# Cisco Desktop Administrator User Guide

Cisco Unified Contact Center Enterprise Release 7.2
June 2007

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# Preface

## Introduction

Desktop Administrator is a “container” program. This program allows you to access various other applications used to administer Cisco Agent Desktop, Cisco Agent Desktop—Browser Edition, Cisco Supervisor Desktop, and Cisco IP Phone Agent from within one interface.

> NOTE: Desktop Administrator is not supported if installed on a virtual private network (VPN) desktop.

### What’s New in This Release

Cisco Desktop Administrator 7.2 includes the following new features:

- Ability to import and export actions from one work flow group to another and between instances of Desktop Administrator
- Support for Cisco Unified Communications Manager-based silent monitoring via an IP phone as an alternative to CAD-based (desktop or server) monitoring.

### Desktop Administrator Feature Levels

There are three feature levels of Cisco Desktop Administrator: Standard, Enhanced, and Premium. The following chart outlines the features available in each feature level. All features not listed here are present at all three feature levels.

Table 1. Cisco Desktop Administrator feature levels

| Feature | Standard | Enhanced | Premium |
|---|---|---|---|
| Configure CAD interface | | × | × |
| Configure work flows | | × | × |

Table 1. Cisco Desktop Administrator feature levels — <Emphasis>Continued

| Feature | Standard | Enhanced | Premium |
|---|---|---|---|
| Configure task buttons for Agent Desktop toolbar | | × | × |
| Configure CAD integrated browser | | | × |
| Configure CAD-BE integrated browser | | × | × |
| Time of day event and data condition | | | × |
| CAD agent work flow HTTP Post/Get action | | | × |
| CAD-BE agent work flow HTTP Post/Get action | | × | × |
| IPC Receive event | | | × |

## Related CAD Documentation

The following documents contain additional information about CAD 7.2:

- *Cisco CAD Installation Guide*
- *Cisco Agent Desktop User Guide*
- *Cisco Agent Desktop—Browser Edition User Guide*
- *Cisco Supervisor Desktop User Guide*
- *Cisco IP Phone Agent User Guide*
- *Mobile Agent Guide for Cisco Unified CC Enterprise*
- *Cisco CAD Service Information*
- *Integrating CAD Into a Citrix MetaFrame Presentation Server or Microsoft Terminal Services Environment*

## Obtaining Documentation

Cisco documentation and additional literature are available on Cisco.com. Cisco also provides several ways to obtain technical assistance and other technical resources. These sections explain how to obtain technical information from Cisco Systems.

### Cisco.com

You can access the most current Cisco documentation at this URL:

http://www.cisco.com/techsupport

You can access the Cisco website at this URL:

http://www.cisco.com

You can access international Cisco websites at this URL:

http://www.cisco.com/public/countries_languages.shtml

### Product Documentation DVD

The Product Documentation DVD is a comprehensive library of technical product documentation on a portable medium. The DVD enables you to access multiple versions of installation, configuration, and command guides for Cisco hardware and software products. With the DVD, you have access to the same HTML documentation that is found on the Cisco website without being connected to the Internet. Certain products also have .PDF versions of the documentation available.

The Product Documentation DVD is available as a single unit or as a subscription. Registered Cisco.com users (Cisco direct customers) can order a Product Documentation DVD (product number DOC-DOCDVD= or DOC-DOCDVD=SUB) from Cisco Marketplace at this URL:

http://www.cisco.com/go/marketplace/

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Registered Cisco.com users may order Cisco documentation at the Product Documentation Store in the Cisco Marketplace at this URL:

http://www.cisco.com/go/marketplace/

Nonregistered Cisco.com users can order technical documentation from 8:00 a.m. to 5:00 p.m. (0800 to 1700) PDT by calling 1 866 463-3487 in the United States and Canada, or elsewhere by calling 011 408 519-5055. You can also order documentation by e-mail at tech-doc-store-mkpl@external.cisco.com or by fax at 1 408 519-5001 in the United States and Canada, or elsewhere at 011 408 519-5001.

## Documentation Feedback

You can rate and provide feedback about Cisco technical documents by completing the online feedback form that appears with the technical documents on Cisco.com.

You can submit comments about Cisco documentation by using the response card (if present) behind the front cover of your document or by writing to the following address:

Cisco Systems
Attn: Customer Document Ordering
170 West Tasman Drive
San Jose, CA 95134-9883

We appreciate your comments.

## Cisco Product Security Overview

Cisco provides a free online Security Vulnerability Policy portal at this URL:

http://www.cisco.com/en/US/products/products_security_vulnerability_policy.html

From this site, you will find information about how to:

- Report security vulnerabilities in Cisco products.
- Obtain assistance with security incidents that involve Cisco products.
- Register to receive security information from Cisco.

A current list of security advisories, security notices, and security responses for Cisco products is available at this URL:

http://www.cisco.com/go/psirt

To see security advisories, security notices, and security responses as they are updated in real time, you can subscribe to the Product Security Incident Response Team Really Simple Syndication (PSIRT RSS) feed. Information about how to subscribe to the PSIRT RSS feed is found at this URL:

http://www.cisco.com/en/US/products/products_psirt_rss_feed.html

### Reporting Security Problems in Cisco Products

Cisco is committed to delivering secure products. We test our products internally before we release them, and we strive to correct all vulnerabilities quickly. If you think that you have identified a vulnerability in a Cisco product, contact PSIRT:

- For Emergencies only—security-alert@cisco.com

  An emergency is either a condition in which a system is under active attack or a condition for which a severe and urgent security vulnerability should be reported. All other conditions are considered nonemergencies.

- For Nonemergencies—psirt@cisco.com

In an emergency, you can also reach PSIRT by telephone:

- 1 877 228-7302

- 1 408 525-6532

**TIP:** We encourage you to use Pretty Good Privacy (PGP) or a compatible product (for example, GnuPG) to encrypt any sensitive information that you send to Cisco. PSIRT can work with information that has been encrypted with PGP versions 2.*x* through 9.*x*.

Never use a revoked or an expired encryption key. The correct public key to use in your correspondence with PSIRT is the one linked in the Contact Summary section of the Security Vulnerability Policy page at this URL:

http://www.cisco.com/en/US/products/products_security_vulnerability_policy.html

The link on this page has the current PGP key ID in use.

If you do not have or use PGP, contact PSIRT at the aforementioned e-mail addresses or phone numbers before sending any sensitive material to find other means of encrypting the data.

## Obtaining Technical Assistance

Cisco Technical Support provides 24-hour-a-day award-winning technical assistance. The Cisco Technical Support & Documentation website on Cisco.com features extensive online support resources. In addition, if you have a valid Cisco service contract, Cisco Technical Assistance Center (TAC) engineers provide telephone support. If you do not have a valid Cisco service contract, contact your reseller.

### Cisco Technical Support & Documentation Website

The Cisco Technical Support & Documentation website provides online documents and tools for troubleshooting and resolving technical issues with Cisco products and technologies. The website is available 24 hours a day, at this URL:

http://www.cisco.com/techsupport

Access to all tools on the Cisco Technical Support & Documentation website requires a Cisco.com user ID and password. If you have a valid service contract but do not have a user ID or password, you can register at this URL:

http://tools.cisco.com/RPF/register/register.do

**NOTE:** Use the Cisco Product Identification (CPI) tool to locate your product serial number before submitting a web or phone request for service. You can access the CPI tool from the Cisco Technical Support & Documentation website by clicking the **Tools & Resources** link

under Documentation & Tools. Choose **Cisco Product Identification Tool** from the Alphabetical Index drop-down list, or click the **Cisco Product Identification Tool** link under Alerts & RMAs. The CPI tool offers three search options: by product ID or model name; by tree view; or for certain products, by copying and pasting **show** command output. Search results show an illustration of your product with the serial number label location highlighted. Locate the serial number label on your product and record the information before placing a service call.

### Submitting a Service Request

Using the online TAC Service Request Tool is the fastest way to open S3 and S4 service requests. (S3 and S4 service requests are those in which your network is minimally impaired or for which you require product information.) After you describe your situation, the TAC Service Request Tool provides recommended solutions. If your issue is not resolved using the recommended resources, your service request is assigned to a Cisco engineer. The TAC Service Request Tool is located at this URL:

http://www.cisco.com/techsupport/servicerequest

For S1 or S2 service requests, or if you do not have Internet access, contact the Cisco TAC by telephone. (S1 or S2 service requests are those in which your production network is down or severely degraded.) Cisco engineers are assigned immediately to S1 and S2 service requests to help keep your business operations running smoothly.

To open a service request by telephone, use one of the following numbers:

Asia-Pacific: +61 2 8446 7411 (Australia: 1 800 805 227)
EMEA: +32 2 704 55 55
USA: 1 800 553-2447

For a complete list of Cisco TAC contacts, go to this URL:

http://www.cisco.com/techsupport/contacts

### Definitions of Service Request Severity

To ensure that all service requests are reported in a standard format, Cisco has established severity definitions.

Severity 1 (S1)—An existing network is down, or there is a critical impact to your business operations. You and Cisco will commit all necessary resources around the clock to resolve the situation.

Severity 2 (S2)—Operation of an existing network is severely degraded, or significant aspects of your business operations are negatively affected by inadequate

performance of Cisco products. You and Cisco will commit full-time resources during normal business hours to resolve the situation.

Severity 3 (S3)—Operational performance of the network is impaired, while most business operations remain functional. You and Cisco will commit resources during normal business hours to restore service to satisfactory levels.

Severity 4 (S4)—You require information or assistance with Cisco product capabilities, installation, or configuration. There is little or no effect on your business operations.

## Obtaining Additional Publications and Information

Information about Cisco products, technologies, and network solutions is available from various online and printed sources.

