information**

COLUMN HEADING	DESCRIPTION
Media server	The Media server box identifies the telephone system (with or without MiTAI) that produced the event record.
Start time	The Start time of a call is reported in hours and minutes in either a 12- or 24-hour format. If a 12-hour clock is used, the letter <i>P</i> indicates P.M. (hh:mmP)
Date	The Date box displays the date of the event record (month/day/year).
Total duration	The duration of a call is reported in hours, minutes and seconds (hh:mm:ss). Leading zeros are output (Maximum time = 99 hours, 59 minutes, 59 seconds). If the call duration exceeds 100 hours, a call duration of 99 hours, 99 minutes, 99 seconds will be recorded.

Table 16: SMDR search results information (continued)

COLUMN HEADING	DESCRIPTION
Calling party	<p>The Calling party is the identity of the party that originated the call. It may be a station, an attendant, or an incoming trunk, as described below.</p> <p>(a) Station number as Calling party (cccc). A station number (extension number or agent ID) may be one to four digits (0-9, *, #) which are left-justified; that is, no leading zeros.</p> <p>(b) Attendant as Calling party (ATTm). Calls originated by an attendant that do not involve a third party are reported as a calling party by ATT followed by the console number. When the console number is in the range of 10 through 99, the format is modified to be ATmm. If an attendant calls an outside party on behalf of a station or trunk, that station or trunk is reported as the caller but the attendant flag symbol [*] appears in the Attendant was Involved box.</p> <p>(c) Trunk number as Calling party (Tnnn or Xnnn). When the originating party is an incoming CO trunk, <i>Tnnn</i> appears on the record, where <i>nnn</i> is the number of the trunk. If the trunk number is less than three digits long, it is left-padded with zeros. If the extended digit length option is enabled, the trunk number <i>nnnn</i> may be up to four digits long, left-justified and without leading zeros. When the originating party is an incoming non-CO trunk, <i>Xnnn</i> appears in the trunks record. The <i>T</i> or <i>X</i> ensures that CO trunks and CO Attendant trunks can be distinguished from tie trunks. The trunk number is the trunk ID specified during customer data entry in the Trunk Assignment form.</p>
Attendant flag	<p>This 1-digit box contains an asterisk [*] when a call is assisted by, or initially answered by, an attendant. This flag will not appear if a call is transferred to an attendant.</p>
Time to answer (Time to Ans)	<p>This is the number of seconds from the time an incoming external call rings the destination until the call is answered. If a call is never answered, this box displays three asterisk [***]. Leading zeros are output and the box remains at 999 when an overflow is reached. If the MITEL Call Distribution (MCD) feature package is installed, and the MCD report transfers option is enabled, this box contains the total time to answer regardless of the number of times the call is rerouted. This box does not apply to Internal SMDR.</p> <p><b>NOTE:</b> Time to answer does not include the duration the request waits in queue outside of regular business hours.</p>

**Table 16: SMDR search results information (continued)**

COLUMN HEADING	DESCRIPTION
Digits dialed	External SMDR
	<p>External SMDR records the digits dialed on the outgoing trunk. A maximum of 26 digits is recorded. This number is reduced to 20 when the Report Meter Pulses option is selected in CDE. This box does not include the trunk group access code on outgoing calls. The digits recorded are the actual digits outputted on the trunk after digit modification has been performed. On incoming calls, the digits dialed in on the trunk are recorded. The digits dialed field contains the digits the telephone system used to route the call. For an incoming call this could be the extension or the path to which the call is being routed. For outgoing calls this is the number the caller dialed. When more than 26/20 digits are dialed, the remaining digits are ignored.</p>
	<p>If the MCD option is enabled, each device is listed whenever the call is rerouted, rather than the last device as in non-MCD loads. To reflect the MCD option, the Digits dialed on the Trunk box displays dd1 ddd2 ddd3.</p>
	Internal SMDR
	<p>Internal SMDR records the digits dialed on an internal line. Up to 26 digits are recorded.</p>

Table 16: SMDR search results information (continued)

COLUMN HEADING	DESCRIPTION
Call completion flag	External SMDR (Outgoing calls)
	This reports the completion status of an outgoing call in so far as the telephone system is able to determine it. When an outgoing call fails toll-deny checking and is dropped, this box contains a <i>T</i> . When the trunk group is programmed to receive <i>Answer Supervision</i> and a supervision is received, an <i>A</i> is reported. When the trunk group is programmed for <i>Toll Reversal</i> and a supervision is received, a <i>T</i> is reported.
	External SMDR (Incoming calls)
	The telephone system can monitor the outcome of a call and can provide a comprehensive report on call completion. When the station or hunt group to which a call is directed is busy, a <i>B</i> is recorded. When an incoming trunk accesses an invalid number and receives reorder tone, an <i>E</i> is reported. An <i>E</i> is also reported for incomplete calls. A <i>T</i> is reported if the incoming trunk is answered with Trunk Answer From Any Station (TAFAS) and if an outgoing trunk call is toll denied, or if the call is Pickup answered.
	When an incoming call is forwarded by an attendant to a busy station, a <i>B</i> appears in the call completion status box, the number called appears as the third party, and the Attendant appears as the called party.
	Internal SMDR
	An <i>I</i> indicates that an internal call was completed.
	Speed Call or Call forward flags (S or F)
Speed call forward	This box contains an <i>S</i> when the number is speed dialed, and an <i>F</i> when an external call is forwarded through the external call forward feature.
	If Internal SMDR is enabled, an <i>F</i> is also recorded when an internal call is forwarded through the call forward feature. However, for internal calls the Third Party box does not contain the number of the station that initiated the call forward feature. The Third Party box is left blank because the Digit dialed box identifies the station that has call forward enabled.
	The Speed call/Forward check boxes search for call records involving a speed dial and/or conference function. When the Blank check box is selected, the search output contains records where there is nothing recorded in the Speed or Fwd check boxes.

Table 16: SMDR search results information (continued)

COLUMN HEADING	DESCRIPTION
Called party	A Called party can be a station number, an attendant, or for outgoing calls, the outgoing trunk number. The Called party output format is identical to that used for the Calling party. See <i>Calling party</i> . For incoming calls to an attendant, the called party is recorded as the attendant unless the attendant transfers a call to a station. For direct-in-lines, it would be the station number. On outgoing calls handled by an attendant, the called party would be the outgoing trunk's ID.
Transfer/Conference call (Trans Conf)	This box identifies calls involving three or more parties. It contains a <i>T</i> for supervised transfers, <i>X</i> for unsupervised transfers (that is, transfer in to busy reports a <i>T</i> , transfer in to ringing reports an <i>X</i> ), and a <i>C</i> for 3-way conversations or conferences.
Third party	<p>The Third party box contains the number of the station to which a trunk call has been transferred. When several transfers take place during a trunk call, the first party is the only one reported, as long as MCD Report transfers = <i>No</i>, and Record transfers = <i>No</i>.</p> <p>If an external call is made to a station whose call forwarding is set to an external number, the Third party box contains the number of the station that initiated the call forward feature. For internal calls, the Third Party box is left blank because the Digit dialed box identifies the station that has external call forward enabled.</p>
Account Code	Enabling the report account codes option in the SMDR Options Assignment form allows an account code of two to 12 digits to be recorded here, if one is used to make a call. Leading zeros are reported if they are entered.
Route optimization flag	At the starting and end nodes of a network call a flag will appear in this box if route optimization has taken place. A route optimized call involves two different trunks to the same party: the pre-optimization trunk and the post-optimization trunk. An SMDR record will be produced for both trunks, which will be distinguished by a lower case <i>r</i> for the pre-optimization trunk, and an upper case <i>R</i> for the post-optimization trunk. Route optimization is only available with the MSDN/DPNSS Voice IV feature package.
ANI/DNIS	ANI/DNIS digits are recorded in this box. ANI and DNIS numbers can be up to 10 digits in length, and are recorded for incoming calls on ANI/DNIS trunks. COS option ANI/DNIS reporting must be enabled.



**Table 16: SMDR search results information (continued)**

COLUMN HEADING	DESCRIPTION
System identifier	This optional 3-digit box may contain values from 000 to 999. 000 indicates that no identifier has been entered. In the absence of a System identifier, a Node identifier is printed (when programmed). When more than one node identifier exists, the first one on the programmed list is printed. When both a System ID and a Node ID are programmed, the System ID takes precedence. Programming of System Identifiers and Node Identifiers is described in the Customer data entry volume.
Call ID	The Call ID box specifies the call number to which the record relates.
Call ID seq	The Sequence ID box specifies the sequence number assigned to the call record.
Assoc call ID	The Associated ID box specifies the number attached to associated data records of the call.
System ID	This optional 3-digit box may contain values from 000 to 999. 000 indicates that no identifier has been entered. In the absence of a System identifier, a Node identifier is printed (when programmed). When more than one node identifier exists, the first one on the programmed list is printed. When both a System ID and a Node ID are programmed, the System ID takes precedence. Programming of System Identifiers and Node Identifiers is described in the Customer data entry volume.
Record	See "SMDR record boxes" on page 227.

## SMDR record boxes

This section describes the SMDR search output records available.

The telephone system records SMDR data in table format. Table 17 provides information used to interpret the SMDR Inspector search output. It summarizes the SMDR record boxes and provides the meaning of the symbols used.

**Table 17: Summary of boxes in SMDR records**

NAME	FORMAT	DEFINITION	NOTES
Date	mm/dd	mm = Month	mm = 01 - 12
		dd = Day	dd = 01 - 31
Start time	hh:mmp	hh = Hours	hh = 00 - 12 or 00 - 23
		mm = Minutes	mm = 00 - 59
		p = pm	p = P.M. (12-hour clock)

Table 17: Summary of boxes in SMDR records (continued)

NAME	FORMAT	DEFINITION	NOTES
Duration of call	hh:mm:ss	hh:mm:ss = duration in hours:minutes:seconds	hh = 00 - 99 mm = 00 - 99 ss = 00 - 99
	hhhh:mm:ss	hhhh:mm:ss = duration in hours:minutes:seconds	hh hh = 0000 - 9999 mm = 00 - 99 ss = 00 - 99
Calling party	pppp	cccc = Extension # Tnnn = Trunk # (CO) Xnnn = Trunk # (non-CO) ATTm = Attendant	c = 0 - 9, *, # nnn = 000 - 999 m = Console # (ATmm for Attendant 00 - 99)
	ppppppp	ccccccc = Extension # Tnnnn = Trunk # (CO) Xnnnn = Trunk # (non-CO) ATTmm = Attendant	c = 0 - 9, *, # nnnn = 0000 - 9999 mm = Console #
Attendant	f	* = Attendant -- = Attendant not involved	Attendant answered or initiated the call, then transferred it to an extension
Time to answer	ttt	ttt = time in seconds (000 - 999)  *** = Call unanswered	Leading zeros output. Incoming calls only.
Digits dialed on the trunk	xx...x		x = 0 - 9, *, #
	x...x y...y or Tx...x y...y (Network Format)	Up to 26 (20 if metering) digits dialed on the trunk  Network Format: up to 26 digits (20 if metering) in total	y = 0 - 9, *, # x...x = Node ID & Extension # (up to 14 digits); y...y = actual digits dialed  Tx...x = Node ID & Trunk #

Table 17: Summary of boxes in SMDR records (continued)

NAME	FORMAT	DEFINITION	NOTES
Call completion status	h	A = Answer supervision	
		B = Called party busy	Outgoing
		E = Caller error	Incoming Direct/Dial-in
		I = Internal call	Incoming/Dial-in incoming
		R = re-queue call	Incoming/Outgoing
		T = Toll-denied, TAFAS answered, or Pickup answered	
Speed call or Call fwd flags	S or F	S = Number was Speed called	
		F = External call forwarded through External call fwd feature or internal call forwarded through Call forward feature	Outgoing
Called party	qqqq	cccc = Extension #	c = 0 - 9, *, #
		Tnnn = Trunk # (CO)	nnn = Range specified in telephone system form programming
		Xnnn = Trunk # (non-CO)	
	qqqqqqqq	ATTm = Attendant	m = Console # (ATmm for Attendant 00 - 99)
		ccccccc = Extension #	c = 0 - 9, *, #
		Tnnnn = Trunk # (CO)	nnnn = 0000 - 9999
		Xnnnn = Trunk # (non-CO)	
		ATTmm = Attendant	mm = Console #
Transfer/Conference call	K	T = Supervised transfer	
		X = Unsupervised transfer	U and I only apply to
		C = 3-Way or Conference	ACD TELEMARKETER® 2000.
		U = Path unavailable	
		I = Interflow	
Third party	rrr	cccc = Extension #	c = 0 - 9, *, #
	rrrrrr	cccccccc = Extension #	c = 0 - 9, *, #
Account Code (opt.)	aa....a	Length of 2 to 12 digits	a = 0 - 9, space-filled

Table 17: Summary of boxes in SMDR records (continued)

NAME	FORMAT	DEFINITION	NOTES
Route optimization flag (opt.)	s	r = pre-optimization trunk R = post-optimization trunk - = Space (no route optimization)	
System identifier (optional)	iii	Entered by System ID	i = 0 - 9 iii = 000 - 999 000 = No code entered In the absence of a System ID, a Node ID is printed (if programmed). When both System ID and Node ID are programmed, System ID takes precedence.
ANI/DNIS	xx...xxxxxxx	Format: -aaaaaaaaa-ddddddddd - = blank a = ANIS digit d = DNIS digit Extended digit length format: -aaaaaaaaa-dddddd	For Extended digit length format only the 7 right most DNIS digits are recorded.

## RUNNING CALL PARTIES SEARCHES

You run a Call parties search to find out who/what phone numbers an extension called within a selected date range.

To run a Call parties search

1. Click the **SMDR Inspector criteria** tab.  
The Options tab opens.
2. Click the **Call parties** tab.
3. Click **Select dates** and select the dates for which to run the search, for example, September 27, 2004 to October 07, 2004.
4. Under **Select media servers**, select the Business Reporter server, for example, 3300 ICP.
5. Under **Call parties**, type the Calling party, for example, extension 1104.
6. Click **Start search**.  
The SMDR Inspector results - SMDR Search results screen opens.

## Call parties search results

The SMDR Search results tab displays the results of who extension 1104 called (Calling Party). On line one of the results, extension 1104 called 592-2122 (Digits dialed). On line five, the extension 1104 checked his voice mail (70). On line six, extension 1104 called extension 1124. (See Figure 31.)

Me...	St...	D...	To...	Calling party	A	T	Digits dialed	C	S	Called party
3300I...	10:01:00	9/27/2...	00:00:45	1104			1104 5922122	A		T8110
3300ICP	19:34:00	9/29/2...	00:00:13	1104			1104 19024660421	A		T8112
3300ICP	19:56:00	9/29/2...	00:01:27	1104			1104 19024620240	A		T8112
3300ICP	19:58:00	9/29/2...	00:14:38	1104			1104 19022096267	A		T8112
3300ICP	09:41:00	10/4/2...	00:00:37	1104		1	70	I		1171
3300ICP	11:00:00	10/4/2...	00:02:56	1104		7	1124	I		1124
3300ICP	11:10:00	10/4/2...	00:00:23	1104			1104 19208318886	A		T8112
3300ICP	12:10:00	10/4/2...	00:00:18	1104			1124	I		1124
3300ICP	12:10:00	10/4/2...	00:00:07	1104		1	1124	I		1172
3300ICP	10:02:00	10/5/2...	00:00:03	1104		1	1104	I		1172
3300ICP	10:02:00	10/5/2...	00:01:21	1104		4	1114	I		1114
3300ICP	15:45:00	10/5/2...	00:01:01	1104			1104 14103203886	A		T8111

Figure 31: SMDR search results tab - Call parties search

## RUNNING CALL TYPES SEARCHES

You run a Call types search to narrow down a Call parties search. If you have completed a Call parties search for all calls made by an extension, for a selected date range, you can now narrow the search to include only outbound calls.

To run a Call types search

1. Click the **SMDR Inspector criteria** tab.  
The Options tab opens.
2. Click the **Call parties** tab.
3. Click **Select dates** and select the dates on which to run the search, for example, September 27, 2004 to October 7, 2004.
4. Under **Select media servers**, select the Business Reporter server, for example, 3300 ICP.
5. Under **Call parties**, type the Calling party, for example, extension 1104.
6. Click the **Call types** tab.
7. Under **Call types**, clear the check boxes for all criteria but **Outbound**.
8. Click **Start search**.  
The SMDR Inspector results - SMDR Search results screen opens.

## Call types search results

The SMDR search results tab displays the call parties/call type results. All Outbound calls made by extension 1104 from September 27, 2004 to October 7, 2004 are displayed. (See Figure 32.)

Me...	St...	D...	To...	C	A	T	Digits dialed	C	S	Cal	T	Th	Ac
3300I...	10:01:00	9/27/2...	00:00:45	1104			1104 5922122	A		T8110			
3300ICP	19:34:00	9/29/2...	00:00:13	1104			1104 19024660421	A		T8112			
3300ICP	19:56:00	9/29/2...	00:01:27	1104			1104 19024620240	A		T8112			
3300ICP	19:58:00	9/29/2...	00:14:38	1104			1104 19022096267	A		T8112			
3300ICP	11:10:00	10/4/2...	00:00:23	1104			1104 19208318886	A		T8112			
3300ICP	15:45:00	10/5/2...	00:01:01	1104			1104 14103203886	A		T8111			

SMDR search results    Exception results

Search Complete    Bad records    Filtered Records 6

Save search    Stop search

SMDR Inspector criteria    SMDR Inspector results

Figure 32: SMDR search results - Call types search

## RUNNING OPTIONS SEARCHES

You run Options searches to narrow down further, Call types and Call parties searches. If you have completed a Call parties search for all outbound calls made by an extension, for a selected date range, you can now search for outbound calls that occurred within a specified time frame.

To run an Options search

1. Click the **SMDR Inspector criteria** tab.  
The Options tab opens.
2. Click the **Call parties** tab.
3. Click **Select dates** and select the dates for which to run the search, for example, September 27, 2004 to October 7, 2004.
4. Under **Select media servers**, select the Business Reporter server, for example, 3300 ICP.
5. Under **Call parties**, type the Calling party, for example, extension 1104.
6. Click the **Call types** tab.
7. Under **Call types**, clear the check boxes for all criteria but **Outbound**.

8. Click the **Options** tab.
  9. Under **Time ranges**, after the Start At time, type the start time, for example 18:00:00.
  10. Under **Time ranges**, after the End At time, type the end time, for example 24:00:00.
  11. Click **Start search**.
- The SMDR Inspector results - SMDR Search results screen opens.

### Options search results

The SMDR search results tab displays the call parties/call type/options results. Extension 1104 made three calls after 6:00 P.M. between September 27, 2004 and October 7, 2004. Were these expensive calls? Were these legitimate calls? Run an extension report to find out. (See Figure 33.)

Me...	St...	D...	To...	C	A	T	Digits dialed	C	S	Cal	T	Th	Ac
3300I...	19:34:00	9/29/2...	00:00:13	1104			1104 19024660421	A		T8112			
3300ICP	19:56:00	9/29/2...	00:01:27	1104			1104 19024620240	A		T8112			
3300ICP	19:58:00	9/29/2...	00:14:38	1104			1104 19022096267	A		T8112			

SMDR search results
Exception results

Search Complete
Bad records
Filtered Records 3

Save search
Stop search

SMDR Inspector criteria
SMDR Inspector results

Figure 33: SMDR Search result - Options search

## RUNNING SEARCHES FOR ERROR AND INFORMATION RECORDS

With the Option tab you can run a search for error and information records. The error messages are records of sequence errors. The information records are records of when the Collector restarts.

If you have completed a Call parties search for all outbound calls made by an extension, for a selected date range and within a specified time frame, you can also run a search for error and information records.

To run an Exception event search

1. Click the **SMDR Inspector criteria** tab.  
The Options tab opens.
2. Click the **Call parties** tab.
3. Click **Select dates** and select the dates for which to run the search, for example, October 12, 2004.
4. Under **Select media servers**, select the Business Reporter server, for example, 3300 ICP.
5. Under **Call parties**, type the Calling Party, extension 1104.
6. Click the **Call types** tab.
7. Under **Call types**, clear the check boxes for all criteria but **Outbound**.
8. Click the **Options** tab.
9. Under **Time ranges**, after the Start At time, type the start time, for example, 8:00:00.
10. Under **Time ranges**, after the End At time, type the end time, for example, 12:59:59.
11. Under **Exceptions**, select the **Error records** and **Information records** check boxes.
12. Click **Start search**.  
The SMDR Inspector results - SMDR Search results screen opens.

### *Exception search results*

There was an information record produced every five minutes. Either the alarm is set incorrectly (the system thinks it should be receiving data because the business hours indicate the business is open), or the connection has died. The Exception results tab displays error and information records. (See Figure 34.)

The Exception search results information is as follows.

#### **Media server**

The Media server box identifies the telephone system that produced the event record.

#### **Record**

The Data record box displays detailed information on the exception record.



Media server	Record
3300ICP	INFORMATION-Tuesday, October 12, 2004 08:09:46
3300ICP	INFO----CyberACD Collector Starting!
3300ICP	INFORMATION-Tuesday, October 12, 2004 08:22:56
3300ICP	INFO----CyberACD Collector Starting!
3300ICP	INFORMATION-Tuesday, October 12, 2004 08:29:40
3300ICP	INFO----SetNoDataAlarmActive-[TCP;10.1.2.2:1752;]-[SMDR Records]-[300 Secs Since Re...
3300ICP	INFORMATION-Tuesday, October 12, 2004 08:29:40
3300ICP	INFO----CPF OneStream::FinishStartComReset-Closing Port-[TCP;10.1.2.2:1752;]-[SMDR R...
3300ICP	INFORMATION-Tuesday, October 12, 2004 08:30:10
3300ICP	INFO----Opening Port-[TCP;10.1.2.2:1752;]-[SMDR Records]-RESET COMPLETE..Waiting ...
3300ICP	INFORMATION-Tuesday, October 12, 2004 08:32:59
3300ICP	INFO----ClearNoDataAlarmActive-[TCP;10.1.2.2:1752;]-[SMDR Records]-DataTimeOut Erro...
3300ICP	INFORMATION-Tuesday, October 12, 2004 08:32:59
3300ICP	INFO----CyberACD Collector Starting!
3300ICP	INFORMATION-Tuesday, October 12, 2004 08:38:32
3300ICP	INFO----CyberACD Collector Starting!
3300ICP	INFORMATION-Tuesday, October 12, 2004 09:03:21
3300ICP	INFO----SetNoDataAlarmActive-[TCP;10.1.2.2:1752;]-[SMDR Records]-[300 Secs Since Re...
3300ICP	INFORMATION-Tuesday, October 12, 2004 09:03:21
3300ICP	INFO----CPF OneStream::FinishStartComReset-Closing Port-[TCP;10.1.2.2:1752;]-[SMDR R...
3300ICP	INFORMATION-Tuesday, October 12, 2004 09:03:51
3300ICP	INFO----Opening Port-[TCP;10.1.2.2:1752;]-[SMDR Records]-RESET COMPLETE..Waiting ...

SMDR search results    Exception results

Control Load Time - 0 - min - 8 - sec    Bad records    Filtered Records 145

Save search

Stop search

SMDR Inspector criteria    SMDR Inspector results

Figure 34: SMDR search results - Exception results tab

## WILD CARD SEARCHES

### NOTE:

- To search for a string of numbers within a digits dialed string, enclose the string of numbers in parenthesis, such as '8905'. The search will produce only records that include 8905 in the digits dialed string.
- To search for records where the calling, called or third party involved a trunk (BOTH T and X in one search), put a C in the calling, called or third party box.

When performing searches on the Queue Events tab, you can enter a *P800* under Queue information and the search will produce records involving Queue 800 only. Alternatively, you can run wild card searches. When you perform wild card searches, you use \* to represent the wild card. For example, if you enter '\*00' under Queue information on the Queue events tab, the search will produce records for all of the Queues or Agent groups that end in '00' (for example, 200, 300).

## EXPORTING SEARCH RESULTS

You can save the SMDR Inspector search results in the following formats:

- HTML
- Microsoft Excel
- XML
- Text

To export the search results

1. Click **Save search**.  
The Inspector Search Results Export window opens.
2. Select the format in which to save search results: **HTML**, **Microsoft Excel**, **XML**, or **Text**.
3. Click **Next**.
4. Click the ellipses to select the location to save the file.
5. After **File name**, type the file name.
6. Click **Save**.
7. Click **Next**.
8. Click **Next** to confirm the format in which to save the file and the location of the file.  
A window opens with the message 'Inspector Search Results export to [export type] complete.'
9. Click **OK**.
10. Click **Finish**.  
A window opens with the message 'Would you like to view/open this file now?'
11. To view the file immediately, click **Yes**.  
The file opens.

# Chapter 10

## BUSINESS REPORTER NODE

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*Business Reporter Node Configuration*

*Business Reporter Node Installation*

## BUSINESS REPORTER NODE

**NOTE:** A single Business Reporter Node can collect data for one voice media server. If you have two voice media servers, you require a second Business Reporter Node license.

The Business Reporter Node enables you to set up a remote collection point at a separate location. It is an add-on application that provides multi-site capabilities using a single-server configuration.

### Business Reporter Node software

Business Reporter Node software collects raw data from the remote media server and both files the data to the local hard drive and streams it to the prairieFyre Collector Service (on the Enterprise Server) over TCP/IP. The prairieFyre Collector Service gathers the data, and the Enterprise Service makes it available for enterprise-wide real-time monitoring and reporting.

Business Reporter Node software does not require SQL, IIS, or other server support applications at your remote sites. This results in significant cost savings. In addition, the redundant data collection provides added security in case of network outages.

The Business Reporter Node software performs the following functions:

- Collects SMDR data from single or co-located telephone systems
- Stores SMDR data on the local Business Reporter Node server
- Streams real-time SMDR data to the Business Reporter Server for enterprise-wide real-time statistics which automatically synchronizes and stores all statistics on the Enterprise Server for accurate, multi-site, historical reporting
- Uses a telephone system neutral collection process that allows you to collect data and run reports on companies with various Mitel telephone systems

### Business Reporter Node license

A Business Reporter Node license enables a company to collect call costing data from co-located or geographically dispersed telephone systems beyond the single telephone system collection license included in Business Reporter.

### Enterprise reporting

Enterprise reporting relies on two types of collectors: the Business Reporter Node - located at branch offices (remote sites), and the prairieFyre Collector Service - the remote node is a collector service that communicates with the Enterprise Service.

In order for data to be collected at a remote site, the Business Reporter Node software must be deployed at that site. The Business Reporter Node contains a data collector. It collects data from a Mitel telephone system or from other media types, and stores the information at that site. The prairieFyre Collector Service, which resides at the Enterprise Server site, gathers the information from your remote site server (Business Reporter Node server) and stores it as raw data. The Enterprise Service, which also resides on the Enterprise Server, summarizes and then stores the data (SQL), and produces real-time data for the real-time monitors.

### Business Reporter Node versus Enterprise Server

The Business Reporter Node collector collects raw data from a single media server at the remote site. The Business Reporter Node streams this data to the Enterprise Server.

The Enterprise Server consists of the prairieFyre Collector Service and the Enterprise Service. The prairieFyre Collector Service collects raw data from all of the (both local and branch office) media servers. The Enterprise Service summarizes the raw data, stores it on the SQL Server, and produces enterprise-wide data for the real-time and reporting applications.

## BUSINESS REPORTER NODE CONFIGURATION

**NOTE:** If the Wide Area Network (WAN) link between a remote site and the Enterprise Server goes down, the managers and supervisors at the remote site cannot view real-time data on their site until the WAN connection is restored. However, if the WAN link is down, data collection at the remote site continues.

You can run both the Business Reporter Node software and the Enterprise Server on a single computer or on separate computers.

### SETTING UP BUSINESS REPORTER NODE EXAMPLES

You can set up Business Reporter Node in the following ways.

- Business Reporter Node server at the remote site
- No dedicated server at the remote site

#### *Scenario 1 - With a dedicated server at the remote site*

In this example, the enterprise consists of the following.

##### **Office 1 - Kanata (prairieFyre Collector Service) with one media server (3300 ICP)**

The Enterprise Server resides at site 1 in Kanata. The prairieFyre Collector Service collects data from all of the media servers at that site. There is one media server at the Kanata site (3300 ICP). No Business Reporter Node is required at this site.

Then setting up your enterprise, you add the first site (Kanata) and then add the first media server (3300 ICP). The first media server has the IP address 28.1.1.1 and IP port 5400.

##### **Office 2 - Boston (Business Reporter Node) with one media server (3300 ICP)**

The second media server resides at site 2 in Boston. The media server in Boston is a 3300 ICP. You do not require a dedicated server because you have a 3300 ICP media server. However, you must install a remote node at the remote site if the media servers communicate over RS-232, and not TCP/IP. Media servers like the 3300 ICP, which communicate over TCP/IP, have the unique ability to send data over TCP/IP without the use of a dedicated server. However, to prevent data loss from the Boston site should the WAN go down, you decide to install a dedicated server in Boston. The Business Reporter Node software is deployed on the dedicated server. Therefore, all of the Boston raw data is stored on the dedicated server in Boston. If the WAN goes down, data is still collected locally in Boston: no data is lost. Also, all of the raw and summarized data is stored at the site with the Enterprise Server (Miami) by the prairieFyre Collector Service.

Continuing to set up your enterprise, you add the second site (Boston) and then add the Boston media server (3300 ICP). The Boston media server has the IP address 256.1.1.1 and IP port 5401. You must have the Business Reporter Node license to add the remote site to your enterprise.

## *Scenario 2 - No dedicated server at the remote site*

**CAUTION:** If you do not have a dedicated server at the remote site, data at the remote site is *permanently* lost if the WAN goes down.

In this example, the enterprise consists of the following.

### **Office 1 - Miami (prairieFyre Collector Service) - with one media server (3300 ICP)**

The Enterprise Server resides at site 1 in Miami. The prairieFyre Collector Service collects data from all of the media servers at that site. There is one media server at the Miami site (3300 ICP). No Business Reporter Node is required at this site. When you set up the enterprise, you add the first site (Miami) and then add the first media server (3300 ICP). The first media server has the IP address 73.1.1.1 and IP port 5400.

### **Office 2 - Houston (Business Reporter Node) with one media server (3300 ICP)**

The second media server resides at site 2 in Houston. The media server in Houston is a 3300 ICP. A dedicated server is not required because of the 3300 ICP media server. This means a Business Reporter Node license is required but the Business Reporter Node software is not deployed at the remote site. The 3300 ICP media server has the unique ability to send data over TCP/IP without the use of a dedicated server. Therefore, all of the raw and summarized data is stored at the site with the Enterprise Server (Miami) and no data can be stored at the Houston site. While the WAN is down, all of the data produced in Houston is lost.

Continuing to set up your enterprise, you add the second site (Houston) and then add the Houston media server (3300 ICP). The Houston media server has the IP address 73.1.1.1 and IP port 5401. Using this set up the prairieFyre Collector Service collects the raw data from the Houston site, therefore, you use the Miami IP address. You must have the Business Reporter Node license to add the remote site to your enterprise.

## **BUSINESS REPORTER NODE INSTALLATION**

In multi-site companies that use Business Reporter, it is necessary to install a Business Reporter Node at each site except the site where the Enterprise Server resides (a remote site with a media server that communicates over TCP/IP is the exception). The prairieFyre Collector Service resides at the office that has the Enterprise Server software installed and it collects data at that site. See "Scenario 2 - No dedicated server at the remote site" on page 240.

Business Reporter Node software collects the raw data from all of the media servers at the remote site. The Business Reporter Node enables supervisors at remote sites to monitor activities in real-time and run reports on their sites without having to install an Enterprise Server at that site.

## **INSTALLING BUSINESS REPORTER NODE SOFTWARE**

To install Business Reporter Node software on the remote site server

1. Log on to the Enterprise Server with a Windows administrator account.  
The account must have full administrative privileges.
2. Ensure all of the Windows programs are closed.
3. Using a web browser browse to <http://www.mitel.com>.
4. Click **Login**.

5. Click **Mitel Online**.
6. Type your Mitel Online **Username** and **Password** and click **Login**.
7. Under **Support** click **Software Downloads**.
8. To download Business Reporter software, click **Call Accounting=>MiContact Center Software Download Current Release 7.1.3.0**.
9. Click the link of the version of 7.1.3.0 you want to download.  
The Disclaimer appears.
10. To download your software:
  - Click **I Agree [Download using Software Download Manager (Recommended)]** to download using the Software Download Manager.
  - Click **I Agree [Download using HTTP]** to download using your browser.**NOTE:** If you click I Disagree, you are unable to download the software.
11. If you are downloading with the Software Download Manger, select the destination for the download and click **Save**. When the file finishes downloading, click **Launch**.
12. If you are downloading using HTTP, depending upon the options presented in your browser, choose to save or run the installation file.

## VIEWING THE STATUS OF THE DATA COLLECTION

Business Reporter Node software collects the data from all of the media servers at the remote site (a remote site with a media server that communicates over TCP/IP is the exception). See "Scenario 2 - No dedicated server at the remote site" on page 240.

You can use the Data link window to verify you are collecting data and to view the status of data collection.

To verify a media server is receiving telephone data

- In YourSite Explorer, select a 3300 ICP media server and click the **Data link** button in the **Tool** tab of the ribbon.  
The Data link window opens.

To reset the data links

- If no data is streaming in the SMDR or ACD panes, click the **Reset SMDR/ACD** link button.

# Chapter 11

## SUBSCRIBER SERVICES

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*Subscribers*

*Licensing*

*Subscriber Services configuration*



## SUBSCRIBER SERVICES

Subscriber Services is an optional application to Business Reporter. Using Subscriber Services, you can create customized plans to cost subscriber calls. Because the plans are customizable, you can bill back some subscribers a fraction of the cost of their calls and others you can markup the cost of the calls. Using Subscriber Services you can also add surcharges for the billing period.

Subscriber reports provide call statistics that help you track subscriber call activity and cost. You can report on all types of calls—inbound, outbound, local, long distance—and create reports to provide to subscribers.

## SUBSCRIBERS

A *subscriber* is someone to whom you provide a communication product or service, such as a student in a dormitory, or a tenant in a rooming house. Subscriber Services is the means by which you mark up or discount call costs.

You configure subscriber devices in YourSite Explorer. To mark up or discount phone use costs, or add billing options for subscribers, you must associate subscriber plans to subscriber devices. To mark up or discount phone use costs, or add billing options for employees, you must associate subscriber plans to employee devices. You identify a subscriber by associating the subscriber with an extension or Account Code.

### Subscriber plans

*Subscriber plans* help you cost the calls made by subscribers or employees, and enable you to charge a markup/discount for each call or add a billing option. *Billing options* are one-time surcharges per subscriber report.

You can create basic subscriber plans or advanced subscriber plans.

**NOTE:** Basic and advanced subscriber plans are not associated with carrier plans. Changes to carrier plans do not effect subscriber plans.

### Basic subscriber plans

You use a *basic subscriber* plan if you want to either mark up or discount carrier costs, or specify calls as outbound, inbound, or internal.

### Advanced subscriber plans

When you specify call types or call rates for outbound, inbound, or internal calls, a basic subscriber plan becomes an *advanced subscriber* plan.

## LICENSING

You license Subscriber Services based on the total number of subscribers on which you report. Your license reflects the maximum number of subscribers on which you can generate reports.

To view details on your software license

- Click **Help=>About your Mitel applications**.

## SUBSCRIBER SERVICES CONFIGURATION

You must configure Subscriber Services before you are able to report on subscriber call activity. You configure devices in the following order. (See Figure 35.)

1. In YourSite Explorer, under YourSite, if you have not done so previously, add
  - Employees and employee groups (optional)  
See "Adding employees" on page 96.
  - Extensions and/or Account Codes  
See "Adding Account Codes" on page 119.
2. In YourSite Explorer, under Business Reporter, if you have not done so previously, add
  - Call types  
See "Adding call types" on page 123.
  - Time slots  
See "Adding time slots" on page 124.
  - Call rates  
See "Adding call rates" on page 124.
  - Subscribers and subscriber groups (optional)  
See "Adding subscribers" on page 131.  
See "Adding subscriber groups" on page 131
  - Billing options  
See "Adding billing options" on page 132.
  - Subscriber plans  
You can associate either subscribers or employees to the subscriber plan.  
You can optionally associate billing options.  
See "Adding subscriber plans" on page 132.

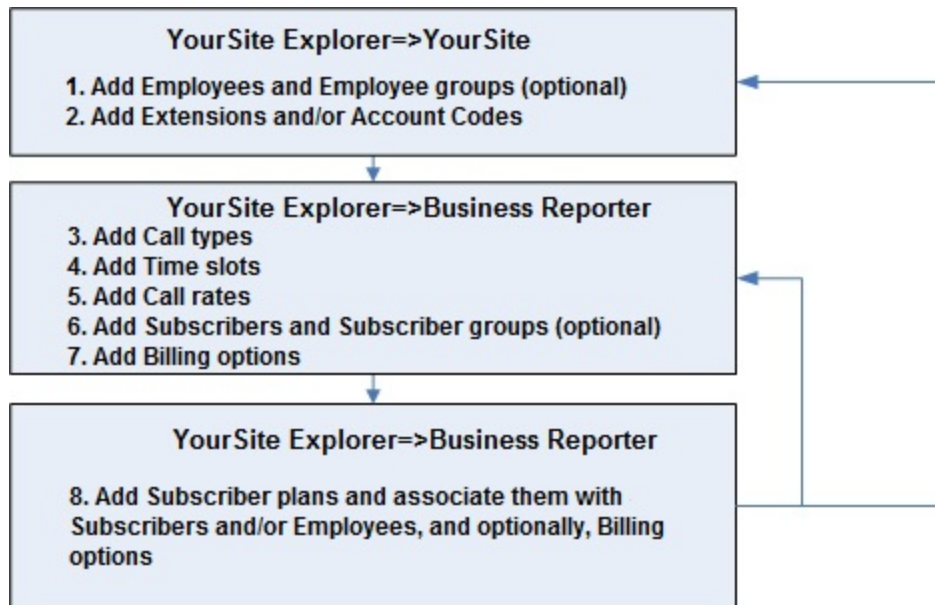


Figure 35: Subscriber Services configuration steps

## TROUBLESHOOTING SUBSCRIBER SERVICES CONFIGURATION ISSUES

When Subscriber Services is configured so that you could either cost calls by an extension associated to a subscriber or by an Account Code associated to an employee, the Account Code cost overrides the extension cost. See the example below.

ABC Travel uses Contact Center Management, Business Reporter, and Subscriber Services. It has several satellite offices around town. Each satellite office is configured as a subscriber, so that call costs can be attributed to the office that generated them.

### **Current configuration**

At ABC Travel, employees use Forced Verified Account Codes to gain access to an outside line. Asha, a new employee, (Employee 8856) is associated with Account Code 8856 and Extension 8856. Her boss has not yet associated her with a subscriber.

### **Action**

Asha's boss accidentally disassociates her extension, then associates the extension (Extension 8856) with Subscriber A. The boss associates Subscriber A to a subscriber plan.

### **Result**

Any calls made using Extension 8856 get pegged to Subscriber A and any calls made using Account Code 8856 get pegged to Employee 8856. If there is a conflict, Account Code overrides extension. For example, if Asha uses Extension 8856 and punches in her Account Code to make a call, the calls get pegged to Employee 8856, not Subscriber A.

# Chapter 12

## TRAFFIC ANALYSIS

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*Using Traffic Analysis*

## TRAFFIC ANALYSIS

Traffic Analysis is an optional application that works with Business Reporter and Contact Center Solutions. Traffic Analysis works in conjunction with the 3300 ICP telephone system.

In order to have summarized data for Traffic Analysis reports you must wait until the nightly maintenance routine runs the summary (at midnight each night). The data for these reports is derived from the traffic stream. Traffic Analysis reports are not available in real-time.

For detailed information about traffic reports, refer to the *Business Reporter Reports Guide*. Traffic reports provide call statistics on DTMF receivers, route lists, route plans, routes, and trunks. You can create the following on-demand and scheduled traffic reports:

- Attendant Console Traffic by Interval report
- Attendant Traffic by Interval
- Attendant Group Traffic by Interval
- DTMF Receiver Group Traffic by Interval
- Route List Traffic by Interval
- Route Plan Traffic by Interval
- Route Traffic by Interval
- Trunk Traffic by Interval
- Trunk Busy Hour Traffic by Day of the Week
- Trunk and Trunk Group Traffic Usage by Day of the Week
- Trunk Group Outgoing Traffic by Interval
- Trunk Group Outgoing Traffic Usage by Day of the Week
- Trunk Group Outgoing Busy Hour Traffic by Day of the Week

## USING TRAFFIC ANALYSIS

Before you generate Traffic Analysis reports you must configure data collection for Traffic Analysis.

To configure data collection for Traffic Analysis

1. Set up the telephone systems to collect traffic data
2. Configure the media servers in Business Reporter for traffic data collection
3. Set up Traffic Analysis reporting

## SETTING UP TELEPHONE SYSTEMS TO COLLECT TRAFFIC DATA

You can collect traffic data from a 3300 ICP telephone system over TCP/IP.

## Setting up the 3300 ICP

You must specify traffic data options on the 3300 ICP Traffic Options Assignment form in order to collect traffic data and produce reports with the Traffic Analysis application.

The Traffic Options Assignment form is a form-driven method to obtain time-based traffic reports on telephone system usage. You can generate reports that cover attendant usage, channel utilization, system activity, data station usage, delay to dial tone, extension-to-extension calls, feature usage, and trunk use.

### NOTE:

- You can define up to six different time slots.
- If the start and stop time are blank while the time slot is active, an error message is displayed when the commit operation is attempted; in this case, the changes will not be committed.
- No two traffic slot stops should be less than 5 minutes apart. This time is required for the system time to generate the previous report.
- Making changes to the data in this form and recommitting interrupts a traffic report that is running.

## Programming the Traffic Options Assignment form

To program the Traffic Options Assignment form

1. Log onto the 3300 ICP telephone system.
2. Browse to the **Traffic Options Assignment** form.
3. Click **Change**.
4. Configure the traffic options as described in Table 18.

**Table 18: 3300 ICP Traffic Options Assignment form**

OPTION	VALUE
Time Slot Active	Select Yes to start a traffic session at the time specified in Start Time field and finish at the Stop Time field for each of up to six different slots. The report is resumed the next day at the same time. Select No to suspend the traffic report for the associated time slot. The traffic report will not run until Yes is entered and the form recommitted. Default is No. There can be no overlapping of ACTIVE time slots. <b>Select: Yes</b>
Start Time (-Hours, -Minutes)	Select the time the traffic report is to start running. Default is blank. The start time must be assigned for active time slots; it can be blank for inactive time slots. If the start time equals the stop time then the time period is 24 hours. <b>Select: 00:00</b>
Stop Time (-Hours, -Minutes)	Select the stop time for the report. If the session is to run for 24 hours, enter the same time as the start time. Default is Blank. The stop time must be assigned for active time slots; it can be blank for inactive time slots. If the start time equals the stop time then the time period is 24 hours. <b>Select: 24:00</b>

Table 18: 3300 ICP Traffic Options Assignment form (continued)

OPTION	VALUE
Period Length	Select the length of time (15, 30, or 60 minutes) that data is to be collected for the session before a traffic report is formatted and output. Default is 60 minutes. <b>Select: 15</b>
Usage Units	Select the type of units the report will use. Default is Erlangs. <b>Select: Erlangs</b>
Autoprint	Select Yes to spool the traffic report to the printer assigned to this function in the Application Logical Port Assignment form. Default is No. We will be using the LPR1 Port 1754 to output traffic. <b>Select: Yes</b>
Maximum Number of Traffic Files	Enter the maximum number of traffic reports to be stored in disk. Default is 10. <b>Select: 10</b>
Sections to include in Traffic Report	Select Yes to enable the collection of data for each resource group you want to include in the traffic report. The default is No.
	Route Plans Yes
	Route Lists Yes
	Routes Yes
	Trunk Groups Yes
	Trunks Yes
	Links No
	Groups of Links No
	Channels No
	DTMF Receivers Yes
	Data Transceivers No
	Modem Groups No
	Data Station Groups No
	Attendant Groups Yes
	Attendant Consoles Yes
	Attendants Yes

### *Assigning ports*

You must assign a port to the 3300 ICP to output traffic data.

To enable traffic data output

1. Log on to the 3300 ICP telephone system.
2. Browse to **Application Logical Port Assignment**.
3. Select **Traffic Report Port**.
4. Click **Change**.
5. Under **Port Physical Name**, type **LPR1**.
6. Click **Save**.

### *Verifying the traffic output*

Before you configure traffic collection settings for the 3300 ICP, verify traffic data is being output through port 1754. Using your preferred telnet client, monitor port 1754 and wait the 15 minute interval time selected in the Traffic Options Assignment. The traffic should then output to your telnet client.

## CONFIGURING MEDIA SERVERS

You must configure traffic collection settings in YourSite Explorer for the media servers from which you collect traffic data.

### **3300 ICP**

You do not require a dataset to collect traffic data from a 3300 ICP. The traffic data is directed to the printer port, 1754, on the 3300 ICP telephone system.

### *Verifying traffic data is saved on the Enterprise Server*

To verify the traffic collection for the 3300 ICP

1. Start Internet Explorer and type your Enterprise Server IP address **http://[your Enterprise Server IP address]/CCMWeb/**.
2. Using an administrative username and password, log on to CCMWeb
3. Click **YourSite=>Enterprise**.
4. Expand the tree of the site for which you want to configure traffic options.
5. Click a **3300 ICP** media server.
6. Click the **Data Collection** tab.
7. Verify the **Traffic Analysis** check box is selected and the port is 1754.
8. Wait the interval time you selected in the Traffic Options Assignment, for example 15, 30 or 60 minutes.
9. On the Enterprise Server, browse to **<drive letter:>\Program Files (x86)\prairieFyre Software Inc\6100CCS\6110\Data Directory\Node\_0X**.  
This is the directory of the media server for which you configured traffic options.  
You should see a new file with the following naming convention, TYYYYMMDD.txt. For example, T20050127.txt, where YYYY is the year, MM is the month, and DD is the day.
10. Double-click the file to open it and view the traffic data.



# Chapter 13

## CONTACT CENTER PHONESET MANAGER AND CONTACT CENTER SOFTPHONE

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*Using Contact Center PhoneSet Manager  
and Contact Center Softphone*

## CONTACT CENTER PHONESET MANAGER AND CONTACT CENTER SOFTPHONE

The Contact Center PhoneSet Manager and Contact Center Softphone applications provide employees with the ability to use their desktop computers as IP-based phones. Contact Center PhoneSet Manager and Contact Center Softphone are designed for the 3300 ICP telephone system.

**NOTE:** Soft phone is not supported on the Enterprise Server.

## USING CONTACT CENTER PHONESET MANAGER AND CONTACT CENTER SOFTPHONE

Contact Center PhoneSet Manager and Contact Center Softphone enable employees to use their desktop computers as IP-based phones. Contact Center PhoneSet Manager automates Mitel IP phone sets from the computer desktop. An employee who uses Contact Center PhoneSet Manager has a headset connected to a desk phone. Contact Center Softphone provides complete phone set functionality from the computer desktop. A computer and wired or wireless USB headset deliver calls to the employee.

### STARTING CONTACT CENTER CLIENT

Contact Center Softphone and Contact Center PhoneSet Manager reside in Contact Center Client.

**NOTE:** Launching client-side applications from the task bar causes them to bypass the Updater Service process. To ensure successful updates from the Enterprise Server, after an upgrade close all client-side applications for 15 minutes or reopen them from the Start menu/Start screen

To start Contact Center Client

1. Open **Contact Center Client**.
2. If prompted, type your user name and password and verify the Enterprise Server IP address.
3. If you use Secure Socket Layer, select the **SSL** check box.
4. Optionally, select the **Remember my credentials** check box.
5. Click **Log in**.

### TESTED HEADSETS

We have tested the following headsets to confirm they work with Contact Center PhoneSet Manager and Contact Center Softphone:

Plantronics models:

- Plantronics USB Headset – Savi D100/W430: Current
- Plantronics USB Headset – Blackwire
- C420
- C600 family
- Plantronics USB Headset – DA4
- Plantronics USB Headset – BUA 100

Jabra models:

- Jabra GN 9330e USB
- Jabra GN 2000 USB
- Jabra BIZ 2400 USB Duo MS

**NOTE:** In order for the Plantronics and GN Netcom headsets to work with Contact Center PhoneSet Manager you must have the correct amplifier adaptor for the Mitel phones. In order for the Plantronics and GN Netcom headsets to work with Contact Center Softphone you must have the correct USB adaptor.

### USB-TO-HEADSET ADAPTORS

For Contact Center Softphone, the Plantronics H251N and H261N and the GN Netcom GN 2110 ST and GN 2115 ST headsets must be connected to your computer by a USB-to-headset adaptor. We have tested the following USB-to-headset adaptors to confirm they work with Contact Center Softphone:

- Plantronics DA60 USB-to-Headset Adaptor (part number DA60)
- GN Netcom USB-to-headset adaptor (part number GN 8110)
- GN Netcom USB-to-headset adaptor (part number GN 8120)

You can integrate the GN 8120 with Contact Center Softphone and use the three different function buttons on the GN 8120 to perform specific functions in Contact Center Soft phone. Table 19 shows the GN 8120 button functions.

**Table 19: GN 8120 button functions**

BUTTON	STATE	ACTION
Blue volume control	Any state	Increases or decreases the headset speaker volume, which controls the volume at which you can hear a caller
White button	Any state	Turns the mute function on or off
Green button	Incoming call is ringing on one of your line appearances	Answers a call
	You are currently talking to someone and you do not have anyone on consultation hold	Hangs up a call
	You are currently talking to someone and you have someone on consultation hold	Performs a swap with the party on hold
Red button	You are currently talking to someone, and you do not have anyone on consultation hold	Places the current call on hold
	You currently have someone on hold	Retrieves the call on hold
	You are currently talking to someone and you have someone on consultation hold	Cancels the current call and returns you to the party on hold

Table 20 shows the various situations where the LEDs will be lit or flashing based on the state of Contact Center Softphone.

**Table 20: GN 8120 LED displays**

WHAT YOU ARE DOING	GN 8120 LED DISPLAYS
All lines are active, and the mute function is off	All LEDs are off
The mute function is on	Blue LED above the white button is on
A call is ringing	Green LED above green button is flashing
You are currently dialing, waiting for an answer, or talking to someone, and you do not have anyone on hold	Green LED above green button is on
You are currently talking to someone, and he has put you on hold	Green LED above green button is flashing
You put someone on hold	Red LED above red button is on
You are currently talking to someone, and you have someone on consultation hold	Green LED above green button is on Red LED above red button is flashing

## *Integrating the GN 8120 with Contact Center Softphone*

To integrate the GN 8120 with Contact Center Softphone

1. Log on to Contact Center Client.
2. In the Contact Center Client ribbon, click **Soft Phone**
3. Click the **Soft Phone** icon in the toolbar ribbon.  
The Soft phone configuration window opens.
4. After **Input audio device**, choose the GN 8120.
5. After **Output audio device**, choose the GN 8120.
6. Click **OK**.

## SETTING UP THE SOFT PHONE

The functionality of Contact Center PhoneSet Manager and Contact Center Softphone is similar. For simplicity, we will use *soft phone* when referring to features and functionality common to both applications.

### **NOTE:**

- Before you set up the soft phone on your client computer, ensure your network administrator has configured your soft phone as a 5020 IP phone on the telephone system.
- Users who are upgrading to Business Reporter Version 6.0 or greater must uninstall MiAUDIO Desktop Edition before they use Contact Center Softphone. MiAUDIO is now bundled in the Business Reporter software and no longer runs as the IP Phone Emulation Service.
- Although Inter-Tel users can log in to multiple extensions simultaneously, this functionality is not currently supported by Contact Center Solutions applications.

To set up a client computer to use the soft phone

1. Consult your network administrator to confirm your soft phone extension number.
2. Ensure your headphone is connected.
3. Configure sound and audio device properties.  
See "Configuring sound and audio device properties" on page 255.
4. Run Client Component Pack.  
See "Installing the latest version of Client Component Pack" on page 32.

## CONFIGURING SOUND AND AUDIO DEVICE PROPERTIES

To configure sound and audio device properties for Windows operating systems, you must set the PC speakers as the default audio device and adjust the volume of the PC speakers, headset speakers, and headset microphone.

## OPENING THE SOFT PHONE

To open the soft phone

1. In the **Contact Center Client** ribbon, click **Soft Phone**
2. Click the **Soft Phone** icon in the toolbar ribbon.  
The Soft phone configuration window opens.  
See Figure 36.

**Figure 36: Soft phone configuration window**

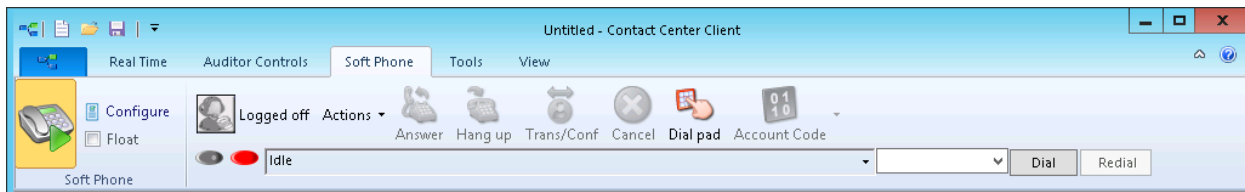
3. Click **Add Extensions** to search and select from all internal standard extensions, hot desk extensions, and external hot desk user extensions.
4. Select your phone extension from the list of extensions.  
**NOTE:** Although Inter-Tel users can log in to multiple extensions simultaneously, this functionality is not currently supported by Contact Center Solutions applications.
5. If you have Contact Center PhoneSet Manager, click **Desk phone**. If you have Contact Center Softphone, click **Soft phone**.