- The *Cisco Product Quick Reference Guide* is a handy, compact reference tool that includes brief product overviews, key features, sample part numbers, and abbreviated technical specifications for many Cisco products that are sold through channel partners. It is updated twice a year and includes the latest Cisco offerings. To order and find out more about the Cisco Product Quick Reference Guide, go to this URL:

  http://www.cisco.com/go/guide

- Cisco Marketplace provides a variety of Cisco books, reference guides, documentation, and logo merchandise. Visit Cisco Marketplace, the company store, at this URL:

  http://www.cisco.com/go/marketplace/

- *Cisco Press* publishes a wide range of general networking, training and certification titles. Both new and experienced users will benefit from these publications. For current Cisco Press titles and other information, go to Cisco Press at this URL:

  http://www.ciscopress.com

- *Packet* magazine is the Cisco Systems technical user magazine for maximizing Internet and networking investments. Each quarter, Packet delivers coverage of the latest industry trends, technology breakthroughs, and Cisco products and solutions, as well as network deployment and troubleshooting tips, configuration examples, customer case studies, certification and training information, and links to scores of in-depth online resources. You can access Packet magazine at this URL:

  http://www.cisco.com/packet

- *iQ Magazine* is the quarterly publication from Cisco Systems designed to help growing companies learn how they can use technology to increase revenue, streamline their business, and expand services. The publication identifies the challenges facing these companies and the technologies to help solve them,

using real-world case studies and business strategies to help readers make sound technology investment decisions. You can access iQ Magazine at this URL:

http://www.cisco.com/go/iqmagazine

or view the digital edition at this URL:

http://ciscoiq.texterity.com/ciscoiq/sample/

- *Internet Protocol Journal* is a quarterly journal published by Cisco Systems for engineering professionals involved in designing, developing, and operating public and private internets and intranets. You can access the Internet Protocol Journal at this URL:

  http://www.cisco.com/ipj

- Networking products offered by Cisco Systems, as well as customer support services, can be obtained at this URL:

  http://www.cisco.com/en/US/products/index.html

- Networking Professionals Connection is an interactive website for networking professionals to share questions, suggestions, and information about networking products and technologies with Cisco experts and other networking professionals. Join a discussion at this URL:

  http://www.cisco.com/discuss/networking

- World-class networking training is available from Cisco. You can view current offerings at this URL:

  http://www.cisco.com/en/US/learning/index.html

# About This Document

## Intended Audience

This document is written for contact center system administrators who use Desktop Administrator.

## Conventions Used

This document uses the following conventions:

| Convention | Use |
|---|---|
| **Bold** | Highlights keys, buttons, and menu items you can select in the interface. |
| `Code` | Highlights file paths and code. |
| *Italic* | Highlights book titles, variables, and terms that are defined. |
| > | The angle bracket indicates a menu choice. For example, “choose **File > Open**” means “click the **File** menu, and then click **Open**.” |

# Getting Started

# 1

## Starting Desktop Administrator

Desktop Administrator comes with 4 licenses, one for each node in the navigation tree. There can be only one user at a time working in each node. If someone is using a node that you must access, an error message appears that identifies the IP address of the computer accessing that particular node.

> NOTE: If the LRM service is down, the error message will only tell you that another user is using the node. The IP address will not be available.

For this reason, it is important that you close Desktop Administrator completely when you are done using it. As long as the application is running, a license is being used and others are blocked from accessing the node selected in your instance of the application.

***To start Desktop Administrator:***

- Choose Start > Programs > Cisco > Desktop > Admin.

  Desktop Administrator starts.

## Automated Updates

CAD can be configured during installation so that every time you start Desktop Administrator, it checks to see if there is an updated version available. If there is, it automatically runs the update process.

> **NOTE:** For automated updates to function correctly, Internet Explorer must be configured so that it checks for newer versions of stored pages. In Internet Explorer, choose **Tools > Internet Options** and select the **General** tab. In the Temporary Internet Files section, click **Settings** and ensure that the "Every visit to the page" option is selected.
>
> **NOTE:** Automated updates are disabled for Windows Vista.

When this happens, you will see a dialog box notifying you that your copy of Desktop Administrator will be updated.

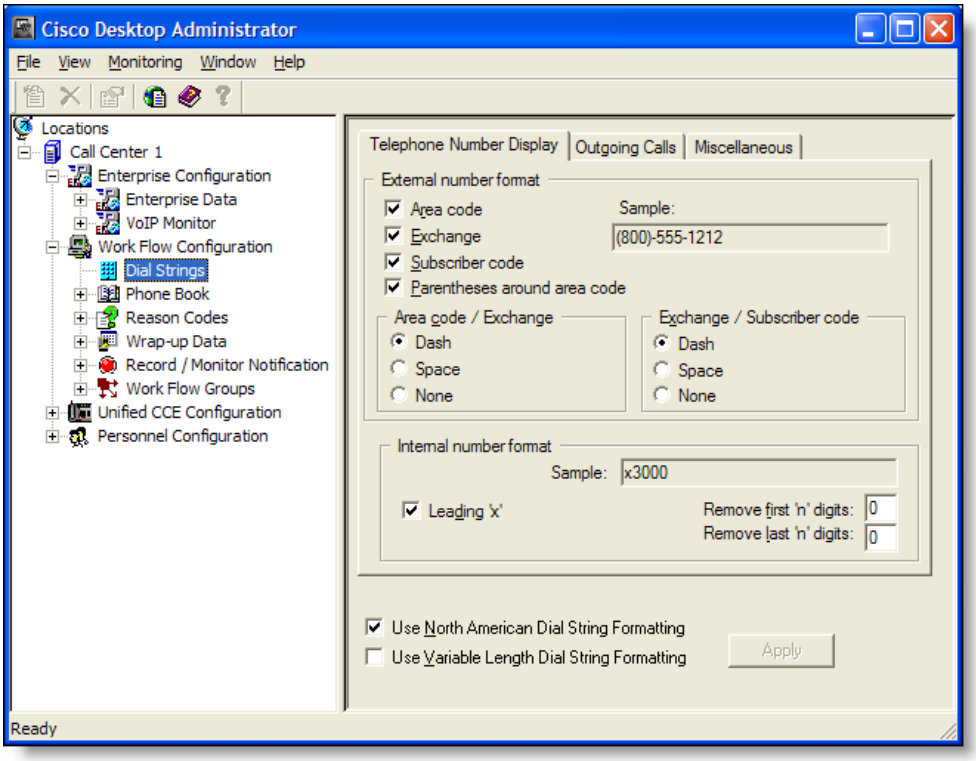
Click **OK** and then follow the instructions in the series of dialog boxes that follows.

When the update is finished, you will see a final dialog box telling you that your update is complete. When you click **OK**, restart Desktop Administrator.

## The Desktop Administrator Interface

The Desktop Administrator interface has two panes. The left pane is a navigation tree similar to that found in Windows Explorer. The right pane displays the application that you choose in the left pane.

**Figure 1. The Desktop Administrator interface. In this example, the Dial Strings node is selected in the left pane and displayed in the right pane.**




The root of the navigation tree is Locations. Underneath Locations is the logical contact center set up in your system. Underneath the logical contact center is a list of the applications that administer Agent Desktop, Agent Desktop—Browser Edition, Supervisor Desktop, and IP Phone Agent.

### Toolbars and Menu Bars

When you select a node on the navigation tree, the Desktop Administrator menu bar and toolbar change to reflect the design of that node's application.

The toolbar buttons you see are among those listed in Table 1.

**Table 1. Desktop Administrator toolbar buttons.**

| Button | Name | Description |
|---|---|---|
| | About | Displays copyright and version information |
| | Delete | Removes the selected work flow group |
| | Remove VoIP, Record/Playback Services | Removes unneeded services from Directory Services |
| | Help | Accesses Help files |
| | New | Adds a new work flow group |
| | Properties | Displays the URL of the selected subnode under the Unified CCE Configuration node |
| | Web | Opens your web browser and accesses Cisco's website |

## Navigation Tree Pane

Use these mouse or keyboard actions in the left pane to navigate the tree.

**Mouse**

- Double-click an icon/application name to expand or collapse the tree.
- Click the plus sign ( + ) to expand the tree.
- Click the minus sign ( – ) to collapse the tree.
- Right-click to delete a node (not available for all nodes).

**Keyboard**

With a node selected,

- Press the up and down arrow keys to move from one node to the next.
- Press the left arrow key to collapse the tree.
- Press the right arrow key to expand the tree.

## Display Pane Navigation

The applications displayed in the right pane are designed to use shortcut keys and the tab key as alternatives to using the mouse to navigate around a window. The shortcut keys that apply to a specific node are discussed in the section devoted to that node's functions.

## User Privileges in Windows 2000 and Windows XP

Because Desktop Administrator users must be able to update registry settings, they must have Administrator or Power User privileges on Windows 2000 Professional and Windows XP platforms.

Only a person with Administrator privileges can change the user privileges on the Administrator PC if it is necessary to upgrade those user privileges.

## Passwords

A password is optional for Desktop Administrator. By default, no password is required.

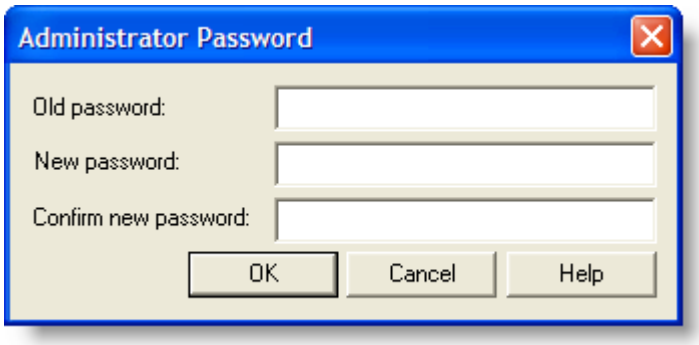
If a password is configured, you are prompted for the password when you select the Call Center 1 node. The password is not specific to one user, but must be entered by anyone trying to access Desktop Administrator's functionality.

***To set up a password:***

1. In the navigation pane, select the Call Center 1 node.
2. Choose **Setup > Change Password**.

   The Administrator Password dialog box appears (see Figure 2).

**Figure 2. Administrator Password dialog box.**




3. Leave the Old password field blank, and enter a new password, type it again to confirm it, and then click **OK**.

   Passwords are case sensitive and may consist of one or more alphanumeric characters.

   Desktop Administrator is now password protected. You must restart the application for the change to go into effect.

***To change your password:***

1. In the left pane, select the Call Center 1 node.
2. Choose **Setup > Change Password**.

   The Change Password dialog box appears (see Figure 2).
3. Enter your old password, a new password, and your new password again to confirm it, and then click **OK**.

   Your Desktop Administrator password is now changed. You must restart the application for the change to go into effect.