6. To log on automatically to the soft phone with your phone extension the next time you open the current profile, select the **Remember my extension** check box.  
You must save the current profile before you quit the soft phone for this option to work.  
If you are a hot desk user who participates in the use of PINs, the PIN login dialog box opens. If you are a hot desk user who does not participate in the use of PINs, go to step 10.  
**NOTE:** When logging in as an external hot desking agent or a hot desking user who is not set up to use a PIN login, if the PIN entry window displays, do not enter a PIN; just click **Login**.
7. Type your **Login PIN**.  
If you want Contact Center Client to remember your Login PIN, select the Remember your credentials check box. This option is not available if your Contact Center Client profile is shared.
8. Click **Login**.  
**NOTE:**
  - If the Login PIN you entered is invalid the login will fail and you will be asked to enter a valid Login PIN.  
By default, users can attempt to log in 3 times before their PIN locks, requiring it be reset with a new PIN. It is recommended that the default number of failed attempts before the PIN is locked is increased on your telephone system to prevent locking. For information on changing this setting, see the following Knowledge Base article:  
<http://micc.mitel.com/kb/KnowledgebaseArticle52108.aspx>.
  - Advanced supervisor or System Administrator will not be prompted to enter a PIN provided third party call control is configured under security in CCMWeb and on the telephone switch.
9. If you want Contact Center Client to be the top-most window on ringing, select the **Bring to front on ringing** check box.
10. If you want Contact Center Client to not display the screen pop window when calls are ringing on the desktop, enable the **Disable toaster on ringing** check box.
11. If you selected Soft phone in step 6, under **Soft phone settings**, configure soft phone options.  
**NOTE:** For the relevant configuration information, contact your supervisor or system administrator.
12. After **Address book source for contacts**, select **YourSite contacts** or **Outlook contacts**.  
Contact Center PhoneSet Manager and Contact Center Softphone users can access YourSite database phone extensions or Outlook Personal Contact or Global Address List phone numbers when they handle calls.
13. To automatically log off the agent from the telephone system when closing the soft phone, select the **Automatically log off this ACD agent when closing the soft phone** check box.  
**NOTE:** This option does not apply to Business Reporter users.
14. To automatically launch Ignite when logging into Contact Center Softphone or PhoneSet Manager, select **Automatically launch the Ignite Client on ACD login** check box.  
**NOTE:** This option does not apply to Business Reporter users.
15. If you want to synchronize online presence indicators with phone states in real-time monitors, select the **Synchronize my Lync presence with my phone state** check box.
16. To display call notes on the soft phone display and on the Call Notes monitor, ensure the **Enable call notes** check box is selected.

17. Click **OK**.

The Contact Center Client window displays the soft phone, Phone and Functions toolbars.

See Figure 37.



**Figure 37: Soft phone toolbars**

18. If you want to be able to position the soft phone toolbar elsewhere on your desktop, enable the **Float** check box.
19. To move the soft phone toolbar, hover the mouse over the perforated line on the left-side of the toolbar until the four-headed arrow displays. Then click, drag, and drop it to the desired position on your desktop. To reanchor the toolbar to the ribbon, drag and drop it into position under the ribbon.
20. If you want to modify the soft phone configuration, click the **Configuration** icon in the toolbar to reopen the Soft phone configuration window.

### *Changing soft phone IP addresses*

If you are required to change the IP address for your soft phone, consult the following procedure.

1. In the **Contact Center Client** ribbon, click **Soft Phone**.
2. Click the **Soft Phone** icon in the toolbar ribbon.
3. In the **Soft phone configuration** window, click **Soft phone settings**.
4. After **Use IP address**: select the new IP address from the drop-down list and click **OK**.  
**NOTE:** For information on what address to select, contact your supervisor or system administrator.
5. In the **Soft Phone configuration** window, under 'This extension is a', click **Desk phone** and then click **Soft phone**.  
**NOTE:** Clicking 'Desk phone' is required to unbind your soft phone from the previous IP address.
6. Click **OK**.
7. On the ribbon, click **Save**.

## USING YOUR HOT DESKING EXTENSION, LOG ON TO THE TELEPHONE SYSTEM

Extensions can log on to the telephone system by selecting the Superkey button in Contact Center Softphone. See "Contact Center PhoneSet Manager and Contact Center Softphone" on page 252.

We recommend that soft phone users who are hot desking log on to their extension using the soft phone Actions menu. This enables the soft phone to identify extensions.

**NOTE:** If you are an external hot desking agent or a hot desking user who logged in internally, logged out, and then chose to log back in externally, you will not be able to log on with the soft phone



Actions menu. In order to access this functionality, you must first close and reopen the soft phone toolbar (View=>Deselect and reselect the soft phone option).

To log on to the telephone system

- On the soft phone **Functions** toolbar, click **Actions=>Log on** and select an extension.

To log on an external hot desking user

- On the soft phone Functions toolbar, click **Actions=>Log on=>Hot Desking Users**.

**NOTE:** When a hot desk agent logs in to the ACD a 3300 ICP user license is taken from the available licensing pool and when the agent logs out the license is released back to the licensing pool. Agents are notified upon login attempt if the number of concurrent logins exceeds the number of available user licenses. If there are no available user licenses the login attempt will fail.

## PHONE AND FUNCTIONS TOOLBARS

The Phone toolbar displays your

- Extensions (gray oval buttons)
- Hold button (red oval button)
- Superkey button (blue oval button, for Contact Center Softphone only)
- Current phone state box with a down arrow that displays a call details window
- Dial box (field for dialing extensions or phone numbers)
- Dial button (Contact Center PhoneSet Manager only)
- Redial button (Contact Center Softphone only)
- Cancel button (Contact Center Softphone only)
- Message button (for retrieving voice mail messages, Contact Center Softphone only)

The Functions toolbar displays

- Your current state (active, inactive, extension inbound, extension outbound)
- Telephony buttons  
See "Displaying, hiding, and retiring toolbar buttons" on page 262.

## PHONE FUNCTIONS

You can readily answer calls or forward them to extensions or phone numbers using the soft phone. You can select extensions from contact and speed dial lists, and perform the following actions: Redial (Contact Center Soft phone only), Transfer, Conference, Mute, Forward, Request help, Hold, Retrieve, Split, Swap, Camp on, Leave a message, Retrieve a message, Call me back, Hang up, and Cancel.

**NOTE:** External hot desk users access the 'Answer' and 'Hang up' functions using their external device and not the soft phone toolbar.

Table 21 lists the soft phone telephony options and their corresponding meanings.

**Table 21: Extension actions**












ICON		MEANING
	Account Code	tags a call with an Account Code
	Answer	answers a ringing call
	Auto answer	if enabled, answers a ringing call without you having to click Answer
	Call me back	notifies you as soon as the extension number you are trying to call is available
	Camp on	notifies an employee you are attempting to call with a series of audible beeps
	Cancel	terminates your connection to a caller
	Conference	connects three or more people together for a conversation
	Dial pad	enables you to dial a number using a keypad
	Forward	forwards a call to a phone number or extension
	Hang up	terminates a call
	Hold	places the current call on hold

Table 21: Extension actions (continued)

ICON		MEANING
	Leave a message	leaves a message waiting notification on an employee's extension
	Mute	if you have Contact Center Softphone, disables your microphone so you can consult privately with another employee while on a call
	Request help	calls an employee who can click Answer and listen to an in-progress call without the caller knowing
	Retrieve	picks up a call that is held or camped on to your extension
	Speed dial	enables you to make a call to a specified number with one mouse click
	Split	disconnects one person from a conference call
	Swap	swaps between the current and the held party
	Transfer	forwards an in-progress call to another answer point
	Transfer/Conference	places a caller on hold and makes a consultation call
	Volume	if you have Contact Center Softphone, adjusts the volume of your speakers and/or microphone
	Call Notes	enables you to add notes to a call

## CUSTOMIZING THE SOFT PHONE

You can enhance productivity by configuring the following time-saving options in the soft phone:

- Toolbar customization
- Sounds and notifications
- Call forward destinations
- Speed dial contacts
- Shortcut keys
- Pre-announcement messages

### *Configuring soft phone settings*

To specify soft phone settings

1. Right-click the Phone toolbar and click **Configure**.
2. After **Input audio device**, select an audio device for your microphone.
3. After **Output audio device**, select an audio device for your speakers or headset.
4. Click **OK**.

### *Specifying the address book source for contacts*

To specify the address book the soft phone uses for contacts (Microsoft Outlook or CCMWeb, on the My options link.)

1. Right-click the Phone toolbar and click **Configure**.
2. After **Address book source for contacts**, select **YourSite contacts** or **Outlook contacts**.
3. Click **OK**.

### *Resizing toolbar buttons*

To resize toolbar buttons

1. Right-click the Phone toolbar and click **Configure**.
2. Click the **Toolbars** tab.
3. After **Functions toolbar**, select a size for displaying the Functions toolbar buttons.
4. After **Phone toolbar**, select a size for displaying the Phone toolbar buttons.
5. Click **OK**.

### *Displaying, hiding, and retiring toolbar buttons*

You can display telephony buttons, hide them so they appear on the Functions toolbar only when required, and retire them for actions you rarely perform, such as Camp on and Request help.

To display telephony buttons

1. Right-click the Phone toolbar and click **Configure**.
2. Click the **Toolbars** tab.
3. Under **Selected buttons**, select the check boxes of the telephony buttons to be displayed.
4. Click **OK**.

To hide telephony buttons

1. Right-click the Phone toolbar and click **Configure**.
2. Click the **Toolbars** tab.
3. Under **Selected buttons**, clear the check boxes of the telephony buttons to be hidden from view.
4. Click **OK**.

To retire telephony buttons

1. Right-click the Phone toolbar and click **Configure**.
2. Click the **Toolbars** tab.
3. Under **Selected buttons**, select the telephony buttons to be retired and click the left arrow to add these buttons to the Available buttons list.
4. Click **OK**.

To restore telephony buttons

1. Right-click the Phone toolbar and click **Configure**.
2. Click the **Toolbars** tab.
3. Under **Available buttons**, select the telephony buttons to be restored and click the right arrow to add these buttons to the Selected buttons list.
4. Click **OK**.

### *Repositioning toolbar buttons*

To specify the order in which telephony buttons appear

1. Right-click the Phone toolbar and click **Configure**.
2. Click the **Toolbars** tab.
3. Under **Selected buttons**, select a telephony button.
4. Click the up or down arrow to change the position of the button relative to other buttons on the Functions toolbar.
5. Click **OK**.

### *Configuring sounds and notifications*

You can configure sounds for individual phone events for incoming calls, secondary incoming calls, and/or the digits dialed on your primary extension, or on all extensions. A primary incoming call is a call you receive while you are in the active state and are available to take the call. A secondary incoming call is a call you receive while you are on an extension outbound call or an extension inbound call.

Every time you receive a call a pop-up window notifies you the call has arrived. You can disable the pop-up notification.

To configure a sound for a phone event

1. Right-click the Phone toolbar and click **Configure**.
2. Click the **Sounds** tab.
3. Select the **Incoming calls**, **Secondary incoming calls**, and/or **Play sounds when dialing digits** check boxes.

4. After **Phone events**, select a phone event.
5. After **Sound file name**, click **Browse** and select a sound file.
6. To play the sound file when the phone event occurs on any of your extensions, click **Apply to all lines**.
7. Click **OK**.

To disable the call arrival pop-up notification

1. Right-click the Phone toolbar and click **Configure**.
2. Click the **Sounds** tab.
3. Under **Phone events**, click a phone line.
4. Clear the **Display pop-up notification for incoming calls** check box.
5. Click **OK**.

### *Making calls ring through your computer speakers*

You can make calls ring through your computer speakers instead of your headset.

To make calls ring through your computer speakers

1. Right-click the Phone toolbar and click **Configure**.
2. Click the **Sounds** tab.
3. After **Play the rings sounds on** select the sound output device for your computer speakers.

### *Adjusting the volume of your speakers and microphone*

If you have Contact Center Softphone, you can adjust the volume of your speakers and microphone.

To adjust the volume of your speakers

1. Right-click the Phone toolbar and click **Configure**.
2. Click the **Sounds** tab.
3. Adjust the volume by moving the speaker slider.

To adjust the volume of your microphone

1. Right-click the Phone toolbar and click **Configure**.
2. Click the **Sounds** tab.
3. Adjust the volume by moving the microphone slider.

### *Configuring call forward destinations*

You can forward calls manually to pre-configured call forward destinations. In addition, you can configure and enable call forwarding so the telephone system forwards calls to other answer points when you are temporarily away from the office. For example, you could specify all External call busy calls you receive be forwarded to a co-worker's extension. Rather than directing these call to voice mail, the telephone system would forward these calls to your co-worker.

To configure call forward destinations for calls you will forward manually

1. Right-click the Phone toolbar and click **Configure**.
2. Click the **Call forward** tab.
3. Under **Name**, type the name of the person to whom you will forward calls.
4. Under **Number**, type an extension or phone number (preceded by a number you dial to access an outside line).
5. Click **OK**.

To configure and enable call forward destinations for calls the telephone system will forward

1. Right-click the Phone toolbar and click **Configure**.
2. Click the **Call forward** tab.
3. Specify destinations for the following call types:
  - All calls (all calls you receive)
  - External call busy (external calls to your extension when you are on an extension inbound or extension outbound call)
  - External call no answer (external calls to your extension that you do not answer)
  - Internal call busy (internal calls to your extension when you are on an extension inbound or extension outbound call)
  - Internal call no answer (internal calls to your extension that you do not answer)
4. To activate the call forwarding rules immediately, select the **Enabled** check boxes of the call forwarding types to be activated.
5. Click **OK**.

### *Configuring speed dial numbers*

When you pre-configure speed dial numbers in Contact Center Softphone, these contacts are available in drop-down lists adjacent to the Speed dial, Trans/Conf, and Request help buttons on the Functions toolbar.

You can display a button for each speed dial number or display one button with a down arrow that lists all of the speed dial numbers you have configured. You can speed dial calls manually to pre-configured extensions and phone numbers.

To configure a speed dial number

1. Right-click the Phone toolbar and click **Configure**.
2. Click the **Speed dial** tab.
3. Under **Name**, type the name of the person to whom you will speed dial calls.
4. Under **Number**, type an extension or phone number (preceded by a number you dial to access an outside line).
5. Click **OK**.

### *Configuring shortcut keys*

You can assign a shortcut key to a telephony function to perform it with a simple keystroke. This enables you to perform telephony functions while the soft phone is minimized or another application is currently selected.

To configure a shortcut key for a telephony function

1. Right-click the Phone toolbar and click **Configure**.
2. Click the **Shortcut keys** tab.
3. Under **Shortcut key**, select a telephony function.
4. Click the down arrow, select **Ctrl**, **Alt**, **Shift**, or **Win**, and select a keyboard number, letter, or function from the list.
5. Click **OK**.

## MAKING AND TERMINATING CALLS USING CONTACT CENTER PHONESSET MANAGER

When you make calls, on the Functions toolbar you can readily select contacts you pre-configure in Microsoft Outlook, or speed dial numbers you configure in Contact Center PhoneSet Manager. See "Configuring speed dial numbers" on page 265 and "Displaying, hiding, and retiring toolbar buttons" on page 262.

You can dial any extension number or phone number. Contact Center PhoneSet Manager typically uses your primary extension to make calls. You can optionally select a different extension on the Phone toolbar to make calls.

### *Making calls*

To dial by phone number or extension number using Contact Center PhoneSet Manager

1. In the dial box, type an extension or phone number (preceded by a number you dial to access an outside line). Otherwise, click the down arrow adjacent to the dial box and type a number or extension on the dial pad.
2. Click **Dial**.
3. To view the call details window, click the down arrow adjacent to the box that displays your current phone state.  
See Figure 38.

To dial internally from a real-time monitor using Contact Center PhoneSet Manager

- From any real-time monitor, right-click an agent, employee, or extension cell and click **Call**.



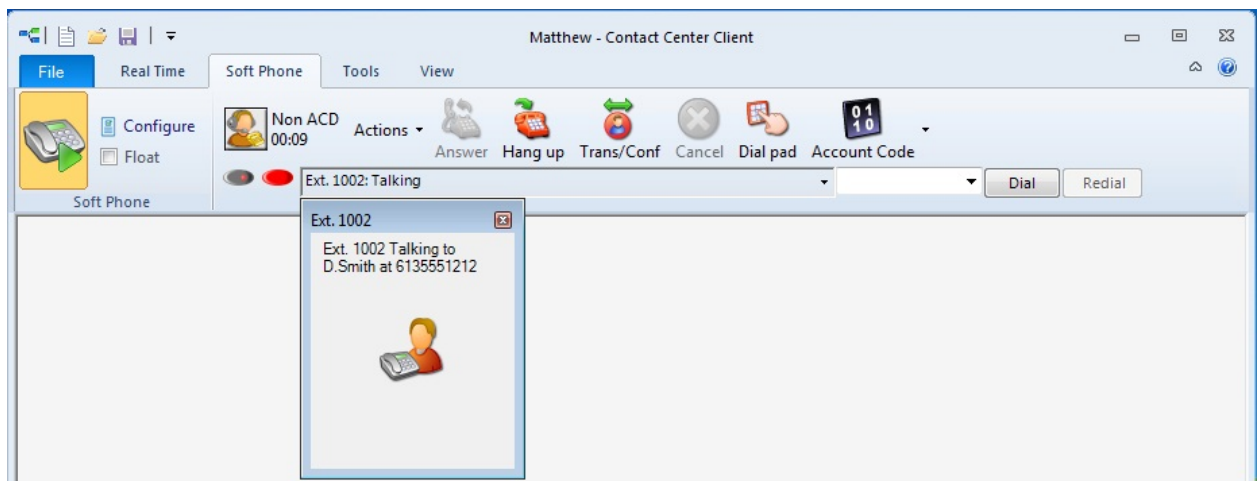


Figure 38: Making a call

### *Making calls to your contacts*

To make a call to an extension in your contact list

1. Click the arrow adjacent to the dial box and click the **Contacts** tab.
2. Select a contact in the list.
3. Click **Dial**.

### *Making calls using speed dial*

To dial using speed dial

- Click **Speed dial** and select a name in the list.

### *Terminating calls*

To terminate a call

- Click **Hang up**.

## FORWARDING AND ANSWERING CALLS USING CONTACT CENTER PHONESET MANAGER

You can forward calls manually to pre-configured call forward destinations without having to speak to the caller first. In addition, you can configure and enable call forwarding so the telephone system forwards calls to other answer points when you are temporarily inactive. See "Configuring call forward destinations" on page 264.

If a call is ringing on your extension and you click the Forward button, the call will be forwarded to the default call forward destination configured in the telephone system. If you click the down arrow adjacent to the Forward button, you can select an extension or phone number for call forwarding.

### *Forwarding calls*

When a call is ringing on your extension, to forward the call using Contact Center PhoneSet Manager

1. Click **Forward**.
2. In the dial box, type an extension or phone number (preceded by a number you dial to access an outside line). Otherwise, click the down arrow adjacent to the Forward button and select a contact.
3. Click **Dial**.

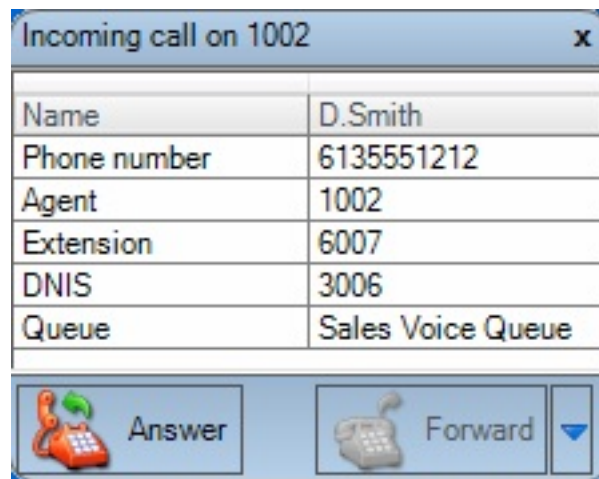
### *Answering calls*

When an employee receives a call with Contact Center PhoneSet Manager detailed caller information is displayed on the desktop. (See Figure 39.) Additionally, the display can provide access to call notes, which are notes an employee adds to the call before transferring it. See "Adding call notes to a call" on page 270.

If configured and available the following information is provided in the soft phone display

- **Caller name**—name of the caller
- **ANI**—telephone number of the caller
- **DNIS**—telephone number the caller dials
- **DNIS name**—the name associated to the DNIS number in YourSite database
- **Extension ID**—extension who transferred the call
- **Extension**—extension from which the call was transferred
- **Collect Caller Entered Digits**—digits the caller enters for identification purposes, such as a customer site key
- **Customer Collected Information**—information collected from a third party ODBC database. Customer Collected Information requires and Verified Collected Digits, and optionally, Remote Database Verification or CTI Developer Toolkit
- **Call notes**—notes added by an agent

You can answer calls by right-clicking the Contact Center PhoneSet Manager system tray icon and selecting Answer, or by clicking the Answer toolbar button.



**Figure 39: Contact Center PhoneSet Manager display**

To answer a call using Contact Center PhoneSet Manager

- Click **Answer**.

## HANDLING CALLS USING CONTACT CENTER PHONESET MANAGER

You can handle calls by right-clicking the Contact Center PhoneSet Manager system tray icon and selecting telephony functions, or by selecting telephony buttons on the Functions toolbar. The telephony buttons available depend on the action you last performed. You can configure the toolbar buttons so they are always visible, or visible only when required. See "Displaying, hiding, and retiring toolbar buttons" on page 262.

When you pre-configure speed dial numbers in Contact Center PhoneSet Manager, these contacts are available in drop-down lists adjacent to the Speed dial, Trans/Conf, and Request help buttons on the Functions toolbar. See "Configuring speed dial numbers" on page 265.

### *Placing calls on hold*

To place a call on hold

- Click **Hold** (red oval button).

### *Retrieving calls*

You can retrieve a held call, or retrieve a call when a call is camped on to your extension.

When an agent is on a call and another caller camps on to their extension, the Retrieve button is enabled. When the agent presses the Retrieve button, they can talk to the held party. From that point on, the agent uses the Swap button to switch back and forth between the two callers (current and held parties).

To retrieve a call

- Click **Retrieve**.

### *Adding call notes to a call*

When employees are speaking with customers, they can add notes to calls to share with other employees involved in the call. This ensures all employees have context on calls and know what information has been provided to customers upon call transfer.

When a call is being transferred to another employee or supervisor, the soft phone display shows the most recent note associated with the call. When the employee answers the call, Contact Center Client appears on top of all other open applications and displays the Call Notes monitor. The monitor includes all of the call notes associated with the current call.

Employees can add notes each time a call is transferred, and employees on conference calls can add notes simultaneously. Each set of notes includes the employee's name and a date/time stamp. When an employee completes a call and answers a new call or closes the Call Notes monitor, all call note information is saved and available in the Lifecycle reports. Call notes are not preserved when a call is parked.

#### **NOTE:**

- On the Soft phone configuration window, you can clear the Enable call notes check box to hide the Call Notes monitor and prevent call notes from being displayed. Optionally, you can enable the Bring to front check box to ensure call notes display on top of all other windows when calls are received.
- You must have Contact Center PhoneSet Manager or Contact Center Softphone open in order to view or add call notes.
- Time stamps are based on the 3300 ICP telephone system clock.

To add a call note

1. As a call is ringing on your extension, on the soft phone display click **Answer** to answer the call.  
Contact Center Client appears on top of all open applications and displays the Call Notes monitor.
2. After **Enter a new call note**, type a note.  
Call notes can include a maximum of 100 characters.
3. Click **Add**.  
The call note is added to the Call notes text box and is included in the soft phone display upon call transfer.

### *Transferring calls*

You can perform a blind transfer or a supervised transfer.

To perform a blind transfer using Contact Center PhoneSet Manager

1. While on a call, click **Trans/Conf**.
2. In the dial box, type an extension or phone number (preceded by a number you dial to access an outside line if required). Otherwise, click the down arrow adjacent to the Trans/Conf button and select a contact.
3. Click **Dial**.
4. Click **Hang up**.

To perform a supervised transfer

1. While on a call, click **Trans/Conf**.
2. In the dial box, type an extension or phone number (preceded by a number you dial to access an outside line). Otherwise, click the down arrow adjacent to the Trans/Conf button and select a contact.
3. Click **Dial**.  
The system places the caller on Hold.
4. Wait for the called party to answer. If you receive a busy signal or a voice mail greeting, click **Cancel** to return to the initial party. Otherwise, speak to the employee and identify the caller.
5. Click **Transfer** to transfer the call.

### *Conferencing calls*

You can include up to eight people in a conference call. The following example illustrates a three-way conference call.

To set up a conference call

1. In the dial box, type an extension or phone number (preceded by a number you dial to access an outside line).
2. Click **Dial**.
3. After you speak with the person who answers, click **Trans/Conf** to add a person to an in-progress call.  
The system places the person on Hold.
4. In the dial box, type an extension or phone number (preceded by a number you dial to access an outside line). Otherwise, click the down arrow adjacent to the Trans/Conf button and select a contact.
5. Click **Dial**.
6. Speak to the person who answers.
7. Click **Conference** to initiate a three-way conference call.

To split a conference call

- Click **Split**.  
The last person you added to the conference call is placed on hold, and you can speak privately with the first person.

### *Consulting with people while on calls*

To consult with a person while on a call using Contact Center PhoneSet Manager

1. Click **Trans/Conf** to conference in the person.  
The system places the initial party on Hold.
2. In the dial box, type an extension or phone number (preceded by a number you dial to access an outside line). Otherwise, click the down arrow adjacent to the Trans/Conf button and select a contact.
3. Click **Dial**.
4. After you consult with the person, either click **Conference** to conference in the person, click **Cancel** to hang up on the person, click **Transfer** to transfer the call to the person, or click **Swap** to talk to the initial party.

## *Requesting help while on calls*

To request help while on a call using Contact Center PhoneSet Manager

1. Click **Request help**.
2. On the dial pad, type the extension number of the employee to be called. Otherwise, click the down arrow adjacent to the Request help button and select a contact.
3. Click **Dial**.  
The system calls the employee. The employee can click Answer and listen in on the call without the caller knowing and can click Conference to join the conversation at any time.

## *Using Camp on*

The Camp on feature is available when you make a call to an extension and receive a busy signal because the employee is already on a call. Camp on notifies the employee you are attempting to call with a series of audible beeps.

### **NOTE:**

- Callers cannot camp on to your extension if you have call forwarding or voice mail configured on the extension.
- You cannot camp on to an extension that is in Make Busy or Do Not Disturb.

To camp on to an extension

1. In the dial box, type an extension number.
2. Click **Dial**.
3. If you receive a busy signal, click **Camp on**.  
The employee you called will hear a series of beeps and can click Retrieve to place the caller on hold and speak with you. After speaking with you, the employee can click Swap to return to the caller.

## *Leaving and retrieving messages*

The Leave a message feature is available when you make a call to an extension that is active. You must use the dial pad to type a number when you are retrieving a message.

To leave a message

1. In the dial box, type an extension number.
2. Click **Dial**.
3. If the employee does not answer, click **Leave a message**.  
The telephone system leaves a message waiting notification on the employee's extension and the Contact Center Client icon flashes red and white in the employee's system tray.

To retrieve a message

1. Click **Dial pad** and type the number configured in the telephone system for message retrieval.
2. Press **Enter**.  
The automated attendant will ask you for your password.
3. Type your password on the dial pad.
4. Follow the instructions provided by the automated attendant to retrieve the message.

**NOTE:** If you are left Call me back messages you must use your physical phone set to retrieve the messages.

### *Using Call me back*

The Call me back feature is available when you make a call to an extension that is active. When you select the Call me back button, the telephone system monitors the called employee's other extension. When the employee's other extension returns to active, your phone rings. If you pick up the call, the employee's phone will ring. If you do not pick up the call, the callback will expire.

To leave a callback message

1. In the dial box, type an extension number.
2. Click **Dial**.
3. If the employee does not answer, click **Call me back**.  
The telephone system monitors the called employee's extension. Your phone will ring when the called employee's other extension returns to the active state.
4. When your phone rings, click **Answer** to pick up the call and speak with the employee.

### *Tagging calls with Account Codes*

You can tag calls with Account Codes you pre-configure in Contact Center Client.

To tag an in-progress call with an Account Code or a Classification Account Code

- Click the down arrow adjacent to the Account Code button and select a traditional Account Code or a Classification Account Code.

After hanging up, while in Work Timer mode, you can tag calls with Classification Account Codes.

To tag a call, after hanging up, with a Classification Account Code

1. Click the down arrow adjacent to the **Account Code** button.
2. Select **After Call Classification** and select the appropriate Classification Account Code from the drop-down list.

## MAKING AND TERMINATING CALLS USING CONTACT CENTER SOFTPHONE

When you make calls, on the Functions toolbar you can readily select from contacts you pre-configure in Microsoft Outlook, or speed dial numbers you configure in Contact Center Softphone. See "Configuring speed dial numbers" on page 265 and "Displaying, hiding, and retiring toolbar buttons" on page 262.

You can dial any extension number or phone number. Contact Center Softphone typically uses your primary extension to make calls. You can optionally select a different extension on the Phone toolbar to make calls.

For information on how to use the superkey and phone book functionality of Contact Center Softphone, refer to the *5220 IP Phone User Guide* at <http://edocs.mitel.com/UG/Index.html>.

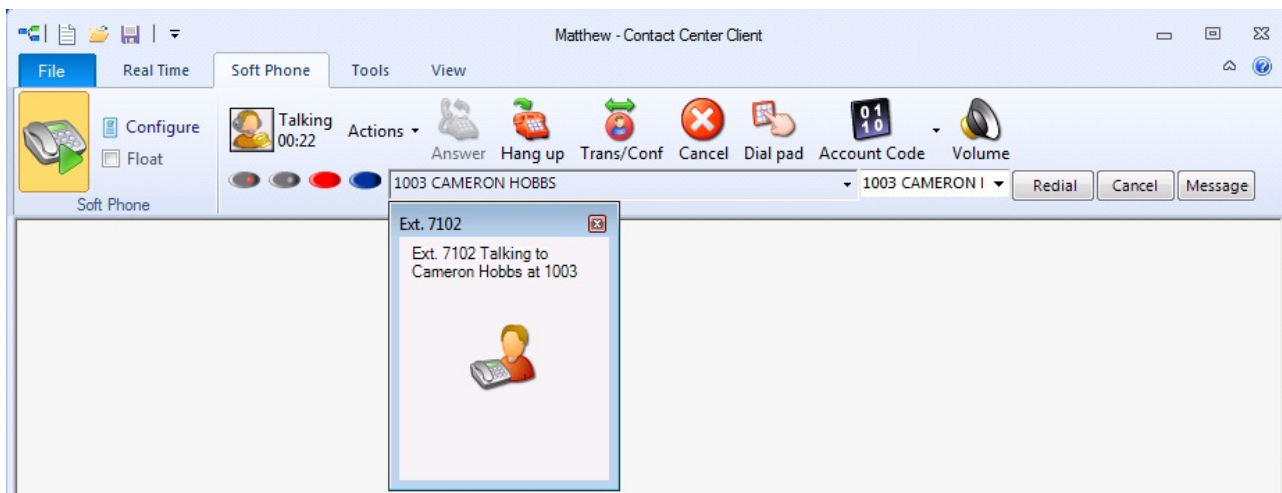
### *Making calls*

To dial by phone number or extension number using Contact Center Softphone

1. In the dial box, type an extension or phone number (preceded by a number you dial to access an outside line). Otherwise, click the down arrow adjacent to the dial box and type a number or extension on the dial pad.
2. To view the call details window, click the down arrow adjacent to the box that displays your current phone state.  
See Figure 40.

To dial internally from a real-time monitor using Contact Center Softphone

- From any real-time monitor, right-click an agent, employee, or extension cell and click **Call**.



**Figure 40: Making a call**

### *Making calls to your contacts*

To make a call to an extension in your contact list

1. Click the arrow adjacent to the dial box and click the **Contacts** tab.
2. Double-click a contact in the list.

### *Making calls to contacts who have called you recently*

To make a call to a contact who has called you recently

1. Click the arrow adjacent to the dial box and click the **Recent** tab.
2. Double-click a contact in the list.



### *Making calls using speed dial*

To dial using speed dial

- Click **Speed dial** and select a name in the list.

### *Redialing numbers*

To dial the contact who last called you

- Click **Speed dial** and select a name in the list.

### *Terminating calls*

To terminate a call

- Click **Hang up**.  
Alternatively, on the Phone toolbar, click **Cancel**.

## FORWARDING AND ANSWERING CALLS USING CONTACT CENTER SOFTPHONE

You can forward calls manually to pre-configured call forward destinations without having to speak to the caller first. In addition, you can configure and enable call forwarding so the telephone system forwards calls to other answer points when you are temporarily inactive. See "Configuring call forward destinations" on page 264.

If a call is ringing on your extension and you click the Forward button, the call will be forwarded to the default call forward destination configured in the telephone system. If you click the down arrow adjacent to the Forward button, you can select an extension or phone number for call forwarding.

### *Forwarding calls*

When a call is ringing on your extension, to forward the call using Contact Center Softphone

1. Click **Forward**.
2. In the dial box, type an extension or phone number (preceded by a number you dial to access an outside line). Otherwise, click the down arrow adjacent to the Forward button and select a contact.

### *Answering calls*

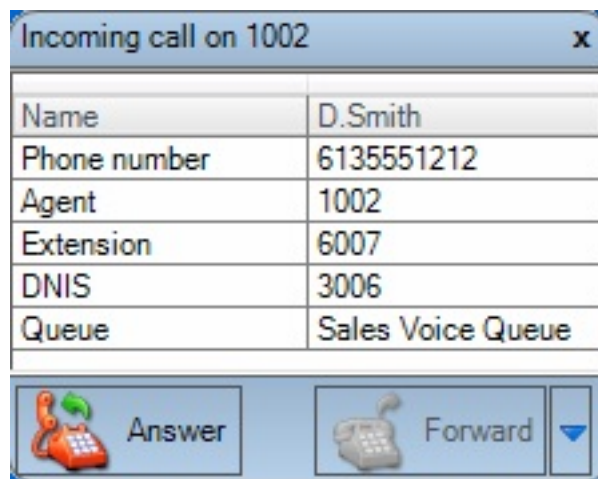
When an employee receives a call with Contact Center Softphone detailed caller information is displayed on the desktop. (See Figure 41.) Additionally, the display can provide access to call notes, which are notes an employee adds to the call before transferring it. See "Adding call notes to a call" on page 270.

If configured and available the following information is provided in the soft phone display

- **Caller name**—name of the caller
- **ANI**—telephone number of the caller
- **DNIS**—telephone number the caller dials
- **DNIS name**—the name associated to the DNIS number in YourSite database
- **Extension ID**—extension who transferred the call

- **Extension**—extension from which the call was transferred
- **Collect Caller Entered Digits**—digits the caller enters for identification purposes, such as a customer site key
- **Customer Collected Information**—information collected from a third party ODBC database. Customer Collected Information requires and Verified Collected Digits, and optionally, Remote Database Verification or CTI Developer Toolkit
- **Call notes**—notes added by an agent

You can answer calls by right-clicking the Contact Center Softphone system tray icon and selecting Answer, or by clicking the Answer toolbar button.



**Figure 41: Contact Center Softphone display**

To answer a call using Contact Center Softphone

- Click **Answer**.

## HANDLING CALLS USING CONTACT CENTER SOFTPHONE

You can handle calls by right-clicking the Contact Center Softphone system tray icon and selecting telephony functions, or by selecting telephony buttons on the Functions toolbar. The telephony buttons available depend on the action you last performed. You can configure the toolbar buttons so they are always visible, or visible only when required. See "Displaying, hiding, and retiring toolbar buttons" on page 262.

When you pre-configure speed dial numbers in Contact Center Softphone, these contacts are available in drop-down lists adjacent to the Speed dial, Trans/Conf, and Request help buttons on the Functions toolbar. See "Configuring speed dial numbers" on page 265.

### *Placing calls on hold*

To place a call on hold

- Click **Hold** (red oval button).

### *Retrieving calls*

You can retrieve a held call, or retrieve a call when a call is camped on to your extension.

When an agent is on a call and another caller camps on to their extension, the Retrieve button is enabled. When the agent presses the Retrieve button, they can talk to the held party. From that point on, the agent uses the Swap button to switch back and forth between the two callers (current and held parties).

To retrieve a call

- Click **Retrieve**.

### *Using Mute*

To use Mute

1. Click **Mute**.  
The system disables your microphone so you can consult privately with another employee.
2. To restore your microphone, click **Resume**.

### *Transferring calls*

You can perform a blind transfer or a supervised transfer.

To perform a blind transfer using Contact Center Softphone

1. While on a call, click **Trans/Conf**.
2. In the dial box, type an extension or phone number (preceded by a number you dial to access an outside line). Otherwise, click the down arrow adjacent to the Trans/Conf button and select a contact.
3. Click **Hang up**.

To perform a supervised transfer

1. While on a call, click **Trans/Conf**.
2. In the dial box, type an extension or phone number (preceded by a number you dial to access an outside line). Otherwise, click the down arrow adjacent to the Trans/Conf button and select a contact.  
The system places the caller on Hold.
3. Wait for the called party to answer. If you receive a busy signal or a voice mail greeting, click **Cancel** to return to the initial party. Otherwise, speak to the extension and identify the caller.
4. Click **Transfer** to transfer the call.

## *Conferencing calls*

You can include up to eight people in a conference call. The following example illustrates a three-way conference call.

To set up a conference call

1. In the dial box, type an extension or phone number (preceded by a number you dial to access an outside line).
2. After you speak with the person who answers, click **Trans/Conf** to add a person to an in-progress call.  
The system places the person on Hold.
3. In the dial box, type an extension or phone number (preceded by a number you dial to access an outside line). Otherwise, click the down arrow adjacent to the Trans/Conf button and select a contact.
4. Speak to the person who answers.
5. Click **Conference** to initiate a three-way conference call.

To split a conference call

- Click **Split**.  
The last person you added to the conference call is placed on hold, and you can speak privately with the first person.

## *Consulting with people while on calls*

To consult with a person while on a call using Contact Center Softphone

1. Click **Trans/Conf** to conference in the person.  
The system places the initial party on Hold.
2. In the dial box, type an extension or phone number (preceded by a number you dial to access an outside line). Otherwise, click the down arrow adjacent to the Trans/Conf button and select a contact.
3. After you consult with the person, either click **Conference** to conference in the person, click **Cancel** to hang up on the person, click **Transfer** to transfer the call to the person, or click **Swap** to talk to the initial party.

## *Requesting help while on calls*

To request help while on a call using Contact Center Softphone

1. Click **Request help**.
2. On the dial pad, type the extension number of the employee to be called. Otherwise, click the down arrow adjacent to the Request Help button and select an employee.  
The system calls the employee. The employee can click Answer and listen in on the call without the caller knowing and can click Conference to join the conversation at any time.

### *Using Camp on*

The Camp on feature is available when you make a call to an extension and receive a busy signal because the employee is already on a call. Camp on notifies the employee you are attempting to call with a series of audible beeps.

#### **NOTE:**

- Callers cannot camp on to your extension if you have call forwarding or voice mail configured on the extension.
- You cannot camp on to an extension that is in Make Busy or Do Not Disturb.

To camp on to an extension

1. In the dial box, type an extension number.
2. If you receive a busy signal, click **Camp on**.  
The employee you called will hear a series of beeps and can click Retrieve to place the caller on hold and speak with you. After speaking with you, the employee can click Swap to return to the caller.

### *Leaving and retrieving messages*

The Leave a message feature is available when you make a call to an extension that is active.

To leave a message

1. In the dial box, type an extension number.
2. If the employee does not answer, click **Leave a message**.  
The telephone system leaves a message waiting notification on the employee's extension and the Contact Center Client icon flashes red and white in the employee's system tray

To retrieve a message

1. In the dial box, type your voice mail access number.  
The automated attendant will ask you for your password.
2. In the daily box, type your password.
3. Follow the instructions provided by the automated attendant to retrieve the message.  
**NOTE:** If extensions leave Call me back messages for you to check your messages, your Contact Center Client tray icon will not clear the messages once you have checked your messages.

To clear a message

1. On the Phone toolbar, click **Message**.
2. After **CALL ME BACK?**, click **Yes**.
3. Click **Erase**.  
The telephone image displays **NO MORE MESSAGES**.

### *Using Call me back*

The Call me back feature is available when you make a call to an extension that is active. When you select the Call me back button, the telephone system monitors the called employee's other extension. When the employee's other extension returns to active, your phone rings. If you pick up the call, the employee's phone will ring. If you do not pick up the call, the callback will expire.

To leave a callback message

1. In the dial box, type an extension number.
2. If the employee does not answer, click **Call me back**.  
The telephone system monitors the called employee's extension. Your phone will ring when the called employee's other extension returns to the active state.
3. When your phone rings, click **Answer** to pick up the call and speak with the employee.

### *Tagging calls with Account Codes*

You can tag calls with Account Codes you pre-configure in Contact Center Client.

To tag an in-progress call with an Account Code or a Classification Account Code

- Click the down arrow adjacent to the Account Code button and select a traditional Account Code or a Classification Account Code.

After hanging up, while in Work Timer mode, you can tag calls with Classification Account Codes.

To tag a call, after hanging up, with a Classification Account Code

1. Click the down arrow adjacent to the **Account Code** button.
2. Select **After Call Classification** and select the appropriate Classification Account Code from the drop-down list.

## MAKING AND HANDLING CALLS USING CONTACT CENTER CLIENT

You can open an Extension by Position monitor and either right-click an extension and select telephony functions or access telephony functions by selecting an extension and accessing the options in the Contact Center Client ribbon. For example, when you are on a call you can consult with an employee by right-clicking the extension cell and clicking Transfer/Conference, or by sending the employee an instant message.

### *Making calls*

To call an extension using Contact Center Client

- Right-click an active extension and click **Call**.

Alternatively:

1. Select an active extension in an open monitor.
2. Click the **Softphone** button under the Extension Control tab in the Contact Center Client **Real Time** ribbon.
3. Choose the **Call** menu item.

### *Forwarding calls*

If a call is ringing on your extension, to forward the call using Contact Center Client

- Right-click an active extension cell and click **Forward**.

### *Answering calls*

If a call is ringing on another extension, to pick up the call using Contact Center Client

- Right-click the cell and click **Pick up**.

### *Adding call notes*

When employees are speaking with customers, they can add notes to calls to share with other employees involved in the call. This ensures employees have context on calls and know what information has been provided to customers upon call transfer. If the call is transferred, call notes are preserved. Call notes are not preserved when calls are parked. See "Adding call notes to a call" on page 270.

**NOTE:** Before adding call notes, ensure the 'Display call notes' option is enabled in the Softphone configuration window. This option is disabled by default.

To add a call note

1. As a call is ringing on your extension, on the soft phone display click **Answer** to answer the call.  
Contact Center Client appears on top of all open applications and displays the Call Notes monitor.
2. After **Enter a new call note**, type a note.  
Call notes can include a maximum of 100 characters.
3. Click **Add**.  
The call note is added to the Call notes text box and is included in the soft phone display upon call transfer.

### *Recording calls*

There are occasions when a user wants to temporarily stop recording a call for confidentiality reasons, or, if the call is not currently being recorded, the user may want to start recording if the conversation becomes hostile or sensitive in nature and a call record may be required. On the Extension Now monitor, the Call recording option enables you to start, stop, and restart call recording at any time during a call, using OAISYS call recording functionality. Requirements for this on-demand call recording feature are Contact Center Management, Contact Center PhoneSet Manager or Contact Center Softphone, and the OAISYS call recording connector.

To record a call

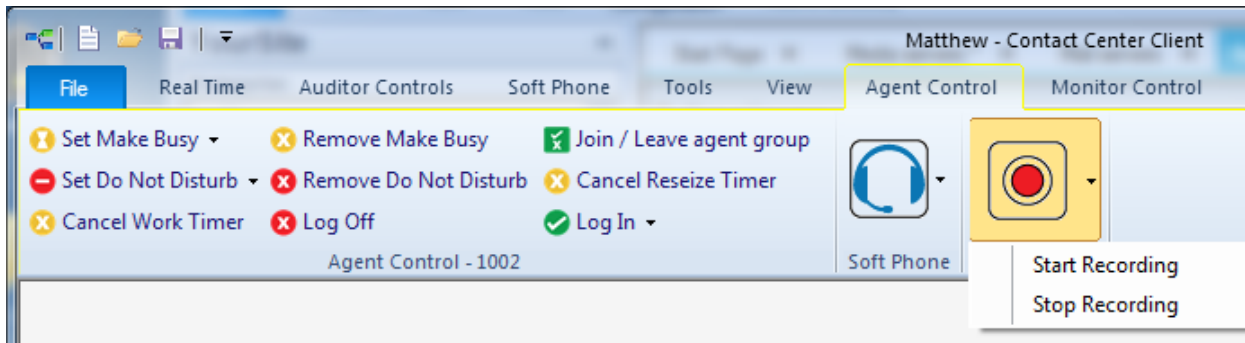
- Right-click the associated cell of an extension and select **Call Recording=>Start Recording**.

To stop recording a call

- To stop recording, right-click the cell and select **Call Recording=>Stop Recording**.

Alternatively:

1. Select the cell of an extension in a monitor whose call you want to record.
  2. In the Contact Center Client **Real Time** ribbon, under the **Agent Control** tab, select **Start Recording** from the drop-down list in the **Call Recording** column.
  3. To stop recording, select **Stop Recording** from the drop-down list in the **Call Recording** column.
- See Figure 42.



**Figure 42: Call recording**

### *Silent monitoring calls*

Silent monitoring is the process of listening to the voice conversations of internal or external calls between extensions and callers. Silent monitoring enables you to track call handling techniques and determine where improvements can be made in individual performance. If required, supervisors can conference into the call they are silently monitoring to talk to the customer. For more information, see "Conferencing calls" on page 271 for Contact Center Softphone and see "Conferencing calls" on page 278 for Contact Center PhoneSet Manager.

Silent monitoring is an MCD feature leveraged by Contact Center Solutions. With MCD 7.0+, supervisors can select an extension for silent monitoring at any time, but the monitoring does not begin until the extension answers or makes a call. The monitoring is maintained so long as the extension remains on call. The supervisor hears everything the extension hears during the course of the call, including conferences and voicemail. If the extension moves to a call on another line, silent monitoring will follow the extension over to that line. Up to six supervisors can silently monitor an extension. MCD 7.0+ also enables supervisors to coach extensions on call. For more information, see "Coaching extensions on a call with customers" on page 283.

Silent Monitor can be accessed through Contact Center Client or, if programmed on your 3300 media server, through entering a Feature Access Code (FAC) on your phone. For more information about silent monitor and its features and enhancements, consult your Mitel MiVoice Business documentation.

Silent monitoring is supported for the 3300 ICP telephone system and requires Contact Center Management, Contact Center PhoneSet Manager or Contact Center Softphone, and Interactive Contact Center.



### NOTE:

- The monitoring extension and the extension being monitored must coexist on the same telephone system.
- The monitoring extension must be permitted by security role to interactively control other agents.
- The monitoring extension's soft phone tool bar must be open.
- For instructions on activating Silent Monitor outside of Contact Center Solutions, as well as how to use silent monitor with agent groups, hunt groups, and ACDX groups outside of Contact Center Solutions, consult your Mitel MiVoice Business documentation.

The following procedures explain how to

- Silently monitor a call using Contact Center Client
- Silently monitor a call using Contact Center Client and a Feature Access Code

The following procedures take place in an open real-time agent or extension monitor

To silently monitor a call using Contact Center Client

- Right-click the cell of an agent or extension and select **Silent Monitor**.

Alternatively:

1. Select the cell of an extension in a monitor whose call you want to silent monitor.
2. In the Contact Center Client **Real Time** ribbon, under the **Extension Control** tab, click the **Softphone** button and click **Silent Monitor**.

**NOTE:** If the telephone system settings are incorrect or the monitoring extension and the extension being monitored are on separate telephone systems, you will be unable to Silent monitor and will instead see 'Not Allowed' when you right-click the cell. See the *Contact Center Management Installation Guide* for more information. If the extension you want to monitor is not currently on a call, you will see 'Waiting' when you right-click the cell.

To silently monitor a call using Contact Center Client and a Feature Access Code

1. In the **dial box**, type the **Feature Access Code** followed by the extension number.
2. Click **Dial**.

### *Coaching extensions on a call with customers*

Supervisors can communicate with extensions they are silently monitoring while they are on a call with a customer through Whisper Coach. Whisper Coach is a feature of silent monitor, enabling supervisors monitoring extensions to talk to the extension and coach them through their call, without letting the customer hear what the supervisor is saying. Supervisors can also coach extensions who are not actively handling a call. If required, supervisors can conference into an active call while coaching to talk to the customer. For more information, see "Conferencing calls" on page 271 for Contact Center Softphone and see "Conferencing calls" on page 278 for Contact Center PhoneSet Manager.

**NOTE:** Whisper Coach requires MCD 7.0+ on a MiVoice Business for ISS platform, a Multi Instance Platform, or VMWare for Virtual Appliance. Whisper Coach is not supported on Mxe platforms

Once a supervisor starts silent monitoring an extension, they have the option of toggling coaching on and off through their IP hardset or the Contact Center Softphone toolbar. Whisper Coach is not automatically disabled when the extension completes the call or switches to a different call. If the supervisor does not stop coaching, the Whisper Coach feature automatically activates the next time the extension makes or answers a call. Only one supervisor can whisper coach an extension at a time. A supervisor can also whisper coach another supervisor, including supervisors actively whisper coaching an extension. If a supervisor whisper coaches another supervisor who is coaching an agent, the supervisor will hear the coached supervisor and the extension, but only the coached supervisor will hear you.

If you want the Coach On display in the Contact Center Softphone toolbar to appear in another language, you must configure the device on the telephone system to the display language. The translation is driven by the telephone system rather than Contact Center Solutions.

For more information on Whisper Coach, consult your Mitel documentation.

**NOTE:**

- Whisper Coach requires specific Class of Service options enabled for agents and supervisors
  - Agent COS
    - ACD Silent Monitor Accept
    - ACD Silent Monitor Accept Monitoring Non-Prime Line
    - ACD Silent Monitor Notification
    - HCI/CTI/TAPI Call Control Allowed
    - HCI/CTI/TAPI Call Monitor Allowed
  - Supervisor COS
    - ACD Silent Monitor Allowed
    - HCI/CTI/TAPI Call Control Allowed
    - HCI/CTI/TAPI Call Monitor Allowed
- Whisper Coach is supported with External Hot Desking Agents, Hot Desking Agents, and External Hot Desking Users
- Only certain IP phones are supported with Whisper Coach. Consult your Mitel documentation for supported IP phones.

The following procedures explain how to

- Whisper to an agent or extension that you are silent monitoring with Contact Center PhoneSet Manager
- Stop whispering to an agent or extension that you are silent monitoring with Contact Center PhoneSet Manager
- Whisper to an agent or extension that you are silent monitoring with Contact Center Softphone
- Stop whispering to an agent or extension that you are silent monitoring with Contact Center Softphone

To whisper to an agent or extension that you are silent monitoring with Contact Center PhoneSet Manager

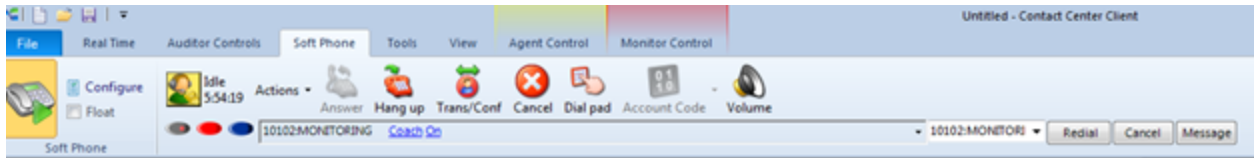
- On your hardset, press **Coach On**.

To stop whispering to an agent or extension that you are silent monitoring with Contact Center PhoneSet Manager

- On your hardset, press **Coach Off**.

To whisper to an agent or extension that you are silent monitoring with Contact Center Softphone

- In the **Softphone** toolbar, click **Coach On**.  
See Figure 43.



**Figure 43: Softphone coach on**

To stop whispering to an agent or extension that you are silent monitoring with Contact Center Softphone

- In the **Softphone** toolbar, click **Coach Off**.

### *Transferring calls*

To perform a blind transfer using Contact Center Client

- While on a call, right-click the cell of an active extension and click **Transfer call**.

### *Consulting with employees while on calls*

To consult with an employee while on a call using Contact Center Client

1. Right-click the cell of an active extension and click **Transfer/Conference**.  
The system places the initial party on hold.
2. In the dial box, type an extension or phone number. Otherwise, click the down arrow adjacent to the Transfer/Conference button and select a contact.
3. Click **Dial**.
4. After you consult with the employee, either click **Conference** to conference in that person, click **Transfer** to transfer the call to the employee, click **Swap** to talk to the other party, or click **Cancel** to end the consultation call.

### *Requesting help while on calls*

To request help while on a call using Contact Center Client

- Right-click the cell of an active extension and click **Request help**.  
The system calls the employee. The employee can click Answer in the soft phone and listen in on the call without the caller knowing. The employee can click Conference in the soft phone to join the conversation at any time.

# Chapter 14

## CONTACT CENTER SCREEN POP

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*Using Contact Center Screen Pop*

## CONTACT CENTER SCREEN POP

Contact Center Screen Pop is an optional application that requires Contact Center Management, and Contact Center Softphone or Contact Center PhoneSet Manager. Optionally, if you want to screen pop based on caller entered digits, you require IVR Routing with the Collect Digits activity.

Contact Center Screen Pop launches applications or webpages. In addition, it enables agents to automatically receive caller and account information via pop-ups on their computer monitors every time they receive calls. Contact Center Screen Pop provides agents with the caller name, caller phone number (ANI), called number (DNIS), and the queue used in the call.

**NOTE:** Users must configure IVR ports and queues on the same telephone system for Contact Center Screen Pop to function.