***To remove password protection:***

1. In the left pane, select the Call Center 1 node.
2. Choose **Setup > Change Password**.

   The Change Password dialog box appears (see Figure 2).
3. Enter your old password, leave the New password and Confirm password fields blank, and then click **OK**.
4. You are asked to confirm that you want to leave Desktop Administrator unprotected. Click **Yes**.

   The Desktop Administrator password has been removed. You must restart the application for the change to go into effect.

## Agent Desktop User ID, Login Name, and Password

Agent Desktop user IDs, login names, and passwords are set up in the ICM software and can be administered only through the ICM software. The user's Agent Desktop password is verified on the CTI server when a user starts the application.

Use the ICM software to change a user's Agent Desktop password if it becomes necessary to do so.

## Supervisor Desktop User ID, Login Name, and Password

A user's Supervisor Desktop user ID and login name are the same as the user's Agent Desktop user ID and login name, and are set up in the ICM software.

The first time Supervisor Desktop is started, the password is blank. It is up to the supervisor to create a password using the Change Password functionality within Supervisor Desktop.

The Supervisor Desktop password can be changed from within Supervisor Desktop or from the Personnel node in Desktop Administrator (see "Supervisors" on page 173 for more information).

## CAD Configuration Setup Utility

Use the Cisco Agent Desktop Configuration Setup utility to configure the CAD services. The Configuration Setup utility consists of a series of data entry windows. You must complete all of the windows in the utility to install and run CAD services successfully.

The Configuration Setup utility has two modes: Initial and Update. The utility is launched automatically in Initial Mode after the CAD service installation finishes. You can run the utility again later in Update Mode to change your configuration settings. To run the utility in Update Mode, choose one of the following methods:

- launch the utility from Desktop Administrator
- run PostInstall.exe, which is located on each CAD computer in C:\Program Files\Cisco\Desktop\bin

The windows that appear when you run this utility depend on the following factors:

- the host computer on which the Configuration Setup utility was launched
- the mode in which the Configuration Setup utility is running
- the services and applications that are running on the computer on which the Configuration Setup utility was launched

Table 2 lists all of the windows that are part of the Configuration Setup utility in alphabetical order. For each window, the table indicates whether that window appears when the utility is run on the computer that hosts the named application or service. If you need to change a configuration setting, use the table to determine the computer on which you must run the Configuration Setup utility. The table has the following columns:

- Window title: The name of the window
- Mode: The mode in which the window appears (Update or Both initial/update)
- Base: The computer on which the CAD base services run
- VoIP: The computer on which the VoIP Monitor Service runs
- Rec: The computer on which the Recording and Statistics Service runs
- CAD/CSD: The computer on which Cisco Agent Desktop and Cisco Supervisor Desktop run
- CDA: The computer on which Cisco Desktop Administrator runs

**Table 2. CAD Configuration Setup windows**

| Window Title | Mode | Base | VoIP | Rec | CAD CSD | CDA |
|---|---|---|---|---|---|---|
| CAD-BE Servers | Update | × | | | | |
| CallManager | Both | × | × | | | × |

Table 2. CAD Configuration Setup windows

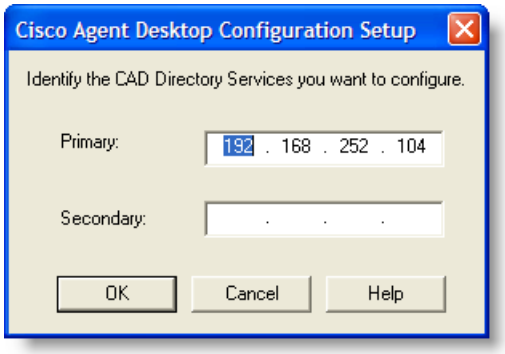
| Window Title | Mode | Base | VoIP | Rec | CAD CSD | CDA |
|---|---|---|---|---|---|---|
| CallManager SOAP AXL Access | Both | × | × | | | × |
| CTI OS | Both | × | | | | × |
| CTI OS Security Setup | Both | | | | × | |
| CTI Server (CallManager) | Both | × | | | | × |
| ICM Admin Workstation Database | Both | × | | | | |
| ICM Admin Workstation Distributor | Both | × | | | | |
| Recording and Statistics Service Database | Both | × | | | | |
| Replication Setup | Both | × | | | | |
| Restore Backup Data | Both | × | | | | |
| Services Configuration | Update | × | × | × | | |
| SNMP Configuration | Update | × | × | × | | |
| Terminal Services | Both | | | | × | |
| VoIP Monitor Service | Update | x | × | | × | |

***To modify CAD configuration settings:***

1. Start CAD Configuration Setup.
   - In Desktop Administrator, select the logical contact center node in the left pane and then choose **Setup > Configure Systems** from the menu bar.
   - On another CAD host computer, navigate to the ...\Program Files\Cisco\Desktop\bin folder and double-click **PostInstall.exe**.

   CAD Configuration Setup starts and displays the CAD Directory Services dialog box.

Figure 3. Cisco Agent Desktop Directory Services dialog box.




2. Ensure that the correct primary (and optional secondary) Directory Services IP addresses are entered, and then click **OK**.

   The Cisco Agent Desktop Configuration Setup tool is displayed with the CallManager node selected.

   **NOTE:** You can press F6 to switch between the left and right pane, and the up and down arrows to move up and down the navigation tree in the left pane.

3. Select the node you want to modify from the left pane, enter the new data in the right pane, and then click **Apply**.
   - You can display the nodes in any order you wish.
   - If you modify something in a node, you must click Apply to save your changes before you move on to another node.
4. When you are done making your changes, choose **File > Exit** or click **Close**.

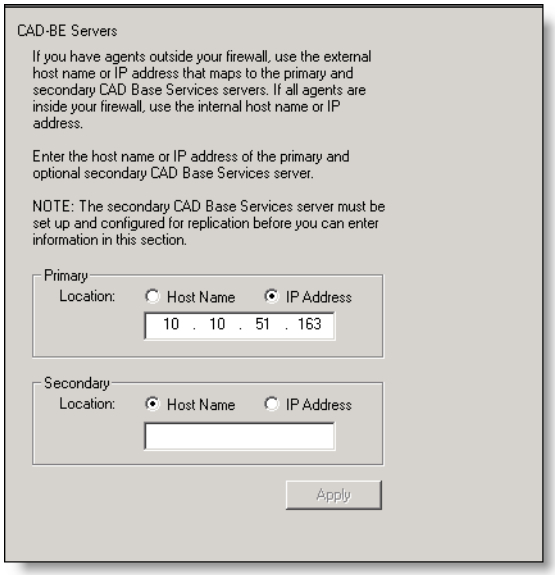
   CAD Configuration Setup closes.
5. Stop and restart the CAD services and all desktops for the change to go into effect.

### *Configuration Setup Windows*

The following pages describe all of the windows in the CAD Configuration Setup utility. The windows are described in alphabetical order.

## CAD-BE Servers

**Figure 4. CAD-BE Servers window.**




The CAD-BE Servers window only appears during Update mode.

Enter the hostname or IP address of the CAD Base Services servers. This is where the Tomcat webserver required to run CAD-BE is installed.

If you have agents outside your firewall, use the external hostname or IP address that maps to the primary and secondary CAD Base Services servers. If all agents are inside your firewall, use the internal hostname or IP address.

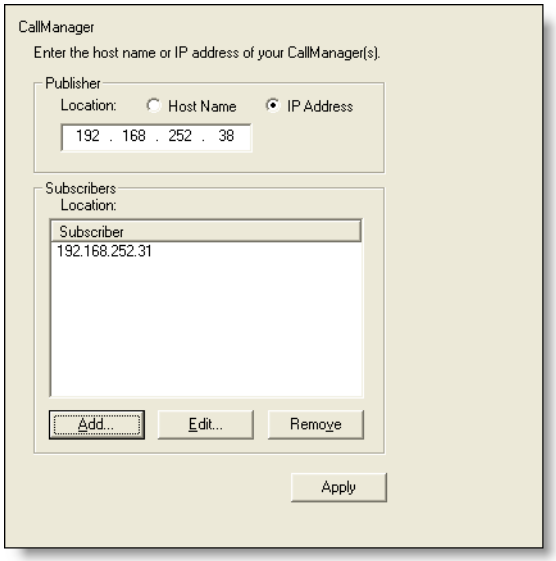
- If you have only one instance of the CAD Base Services, enter the information in the Primary section.
- If you are also using a secondary instance of the CAD Base Services and have configured replication, enter its location in the Secondary section.

  NOTE: The Secondary section is not enabled until the secondary CAD Base Services are set up and replication is configured.

  NOTE: If you set up replication during initial mode, the Secondary Location will be filled automatically.

## CallManager

Figure 5. CallManager window.




The CallManager window has two sections: the Publisher section and the Subscriber section. If you have only one CallManager, complete the Publisher section and leave the Subscriber section blank. If you have a CallManager cluster, which consists of one publisher CallManager and one or more subscriber CallManagers, complete both sections.

For the Publisher section, select Hostname or IP Address. Then type the location of the CallManager (the publisher CallManager if you have a CallManager cluster).

If you have a single CallManager, leave the Subscriber section blank and click **Apply**.

If you have a CallManager cluster, add the locations of all of the subscriber CallManagers in the Subscribers section. To add a subscriber location, click **Add**. The Add/Edit Host dialog box appears. Enter the location of the subscriber CallManager in one of the following ways, then click **Apply**.

- Select Hostname, then type the hostname of the subscriber CallManager.
- Select Hostname, then choose the hostname of the subscriber CallManager from the drop-down list.
- Select IP Address, then type the IP address of the subscriber CallManager.

**NOTE:** If you change these settings after initial setup, you must restart the Sync Service and the VoIP Monitor Service to ensure that the change is registered with them properly.

## CallManager SOAP AXL Access

Figure 6. CallManager SOAP AXL Access window.