## USING CONTACT CENTER SCREEN POP

When an agent receives a call, Contact Center Screen Pop can launch an application or webpage. For example, when integrated with a Customer Relationship Management (CRM) database, Contact Center Screen Pop can launch a customer account page from the CRM database based on call information.

For businesses that have Contact Center Screen Pop, the pop-up provides

- **Caller name**—name of the caller
- **ANI**—telephone number of the caller
- **DNIS**—telephone number the caller dials
- **DNIS name**—the name associated to the DNIS number in YourSite database
- **Extension ID**— extension who transferred the call
- **Extension**—extension from which the call was transferred
- **Collect Caller Entered Digits**—digits the caller enters for identification purposes, such as a customer site key (IVR Routing required)
- **Customer Collected Information**—information collected from a third party ODBC database. Customer Collected Information requires IVR Routing and the Collect Digits activity, and, optionally, Remote Database Verification or CTI Developer Toolkit.
- **Call notes**—notes added by an agent

## CONFIGURING OPTIONS IN YOURSITE EXPLORER

You configure Contact Center Screen Pop options in YourSite Explorer. You can specify which information fields the pop-up displays and whether an application or Web page is launched when an extension receives a call. See "Configuring Contact Center Screen Pop options" on page 288.

## Enabling Contact Center Screen Pop

To enable Contact Center Screen Pop

1. Start Contact Center Client.
2. Right-click the Phone toolbar and click **Configure**.
3. Click the **Screen pop** tab.
4. Select the **Display Contact Center Screen Pop** check box.
5. Click **OK**.

## Configuring Contact Center Screen Pop options

To configure Contact Center Screen Pop options

1. Click **YourSite=>Enterprise**.
2. Click the **Screen Pop** tab.
3. To launch an application or webpage when calls are answered, select the **Launch an application or Web page when agents answer ACD calls** check box. This option displays the caller-specific Inbound trace report webpage, which lists the number of times the caller has called in the last seven days and provides additional call details. (See Figure 44.) To specify a different path or URL, see step 5, below.  
**NOTE:** The 'Contact Center Screen Pop will launch this application or Web page' field is automatically populated with the URL of the Inbound Trace report.
4. To launch a specific Web page or an application when calls are answered, ensure **Display a specific application or Web page** is selected and, under **Contact Center Screen Pop will launch this application or Web page**, type the path for the executable file or the URL of the webpage and indicate any variables that the screen pop will contain.  
**NOTE:** For important information on how to configure this field, click the ? button. For information on variables used by Contact Center Screen Pop, see "Configuring Contact Center Screen Pop display variables" on page 289.
5. If Mitel Professional Services has provided you with an integrated custom screen pop, select **Display this Professional Services custom executable file or Web page**. Click **Manage** to review the Professional Services custom screen pop options.
6. Click **Save**.

Inbound Customer Trace					
Call start time 7/27/2007 9:20:50 AM					
Patrick M has called our company 43 times in the last 7 days					
Phone Number: 6135990045					
Call Start time (date and time)	Call duration	DNIS name	Agent name	Extension	Account Code
7/23/2007 4:15:24 PM	00:00:06	7777	2068	1278	
7/23/2007 4:14:59 PM	00:00:20	7777		6165	
7/23/2007 4:06:40 PM	00:00:19	7777	2030	1261	

Figure 44: Inbound Customer Trace Report

## Configuring Contact Center Screen Pop display variables

The variables described in Table 22 are used by Contact Center Screen Pop to determine the application area or Web page that launches when an agent answers an ACD call. Ensure the required IVR Routing activities are available in workflows to use these variables.

**NOTE:** The variable names are case-sensitive. For an application, variables must be in quotes and separated by a space.

**Table 22: Contact Center Screen Pop display variables**

VARIABLE	IVR ROUTING ACTIVITY REQUIRED	DESCRIPTION
%PFCALLERNAME%	ANI activity	Caller name as provided by the telephone carrier. For example, 'John Smith'
%PFANI%	ANI activity	Caller number (ANI), the telephone number of the calling party. For example, '6135990045'
%PFDNIS%	DNIS activity	Dialed Number Identification Service (DNIS), numbers passed from the public telephone network to identify what phone number the caller dialed. This is typically used to identify different 1-800 or 1-900 numbers. For example, '9875'
%PFVERIFIEDCOLLECTEDDIGITS%	Collect Digits activity	The digits entered by the user during the call. For example, account number '78831'
%Queue%	ANI and DNIS activities	Name of the queue from which the call is answered. For example, 'Sales'
%ReceivingAgent%	N/A	Contains the Agent ID for the agent receiving the current call
%ReceivingExtension%	N/A	Contains the Extension ID for the extension receiving the current call

**Table 22: Contact Center Screen Pop display variables (continued)**

<b>VARIABLE</b>	<b>IVR ROUTING ACTIVITY REQUIRED</b>	<b>DESCRIPTION</b>
%SendingAgent%	N/A	Contains the Agent ID for the agent sending or transferring the call to the current recipient
%SendingExtension%	N/A	Contains the Extension ID for the extension sending or transferring the call to the current recipient

**To launch an application**

- Type the URL of the executable file followed by the required variables.  
For example, C:\MyProgram\CustomerManagement.exe "%PFCALLERNAME%"  
"%PFANI%" "%PFDNIS%" "%PFVERIFIEDCOLLECTEDDIGITS%" "%Queue%"

**NOTE:** Variables must be in quotes and be separated by a space.

If John Smith calls 1-800-266-9875 from 613-599-0045, is prompted to enter his account number (78831), and is then routed to the Sales queue, the executable file will use the actual values of the call, for example, C:\MyProgram\CustomerManagement.exe "John Smith" "6135990045" "9875" "78831" "Sales".

**To launch a Web page**

- Type the URL of the Web page followed by the required variables, as per standard HTTP protocol.  
For example,  
http://myintranetsite.business.com?CALLERNAME=%PFCALLERNAME%&ANI=%PFANI%&DNIS=%PFDNIS%&COLLECTEDDIGITS=%PFVERIFIEDCOLLECTEDDIGITS%&QUEUE=%Queue%

If John Smith calls 1-800-266-9875 from 613-599-0045, is prompted to enter his account number (78831), and is then routed to the Sales queue, the Web page will use the actual values of the call, for example,  
http://myintranetsite.business.com?CALLERNAME=John%20Smith&ANI=6135990045&DNIS=9875&COLLECTEDDIGITS=78831&QUEUE=Sales.



## *Testing Contact Center Screen Pop search functions*

This test will confirm that Contact Center Screen Pop will function with the software you selected.

To test the search function in Contact Center Screen Pop

1. Start Contact Center Client.
2. Right-click the Phone toolbar and click **Configure**.
3. Click the **Screen pop** tab.
4. Click **Test**.
5. Type the variables using the described format.  
**PFCALLERNAME**—first name followed by last name, separated by a space (for example, John Smith)  
**PFANI**—phone number (including area code if relevant) with no spaces, dashes, or brackets (for example, 6135558769)  
**PFDNIS**—phone number (including area code if relevant) with no spaces, dashes, or brackets (for example, 8005556598)  
**PFVERIFIEDCOLLECTEDDIGITS**—all digits the caller has entered since entering the telephone system, with no spaces, dashes or brackets (for example, 1113)  
**Queue**—queue that the caller first entered (for example, P500)
6. Click **OK**.  
A screen pop that contains the test parameters you specified will display. The outcome of the Contact Center Screen Pop test will change depending on the type of screen pop you have configured and the test parameters you entered.

## *Disabling Contact Center Screen Pop*

If you prefer some client computers do not use Contact Center Screen Pop, you can disable it on one or more computers. This procedure affects one profile only.

To disable Contact Center Screen Pop on a client computer

1. Start Contact Center Client.
2. Right-click the Phone toolbar and click **Configure**.
3. Click the **Screen pop** tab.
4. Clear the **Display Contact Center Screen Pop** check box.
5. Click **OK**.

# Chapter 15

## CTI DEVELOPER TOOLKIT

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*CTI Developer Toolkit sample applications*

*Best practices for custom development*

*Common user scenarios and source code examples*

*Troubleshooting CTI Developer Toolkit issues*

## CTI DEVELOPER TOOLKIT

### NOTE:

- CTI Developer Toolkit is currently supported for use with the 3300 ICP only.
- If you require the calculations used to populate Contact Center Management and Business Reporter reports to use in your custom application built with the CTI Developer Toolkit, you can download these applications from Mitel Online under Support=>Software Downloads=>Contact Center Enterprise Edition or Contact Center Business Edition.
- In Version 7.0 and greater, the CTI toolkit application uses .NET Framework 4.5. Upon upgrade to Version 7.1, any third-party products that use the CTI Toolkit will need to be recompiled using the latest CTI Toolkit dlls.

Mitel Computer Telephony Integration (CTI) Developer Toolkit is a programmable .NET C# Dynamic-link library (DLL) that can be used in any .NET Framework 4.5 application or website. The CTI Developer Toolkit completes the migration from Mitel Agent Portal to Mitel Contact Center Screen Pop.

The CTI Developer Toolkit is offered in two forms: server side and client side license. The server side license provides the ability to insert custom real-time IVR collected data to each incoming call. It also uses the Contact Center Screen Pop infrastructure to deliver third-party data to agent desktops (using either the client side license or Contact Center PhoneSet Manager). The client side license provides basic telephony functions (answer, hang up, transfer, and hold), provides agent control (such as set/remove Make Busy) and delivers caller information such as ANI, DNIS, Collected Digits, and call notes in real time as calls arrive. The client side license may be used to display information in CRM, Microsoft Outlook, or custom applications.

If you want to route or screen pop on digits or other data sets collected from a third-party IVR, you must adhere to the following conditions:

- You must have a CTI Developer Toolkit Server license
- The third-party vendor must be a Mitel MSA Development partner. As a Mitel MSA Development partner, they must have completed a MiTAI (API) integration that allows them to pass the collected digits or other data set, along with a unique call ID provided by this API, enabling Mitel's Contact Center software to associate the collected digits to a particular call with unique call ID matching.
- If you want to route or screen pop on ANI or DNIS or on digits collected within the Mitel IVR, the above are not required.

For installation information and procedures, see the *Business Reporter Installation Guide*.

**NOTE:** Once you have installed the CTI Developer Toolkit, typically to <installation\_drive>:\Program Files (x86)\prairieFyre Software Inc\CTI Developer Toolkit, you can access the DLLs required to create customized applications in the CTI Developer Toolkit\Redist folder. You must include the entire Redist folder with your final compiled custom application or it will not function properly.

The CTI Developer Toolkit includes a number of sample applications, including source code, that can be used to test CTI Developer Toolkit functionality. For a complete overview of the sample applications included, see "CTI Developer Toolkit sample applications" on page 299.

---

The CTI Developer Toolkit is currently available with the following functionality:

- Connect and disconnect from the Contact Center Management Enterprise Server with user authentication
- Retrieve devices from the Contact Center Management configuration database, based on all
  - All agent devices for the user currently logged on to the system
  - All agent devices associated with employees
  - All extensions
  - All queues
- Set real-time monitors on agents, extensions, and queues to receive notification when
  - A call is received (including call detail information)
  - A device state changes (for example, idle, ACD, and hold)
- Set phone monitors on agents and extensions to receive notification when
  - A call is received (including call detail notification)
  - A call is made
  - A call is cleared
  - A call is transferred
  - A call is conferenced
  - A call is established
  - A call fails
- Control a device (for example, set/remove Do Not Disturb or Make Busy)
- Make calls from agent or extension devices
- Place calls on hold
- Retrieve calls that are on hold
- Remove calls from queues
- Redirect calls from queues to agents/extensions
- Transfer or conference calls between agent and extension devices
- Clear calls for agent and extension devices
- Add call detail information from third-party IVRs and dialers. This information is available to client applications in the Call Received event

Table 23 lists the major areas of functionality exposed with each version of the CTI Developer Toolkit. The version specified indicates the most recent version, including any service packs available to customers.

Table 23: Supported functionality by version

FUNCTIONAL AREA	VERSION 5.8	VERSION 6.0.2	VERSION 7.0	VERSION 7.1
<b>Application events</b>				
• Connection state changes	x	x	x	x
• Configuration loaded	x	x	x	x
<b>Device Information</b>				
• Get all devices	x	x	x	x
• Get all extension	x	x	x	x
• Get all agents	x	x	x	x
• Get all queues	x	x	x	x
• Get agents by login	x	x	x	x
• Get agents for all employees	x	x	x	x
<b>Device events<sup>1</sup></b>				
• Device state changed	x	x	x	x
<b>Voice events<sup>2</sup></b>				
• Call info received	x	x	x	x
• Call delivered	x	x	x	x
• Call received	x	x	x	x
• Call cleared	x	x	x	x
• Call transferred	x	x	x	x
• Call established	x	x	x	x
• Call failed	x	x	x	x
• Call diverted	x	x	x	x
• Call originated	x	x	x	x
• Call retrieved	x	x	x	x
<b>Extension events</b>				

**Table 23: Supported functionality by version (continued)**

FUNCTIONAL AREA	VERSION 5.8	VERSION 6.0.2	VERSION 7.0	VERSION 7.1
• Extension state changed	x	x	x	x
<b>Agent events</b>				
• Agent state changed	x	x	x	x
<b>Queue events</b>				
• Queue Now statistics	x	x	x	x
• Queue totals statistics	x	x	x	x
• Interactive Visual Queue delta	x	x	x	x
• Interactive Visual Queue snapshots	x	x	x	x
<b>Voice control<sup>3</sup></b>				
• Make call	x	x	x	x
• Clear call	x	x	x	x
• Answer call	x	x	x	x
• Hold call	x	x	x	x
• Retrieve held call	x	x	x	x
• Conference call	x	x	x	x
• Transfer call	x	x	x	x
• Make consultation call	x	x	x	x
• Transfer consultation call	x	x	x	x
• Cancel consultation call	x	x	x	x
• Trade call		x	x	x
<b>Agent control</b>				
• Login	x	x <sup>5</sup>	x <sup>5</sup>	x <sup>5</sup>
• Logout	x	x <sup>5</sup>	x <sup>5</sup>	x <sup>5</sup>
• Set Make Busy	x	x	x	x

Table 23: Supported functionality by version (continued)

FUNCTIONAL AREA	VERSION 5.8	VERSION 6.0.2	VERSION 7.0	VERSION 7.1
• Remove Make Busy	x	x	x	x
• Set Do Not Disturb	x	x	x	x
• Remove Do Not Disturb	x	x	x	x
• Cancel Work Timer	x	x	x	x
• Cancel reseize timer		x <sup>6</sup>	x <sup>6</sup>	x <sup>6</sup>
• Conference call	x	x	x	x
<b>Queue control</b>				
• Redirect call	x	x	x	x
• Remove call	x	x	x	x
• IVR integration				
• Add call detail <sup>7</sup>	x	x	x	x

1 Device events are supported by all device types.

2 Voice events are supported by extension and agent devices

3 Voice control is supported by extension and agent devices.

4 Both hot desking and traditional agent logins are supported with Version 5.5 SP1 or greater.

5 Supports External hot desk agent and External hot desk user functionality.

6 The Cancel reseize timer agent control function requires External hot desk agent functionality.

7 The AddCallDetail method requires a CTI Developer Toolkit server license.

**NOTE:** The CTI Developer Toolkit may also be referred to as the prairieFyre.CallControl.Toolkit namespace throughout this chapter and in the CHM help file documentation, as the CHM help file included with the CTI Developer Toolkit is sourced from the source code, which refers to the namespace by this name.

Table 24 lists and describes the top level classes available with the CTI Developer Toolkit.

---

**Table 24: Primary object classes**

CLASS	DESCRIPTION
DeviceManager	This class contains functionality to manage the connection to the Enterprise Server and provides access to configured agents, extensions, and queues.
Device	This abstract class includes the core properties for all device types. Objects of this class may not be directly instantiated.
Voice	This class is derived from the Device class and serves as the base class for the agent and extension classes. It includes properties and functionality that is specific to devices with voice characteristics.
Agent	This class is derived from the Voice class. It represents both traditional ACD and hot desking agents. Specialized functionality handled in this class includes agent control operations, such as agent login and set/remove Make Busy.
Extension	This class is derived from the Voice class. It represents configured extensions.
Queue	This class is derived from the Device class. It represents configured queues. It includes properties and functionality that is specific to the queue device. Specialized functionality handled in this class includes set/remove Do Not Disturb, redirect call, and remove call.

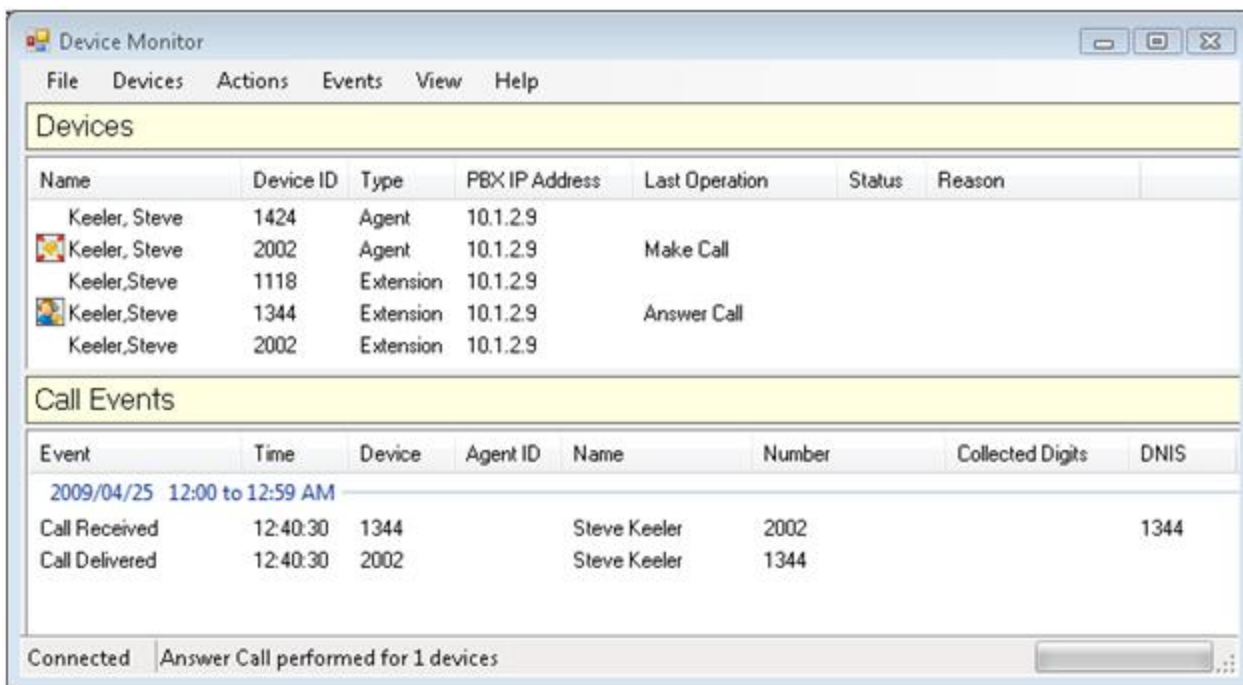


## CTI DEVELOPER TOOLKIT SAMPLE APPLICATIONS

There are currently four sample applications, including source code, that are included with the CTI Developer Toolkit.

### Device Monitor

The Device Monitor sample application provides a graphical user interface that enables developers to connect to the Contact Center Solutions Enterprise Server, retrieve a list of devices, perform agent control activities on the retrieved devices (for example, login/logout, set/remove Make Busy, etc.), perform call control activities (for example, make call, answer call, clear call, etc.), and retrieve call event notifications. (See Figure 45.)



**Figure 45: Device Monitor sample application**

To use the CTI Developer Toolkit Device Monitor sample application

1. In Windows, navigate to the **CTI Developer Toolkit** and open **Device Monitor**.
2. Click **File=>Connect**.
3. Type the IP address of the Enterprise Server, user name, and password and click **OK**.
4. Click **Devices** and select one of the following options:
  - Retrieve agents for current login
  - Retrieve agents for all employees
  - Retrieve all agents
  - Retrieve all extensions
  - Retrieve all queues
  - Retrieve all devices

5. Once the devices you selected have loaded, you perform actions on the selected device(s) by clicking **Actions** and selecting an available action or by right-clicking and selecting an available action from the list:
- Set monitor=>Phone, Real time, All
  - Remove monitor=>Phone, Real time, All
  - Login
  - Logout
  - Set Make Busy
  - Remove Make Busy
  - Set DND
  - Remove DND
  - Cancel Work Timer
  - Make call
  - Answer call
  - Hold call
  - Retrieve call
  - Transfer call
  - Conference call
  - Clear call
  - Add call notes
  - Make consultation call
  - Transfer consultation call
  - Cancel consultation call
  - Trade call

### **Queue Monitor**

The QueueMonitor sample application displays the functionality and support for queue device types included with the CTI Developer Toolkit. The QueueMonitor application is similar to the optional Interactive Visual Queue monitor that is housed in Contact Center Client. It enables developers to connect to the Contact Center Solutions Enterprise Server, load a set of queues, and view real-time call activity (calls entering and exiting queues) and queue statistics (for example, calls waiting, number of agents available, longest waiting, etc.). (See Figure 46.)

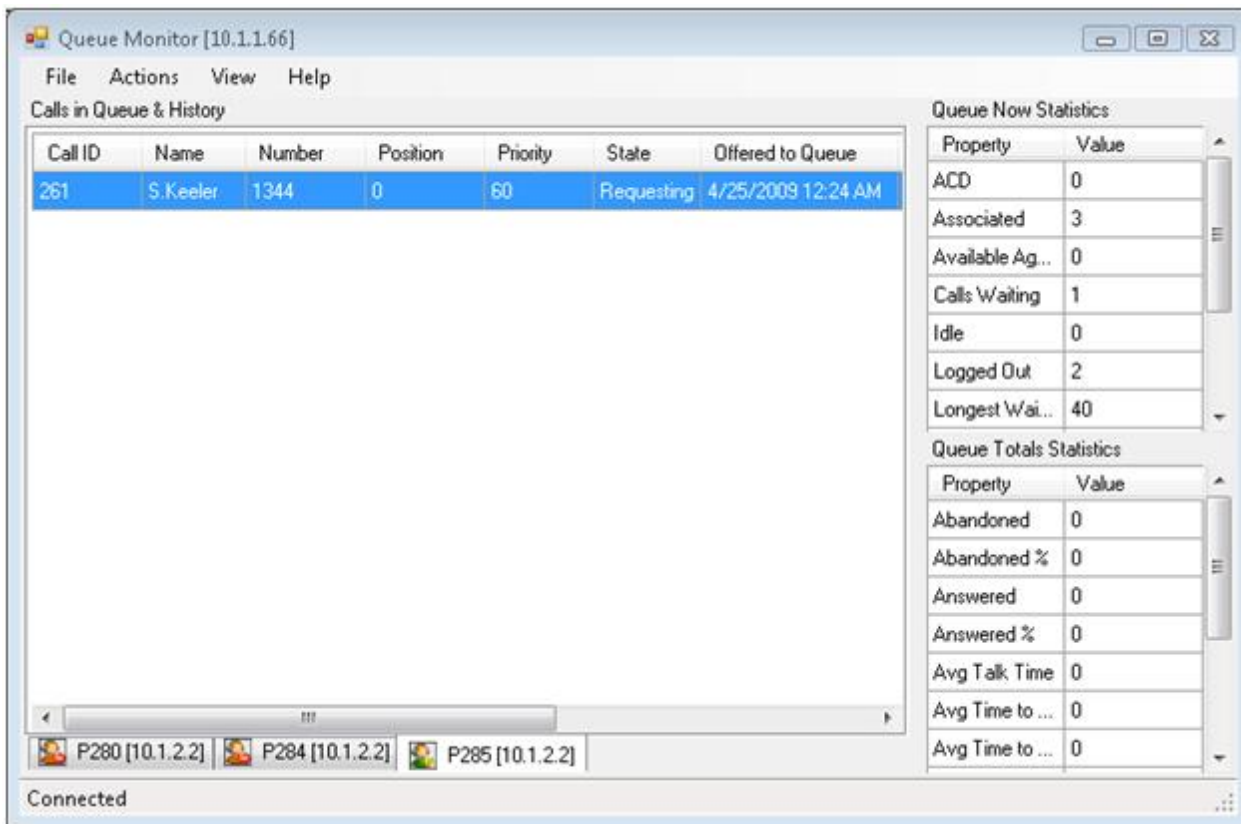


Figure 46: Queue monitor sample application

To use the CTI Developer Toolkit QueueMonitor sample application

1. In Windows, navigate to the **CTI Developer Toolkit** and open **Queue Monitor**.
2. Click **File=>Connect**.
3. Type the IP address of the Enterprise Server, user name, and password and click **OK**.
4. Click **Actions**.
5. Select one or more queues to open.
6. Click **OK**.  
If you selected multiple queues, you can toggle between them using the tabs at the bottom of the queue monitor.
7. Once the queues you selected have loaded, you perform actions on the selected device(s) by clicking **Actions** and selecting an available action or by right-clicking and selecting an available action from the list:
  - Open queue
  - Close queue
  - Set DND
  - Remove DND
  - Redirect call
  - Remove call

### Console Call Monitor

The ConsoleMonitor sample application displays call received information for either single or multiple agents or extensions in a simple console application window. It is intended to be a very brief example, with little error handling, that can be used to demonstrate the basics of coding screen pop displays.

To use the CTI Developer Toolkit ConsoleCallMonitor sample application

1. In Windows, open the command prompt window.
2. Type **cd "<installation\_drive>:\Program Files (x86)\prairieFyre Software Inc\CTI Developer Toolkit\Samples\ConsoleCallMonitor\bin"** and click **Enter**.
3. Type **ConsoleCallMonitor.exe Device Number/Telephone System IP Address/Type** and click **Enter**.

The ConsoleCallMonitor application takes multiple parameters in the following form, Device Number/Telephone System IP Address/Type. For example, 2000/10.1.1.1/Agent 1800/10.1.1.10/Extension would invoke agent 2000 on telephone system 10.1.1.1 and extension 1800 on telephone system 10.1.1.10.

### Console Queue Monitor

The ConsoleQueueMonitor sample application displays information on calls entering/exiting queues and queue statistics in a simple console application window. Similar to the Console Call Monitor application, it represents a minimal set of code required to build a real-time queue monitoring application.

To use the CTI Developer Toolkit Console Queue Monitor sample application

1. In Windows, open the command prompt window.
2. Type **cd "<installation\_drive>:\Program Files (x86)\prairieFyre Software Inc\CTI Developer Toolkit\Samples\ConsoleQueueMonitor\bin"** and click **Enter**.
3. Type **ConsoleQueueMonitor.exe Queue/Telephone System IP Address** and click **Enter**.  
The ConsoleQueueMonitor application takes multiple parameters, in the following form: Queue/Telephone System IP Address. For example: P200/10.1.1.1 P180/10.1.1.10 would invoke monitoring calls on two queues, queue P200 on telephone system 10.1.1.1 and queue P180 on telephone system 10.1.1.10.

## BEST PRACTICES FOR CUSTOM DEVELOPMENT

The following best practices must always be followed when developing custom developments to work in conjunction with Contact Center Solutions software.

- Before you begin development
  - Verify that the CTI Developer Toolkit and Contact Center Solutions software are the same version and that you are properly licensed for all desired functionality
  - Verify that you have access to the Contact Center Management Enterprise Server
  - Verify that the Contact Center Solutions Enterprise Server has been properly set up and configured with the extensions, agents, and queues that you will be using with your custom application
  - Verify that the telephone system(s) in your enterprise has been properly set up and configured with the extensions, agents, and queues that you will be using with your custom application
  - Verify that all pre-installation and post installation steps have been completed. See the *Business Reporter Installation Guide*.
  - Confirm the telephone system conforms to the guidelines stated in the Golden Rules document. In particular, aspects of the CTI Developer Toolkit rely on the ability to set MiTAI monitors on devices. As such, the 'HCI Options' must be enabled for the Class of Service on all monitored devices. See the Mitel Knowledge Base at <http://micc.mitel.com/kb/> and use the key words 'Golden Rules'.
  - Verify you have Microsoft .NET Framework Version 4.5 installed on your workstation
  - Verify you have an IDE installed on your workstation, either Visual Studio 2005/2008 or SharpDevelop
- When developing custom applications and integrations
  - Verify the what you are attempting to build is possible by attempting the functions from an alternate client application, such as Contact Center Client, the Device Monitor sample application, or MiTAI Browser
  - Routinely check the log files of all related services, specifically the Enterprise Server, Collector, and MiTAI Proxy Server to ensure there are no unusual or unexpected warnings or errors
  - Routinely check the log files of alternative client applications for any unusual or unexpected warnings or errors (as listed in the previous bullet)

The following best practices must always be followed when developing custom connectors to third-party IVRs.

- Third-party IVR ports and IVR Routing ports must all be programmed in YourSite Explorer as an extension type=>Messaging Port or RAD Port. When configuring the extension as a port type, the disable real-time monitoring option will not be configurable.
- In addition to whatever custom data your third-party IVR is sending, it must also send the same data that IVR Routing does (using the same naming conventions). These are PFANI, PFCALLERNAME, and PFDNIS. This will ensure that the existing MiTAI record linking logic within the Contact Center Management Enterprise Server gets the correct information, which is typically at the first controller/port

## COMMON USER SCENARIOS AND SOURCE CODE EXAMPLES

This section details the following common user scenarios for developing custom integrations and applications using the CTI Developer Toolkit

- Click to dial
- Call received notification
- Add call detail (using a third-party IVR)

### CLICK TO DIAL

**NOTE:** This code sample is not included in the sample project that is included with the CTI Developer Toolkit.

The following C# code fragment provides sample source code that can be used to build a console application with click-to-dial functionality.

```
static void Main()
{
    DeviceManager dm = DeviceManager.Instance;
    string pbxIpAddress = "10.1.1.10";
    string server = "the-CCM-server-IP-address-here";
    string username = "your-username-here";
    string password = "your-password-here";
    Voice extension;
    if (!dm.Connect(server, 5024, username, password))
    {
        Console.WriteLine("Unable to connect to server");
        return;
    }
    extension = dm.GetDevice("1100", pbxIpAddress, DeviceType.Extension) as Voice;
    if (extension == null)
    {
        Console.WriteLine("Unable to retrieve extension device");
        return;
    }
    if (!extension.SetMonitor())
```

```
{  
    Console.WriteLine("Unable to monitor extension");  
    return;  
}  
extension.MakeCall("16135990045");  
dm.ReleaseAllDevices();  
dm.Disconnect();  
Console.WriteLine("Exit application");  
}
```

This source code will connect to the specific Enterprise Server using the supplied username and password. It then initiates a call from extension 1100 on the telephone system with IP address 10.1.1.10 to the phone number 16135990045.

## CALL RECEIVED NOTIFICATION

The following C# code fragment shows a condensed version of the source code provided with the ConsoleCallMonitor sample application that is shipped with the CTI Developer Toolkit.

```
static void Main()  
{  
    DeviceManager dm = DeviceManager.Instance;  
    string pbxIpAddress = "10.1.1.10";  
    string server = "the-CCM-server-IP-address-here";  
    string username = "your-username-here";  
    string password = "your-password-here";  
    Voice extension;  
    if (!dm.Connect(server, 5024, username, password))  
    {  
        Console.WriteLine("Uable to connect to server");  
        return;  
    }  
    extension = dm.GetDevice("1100", pbxIpAddress, DeviceType.Extension) as Voice;  
    if (extension == null)  
    {  
        Console.WriteLine("Unable to retrieve extension device");  
        return;  
    }  
}
```

```
}  
if (!extension.SetMonitor())  
{  
    Console.WriteLine("Unable to monitor extension");  
    return;  
}  
device.CallInfoReceived += CallInfoReceivedHandler;  
Console.WriteLine("Listening for calls on extension 1100");  
Console.WriteLine("Press any key to end application.");  
while (!Console.KeyAvailable) ;  
dm.ReleaseAllDevices();  
dm.Disconnect();  
Console.WriteLine("Exit application");  
}  
static void CallInfoReceivedHandler(object sender, CallInfoReceivedEventArgs e)  
{  
    Console.WriteLine("-----");  
    Console.WriteLine("Call Info Received:");  
    Console.WriteLine(" Caller Name : " + e.Info.CallerName);  
    Console.WriteLine(" Caller Number : " + e.Info.CallerNumber);  
    Console.WriteLine(" DNIS : " + e.Info.DNIS);  
    Console.WriteLine(" Collected Digits : " + e.Info.CollectedDigits);  
}
```



## ADD CALL DETAIL (USING A THIRD-PARTY IVR)

The following C# code fragment shows a condensed version of using the AddCallDetail method to toolkit users can invoke to add custom key/value pairs into call information.

In summary, this code fragment does the following:

- Device\_CallReceived is an event handler that is invoked whenever a monitored IVR extension/port receives a call. This is needed to acquire the MiTAI Call ID which is used to link these extra information records (--w records in ACD data files) to other call records
- When this event handler is invoked, it makes three sequential calls to the AddCallDetail method, adding call values for the following keys: PFANI, PFCALLERNAME, and PFDNIS
- The keys used above are the ones that the default screen pop display recognizes but developers can easily make up their own key names as well, provided they have toolkit code on the client side to pull the custom information from the CallInfoReceivedEvent notifications

```
public void Device_CallReceived(object sender, CallReceivedEventArgs e)
{
    Device device = sender as Device;
    DeviceManager.Instance.AddCallDetail(
        e.CallingDevice.CallReferenceID, device.PBXIPAddress, device.DeviceID,
        "PFANI", "6135990045");
    DeviceManager.Instance.AddCallDetail(
        e.CallingDevice.CallReferenceID, device.PBXIPAddress, device.DeviceID,
        "PFCALLERNAME", "John Smith");
    DeviceManager.Instance.AddCallDetail(
        e.CallingDevice.CallReferenceID, device.PBXIPAddress, device.DeviceID,
        "PFDNIS", "8001");
}
```

## TROUBLESHOOTING CTI DEVELOPER TOOLKIT ISSUES

Diagnosing any issues experienced while using the CTI Developer Toolkit requires a high level of familiarity with Contact Center Solutions and Business Reporter applications and CTI Developer Toolkit functionality. This section details several troubleshooting tips and tricks when encountering issues with CTI Developer Toolkit functionality.

The CTI Developer Toolkit and any custom applications created using it rely heavily on the proper configuration and operation of the Contact Center Solutions Enterprise Server. Ensuring that the server is operating correctly is the first diagnostic step that should be taken when troubleshooting CTI Developer Toolkit issues. This includes:

- Verifying that the CTI Developer Toolkit and Business Reporter software are the same version and that you are properly licensed for the desired functionality
- Verifying that all pre-installation and post installation steps have been completed. See the *Business Reporter Installation Guide*.
- Checking the log files of all related services, specifically the Enterprise Server, Collector, and MiTAI Proxy Server to ensure there are no unusual or unexpected warnings or errors
- Attempting the same operation using an alternate client application. This can be any of the following, depending on the underlying issue:
  - Contact Center Client
  - Device Monitor sample application
  - MiTAI Browser
- Checking the log files of alternative client applications for any unusual or unexpected warnings or errors (as listed in the previous step)
- Confirming the telephone system conforms to the guidelines stated in the Golden Rules document. In particular, aspects of the CTI Developer Toolkit rely on the ability to set MiTAI monitors on devices. As such, the 'HCI Options' must be enabled for the Class of Service on all monitored devices. See the Mitel Knowledge Base at <http://micc.mitel.com/kb/> and use the key words 'Golden Rules'.

## TROUBLESHOOTING SPECIFIC ISSUES

This section describes some specific problems that may be encountered when working with the CTI Developer Toolkit and provides any recommended steps for diagnosing issues and potential solutions.

### *Retrieve All commands does not display any devices*

If any of the *Retrieve All* commands in the Device Monitor application return an empty list of devices, there may be a configuration problem with the *IPAddress* values stored in the *CCMData* database table named *tblEnterpriseConfig\_Node*.

To troubleshoot this issue, run the following SQL query and pay particular attention to values in the [IP Address] column. This query simulates the query used by the CTI Developer Toolkit and will return a list of agents and extensions for all voice media servers.

```
SELECT node.Name AS [Node],
node.IPAddress AS [IP Address],
'Agent' AS [Type],
device.FirstName AS [First Name],
device.LastName AS [Last Name],
device.Reporting AS [Reporting Number]
FROM tblConfig_Agent device INNER JOIN tblEnterpriseConfig_Node node
ON device.FKNode = node.Pkey INNER JOIN tblLookup_NodeType NodeType
ON node.FKNodeType = NodeType.Pkey
WHERE FKNodeFamily = 1
```

```
UNION
SELECT
node.Name AS [Node],
node.IPAddress AS [IP Address],
'Extension' AS [Type],
" AS [First Name], -- No first name on extensions
" AS [Last Name], -- No last name on extensions
device.Reporting AS [Reporting Number]
FROM tblConfig_Extension device INNER JOIN tblEnterpriseConfig_Node node
ON device.FKNode = node.Pkey INNER JOIN tblLookup_NodeType NodeType
ON node.FKNodeType = NodeType.Pkey
WHERE FKNodeFamily = 1
ORDER BY [Node], [Type]
```

The [IP Address] values in the query results should contain the IP address of the telephone system that is associated with the voice media server. If this value is incorrect or blank, use YourSite Explorer to set the IP address to the correct value.

### ***GetDevice method fails or returns null unexpectedly***

If a custom applications calls the *GetDevice* method and returns null even though the device is valid and programmed in Contact Center Management, there may be a timing issue with the Connect operation. When a custom application calls the *Connect* method in the CTI Developer Toolkit, the operation returns as soon as an authenticated connection has been established with the Enterprise Server. However, there may still be some basic configuration loading occurring in the background, which must complete before calls to *GetDevice* can be successful.

An event named *ConfigurationLoaded* is provided in the CTI Developer Toolkit, which is used to notify custom applications that background configuration loading has completed. In previous versions, the Device Monitor sample application used a workaround method of issuing a *Sleep* method call on the active thread to give background configuration loading time to complete.

### ***Agent control actions succeed while call control actions fail***

In this scenario, agent control actions (for example, login, logout, and set/remove Make Busy) succeed, while call control actions (for example, make call, answer call, and clear call) fail. The key difference between these two types of operations is that call control actions require a MiTAI monitor set on the device and agent control actions do not. Your investigation should start with an analysis of MiTAI related configuration, including:

- Verifying that the MitaiEnabled flag set properly for devices in the database
- Checking telephone system (for example, HCI Options enabled)
- Confirming the telephone system version is supported

### *Unable to set monitor on agent device*

In some cases, using the Device Monitor to issue a Set Monitor operation on an agent will fail. If you have the Errors view open in the application, it displays a MiTAI error, indicating 'Operation failed: MessageTag[8] ReturnCode [SXERR\_FEATURE\_NOT\_ALLOWED]'

In this case, you should verify that the agent device is properly configured on the telephone system, including HCI Options enabled for the associated Class Of Service. If the problem persists, check to see if the CTI Developer Toolkit is Version 5.5 or earlier and if the agent is a traditional or hot desking agent. There was a known issue setting monitors on traditional ACD agents using the CTI Developer Toolkit that was corrected in 5.5 SP1. For earlier versions, one workaround is to set the monitor on the extension the agent logs in to.

### *Web service errors occurring in log files*

If you encounter Web service error messages in log files and an application built with the CTI Developer Toolkit is experiencing errors, check to ensure that the Microsoft.Web.Services3.dll file is present under the Windows system directory or in the custom application directory.

### *'Softphone proxy did not respond after 30 seconds' error*

If you encounter this message and the Contact Center Solutions software is Version 5.5 SP2 or earlier, there is a known licensing issue where the MiTAI Proxy Server will fail to send clients messages unless there is at least one Contact Center Softphone or Contact Center PhoneSet Manager license in your enterprise. This issue was corrected in version 5.5 SP3.

To work around this problem, contact Mitel technical support at 1-800-722-1301 (North American customers) or your approved Mitel vendor (for customers residing in Latin America, Europe, the Middle East, Africa, and Asia Pacific).and have them create new license files.

# Chapter 16

## SALESFORCE.COM CONNECTOR

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*Setting up a Call Center in Salesforce.com*

*Logging into your Contact Center*

*Salesforce.com Connector*

*Salesforce.com Connector functionality*

## SALESFORCE.COM CONNECTOR

Salesforce.com Connector is an optional client application that works in conjunction with Contact Center Management and/or Business Reporter and requires an account with Salesforce.com (Enterprise and Professional editions of Salesforce.com), and, optionally, IVR Routing (for Collect Caller Entered Digits only).

**NOTE:**

- Salesforce.com Connector is currently supported for use with the 3300 ICP only.
- Whether Salesforce.com is running on the cloud or on a server within your organization, agents must have the Contact Center Salesforce.com Connector installed and running on their client computers for Salesforce.com Connector to function properly.
- The Contact Center Salesforce.com Connector refers to the Contact Center Softphone application as it appears in Salesforce.com.
- We test support for Salesforce.com Connector against Internet Explorer 9, 10, and 11, and make every effort to test against the most recent versions of Mozilla Firefox and Google Chrome. For information regarding Salesforce's support requirements, please consult Salesforce documentation.
- If you use Internet Explorer 10 or 11, you must enable Compatibility View.
- Ensure you enable the 'Display mixed content' option in Internet Explorer's local intranet security settings before logging into Salesforce.com.

Salesforce.com Connector enhances the functionality of Salesforce by embedding your Mitel phone directly into the Salesforce user interface. This improves productivity by providing fast and easy access to accounts, contacts, cases, and other Salesforce objects directly related to incoming calls. Using Salesforce.com Connector enables your contact center employees to perform their job functions through a single user interface.

Salesforce.com Connector is compatible with the Salesforce.com Microsoft Outlook connector. Users can synchronize their Salesforce.com contacts, tasks, and calendar events, associate Outlook email messages, and map custom fields in Salesforce.com to fields in Outlook.

Salesforce.com Connector manages interactions between the Contact Center Management server and the hosted Salesforce.com server through the Salesforce user interface. Salesforce.com Connector offers a wide variety of enhancements and capabilities to employees, including

- **Unified login**  
Salesforce automatically retrieves agent IDs and extensions to enable users to log in to Contact Center Management directly from Salesforce.com.
- **Hot desking support**  
ACD hot desking agents and non-ACD general business hot desking extensions are supported for use with the Salesforce.com Connector.
- **Click to dial**  
Employees can save time and avoid misdialed calls by using click to dial to contact customers, co-workers, or extensions.

- **Screen pop**

When an external call arrives, the relevant Salesforce customer record displays on the employee's screen. Immediate access to customer information increases employee productivity and improves customer satisfaction. Screen pop can be configured to work with Automatic Number Identification (ANI), Dialed Number Identification Service (DNIS), or Collect Caller Entered Digits (requires IVR Routing Premium ports).

Pertinent customer information also displays in the Salesforce user interface, for example, Caller Name, Collect Caller Entered digits, ANI, DNIS, and any search results you configure in the Salesforce soft phone layout. For information on configuring soft phone layouts in Salesforce.com, see the *Business Reporter Installation Guide*.

**NOTE:** If Salesforce is not providing Collect Caller Entered Digits in a screen pop, ensure you disable caching if you use Internet Explorer.

- **Call control**

Employees can save time by having all their typical desk phone functions embedded and available directly from the Salesforce user interface. With complete customer information on the screen, employees can quickly access alternate numbers for customers.

- **Call logging capabilities**

Salesforce creates call tasks when employees make or receive internal or external calls. Use call tasks to log caller information including notes, phone numbers, and the date and time of a call. This assists compliance with your business processes by increasing consistency and providing improved reporting.

## SETTING UP A CALL CENTER IN SALESFORCE.COM

To set up a Call Center in Salesforce.com, you must first ensure you are running the Call Center version that is compatible with your version of Contact Center Solutions. Contact Center Solutions Version. 7.1 requires Salesforce Call Center v. 4.0. For more information, see "Upgrading to Call Center v.4.0 in Salesforce.com" on page 313.

Once you are running the appropriate version of the Call Center in Salesforce.com, you may create and configure a Call Center, add users to the Call Center, and configure the soft phone layout from within the Salesforce user interface. Optionally, you can configure Salesforce.com Connector to display caller DNIS information to agents receiving calls. You can also optionally add custom ANI and DNIS fields to call logs to save caller information.

**NOTE:**

- Whenever you make changes to your Call Center settings, you must log out of and back into Salesforce for these changes to take effect.
- Ensure you enable the 'Display mixed content' option in Internet Explorer's local intranet security settings before logging into Salesforce.com.

## UPGRADING TO CALL CENTER V.4.0 IN SALESFORCE.COM

Before creating and configuring a Call Center in Salesforce.com, ensure you are using a version of Salesforce that is compatible with your version of Contact Center Solutions. If you upgrade to Business Reporter Version 7.1 or greater without Salesforce Call Center upgraded to v.4.0, you will not be able to use your Contact Center Salesforce.com Connector.

Upgrading to Salesforce Call Center 4.0 requires you to:

- Determine your current version of Salesforce Call Center
- Import Salesforce Call Center 4.0
- Remove users from a previous Call Center
- Add users to the Call Center

To determine your current version of Salesforce Call Center

1. Double-click the **Salesforce Connector** icon on your desktop.  
If the Salesforce Connector icon is not visible on your desktop, from the **Start menu** select **All Programs=>Mitel=>Salesforce Connector**.
2. In the task bar, right-click the **Contact Center Salesforce.com Connector** icon and select **About**.  
The Salesforce.com About window opens.
3. Under **Call Center Edition**, note the version number listed.  
If the version number is 4.0, you do not need to upgrade your Salesforce Call Center.  
If the version is 3.0, 3.0a, or 3.0b, follow the procedures below to upgrade your Salesforce Call Center to 4.

To import Salesforce Call Center 4.0

1. Log in to **www.salesforce.com**.
2. Click your **user name** and select **Setup** from the drop-down list.
3. Under **App Setup**, click **Customize=>Call Center=>Call Centers**.  
The All Call Centers page opens.
4. Click **Edit** beside Mitel Contact Center Integration to view your Call Center configuration settings.  
**NOTE:** You will have to re-enter these settings in the Mitel Contact Center Integration page when you upgrade to Salesforce Call Center 4.0. We recommend that you print or save this page in order to reference your settings.
5. At the top of the screen, click **All Call Centers** to return to the All Call Centers page.
6. Click **Import=>Browse**, and after **File name** navigate to the Mitel3300.xml file and click **Open**.  
**NOTE:** The file is generally held in C:\Program Files (x86)\prairieFyre Software Inc\CCM\Applications\SalesforceIntegration.  
For E.164 support, import the Mitel3300v4.0a - E164.xml file.
7. Click **Import**.
8. On the **Call Center page**, click **Edit** beside the new Call Center.
9. Using the information you saved or printed in step 4, enter the IP/Name of your Enterprise Server and other configuration settings for the Call Center.
10. Click **Save**.



To remove a user from a Call Center

1. In Salesforce.com, click your **user name** and select **Setup** from the drop-down list.
2. Under **App Setup**, click **Customize=>Call Center=>Call Centers**.  
The All Call Centers page opens.
3. In the **All Call Centers page**, select the Call Center from which you want to remove users.
4. At the bottom of the page, click **Manage Call Center Users**.  
The Manage Users page opens.
5. Select the checkboxes beside the Call Center users you wish to remove and click **Remove Users**.

To add a user to a Call Center

1. In Salesforce.com click, your **user name** and select **Setup** from the drop-down list.
2. Under **App Setup**, click **Customize=>Call Center=>Call Centers**.  
The All Call Centers page opens.
3. In the **All Call Centers page**, select the Call Center to which you want to add users.
4. At the bottom of the page, click **Manage Call Center Users**.  
The Manage Users page opens
5. Click **Add More Users**.  
The Search for New Users page opens.
6. Specify your search parameters using the drop-down list for each search field and click **Find**.  
**NOTE:** To see all users, do not select any parameters for the search fields.
7. Select the checkboxes for the users you want to add to the Call Center and click **Add to Call Center**.  
**NOTE:** Users can only be assigned to one Call Center at a time. Users who already belong to a Call Center are excluded from search results.

## CREATING CALL CENTERS IN SALESFORCE.COM

To use Salesforce.com Connector, you must first create a Call Center. For more information on selecting call center configuration options, see Table 25.

**NOTE:** If you have imported your Call Center as part of upgrading to the latest Call Center version of Salesforce.com, you can skip the following procedure.

To create a Call Center in Salesforce.com

1. In Salesforce.com, click your user name and select **Setup**.
2. Under **App Setup**, click **Customize=>Call Center=>Call Centers**.  
The All Call Centers page opens.  
**NOTE:** If the Introducing Call Center Edition splash page opens, click **Continue**.
3. Click **Import=>Browse** and, after **File name**, navigate to the **Mitel3300.xml** file and click **Open**.  
**NOTE:** This file is generally held in C:\Program Files (x86)\prairieFyre Software Inc\CCM\Applications\SalesForceIntegration\  
For E.164 support, import the Mitel3300v4.0a - E164.xml file.

4. Click **Import**.
5. In front of the Call Center's name, click **Edit**.  
The Call Center Edit page opens.  
**NOTE:** We recommend you do not alter any of the general information fields.
6. Under **CTI Server Info**, after **IP/Name**, type the IP address or name of your Enterprise Server.
7. After **Use SSL**, type **Yes** or **No**.
8. Under **Advanced Queries**, after **Search by IVR Routing Collected Digits**, type the object and the field to search using collected digits.
9. After **Search Cases by ANI**, type **Yes** or **No**.
10. Under **If Records are Found for both ANI and DNIS**, after **Open the ANI Records**, type **Yes** or **No**.
11. After **Open the DNIS Records**, type **Yes** or **No**.
12. Under **If Records are Found for both ANI and/or DNIS and Advanced Queries**, after **Open the ANI and/or DNIS Records**, type **Yes** or **No**.
13. After **Open the Advanced Queries Records**, type **Yes** or **No**.  
**NOTE:**
  - Whether you open records matching the ANI or the DNIS depends on the information you entered in **If Records are Found for both ANI and DNIS**.
  - Whether you open records matching IVR Routing Collected Digits or records attached to Contact or Account objects matching the ANI depends on the information you entered under **Advanced Queries**.
14. Under **New Lead Button**, after **Enable**, type **Yes** or **No**.
15. After **DNIS (custom field ID)**, type the DNIS custom field ID.
16. Under **Dialing Options**, after **Outside Prefix**, type the number required to make an outbound call.
17. After **Long Distance Prefix**, type the digit or digits to be appended to the front of a long distance number.
18. After **International Prefix**, type the digit or digits to be appended to the front of an international number.
19. After **Local Area Codes (comma-separated)**, type the area code(s) that do not require the long distance prefix.  
**NOTE:** To set the long distance prefix to always dial first, do not configure local area codes.
20. Under **Call Log Options**, after **Save Extra Information to CallLog**, type **Yes** or **No**.
21. After **Create CallLogs For All Outbound Calls**, type **Yes** or **No**.
22. If you want to enable E.164 support:
  - After **Search Enabled**, type **Yes**.
  - After **Local Country Code**, type your local E.164 local country code.
  - After **Long Distance Call Prefix**, type the digit or digits to be appended to the front of a long distance number.
  - After **International Call Prefix**, type the digit or digits to be appended to the front of an international number.
23. Click **Save**.

## CONFIGURING CALL CENTERS IN SALESFORCE.COM

Table 25 describes configurable options for creating a Call Center in Salesforce.com. The configuration options that you choose determine the Contact Center Salesforce.com Connector's behavior during call handling and help streamline your contact center operations. The table lists configurable options, the default setting for each option, the purpose each configuration option serves in the Call Center setup, and our recommendations for configuring the option.

Table 25: Configuration options for Salesforce Call Centers

SETTING	OPTION	DEFAULT SETTING	PURPOSE	RECOMMENDATION
General Information	Internal Name	MitelContactCenter IntegrationV4	Identifies the call center object internally	Optionally, leave this as the default  <b>NOTE:</b> If using multiple Call Centers, each Call Center must have a unique internal name
General Information	Display Name	Mitel Contact Center Integration v4.0	Identifies the Call Center object in Salesforce.com  Also used for readability and administration	Set the display name as required.  This name will display in the agent's Salesforce.com profile for the associated Call Center and in the Call Center list.
General Information	Description	Mitel Contact Center integration v4.0 (developed by Mitel Networks)	Describes the purpose of the Call Center	Optionally, leave this as the default
General Information	CTI Connector ProgId	Mitel3300Adapter..1	Represents the base Component Object Model class of the customized Contact Center Salesforce.com Connector	<b>CAUTION:</b> Never change this option as this could cause functionality issues within the Contact Center Salesforce.com Connector.

Table 25: Configuration options for Salesforce Call Centers (continued)

SETTING	OPTION	DEFAULT SETTING	PURPOSE	RECOMMENDATION
General Information	CTI Connector ProgId	4.0	Represents the Contact Center Salesforce.com Connector Toolkit against which the Connector has been built  Identifies the Salesforce API version against which the Contact Center Salesforce.com Connector has been built	<b>CAUTION:</b> Never change this option as this could cause functionality issues within the Contact Center Salesforce.com Connector.
CTI Server Info	IP/Name	Blank	Contains the IP address of the Enterprise Server  Points the Contact Center Salesforce.com Connector to the Enterprise Server	This option can either be the IP address of the server or the DNIS name  <b>NOTE:</b> We recommend using an IP address instead of a DNS name or DNS entry.
CTI Server Info	Use SSL	No	Specifies if the client uses SSL to connect to the Enterprise Server	Set this option to <b>Yes</b> if SSL is enabled on the Enterprise Server.