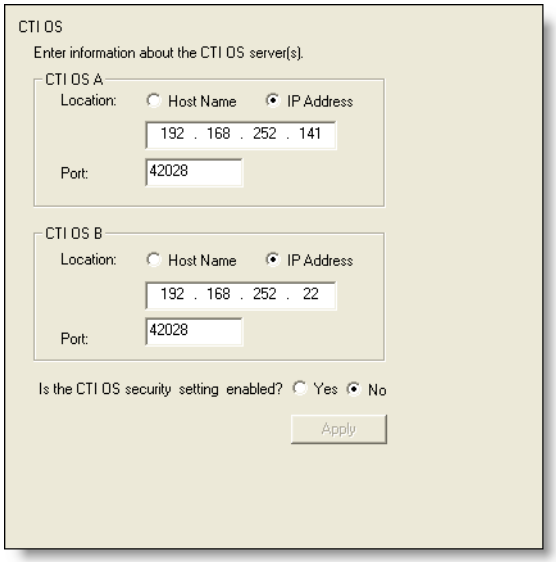

Enter the login ID and password required for the Publisher CallManager Administration to access SOAP AXL (Simple Object Access Protocol Administrative XML Layer), and select the CallManager version.

The login ID and password are the same used to access the Publisher CallManager.

> NOTE: If you change these settings after initial setup, you must restart the Sync Service and the VoIP Monitor Service to ensure that the change is registered with them properly.

## CTI OS

**Figure 7. CTI OS window.**




Enter the hostname or IP address, port number, and peripheral ID of the CTI OS (Computer Telephony Integration Object Server).

- If you have only one CTI OS, enter the information in the CTI OS A section.
- If you are also using a redundant CTI OS in a duplexed environment, enter the location of the redundant CTI OS in the CTI OS B section.

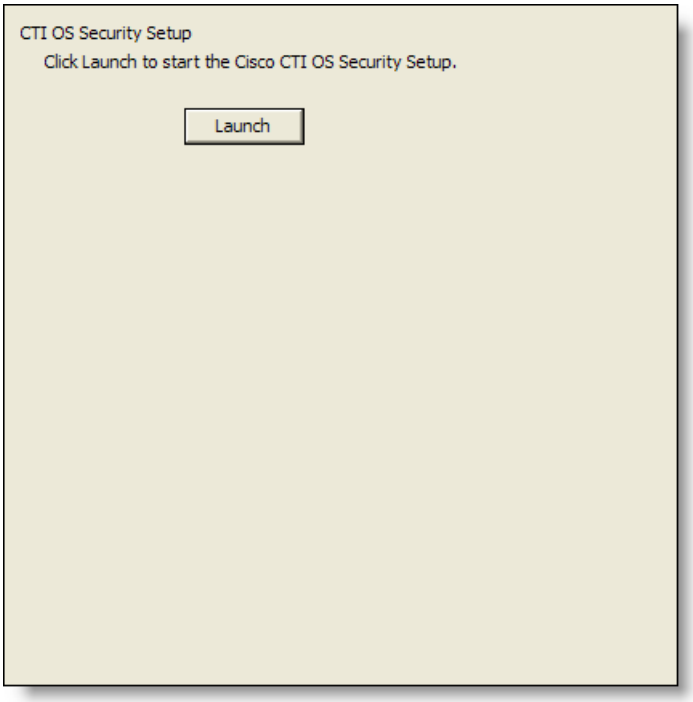
If you are running CAD Configuration Setup in Upgrade mode, the question Is the CTI OS Security Setting Enabled appears. Select **Yes** or **No**.

> **NOTE:** If you are running CAD Configuration Setup in Initial mode (immediately after installation), the question Is the CTI OS Security Setting Enabled does not appear.

If you choose Yes, ensure that CTI OS security is enabled on the CTI OS server. Then, follow the procedures in “Setting Up CTI OS Security” in *Cisco CAD Installation Guide*.

## CTI OS Security Setup

Figure 8. CTI OS Security Setup window.



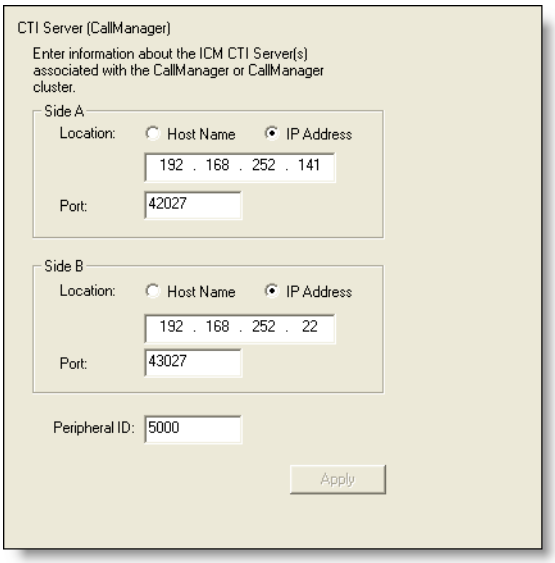

Click **Launch** to start the Cisco CTI OS Security Setup installation program and install the CTI OS Security client on the PC.

This window appears only if CTI OS Security is enabled for your system.

For more information, see “Setting Up CTI OS Security” in *Cisco CAD Installation Guide*.

## CTI Server (CallManager)

Figure 9. CTI Server (CallManager) window.




Enter the hostname or IP address, port number, and peripheral ID of the ICM CTI Server associated with the CallManager or CallManager cluster.

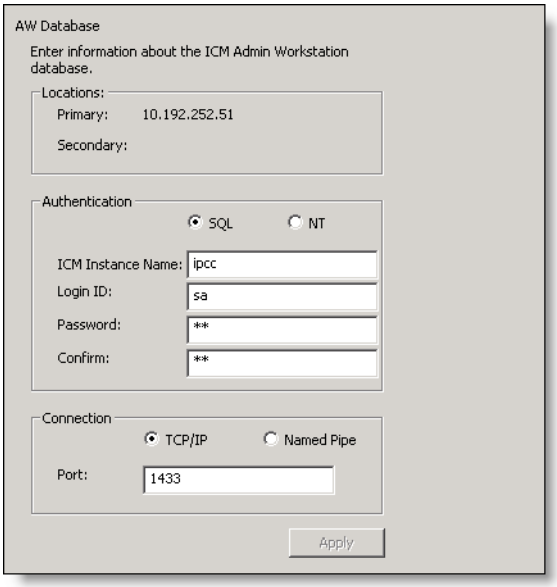
- If the CTI Server is entered with a hostname in ICM, enter a hostname. If it is entered as an IP address, enter an IP address. Mixing hostname and IP address between the ICM and Configuration Setup can result in failing to display enterprise data in desktop applications.
- If you have only one ICM CTI server, enter the information in the Side A section.
- If you are also using a redundant ICM CTI server in a duplexed environment, enter the location of the redundant ICM CTI server in the Side B section.
- The peripheral ID is used by services to filter information such as agents and skills. You can find the peripheral ID by using PG Explorer in the ICM Configuration Manager.

  NOTE: If you change the peripheral ID, you must restart the Sync Service, the Enterprise Service, and the Browser and IP Phone Agent Service to ensure that the change is registered with them properly.

  NOTE: If you are running System IPCC and change the Peripheral ID, your system will not work.

## ICM Admin Workstation Database

Figure 10. ICM Admin Workstation Database window.




The ICM Admin Workstation database locations are autofilled based on what you entered in the ICM Admin Workstation Distributor window.

Select the database type, SQL or NT, then type the instance name and a user login ID/password. The user must have read privileges for the ICM Admin Workstation database.

- If you select NT, the user must also have an account on the ICM Admin Workstation computer. Use the format <domain>\<username> or .\<username> for the login ID.

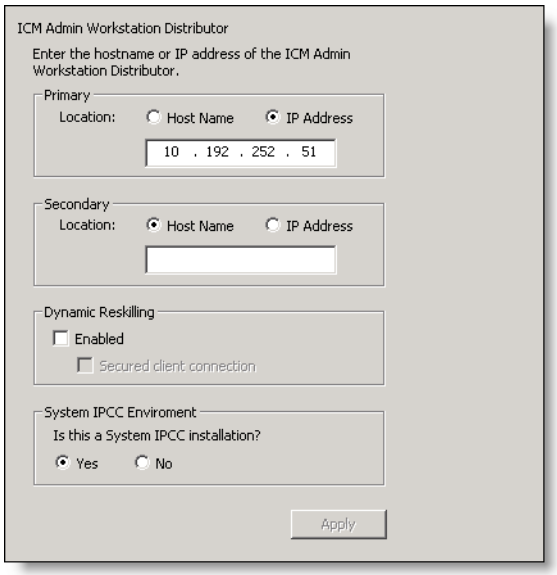
Select the connection type, TCP/IP or Named Pipes.

- If TCP/IP, type the port number used to connect to the database.
- If Named Pipes, type the share path in the format \\<path> in the Port field.

NOTE: If you change these settings after initial setup, you must restart each Recording and Statistics Service and the Sync Service to ensure that the change is registered with them properly.

## ICM Admin Workstation Distributor

**Figure 11. ICM Admin Workstation Distributor window.**




Type the hostname or IP address of the ICM Admin Workstation (AW) Distributor.

- If you have only one ICM AW Distributor, complete the Primary section only.
- If you are using a secondary ICM AW Distributor, type its location in the Secondary section.

  **NOTE:** If you change either location after initial setup, you must restart each Recording and Statistics Service and the Sync Service to ensure that the change is registered with them properly.

If you are running CAD Configuration Setup in Update mode, the Dynamic Reskilling and System IPCC Environment sections appear.

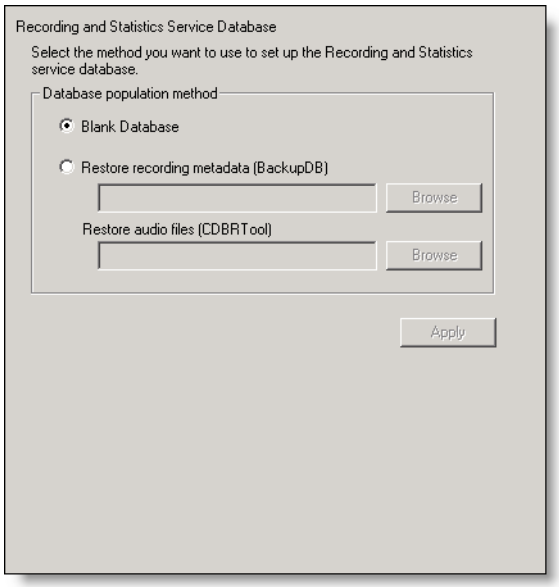
- Dynamic Reskilling: To enable supervisors to dynamically re-skill agents on their teams using the Cisco Unified Contact Center Enterprise Web Administration Agent Re-skilling tool, check **Enabled**. This tool is a web-based application. If it is located on a secured server and requires a secure socket URL (https), select the **Secured client connection** check box. If you leave this box unchecked, the URL will use the http prefix.
- System IPCC Environment: Select **Yes** or **No** to indicate whether or not your configuration is running in a System IPCC environment.

If you are running CAD Configuration Setup in Initial mode (immediately after installation), the Dynamic Reskilling and System IPCC Environment sections do not appear in the ICM Admin Workstation Distributor window.

> NOTE: If Configuration Setup does not detect that it is installed in a System IPCC Environment, a dialog box will appear during Initial mode, prompting you to indicate whether it is a System IPCC Environment.

## Recording and Statistics Service Database

**Figure 12. Recording and Statistics Service Database window.**




This window is displayed if you are running CAD Configuration Setup in both Initial and Update modes. If you are running CAD Configuration Setup on the secondary server in a replicated system, this window does not appear, because the database information was already entered on the primary system.

> NOTE: If you change these settings after initial setup, you must restart each Recording and Statistics Service to ensure that the change is registered with them properly.

In the Database Population Method section, select the method you want to use to set up the Recording and Statistics Service database.

- Select **Blank Database** (the default) when installing a single service or a primary service in a replicated environment. This option creates the Recording and Statistics Service schema.

- Select **Restore From** if you are restoring a previously backed-up database. If you are running CAD in a replicated environment, a dialog box appears, reminding you to shut down replication before restoring data. After dismissing the dialog box, use the Browse button to navigate to the location of the backup database created using the BackupDB and CDBRTool utilities.

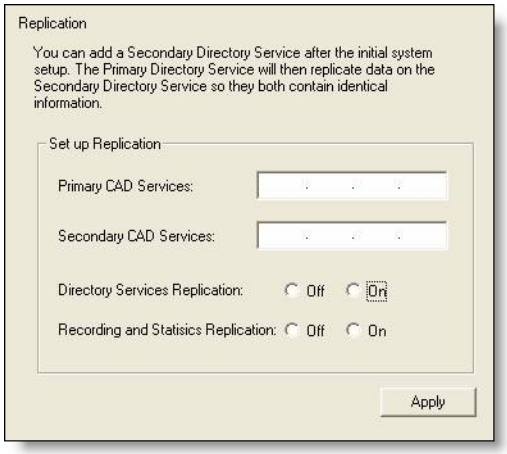
  When you continue to the next window, a dialog box appears, reminding you to re-establish replication after the restore is done.

  **NOTE:** You can restore recording metadata without restoring audio files, but you cannot restore audio files without recording metadata.

For information about backing up and restoring CAD data, see "Backup and Restore (BARS)" in *Cisco CAD Installation Guide*.

## Replication Setup

**Figure 13. Replication Setup window.**




This window is displayed only when you run CAD Configuration Setup in Update mode on the secondary CAD Services server.

Use the Replication Setup window to add a secondary Directory Services, a secondary Recording and Statistics Service, or both, after the initial system setup. The primary service will then replicate data on the secondary service so that they both contain identical information.

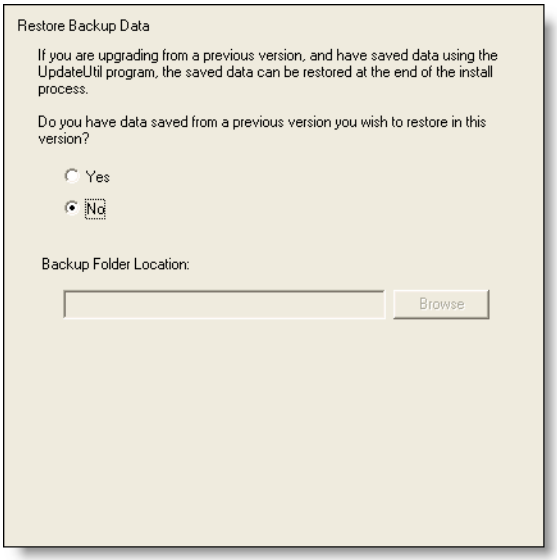
**NOTE:** If you are setting up replication for the Directory Services and/or the Recording and Statistics Service, make sure that Cisco Security Agent is stopped on both computers.

If you want to set up Directory Services replication, select **On** for Directory Services Replication. If you want to set up Recording and Statistics replication, select **On** for Recording and Statistics Replication. If you select **On** for one or both services, type the IP addresses of the primary and secondary servers in the corresponding fields.

To save your settings, click **Apply**. A dialog box appears and prompts you to type the hostname of the computer you have identified as the primary server for Recording and Statistics replication. Type the primary server hostname and click **OK**. A dialog box appears and prompts you to type the hostname of the computer you have identified as the secondary server for Recording and Statistics replication. Type the second server hostname and click **OK**.

## Restore Backup Data

**Figure 14. Restore Backup Data window.**




This window appears only when CAD Configuration Setup is run for the first time during CAD services installation.

If you want to restore data that was saved from a previous version of CAD, click **Yes**. A dialog box appears, reminding you to shut down replication before you start restoring backup data.

> **NOTE:** If you do not shut down replication before restoring your data, your database may become corrupted.

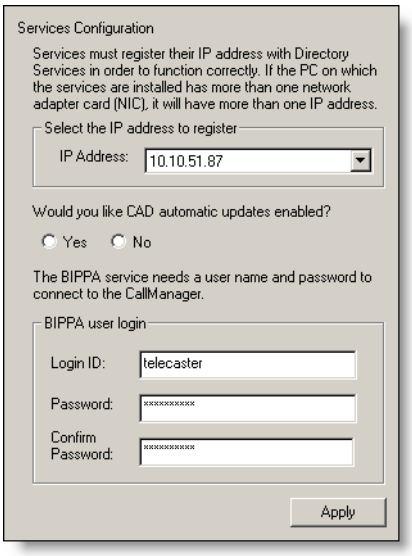
Click **OK** and then enter the path to the backup folder. When you move to the next window or click **Apply**, a dialog box appears, reminding you to re-establish replication after you exit CAD Configuration Setup.

The tool used to save data is CDBRTool utility, used to back up data from CAD 6.0 and CAD 7.0.

For information about using these tools, see "Upgrading From a Previous Version" in *Cisco CAD Installation Guide*.

## Services Configuration

**Figure 15. Services Configuration window.**




The Services Configuration window only appears during Update mode.

If the computer has more than one IP address, select the IP address of the NIC used to connect to the LAN—it must be accessible by the client desktops.

If you enable automated CAD updates, every time a user starts Agent Desktop, Supervisor Desktop, or Desktop Administrator the system checks if there is a newer version available. if there is, it automatically runs the update process.

To enable automated updates, select **Yes**.

> **NOTE:** Automated updates are disabled for Windows Vista.

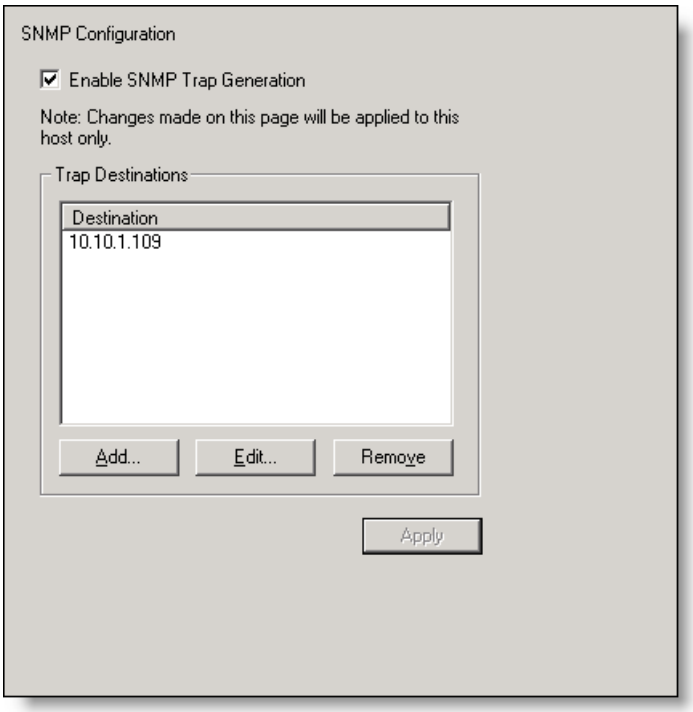
In order to connect to the CallManager, the BIPPA Service must have a user ID and password. This user ID and password are also set up in CallManager. You can complete these fields before actually setting up the user in CallManager, but the user ID and password must be identical in both places. If they are changed in this window or in CallManager, they must be changed in both.

**NOTE:** If you change these settings after initial setup, you must restart the all CAD services to ensure that the change is registered with them properly.

To set up the user ID and password, see "Creating a CallManager User" in *Cisco CAD Installation Guide*.

## SNMP Configuration

**Figure 16. SNMP Configuration window.**




The SNMP Configuration window appears only during the Update mode if the Microsoft Simple Network Management Protocol (SNMP) Service is installed on the CAD services server.

If you select the **Enable SNMP Trap Generation** check box, INFO and higher error messages are sent from the CAD services server to the IP addresses configured in the Destination pane. Use the **Add**, **Edit**, and **Remove** buttons to manage the list of destination IP addresses.

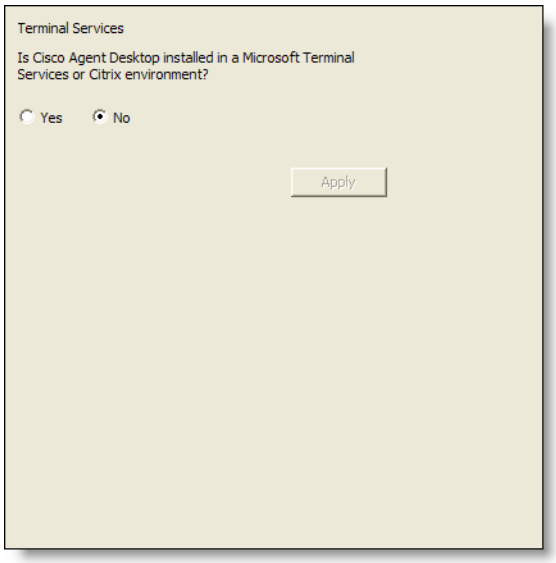
The SNMP Service can be installed using the Add/Remove Windows Components button in the Add or Remove Programs utility in Control Panel (select Management and Monitoring Tools from the list of available components, and then choose Simple Network Management Protocol).