Table 25: Configuration options for Salesforce Call Centers (continued)

SETTING	OPTION	DEFAULT SETTING	PURPOSE	RECOMMENDATION
Advanced Queries	Search by IVR Routing Collected Digits	Case.CaseNumber	Specifies if the Salesforce.com object (case, contact, lead) and the field (phone, description, ID) will search using collected digits from IVR Routing	By default this option searches for a case that has a CaseNumber equal to the collected digits.  If you are running Salesforce in conjunction with IVR Routing and you have your call center configured to search the Salesforce database by Collected Digits, you must have 'Send to agent desktop' enabled for the 'LastCollectedDigits' variable.
Advanced Queries	Search Cases by ANI	No	Specifies if the Contact Center Salesforce.com Connector will open records using the ANI as the search value	If set to <b>No</b> , the Contact Center Salesforce.com Connector stops searching records based on the customer phone number.
If Records are Found for both ANI and/or DNIS	Open the ANI Records	Yes	Specifies if the Contact Center Salesforce.com Connector should open records using the ANI as the search value	If set to <b>No</b> , the Contact Center Salesforce.com Connector stops searching records based on the customer phone number.

Table 25: Configuration options for Salesforce Call Centers (continued)

SETTING	OPTION	DEFAULT SETTING	PURPOSE	RECOMMENDATION
If Records are Found for both ANI and/or DNIS	Open the DNIS Records	Yes	Specifies if the Contact Center Salesforce.com Connector should open records using the DNIS as a search value	If set to <b>No</b> , the Contact Center Salesforce.com Connector stops searching records based on the customer dialed number.
If Records are Found for both ANI and/or DNIS and Advanced Queries	Open the ANI and/or DNIS Records	Yes	Specifies if the Contact Center Salesforce.com Connector opens records found using ANI and/or DNIS when results are also found using an Advanced Query	If set to <b>Yes</b> , this option displays records in the Contact Center Salesforce.com Connector that have been found using ANI and/or DNIS.
If Records are Found for both ANI and/or DNIS and Advanced Queries	Open the Advanced Queries Records	Yes	Specifies if the Contact Center Salesforce.com Connector opens records found using the Advanced Query when results are also found using customer ANI and/or DNIS	If set to <b>Yes</b> , this option displays records in the Contact Center Salesforce.com Connector that have been found using Advanced Query.

Table 25: Configuration options for Salesforce Call Centers (continued)

SETTING	OPTION	DEFAULT SETTING	PURPOSE	RECOMMENDATION
New Lead Button	Enable	No	Enables or disables the New Lead button within the Contact Center Salesforce.com Connector	<p>If set to <b>Yes</b>, a yellow button for New Lead displays in the Contact Center Salesforce.com Connector when you are on a call with a customer.</p> <p>Enabling this option will open the New Lead page in Salesforce.com or start a New Lead workflow if one exists.</p>
New Lead Button	DNIS (custom field ID)	Blank	Specifies the New Lead field into which the DNIS information is automatically entered	<p>Find this value by editing the field within Salesforce.com and copying the ID from the URL bar.</p> <p>The custom field ID begins immediately after <b>salesforce.com</b> and ends before the <b>?</b> in the URL.</p> <p>For more information, see "Configuring the New Lead button to display DNIS information" on page 328.</p>
E.164 Support	Search Enabled	No	Enables searching using E.164 phone numbering format	Yes, if using E.164; otherwise No
E.164 Support	Local Country Code	31	Specifies the E.164 country code (example 31 for Netherlands)	Change to your E.164 local country code



Table 25: Configuration options for Salesforce Call Centers (continued)

SETTING	OPTION	DEFAULT SETTING	PURPOSE	RECOMMENDATION
E.164 Support	Long Distance Call Prefix	00	Specifies the prefix required to dial long distance numbers in an E.164 country	Specify a long distance prefix for click to dial functionality to work correctly. To specify, type the digit or digits to be appended to the front of a long distance number
E.164 Support	International Call Prefix	00	Specifies the prefix required to dial international numbers in an E.164 country	Specify an international prefix for click to dial functionality to work correctly. To specify, type the digit or digits to be appended to the front of an international phone number
Dialing Options	Outside Prefix	9	Specifies the outbound dialing digit(s) that your Mitel telephone system requires	Specify an outside prefix for click to dial functionality to work correctly. To specify, type the digit or digits to be entered when making an outbound call.  For example, when an agent clicks 613-599-0045 the Contact Center Salesforce.com Connector will automatically dial 96135990045.

Table 25: Configuration options for Salesforce Call Centers (continued)

SETTING	OPTION	DEFAULT SETTING	PURPOSE	RECOMMENDATION
Dialing Options	Long Distance Prefix	1	Specifies the prefix required to dial long distance numbers	<p>Specify a long distance prefix for click to dial functionality to work correctly. To specify, type the digit or digits to be appended to the front of a long distance number.</p> <p>For example, when an agent clicks 416-599-0045 the Contact Center Salesforce.com Connector will automatically dial 914165990045.</p>
Dialing Options	International Prefix	011	Specifies the prefix required to dial international numbers	<p>Specify an international prefix for click to dial functionality to work correctly. To specify, type the digit or digits to be appended to the front of an international phone number.</p> <p>For example, when an agent clicks a number with a country code that does not correspond to the regional settings (44-770-954-321) the Contact Center Salesforce.com Connector will automatically dial 901144770954321.</p>

Table 25: Configuration options for Salesforce Call Centers (continued)

SETTING	OPTION	DEFAULT SETTING	PURPOSE	RECOMMENDATION
Dialing Options	Local Area Codes	613,819	Specifies your local area codes	<p>Specify local area codes for click to dial functionality to work correctly. To specify, type the area code or area codes for which the long distance prefix is not required.</p> <p><b>NOTE:</b> If your agents are in multiple geographic locations each location must have its own Call Center with applicable dialing options.</p>
Call Log Options	Save Extra Information To CallLog	No	Saves or adds extra ANI or DNIS information to the call log	<p>If set to <b>Yes</b>, the call log must contain the following custom fields:</p> <p>ANI: <b>Field</b> name must be ANI, <b>Type</b> must be Text</p> <p>DNIS: <b>Field</b> name must be DNIS, <b>Type</b> must be Text.</p> <p>Ensure that all agents have write access to these fields.</p> <p>For more information, see "Adding custom ANI and DNIS fields to Call Logs" on page 329.</p>
Call Log Options	Create CallLogs For All Outbound Calls	No	<p>Specifies if a call log should be created on unanswered outbound calls</p> <p>Specifies that if an agent makes an unanswered outbound call, a call log is still created</p>	<p>This option may be required for continued functionality when switching from traditional PRI trunks to SIP trunks.</p> <p><b>CAUTION:</b> Setting this to <b>Yes</b> when a Call Center is already in operation will impact your Salesforce.com task reporting.</p>

## ADDING USERS TO CALL CENTERS

Salesforce users must be added to a Call Center before they can use Salesforce Call Center Edition features. You must also add users to a Call Center to enable the Contact Center Salesforce.com Connector to display in the Salesforce.com page upon login.

To add a user to a Call Center

1. In Salesforce, click your user name and select **Setup=>Customize=>Call Center=>Call Centers**.  
The All Call Centers page opens.
2. Select the Call Center to which you want to add users.  
The Call Center Detail page opens.
3. At the bottom of the page, click **Manage Call Center Users**.  
The Manage Users page opens.
4. Click **Add More Users**.  
The Search for New Users page opens.
5. Specify your search parameters using the drop-down list for each search field and click **Find**.  
**NOTE:** To see all users, do not select any parameters for the search fields.
6. Select the checkboxes beside the users you want to add to the Call Center and click **Add to Call Center**.  
**NOTE:** You can only assign users to one Call Center at a time. Users who already belong to a Call Center are excluded from search results.

## CONFIGURING SOFT PHONE LAYOUTS

Configuring soft phone layouts enables you to control the information that displays in a screen pop. Once you have configured soft phone layouts, you can assign them to agents. Assigning customized soft phone layouts increases service efficiency by giving agents access to the most pertinent customer information.

**NOTE:** For more detailed information on the options for configuring soft phone layouts, click **Help about this section** on the **SoftPhone Layout Edit** page in Salesforce.com.

To configure a soft phone layout

1. In Salesforce.com, click your user name and select **Setup** from the drop-down list.
2. Under **App Setup**, click **Customize=>Call Center=>SoftPhone Layouts**.
3. To create a new soft phone layout, click **New**.
4. To modify a soft phone layout, click **Edit** beside the existing layout's name.  
The SoftPhone Layout Edit page opens.
5. After **Name**, type or modify the name for the soft phone layout.
6. To make this soft phone layout the default layout, select the **Is Default Layout** checkbox.
7. After Select Call type, select one of the following call types from the drop-down list:
  - Internal
  - Inbound
  - Outbound

8. After **Caller ID, Dialed Number**, click **Edit**.
9. To add or remove a call-related field, in the **Available** or **Selections** pane, select the field and click **Add** or **Remove**.
10. To change the order of call-related fields, in the **Selections** pane, select the field and click **Up** or **Down**.
11. After **Account, Contact, Lead**, click **Add/Remove Objects**.
12. To add or remove an object, in the **Available** or **Selections** pane, select the object and click **Add** or **Remove**.
13. To change the order of objects, in the **Selections** pane, select the object and click **Up** or **Down**.
14. For each object, after each **If single <name of object> found, display:**, click **Edit**.
15. To display objects in the soft phone layout if a single record is found, in the **Available** pane, select the field(s) and click **Add**.
16. To remove objects from display in the soft phone layout if a single record is found, in the **Selections** pane, click **Remove**.
17. To change the order in which objects display, in the **Selections** pane, select the object and click **Up** or **Down**.
18. At the top of the page, click **Save**.  
**NOTE:** To configure soft phone layouts for additional call types, repeat steps 7-18 for each type.

To configure screen pop settings for a soft phone

1. Under **Screen Pop Settings:**, after **Screen pops open within:**, click **Edit** and select a screen pop location.
2. After **No matching records:**, click **Edit** and select a screen pop location.
3. If you select **Pop to new**, select a page from the drop-down list.
4. If you select **Pop to Visualforce page**, type the name of the page in the field provided or click the **Lookup** button to search for a page.
5. After **Single-matching record:**, click **Edit** and select a screen pop location.
6. After **Multiple-matching records:**, click **Edit** and select a screen pop option.
7. At the top of the page, click **Save**.

To assign a soft phone layout to an agent

1. In Salesforce.com, click your user name and select **Setup**.
2. Under **App Setup**, click **Customize=>Call Center=> SoftPhone Layouts**.
3. Click **SoftPhone Layout Assignment**.
4. From the drop-down lists, select a soft phone layout for each agent.  
**NOTE:** The list of agents only includes those who have been added to a Call Center.
5. Click **Save**.

## CONFIGURING THE NEW LEAD BUTTON TO DISPLAY DNIS INFORMATION

You can configure the New Lead button to display caller DNIS information to agents receiving calls.

To configure the New Lead button to display DNIS information, you must

- Add the DNIS custom field to the Leads form in Salesforce
- Configure Salesforce to display a New Lead button when calls are received

To add the DNIS custom field to the Leads form in Salesforce

1. In Salesforce.com, click your username and select **Setup**.
2. Under **App Setup**, click **Customize=>Leads=>Fields**.  
The Lead Fields page opens.
3. Under **Lead Custom Fields & Relationships**, click **New**.  
The New Custom Field page opens.
4. Under Data Type, select **Text** and click **Next**.
5. After **Field Label**, type a label for the DNIS custom field.
6. After **Length**, type the number of characters permitted in the DNIS custom field.
7. After Field Name, type **DNIS**.
8. Click **Next**.
9. Under **Field-Level Security for Profile**, select the page layouts to which the DNIS custom field will be added.
10. Click **Next**.
11. Click **Save**.  
The Lead Fields page opens.
12. Under **Lead Custom Fields & Relationships**, select the DNIS custom field.
13. Take note of the URL that displays in your web browser. This is the DNIS custom field information required in the following procedure.  
For example, in the URL  
<https://na7.salesforce.com/00Nd0000005FhBE?setupid=LeadFields>, the DNIS custom field information is 00Nd0000005FhBE.

To configure Salesforce to display a New Lead button when calls are received

1. In Salesforce.com, click your username and select **Setup**.
2. Under **App Setup**, click **Customize=>Call Center**.  
The Call Center page opens.
3. Under **Call Center**, select **Manage call centers**.  
The All Call Centers page opens.
4. Under **Action**, for the appropriate Call Center, click **Edit**.
5. Under **New Lead Button**, after **Enable**, type **Yes**.
6. After **DNIS (custom field ID)**, enter the DNIS custom field information as noted in the previous procedure.
7. Click **Save**.

## ADDING CUSTOM ANI AND DNIS FIELDS TO CALL LOGS

Adding custom ANI and DNIS fields to call logs saves a caller's phone number, or the number they dialed to reach your organization, within Salesforce call logs. Adding ANI and DNIS fields enables you to collect additional customer information by customizing your call logs in Salesforce.

**NOTE:** To see ANI and DNIS information in call logs, in the Call Center setup page under Call Log Options, you must set the 'Save Extra Information to CallLog' field to 'Yes'. For more information, see "Configuring Call Centers in Salesforce.com" on page 317.

To add a custom ANI and DNIS field to a call log

1. In Salesforce.com, click your user name and select **Setup**.
2. Under **App Setup**, click **Customize=>Activities=>Activity Custom Fields**.  
The Activity Fields page opens.
3. Click **New**.  
The New Custom Field page opens.
4. Under **Data Type**, select **Text** and click **Next**.
5. After **Field Label**, type a name for this field as it will appear in the call log.  
**NOTE:** We recommend using 'ANI' or 'DNIS' for ease of identification.
6. After **Length**, type the maximum length for the ANI or DNIS field.
7. After **Field Name**, type **ANI** or **DNIS**, depending on the field type you are adding.  
**NOTE:** You must populate this field with "ANI", or "DNIS", only.
8. Click **Next**.
9. Under **Field-Level Security**, select the profiles that will be able to see the ANI or DNIS field.
10. Click **Next**.
11. If you are finished adding fields, click **Save**.
12. To add an additional field to a Salesforce call log, click **Save & New** and repeat steps 4-10.  
**NOTE:** A call log can only have a single ANI or DNIS field. Clicking Save & New enables you to create a DNIS field after creating an ANI field or an ANI field after creating a DNIS field.
13. To make these changes take effect, log out of Salesforce and log back in.

## LOGGING INTO YOUR CONTACT CENTER SALESFORCE.COM CONNECTOR

The Contact Center Salesforce.com Connector refers to the Contact Center Softphone application as it appears in Salesforce.com. To integrate with Salesforce.com, you must first open Contact Center Client and load the Contact Center Salesforce.com Connector toolbar. This sets the MiTAI monitor on the extension and indicates to the telephone system that the extension is ready to make and receive calls. Following this action, you can minimize Contact Center Client and log in, log out, and perform all call control activities from within the Salesforce.com client.

### NOTE:

- The Salesforce.com Connector must be running before logging into the Salesforce.com website. Before logging into the Salesforce.com website, verify the Salesforce.com Connector is running in the system tray on your computer (next to the clock and volume controls). If the icon is displayed, the Salesforce.com Connector is open.
- If you are using a desk phone, you do not need to open Contact Center Client before loading the Contact Center Salesforce.com Connector toolbar.
- Your login for Salesforce.com is different than the login used for the Contact Center Salesforce.com Connector.
- The Contact Center Salesforce.com Connector is located in the left pane of the Salesforce user interface and appears only when you are assigned to Call Center in Salesforce.

To log into your Contact Center Salesforce.com Connector

1. Start Internet Explorer and type **<http://login.salesforce.com/>**.
2. In the Login pane, type your Salesforce.com **User Name** and **Password**, and click **Login**. See Figure 47.

**Figure 47: Salesforce.com login pane**

After you log in, the Contact Center Salesforce.com Connector will initialize in the top-left section of the Salesforce.com webpage. (See Figure 48.)



3. If you receive a message asking if you want to see the page content that was delivered securely, click **No**.  
**NOTE:** Clicking Yes or closing the window will disable the Contact Center Salesforce.com Connector.

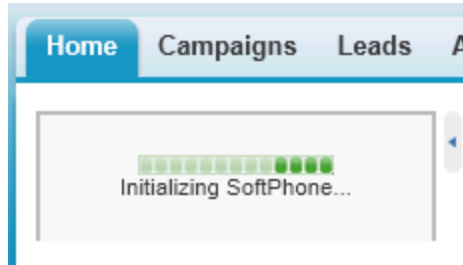


Figure 48: The initializing pane

4. Type your Call Center **Username**, **Password**, **Agent ID**, and **Extension**.  
**NOTE:** If you do not have an agent ID associated with your employee ID, you will not have ACD functionality. However, you can continue to log in and use your desk phone or soft phone from within Salesforce for non-ACD calls.
5. To set Salesforce to remember your Contact Center Salesforce.com Connector login credentials every time you log into Salesforce, enable the **Remember me** check box. See Figure 49.

A screenshot of a login form. The form is contained within a larger window that has a navigation bar at the top with tabs labeled 'Home', 'Campaigns', 'Leads', and 'A'. The login form itself has the following fields and elements:

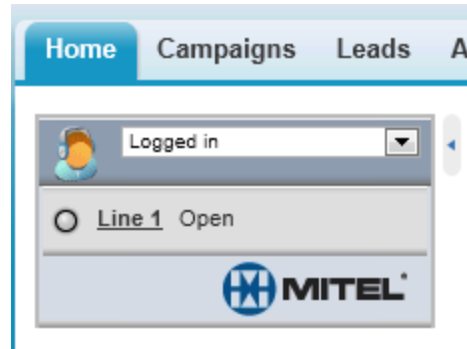
- Username:** A text input field containing the value 'james'.
- Password:** A password input field represented by a series of black dots.
- Agent ID:** A text input field containing the value '2003'.
- Extension:** A text input field containing the value '7500'.
- Remember me:** A checkbox that is checked, with the text 'Remember me' next to it.
- Log In:** A green button with a white telephone handset icon and the text 'Log In'.
- Mitel Logo:** The Mitel logo, consisting of a blue square with a white 'M' and the word 'MITEL' in blue capital letters.

Figure 49: The login pane

6. Click **Log In**.

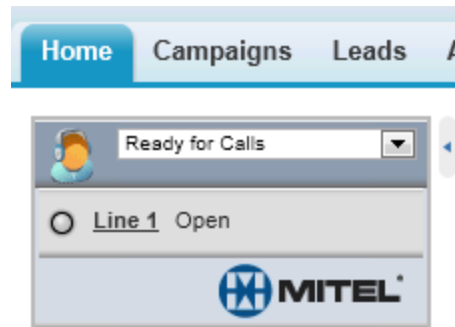
The Contact Center Salesforce.com Connector will display 'Logged In' when you are logged in as an ACD agent.

See Figure 50.



**Figure 50: The 'Logged In' status display**

If no agent ID was provided with the login credentials and you are not logged in as an ACD agent, the Contact Center Salesforce.com Connector functions as a soft phone and displays 'Ready for Calls'. (See Figure 51.)



**Figure 51: The 'Ready for Calls' status display**

To automatically log into your Call Center when logging into Salesforce

1. In Salesforce, click your username and select **Setup**.
2. Under **Personal Setup**, select **Call Center Settings => My SoftPhone Settings**.
3. Enable the **Automatically log into your call center when logging into salesforce.com** checkbox.
4. Click **Save**.

## SALESFORCE.COM CONNECTOR FUNCTIONALITY

### NOTE:

- If using a true soft phone, you must first open Contact Center Client, click View => Soft phone and configure soft phone options. You must keep Contact Center Client running in the background as you use Salesforce. If you are using a desk phone there is no need to open Contact Center Client.
- Caller ANI/DNIS information is not included when you transfer a call between telephone systems. When you transfer a call between telephone systems, the ANI/DNIS information that displays in the screen pop for the receiving agent is that of the transferring agent, not the caller.

You can use Salesforce.com Connector to perform the following functions:

- **Dial phone numbers**

Dial a phone number by clicking Line 1, entering the number into the Contact Center Salesforce.com Connector and clicking Dial. (See Figure 52.)

**NOTE:** Default digit lengths that determine whether a call is recognized as internal or external in reports and the 'My Calls Today' interface can be modified in YourSite Explorer=>Media servers in the 'Min/Max digits to dial locally' procedural steps. The default values are set to < 10 digits in length to signify an internal number and > = 10 digits in length to signify an external number.

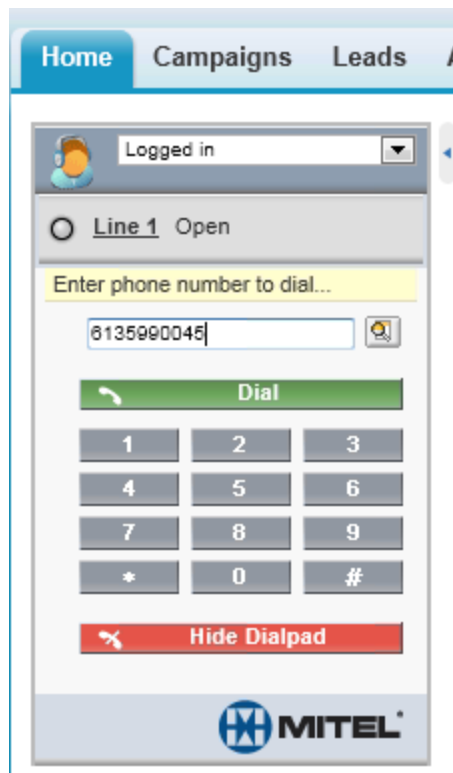


Figure 52: Dialpad

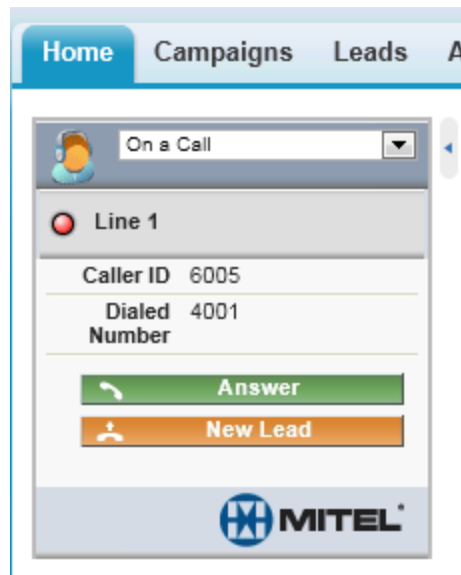
Alternatively, dial by clicking the icon next to a phone number associated with a contact, lead, activity, account, or any other phone field you have created. (See Figure 53.) ACD agents can dial by clicking on available employee or extension links. You can also dial numbers using the dial pad on your desk phone.

Phone	<u>(613) 599-0045</u> 
Mobile	
Fax	

**Figure 53: The icon to dial a contact, lead, activity, account, or other phone field**

- **Answer phone calls**

Answer a phone call by clicking Answer or using your desk phone. If the caller's number is in your Salesforce database, their customer information page appears. Salesforce.com Connector supports one incoming line per user. (See Figure 54.)



**Figure 54: Answer**

- **Place callers on hold**

Place callers on hold by clicking Hold. Retrieve the call by clicking Retrieve from Hold. (See Figure 55.)

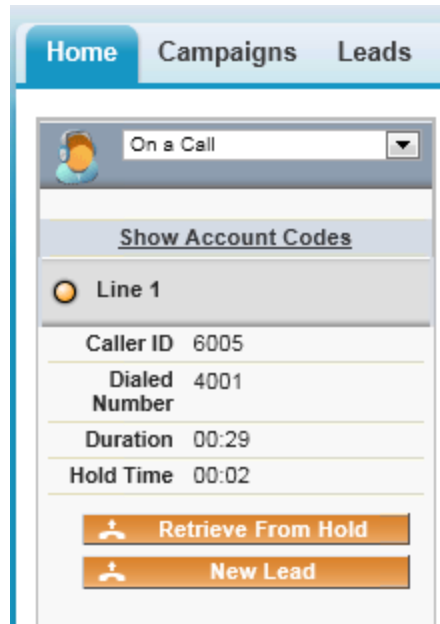


Figure 55: Retrieve From Hold

- **Perform one-step transfers (cold transfers)**

A one-step transfer (cold transfer) is when you transfer a caller without speaking to the third party destination first. Transfer a call directly to another number without speaking to the third party by clicking Transfer, entering the third party's phone number or extension, and clicking One Step Transfer to complete the transfer. (See Figure 56.)

**Figure 56: One-Step Transfer**

- **Perform initiated transfers (warm transfer)**

An initiated transfer (or warm transfer) is when you place a caller on hold and speak to the third party destination before transferring the call. To transfer a call directly to another number and speak with the third party before transferring the call, click Initiate Transfer. Speak with the third party and once the call is ready to be transferred click Complete Transfer to connect the caller and remove yourself from the call.

- **Initiate conference calls**

Initiate a conference call by clicking the Conference button while on a call, entering the phone number to join to the conference and clicking Initiate Conference. Your caller is placed on hold while you dial the third party to be added to the call. (See Figure 57.)

Home Campaigns Leads A

On a Call

Show Account Codes

Line 1

Caller ID 6005

Dialed Number 4001

Duration 01:53

Enter phone number to conference...

Initiate Conference

1 2 3

4 5 6

7 8 9

\* 0 #

Cancel Conference

Figure 57: Initiate Conference

Once you have connected to the third party number, click Complete Conference to place all three parties on the same line. (See Figure 58.)

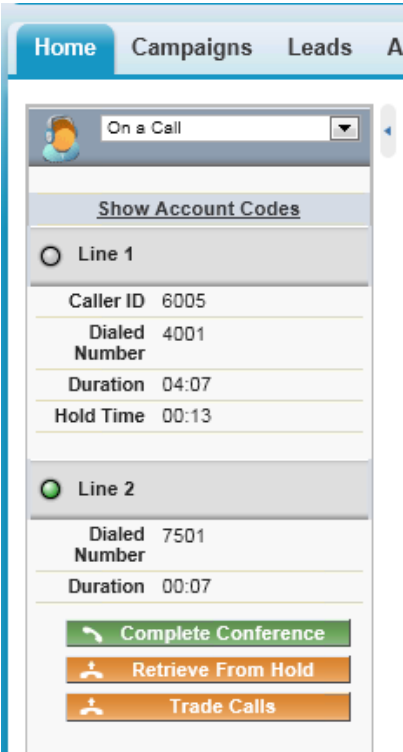
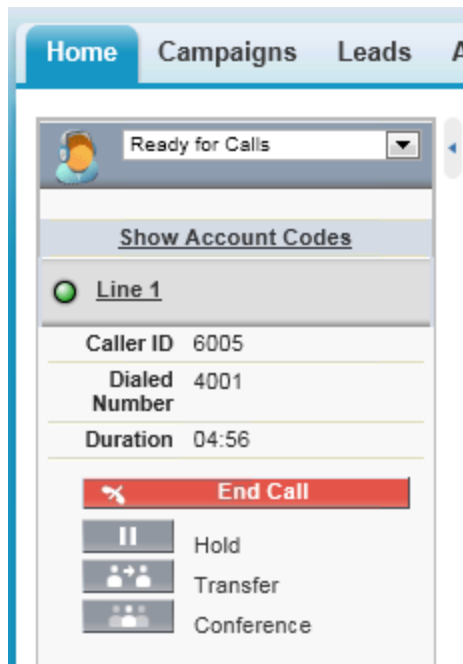


Figure 58: Complete Conference



- **Ending calls**

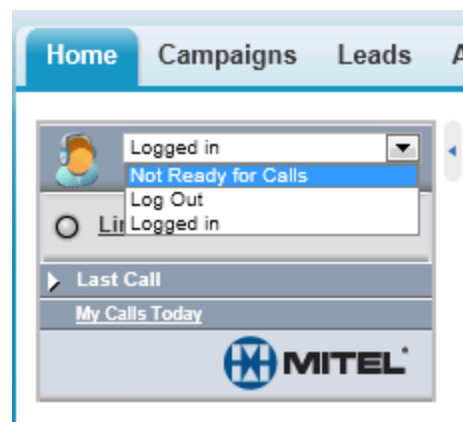
End a call by clicking End Call. (See Figure 59.)