SNMP allows you to monitor and manage a network from a single workstation or several workstations, called SNMP managers. SNMP is actually a family of specifications that provide a means for collecting network management data from the devices residing in a network. It also provides a method for those devices to report any problems they are experiencing to the management station.

Consult Microsoft SNMP documentation for more information on using this tool.

## Terminal Services

**Figure 17. Terminal Services window.**

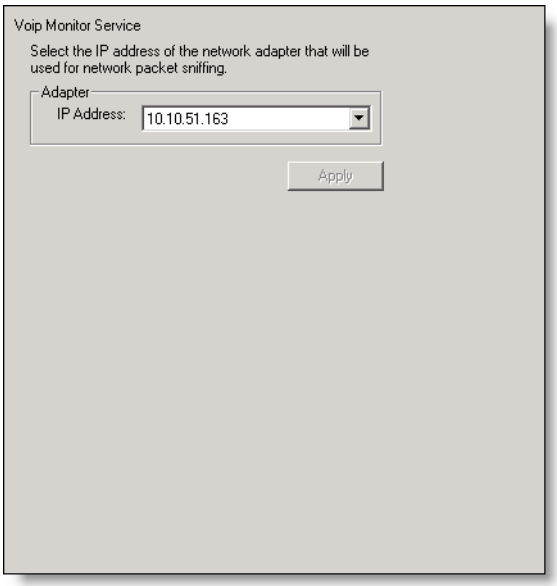



If this installation of Cisco Agent Desktop is installed in a Microsoft Terminal Services or Citrix environment, click **Yes**. If not, click **No**.

> **NOTE:** You must be running CAD Configuration Setup on the PC where the Citrix/Microsoft Terminal Services Service is hosted in order to view this window.

## VoIP Monitor Service

Figure 18. VoIP Monitor Service window.




The VoIP Monitor Service window only appears during Update mode.

Select the IP address of the network adaptor to which voice packets are sent to be sniffed by the VoIP Monitor Service (if this is a server box) or the desktop monitor (if this is a client desktop).

- On a VoIP Monitor Service server, it is the IP address of the NIC that is connected to the port configured for SPAN.
- On a client desktop computer, it is the IP address of the NIC on which the computer is daisy-chained to the phone.

NOTE: If you change these settings after initial setup, you must restart the VoIP Monitor Service or the client application (depending on where you run Configuration Setup) to ensure that the change is registered with them properly.

## Synchronizing Directory Services

The Directory Services database should by synchronized with the master ICM agent database. You can synchronize the agent database between the ICM software and Directory Services with the Synchronize Directory Services command.

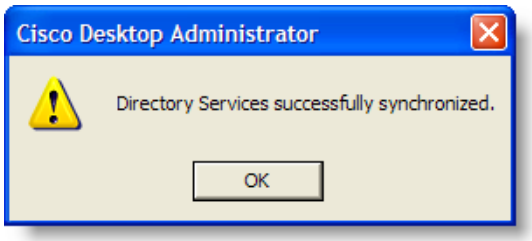
By default, the database is synchronized once every 10 minutes. You can change the synchronization interval by changing a setting in the DirAccessSynSvr.cfg file (refer to *Cisco CAD Service Information*, Chapter 3), or you can synchronize the databases manually.

***To synchronize the databases manually:***

1. In the left pane, select the logical contact center node.
2. Choose **Setup > Synchronize Directory Services**.

   When the synchronization is complete, the system displays a confirmation message (see Figure 19).

**Figure 19. Directory Services synchronization confirmation.**



# Enterprise Configuration

# 2

## Introduction

Enterprise Configuration enables you to:

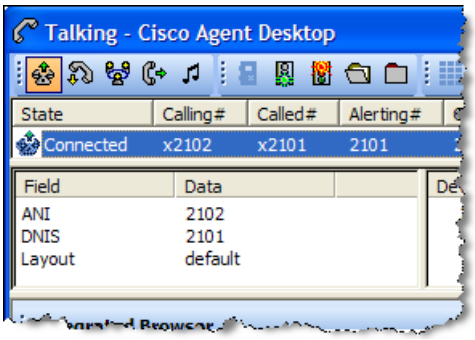
- Set up and modify enterprise data layouts and fields
- Assign phones to be monitored by a particular Voice over IP (VoIP) Monitor service
- Configure devices for desktop monitoring

To use either Enterprise Configuration application, select the Enterprise Data node or VoIP Monitor node in the left navigation pane of the Desktop Administrator window.

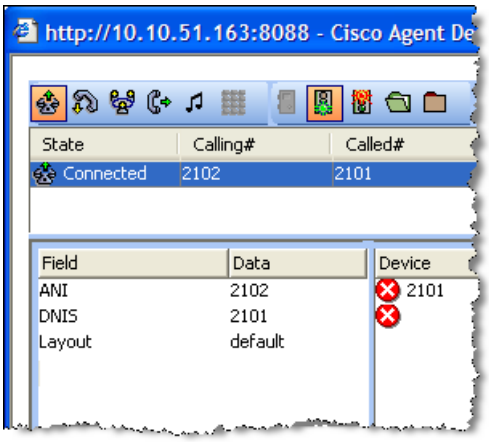
## Enterprise Data

Enterprise data is information associated with an incoming call. It is displayed in Cisco Agent Desktop, Cisco Agent Desktop—Browser Edition, and Cisco IP Phone Agent (see Figure 20).

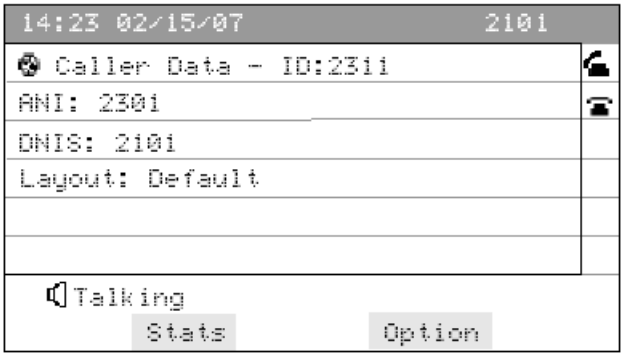
**Figure 20. Enterprise data as it appears in the CAD client applications. All applications are using the same default layout.**




Cisco Agent Desktop




Cisco Agent Desktop—Browser Edition



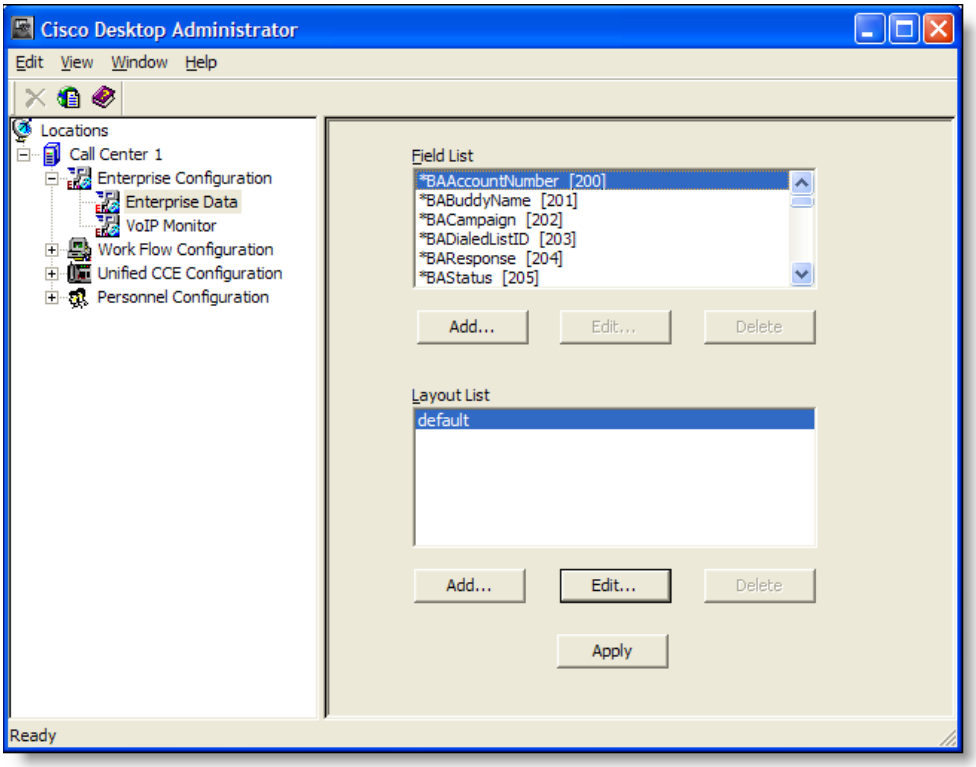

Cisco IP Phone Agent

Use the Desktop Administrator's Enterprise Data window to specify what information is displayed and how it appears in the agent applications.

> **NOTE:** The agent applications must be restarted for any enterprise data variable or layout changes you make to go into effect.

When you select Enterprise Data in the navigation pane, the display pane displays the Field List and Layout List (see Figure 21).

**Figure 21. The Enterprise Data window.**




## Fields

The Field List displays both the predefined fields in ICM and the custom fields you create using the Field Editor.

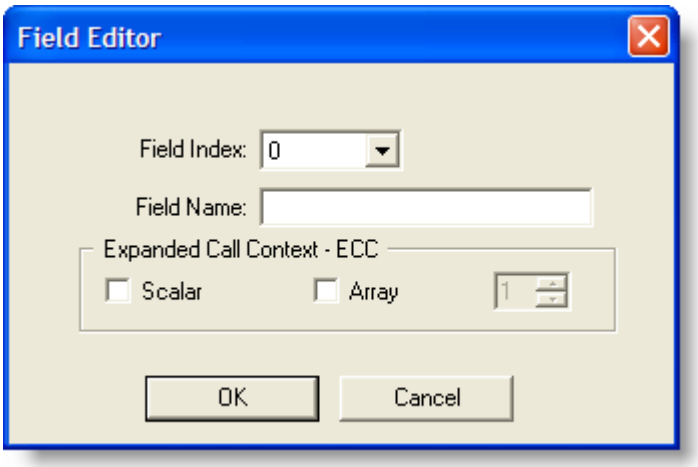
- Predefined fields have index numbers of 159–255, and cannot be edited.
- Custom fields have index numbers of 0–158, and can be edited.
- Fields marked with an asterisk (*) are expanded call context (ECC) variables.