**Figure 59: End Call**

- **Set make busy codes (ACD agents only)**

To set a Make Busy code, click on the arrow in the agent state bar and select Not Ready for Calls. (See Figure 60.) Make Busy codes are entered in YourSite Explorer and should be maintained by your YSE Administrator.



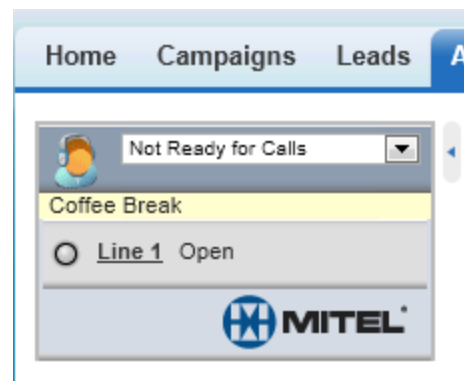
**Figure 60: Not Ready for Calls**

Select from the list of available Make Busy codes. (See Figure 61.)



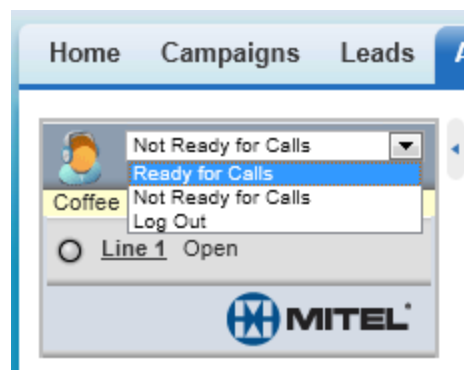
**Figure 61: Make Busy codes**

You will now appear as unavailable for calls. (See Figure 62.)



**Figure 62: Agent Status**

Remove the Make Busy code and make yourself available for calls again by clicking Ready for Calls in the agent state bar. (See Figure 63.)



**Figure 63: Ready for Calls**

- **Create new leads while on calls**

Once you have answered an internal/external call, the Contact Center Salesforce.com Connector will display a New Lead button. Click the New Lead button to open a new lead and auto-populate the Lead phone number field with the caller's phone number. (See Figure 64.)

The screenshot displays the MITEL Salesforce.com Connector interface. At the top, there are tabs for 'Home', 'Campaigns', 'Leads', and 'A'. Below the tabs, a status bar shows 'On a Call' with a dropdown arrow. A 'Show Account Codes' link is visible. The main section is titled 'Line 1' and contains call details: 'Caller ID 6005', 'Dialed Number 4001', and 'Duration 00:27'. Below these details are four buttons: 'End Call' (red), 'New Lead' (orange), 'Hold' (grey), and 'Transfer' (grey). A 'Conference' button is also present. A 'Current Call Log' section is expanded, showing a message 'Log will auto-save when call ends.' and a 'Subject' field with the value 'Call 4/25/2012 11:38 AM'. A 'Related To' field is also present with a placeholder text. A 'Comments' text area is at the bottom. The MITEL logo is in the bottom right corner.

Figure 64: New Lead

- **Relate Salesforce records to a call activity task**

You can associate up to two records to a call. From the Related To list in the call log area, select the Account, Opportunity, or Case to which you will associate the call. To associate a Contact or Lead to the call, select it from the Name drop-down list in the call log area. (See Figure 65.)

The figure displays two side-by-side screenshots of the Salesforce interface, specifically the 'On a Call' window. Both screenshots show the 'Current Call Log' section with a yellow banner indicating 'Log will auto-save when call ends.' The left screenshot shows the 'Subject' field with the value 'Call 4/25/2012 11:38 AM', the 'Name' field with 'Contact: Mr. Curtis Brunet', and the 'Related To' field with 'Account: Systems Engineer'. The right screenshot shows the same interface but with the 'Related To' field set to 'Account: Systems Engineer'.

**Figure 65: Call Log and Related To**

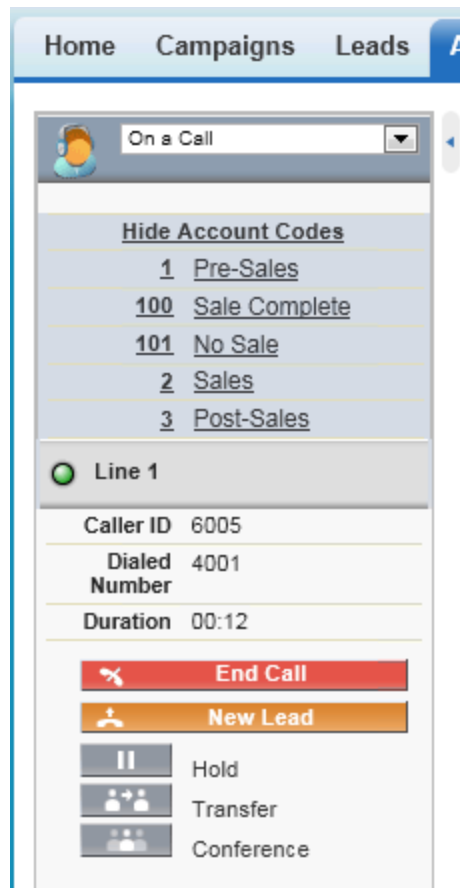
**NOTE:** The Related To record cannot be selected when Name is set to a Lead.

- **Search on outbound calls**

Search results for outbound calls display in the Contact Center Salesforce.com Connector user interface, but do not generate screen pops.

- **Tag calls with account codes**

Click on Show Account Codes to display a list of available Account Codes, then click on the account code link that you want to apply. (See Figure 66.)



**Figure 66: Account Codes**

- **Set wrap-up codes (ACD agents only)**

When an external ACD call ends, select an appropriate Wrap-up code (also known as a Call Classification code) from the Call Result list of the Current Call Log window.

- **Attach comments to a call**

Attach comments to a call by typing text into the Comments field. When the call ends, the comments are automatically saved. (See Figure 67.)

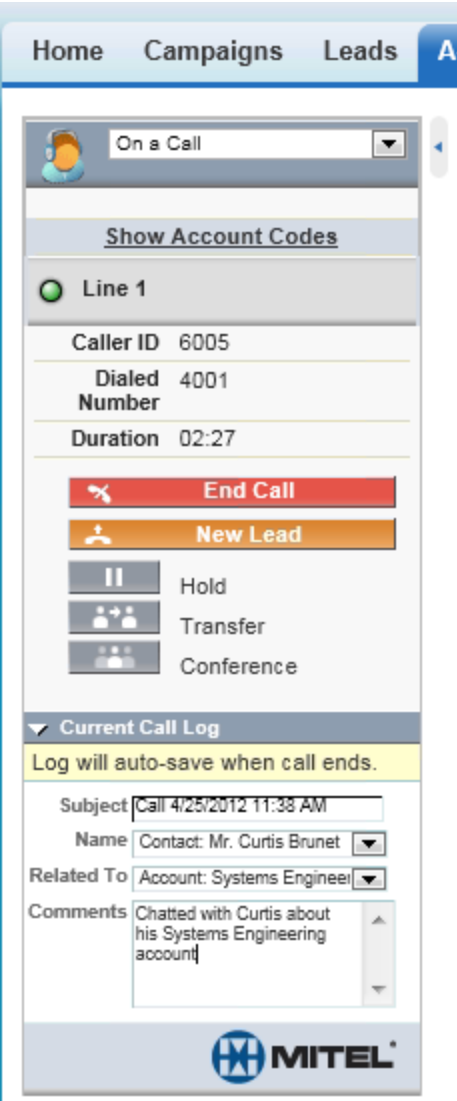


Figure 67: Attach comments to call

Call log information can be accessed from either the My Calls Today section of the soft phone or by scrolling to the Active History section of an object in Salesforce. (See Figure 68.)

Activity History			Log A Call	Mail Merge	Send An Email
Action	Subject	Related To			
<a href="#">Edit</a>   <a href="#">Del</a>	<a href="#">Call 4/25/2012 12:12 PM</a>				
<a href="#">Edit</a>   <a href="#">Del</a>	<a href="#">Call 4/25/2012 12:11 PM</a>				
<a href="#">Edit</a>   <a href="#">Del</a>	<a href="#">Call 4/25/2012 11:38 AM</a>	<a href="#">Systems Engineering</a>			
<a href="#">Edit</a>   <a href="#">Del</a>	<a href="#">Call 4/25/2012 10:45 AM</a>	<a href="#">Systems Engineering</a>			
<a href="#">Edit</a>   <a href="#">Del</a>	<a href="#">Call 4/25/2012 10:26 AM</a>	<a href="#">Systems Engineering-</a>			

Figure 68: Activity History

- **View recent call activity**

Access recent call activities by clicking Last Call or My Calls Today. To edit one of the last call activities created, click the Last Calls arrow in the Contact Center Salesforce.com Connector and enter the new comments you would like to add before clicking the Save button. Clicking My Calls Today will take you to the My Calls Today webpage where you can view all Call Activities that have been created for the entire day. (See Figure 69.)

**NOTE:** If call duration is not accurately displayed in My Calls Today, run Windows Update and install the most recent updates on your work stations. For more information on running Windows Update, see the *Business Reporter Installation Guide*.

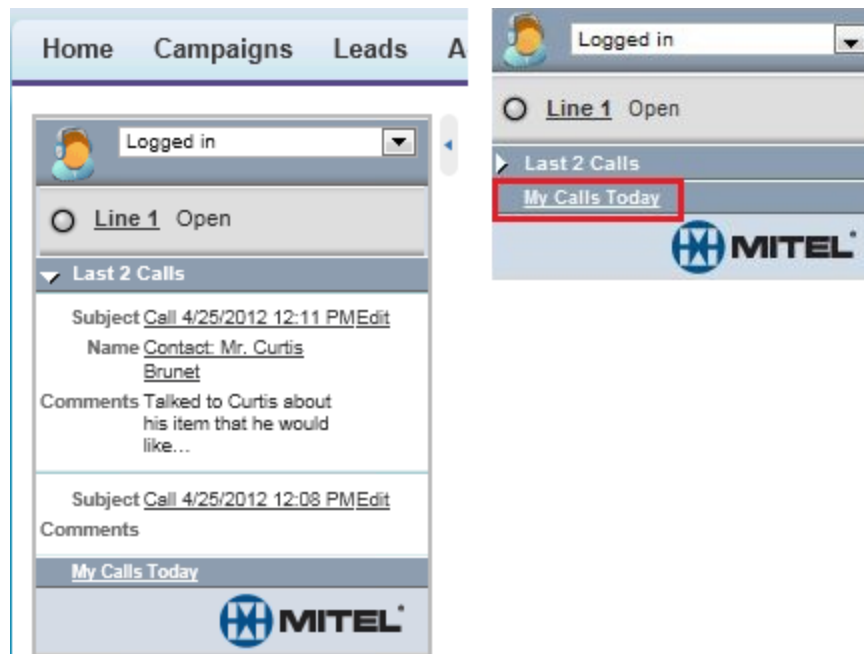


Figure 69: Call history

- **Edit completed call logs**

Call logs are automatically created for all external calls an agent makes or receives. Edit a call log by clicking on the link to the call. (See Figure 70.)

Activity History						
<a href="#">Log A Call</a>   <a href="#">Mail Merge</a>   <a href="#">Send An Email</a>   <a href="#">Request Update</a>   <a href="#">View All</a>						
Action	Subject	Related To	Task	Due Date	Assigned To	Last Modified Date/Time
<a href="#">Edit</a>   <a href="#">Del</a>	<a href="#">Call 4/25/2012 12:12 PM</a>		✓	25/04/2012	<a href="#">James Renaud</a>	25/04/2012 12:17 PM
<a href="#">Edit</a>   <a href="#">Del</a>	<a href="#">Call 4/25/2012 12:11 PM</a>		✓	25/04/2012	<a href="#">James Renaud</a>	25/04/2012 12:16 PM
<a href="#">Edit</a>   <a href="#">Del</a>	<a href="#">Call 4/25/2012 11:38 AM</a>	<a href="#">Systems Engineering</a>	✓	25/04/2012	<a href="#">James Renaud</a>	25/04/2012 11:46 AM
<a href="#">Edit</a>   <a href="#">Del</a>	<a href="#">Call 4/25/2012 10:45 AM</a>	<a href="#">Systems Engineering</a>	✓	25/04/2012	<a href="#">James Renaud</a>	25/04/2012 10:50 AM
<a href="#">Edit</a>   <a href="#">Del</a>	<a href="#">Call 4/25/2012 10:26 AM</a>	<a href="#">Systems Engineering</a>	✓	25/04/2012	<a href="#">James Renaud</a>	25/04/2012 10:48 AM
<a href="#">Show more »</a>   <a href="#">Go to list »</a>						

Figure 70: Edit call logs

- **Search on outbound calls**

Search results for outbound calls display in the Contact Center Salesforce.com Connector user interface within Salesforce, but do not generate screen pops. Enter the phone number into the dial pad and click Dial. The search will return results in the Contact Center Salesforce.com Connector interface. You can click Account, Contact, etc. to view the details of the search result. (See Figure 71.)

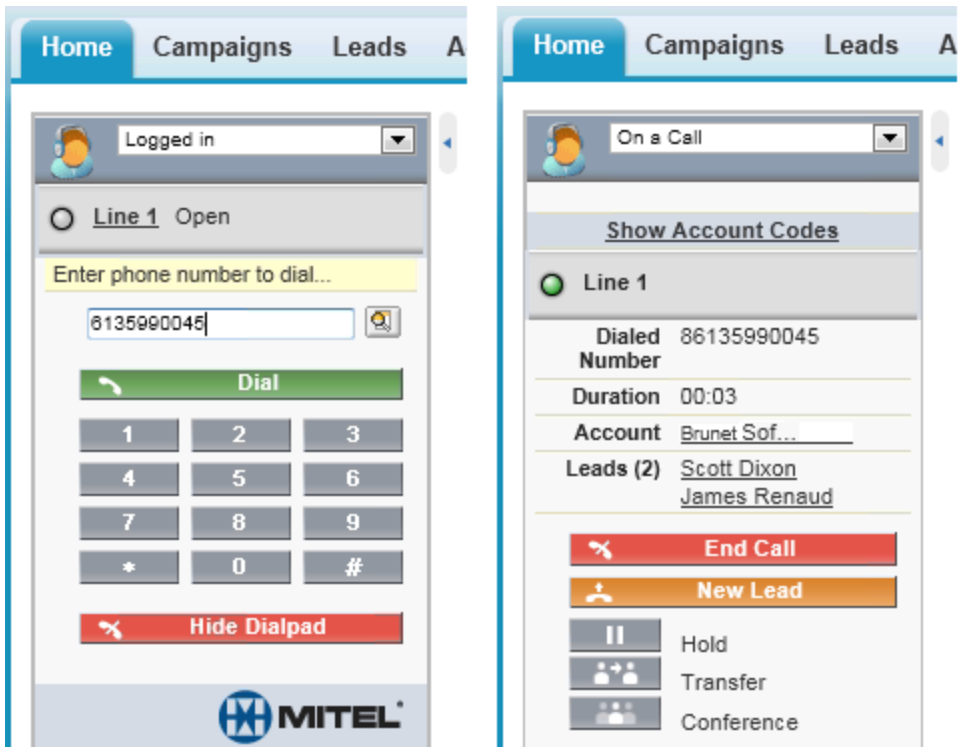


Figure 71: Search on outbound calls display



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# BUSINESS REPORTER TERMS AND DEFINITIONS

## **Account Code**

Account Codes are classifiers that can be applied to call records and used to identify unique attributes about the caller or call for individual departments, projects, or services to generate reports on them. Account codes can be verified, non-verified, fixed length, or forced.

See Classification Codes, Fixed Length Account Codes, Forced Account Codes, Non-Verified Account Codes, Verified Account Codes.

## **ACD (Automatic Call Distribution)**

ACD (Automatic Call Distribution) is a call distribution mechanism that distributes calls to a pool of available queue members.

## **Active Directory**

Active Directory is a directory service created by Microsoft that is used for managing a domain. In Business Reporter, Active Directory is synchronized with YourSite Explorer to align Active Directory security groups and users with Business Reporter employees and employee groups within selected organizational units.

## **ANI (Automatic Number Identification)**

ANI (Automatic Number Identification) is a service that provides receivers of telephone calls with the caller information. ANI identifies callers and can be used to route calls by caller phone numbers.

## **Answered by**

## **Answering points**

An answering point is a single point of communication available to callers where they can contact a contact center, such as a queue, voice mail, or extension.

## **Billing options**

Billing options are the surcharges that can be associated to a subscriber plan at a daily, weekly, monthly, or yearly basis, as well as a single time as a flat rate.

## **Blocked call**

A blocked call is a call that is unable to get into the contact center's telephone system because there are no trunks available. The caller receives a busy signal.

## **Call rate**

A call rate is the amount charged by a company per call. Each digital pattern is associated with a call type and call rate.

## **Call type**

Call type categorizes calls employees receive, enabling them to be looked up in SMDR Inspector. Call types include ACD or non-ACD, abandoned, interflowed, requeued, unavailable, or outbound.

### **Camp on**

Camp on is a notification tool that enables callers to notify an employee, who is currently on a call, that they are waiting to be answered. The employee is notified by a series of audible beeps.

### **Carrier plan**

A carrier plan determines the cost of calls, based on the call rate charged by a phone carrier for phone service. Carrier plans enable the costing of outgoing calls using digit patterns, cost incoming calls using DNIS rates, and cost internal calls by assigning rates.

### **Charge bands**

Charge bands are the rates charged by a carrier during time periods specified by associated time slots. Call rates are composed of charge bands.

### **Clustered environment**

A clustered environment is a network environment where multiple telephone systems are linked together to function as a single system.

### **Cost ceiling**

A cost ceiling is the maximum charge that can be applied to a call.

### **Crossing percentage surcharge**

A crossing percentage surcharge is a percentage markup added to the total cost of a call once the duration boundary of a call is reached.

### **Crossing surcharge**

A crossing surcharge is a flat rate applied to a call after the duration boundary is crossed.

### **Customer Relationship Management**

Customer Relationship Management (CRM) is a model for customer management that relies on technology to streamline and manage interactions with customers.

### **Date stamp**

See Date/Time stamp.

### **Date/Time stamp**

A date/time stamp is an indicator attached to a record or statistic detailing when it was created.

### **Dialable number**

The dialable number is a digit or series of digits dialed by a caller to reach an answering point, such as an employee, an extension, a queue, or voice mail.

### **Dialed Number Identification Service (DNIS)**

Dialed Number Identification Service (DNIS) is a telecommunication service that identifies the phone numbers dialed by inbound callers. DNIS can be used to route calls, enabling contact centers managing multiple product lines or businesses to direct calls to the appropriate endpoint.

---

**Digit pattern**

A digit pattern is one or more numbers used to identify and cost a call. A digit pattern can be part or all of a phone number.

**Discount**

A discount is a percentage reduction applied to the entire cost of a call, such as for calls occurring during off-peak hours.

**Division**

A division is a grouping of several employee or extension groups that enable a single report to be run for several groups simultaneously.

**DND**

See Do Not Disturb (state).

**DNIS**

See Dialed Number Identification Service.

**Duration**

The duration is the maximum call length before a surcharge is applied to a call.

**Employee**

An employee is a person who is employed by an organization and configured as an employee in Business Reporter so that they have access to Business Reporter applications and may have their associated devices reported on.

**Enterprise**

An enterprise is both the single site where the Enterprise Server is installed and all the connected branch offices that comprise a company.

**Enterprise Server**

The Enterprise Server is the central server upon which Business Reporter is installed and from which Business Reporter runs.

**External Hot Desking Agent**

See Hot Desking Agent.

**Extension**

An extension is an endpoint for answering calls. Extensions can be assigned to Ring Groups.

**First cost**

First cost is the rate applied to the first segment of a call to the first cost interval. The first increment is always charged at the full first cost, regardless of whether the call exceeds the first interval or not.

**First cost interval**

First cost interval is the duration of the first segment of a call, to which the First cost is applied.

### **Fixed cost**

A fixed cost is the charge applied to all calls, regardless of their duration. Fixed costs cannot be combined with any other costing rate.

### **Fixed cost markup/discount**

A fixed cost markup/discount is the dollar amount added to or subtracted from the entire cost of a call.

### **Fixed Length Account Codes**

Fixed Length Account Codes are verified and non-verified Account Codes that are automatically submitted to the system when the correct number of digits has been entered.

### **Forced Account Codes**

Forced Account Codes are verified and non-verified account codes that must be entered at a specific time in a call. Forced verified account codes must be entered as soon as the phone is off the hook. Forced non-verified Account Codes must be entered after the phone number is dialed. Systems may be configured to avoid the requirement of entering a forced non-verified Account Code when making a call that must not be charged (for example, dialing a leading digit such as 8 to make a call without entering an Account Code and dialing a leading digit such as 9 to make a call that requires an Account Code).

### **Hunt group**

A hunt group is a series of telephone lines grouped by the telephone system that rotates incoming calls through the lines until an available line is found and the caller is connected.

### **Inbound**

Inbound is a descriptive term applied to forms of contact or communication, such as a phone call, to indicate that it is being sent to a contact center from an external source.

### **Inbound calls**

See Inbound.

### **Interactive Voice Response**

Interactive Voice Response (IVR) is a technology that enables callers to interact with a contact center's phone system by pressing keys or speech recognition while following IVR dialog.

### **Internal calls**

Internal calls are calls made from within a system to other answering points within the same system.

### **Media servers**

A media server is a server or system, such as a telephone system, used to organize and distribute communications throughout a contact center.

### **Minimum duration to cost**

The minimum duration to cost is the length of time that may pass before a call is costed.

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**Mitel OPS Manager**

Mitel OPS Manager is a Mitel software application that provides network-wide administration and maintenance for MCD and 3300 Network Elements or Nodes.

**Non-verified Account Codes**

Non-verified Account Codes are numbers entered onto the SMDR record for billing and call management. During a call, non-verified Account Codes can be entered as often as required.

**Outbound calls**

Outbound calls are calls made from within a contact center to external answering points.

**PBX**

See Telephone system.

**Peak Monday to Friday end hour**

The Peak Monday to Friday end hour is the hour that ends the peak hour period. Regular rates apply during peak hours, from Monday to Friday.

**Peak Monday to Friday start hour**

The Peak Monday to Friday start hour is the hour that starts the peak hour period. Regular rates apply during peak hours, from Monday to Friday.

**Percentage markup/discount**

The percentage markup/discount is a percentile increase or decrease applied to the entire cost of a call.

**Pooling principle**

The pooling principle refers to the increased contact center efficiency gained by consolidating contact center resources.

**Port**

A port is a communications endpoint in Contact Center Solutions used to link services.

**Probability of delay**

The probability of delay is a statistic that measures the likelihood of a call being delayed in the ACD queue, comparing the number of queue members to the level of traffic carried by the trunks.

**PSTN**

See Public Switched Telephone Network.

**Public Switched Telephone Network (PSTN)**

The Public Switched Telephone Network is a global collection of Central Offices (CO) interconnected by long distance telephone switching systems.

**Queue member**

A queue member is an individual answering for the queue. For Ring Groups, 'members' refers to the extensions assigned to the queue's Ring Groups.

### **Reason Code**

Reason codes are descriptive classifiers applied to Make Busy and Do Not Disturb states to provide more detailed information as to why the queue member applied the code.

### **Reporting number**

A reporting number is the unique number assigned by the system to contact center resources for reporting purposes.

### **Ring Group**

A Ring Group is a collection of extensions, or a single dialing point for a collection of extensions, in a business. Ring Groups are typically used to reach back office extensions. For example, a business may have several phone extensions in the warehouse. These warehouse phone extensions are compiled into a Ring Group, which can be reached via a single dialing point.

### **Silent monitoring**

Silent monitoring is a Business Reporter feature that facilitates the tracking of extension call handling techniques by enabling supervisors to listen to the voice conversations of internal or external calls between extensions and callers.

### **Site**

A site is a physical location of a contact center with one or more media servers. It may be the same location where the Enterprise Server is installed or a branch office.

### **Spectrum**

Spectrum is a reporting feature configured for queues that provides a frequency distribution of calls abandoned, answered, or interflowed based on a defined time scale.

### **SQL**

SQL is a standard query language used to enter, query, and change data in a database, as well as create and administer databases. Administration of YourSite Explorer is done using Microsoft's SQL Server.

### **Subscriber**

A subscriber is a client or customer outside of a company to whom the organization provides a communication product or service, such as a student in a dormitory or a tenant in a rooming house.

### **Subsequent increment interval**

Subsequent increment interval is the segment of a call that occurs after the first call interval to which the subsequent increment cost is applied.

### **Surcharge amount**

The surcharge amount is an additional amount charged to subscribers on a daily, weekly, monthly, yearly, or one time basis.

### **Surcharge per call**

The surcharge per call is an additional charge applied to calls regardless of their duration.

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**Talk-time**

Talk-time is the measure of the time an employee spends talking to callers, excluding time spent on hold.

**TCP/IP**

TCP/IP is the basic communication protocol of the Internet and is used as a communication protocol in private networks (intranets).

**Telephone system**

A telephone system is a private branch exchange (PBX) or business telephone switch used to process incoming and outgoing calls to a contact center.

**Time slot**

A time slot is the days and hours that a rate for a call is active. Charge bands are composed of multiple time slots.

**Toll fraud**

Toll fraud is the misuse of a telephone system, either from improper calling or from carriers overcharging. In Business Reporter, toll fraud is user-defined and may include specific digit patterns, internal calls, or calls that cost more than a set rate.

**Trunk**

A trunk is a communication line between two telephone systems.

**Trunk load**

Trunk load is the duration of time from when a trunk receives a call to when the employee finishes handling the call and disconnects. Trunk load does not include Wrap Up Time.

**Updated Position in Queue (UPiQ)**

Updated Position in Queue (UPiQ) is a notification feature that provides messages to callers informing them of their position in queue and keeps them informed of their position if it changes, at preset intervals.

**UPiQ**

See Updated Position in Queue.

**Verified Account Codes**

Verified Account Codes are numbers entered before making a call to change the Class of Service or Class of Restriction at the station. When the call ends, the station returns to normal. Verified Account Codes can be tracked with SMDR for long-distance billing purposes and may be reported in Internal SMDR logs.

**Whisper Coach**

Whisper Coach is a silent monitor feature that enables supervisors to converse with and coach extensions handling calls without callers hearing the supervisor.