***To add a custom field to the Field List:***

1. In the Field List area, click **Add**.

   The Field Editor dialog box appears (see Figure 22).

**Figure 22. The Field Editor dialog box.**




2. Choose a field index number from the drop-down list.

   The field automatically shows the next available number.

3. Enter a field name that describes the contents of the field.

   The field name and field value can contain only the following characters:

   - Alphanumeric characters (Aa–Zz, 0–9)
   - Underscore ( _ )
   - Period ( . )

   If you use disallowed characters in the field name or field value, they may not display in the IP Phone Agent service.

   > NOTE: For Chinese, Japanese, and Korean localized sites, IP Phone Agent phones display the field index number, not the field name. This is due to phone limitations on displaying multi-byte characters.

   If the field is an ECC variable, the field name must exactly mirror how the field is expressed in ICM, but without the “user” prefix. For instance, the ICM ECC variable **user.Account.Number** must be named **.Account.Number** in the custom field list.

NOTE: ECC variable names cannot be localized with multi-byte characters due to a limitation in ICM.

4. If the field is an ECC variable, select the appropriate check box—**Scalar** or **Array**.
   - A scalar ECC variable is one that stores a single piece of data.
   - An array ECC variable is one that stores multiple pieces of data.
5. If you select **Array**, specify the number of elements in the array in the number field on the right.

   Entering a number in the number field disables the Field Index field. The system automatically assigns the next available indexes to each element in the array.
6. Click **OK**.

   The Field Editor dialog box closes.
7. In the Enterprise Data window, click **Apply** to save your changes.

***To edit an existing custom field:***

1. In the field list, select the field you want to edit, and then click **Edit**.

   The Field Editor dialog box appears.
2. Make your changes, and then click **OK**.

   The Field Editor dialog box closes.
3. In the Enterprise Data window, click **Apply** to save your changes.

***To delete a custom field:***

1. In the field list, select the field you want to delete, and then click **Delete**.

   You can delete only custom fields.
2. In the Enterprise Data window, click **Apply** to save your changes.

## Layouts

The Layout List displays the field layouts available for use on the agent desktop. Each layout may contain up to 16 fields chosen from the fields in the Field List. You can create up to 15 custom layouts in addition to the default layout, for a maximum number of 16 layouts.

You cannot delete the default layout, but it can be edited to add or remove enterprise data fields.

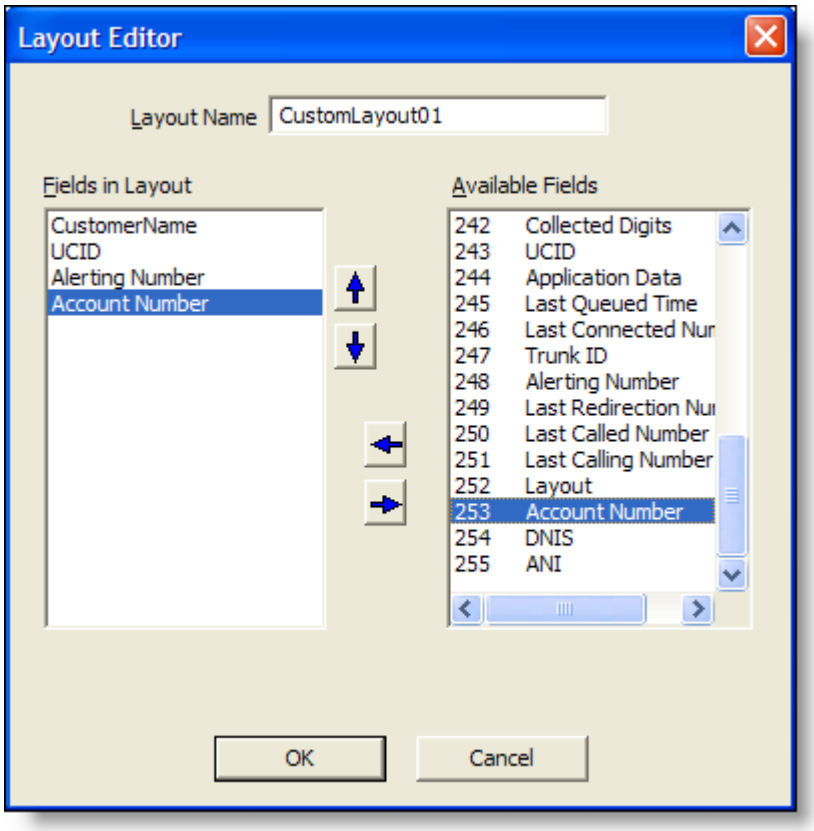
**NOTE:** Cisco Unified CCE Outbound Dialer enterprise data fields (fields prefixed with "BA") display correctly only when added to the Default layout. For more information on Outbound Dialer enterprise data fields, see "Outbound Dialer Enterprise Data" on page 161.

***To create a custom layout:***

1. In the Layout List area, click **Add**.

   The Layout Editor dialog box appears (see Figure 23).

**Figure 23. The Layout Editor dialog box.**




2. In the Layout Name field, enter a name for your layout.
3. Select the desired field from the available fields in the right pane, and either click the left arrow button or double-click your selection to move it to the left pane. You may select up to 16 fields.
4. To rearrange the order in which fields are displayed in the left pane, select a field and click the up or down arrow button to move the field up or down in the list.
5. When the layout is arranged to your satisfaction, click **OK**.

The Layout Editor dialog box closes.

6. In the Enterprise Data window, click **Apply** to save your changes.

***To edit an existing layout:***

1. In the Layout List, select the layout you want to edit, and then click **Edit**.

   The Layout Editor dialog box appears.

2. Make your changes, and then click **OK**.

   The Layout Editor dialog box closes.

3. In the Enterprise Data window, click **Apply** to save your changes.

***To delete an existing layout:***

1. In the Layout List, select the layout you want to delete, and then click **Delete**.

   The layout is deleted.

2. In the Enterprise Data window, click **Apply** to save your changes.

   **NOTE:** You cannot delete the Default layout.

## Custom Layouts

If you want to use a custom layout rather than the default layout, you must first create the custom layout and then create a custom ICM script.

***To use a custom layout:***

1. Create a new ECC scalar variable with ICM Configuration Manager. The new variable stores the new layout as set in an ICM script.
2. Delete the existing field with the index number of **252** from the list of variables.
3. Add a new custom field with an index number of **252**. (This index number is an exception to the rule that fields with indexes between 231 and 255 are predefined and not editable.)
4. Name the new field with the name you gave the new ECC variable you created in Step 1, without the “user” prefix.

   The new field must be a scalar variable, not an array variable.

5. Create a new layout (see the procedure "To create a custom layout:" on page 56).
6. Write an ICM script that assigns the new layout name to the new ECC variable. See your ICM documentation for information on creating scripts.

## VoIP Monitor

The VoIP Monitor window (Figure 24) enables you to:

- Enable desktop monitoring or server monitoring for devices
- Configure a default VoIP Monitor server for server monitoring
- Configure devices to be monitored by specific VoIP Monitor servers
- Configure agent gateways to be monitored by specific VoIP Monitor servers in order to monitor and record mobile agents

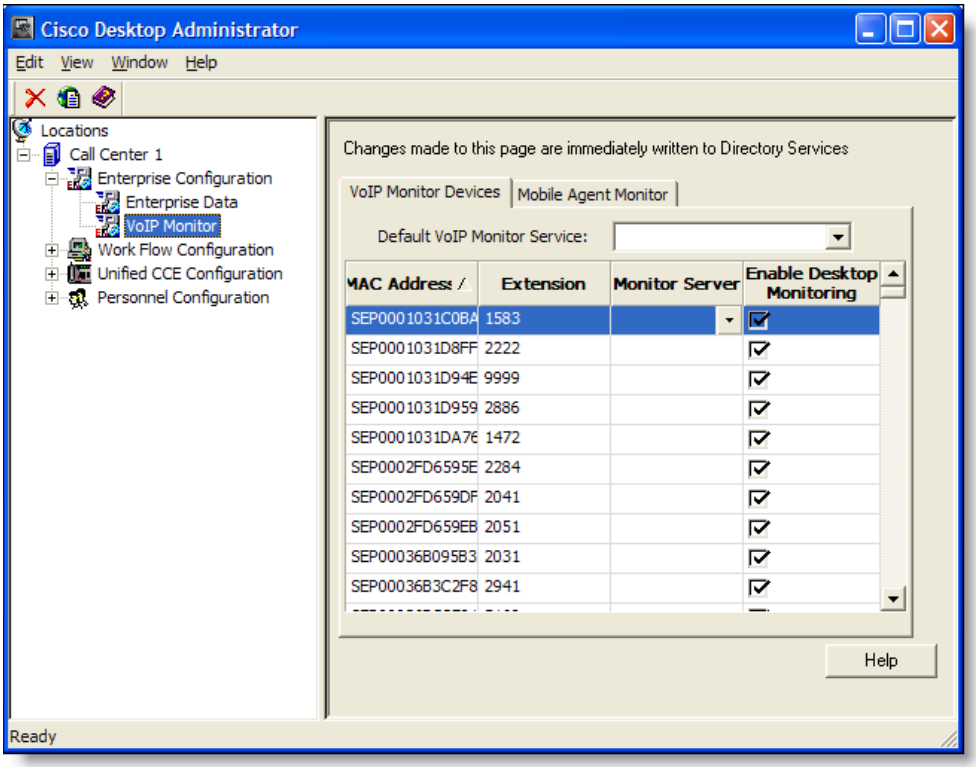
The default setting is all agents using desktop monitoring. In general, there is no need to configure devices for VoIP Monitor server monitoring. See "VoIP Monitor Service Monitoring" on page 60 for more information.

Desktop monitoring and server monitoring are two ways of providing CAD-based monitoring. If your system configuration uses Cisco Unified Communications Manager 6.0 (Unified CM), CAD also supports Unified CM-based monitoring.

The type of monitoring that is used is determined when the Cisco components of your system are installed. CAD uses either Unified CM-based or CAD-based monitoring, not both. If your system is configured to use Unified CM-based monitoring, desktop and server monitoring are not available.

> **NOTE:** If your system is configured to use Cisco Unified Communications Manager-based (Unified CM-based) silent monitoring, no additional configuration is required in Desktop Administrator.

Figure 24. The VoIP Monitor window (VoIP Monitor Services tab).




## Desktop Monitoring

A phone is monitored either through desktop monitoring or a VoIP Monitor service—it cannot be monitored by both. However, a VoIP Monitor service can be a backup if the agent's desktop monitoring module fails to register with Directory Services when CAD is started.

With desktop monitoring enabled, software on the agent desktop handles recording and monitoring requests for that agent. This is possible only on desktops that are physically connected to the network through a hard IP phone (see the *Cisco CAD Installation Guide* for a list of supported hard IP phones) or through the Cisco IP Communicator soft phone. Desktop Monitoring does not apply to agents using the IP Phone Agent service on their IP phone or to CAD-BE agents.

> NOTE: Desktop monitoring does not function with some NIC cards that are unable to detect both voice packets and data packets in a multiple VLAN environment. For more information on this issue, and suggested work-arounds, see Chapter 1 in the *Cisco CAD Installation Guide*.

> **NOTE:** A number of factors can prevent desktop monitoring from registering with Directory Services when CAD is started—for example, there might be network connectivity issues, a lack of some system resources due to other applications running on the agent PC, or issues with the NIC card. As a result, the availability of desktop monitoring cannot be guaranteed.

Desktop monitoring is enabled by default.

***To disable desktop monitoring:***

- On the VoIP Monitor Devices tab, clear the device's **Enable Desktop Monitoring** check box.

## VoIP Monitor Service Monitoring

If your system has only one VoIP Monitor service, it is not necessary to set a default monitor service or to manually assign each device to that single monitor. The VoIP Monitor service assumes that each device is assigned to it as the only available monitor service.

This does not apply to devices that are configured to use desktop monitoring. The default VoIP Monitor service does serve as a backup for desktop monitoring if no other VoIP Monitor service is explicitly defined as the backup.

It is advisable to select a default monitor service to avoid the possibility of having devices unassigned to a monitor service. This situation can arise when there is more than one VoIP Monitor service in the system.

Modifications you make in the VoIP Monitor window are immediately written to LDAP and go into effect shortly thereafter.

Agents using the IP Phone Agent service and CAD-BE agents must be monitored via a VoIP Monitor service.

### Devices Displayed in the VoIP Monitor Window

The VoIP Monitor Devices tab displays all agent devices set up in the Unified CM.

If a phone is configured for extension mobility, the Extension field displays:

- the extension of the user logged into the phone via the Extension Mobility service
- the static extension assigned to the device's MAC address, if no user is logged into the phone and if a static extension is set up
- a blank if no static extension is set up

NOTE: We recommend you assign a static extension to an extension mobility device to make administration easier.

***To set a default VoIP Monitor service:***

- On the VoIP Monitor Services tab, choose a VoIP Monitor service from the Default VoIP Monitor Server field.

  The service you choose is set as the default monitor service for your system. Any device not assigned to a specific VoIP Monitor service or that has desktop monitoring disabled is monitored by the default monitor service.

***To assign a device to a specific VoIP Monitor service:***

1. Select the VoIP Monitor Services tab.
2. Using either the device's extension or the MAC address, locate the device you wish to assign to a specific VoIP Monitor service.

   You can click a column header to sort the column in ascending or descending order to make your search easier.
3. Choose a VoIP Monitor service from the Monitor Server drop-down list.

   You can right-click anywhere in a device's row to pop up the Select a VoIP Monitor Server dialog box from which to choose a VoIP Monitor service.
4. Make sure that the device's Enable Desktop Monitoring check box is cleared.

   The device is now assigned to that VoIP Monitor service.

***To assign multiple devices to a specific VoIP Monitor service:***

1. Use standard Windows multiple selection techniques to assign more than one device to a specific VoIP Monitor service:
   - Shift-Click to select a range of contiguous devices, then right-click the selected devices to display the Select a VoIP Monitor Server dialog box.
   - Ctrl-Click to select non-contiguous devices, then right-click the selected devices to display the Select a VoIP Monitor Server dialog box.
2. Choose the VoIP Monitor service from the drop-down list.

   The devices you selected are now assigned to that VoIP Monitor service.

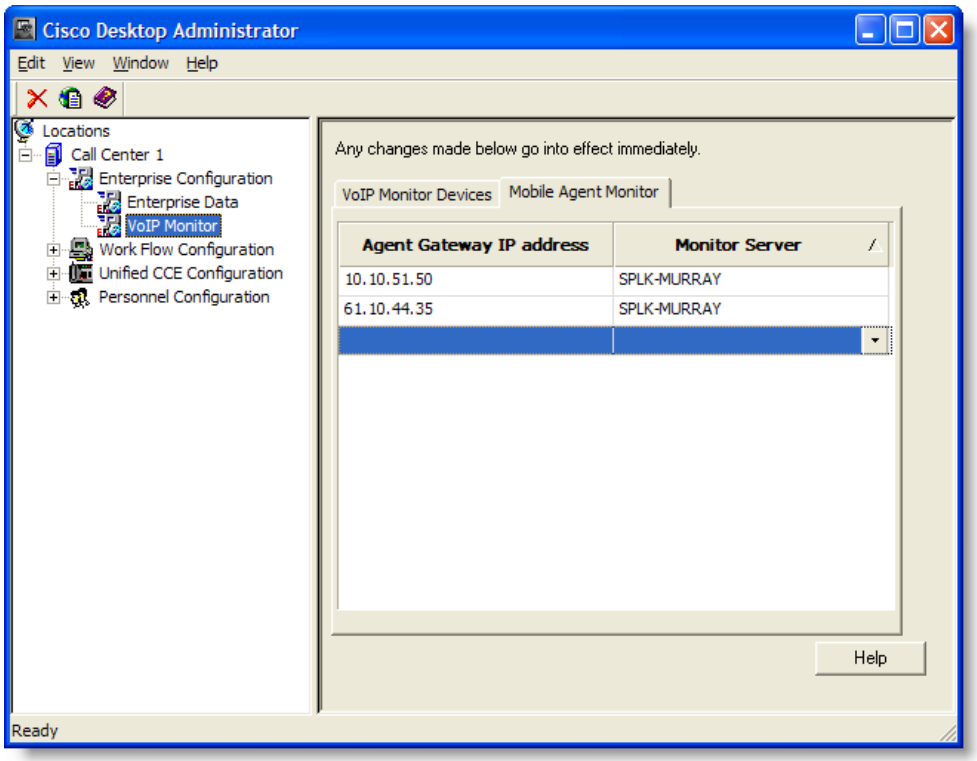
## Mobile Agent Monitoring

Mobile agents can connect to the system through any one of a number of agent gateways. The Mobile Agent Monitor tab (see Figure 25) enables you to assign one VoIP Monitor service to each agent gateway. Only one VoIP Monitor service per agent gateway is supported. One VoIP Monitor service can be assigned to multiple agent gateways as well as to regular agent phones.

For mobile agent monitoring to work, the caller and agent voice gateways must be separate. In addition, the VoIP Monitor server must be located in the network where it can see the traffic flowing between the agents and customers. If the customer and agent are speaking to each other over the same voice gateway, then that voice stream will remain local to the gateway and not be exposed to the VoIP Monitor Service. SPAN will not send those packets to the VoIP Monitor Service, and the conversation will not be heard. For this reason, monitoring and recording of Agent-to-Agent calls is not supported.

One additional limitation of mobile agent monitoring is that if a mobile agent logs in while on a call or is on a call during a CAD services or CRI server failover, the agent cannot be monitored until the call state changes or the agent makes a new call.

**Figure 25. Mobile Agent Monitor tab.**




***To set up mobile agent monitoring:***

1. On the Mobile Agent Monitor tab, double-click or right-click the first available field in the Agent Gateway IP Address column.
2. Enter the IP address of the agent gateway to be monitored.
3. In the Monitor Server field, select the VoIP Monitor service that will monitor the agent gateway from the drop-down list.

Your changes go into effect immediately.

## Effect of Monitoring Options on Devices

Use Table 3 to determine the effect on monitored devices with various combinations of desktop monitoring, VoIP Monitor service monitoring, and setting a default monitor.

If a device is assigned to be monitored by a specific VoIP Monitor service, and that service fails, there is no failover to the default VoIP Monitor service (if one is designated). However, if a device has desktop monitoring enabled, and the desktop monitoring module is not registered with Directory Services at the time a monitoring or recording session is requested, there is failover to a specific VoIP Monitor service (if designated) or to the default VoIP Monitor service (if designated).

**Table 3. Effect of Monitoring Options on Devices**

| Specific VoIP | Desktop Monitor | Default VoIP | Effect on Devices |
|---|---|---|---|
| No | No | No | Monitoring fails if there are multiple VoIP monitor services; monitored by default VoIP Monitor service if there is one VoIP Monitor service in the system. |
| Yes | No | No | Monitored by specific VoIP Monitor service; no backup in case of failure. |
| Yes | Yes | No | Monitored by Desktop Monitor; backed up by specific VoIP Monitor service. |
| Yes | No | Yes | Monitored by specific VoIP Monitor service; no backup in case of failure. |
| No | Yes | No | Monitored by Desktop Monitor; no backup in case of failure. If there is only one VoIP Monitor service in the system, it serves as backup. |
| No | Yes | Yes | Monitored by Desktop Monitor; backed up by default VoIP Monitor service. |
| No | No | Yes | Monitored by default VoIP Monitor service; no backup in case of failure. |
| Yes | Yes | Yes | Monitored by Desktop Monitor; backed up by the specific VoIP Monitor service. If the selected VoIP Monitor service fails, there is no backup. |

## Removing a VoIP Monitor or Recording & Playback Service from Directory Services

You can remove a VoIP Monitor service or Recording & Playback service from Directory Services.

Remove these services only if you intend to uninstall (or already have uninstalled) the VoIP Monitor service or Recording & Playback service permanently. The Remove function enables you to clean up Directory Services.

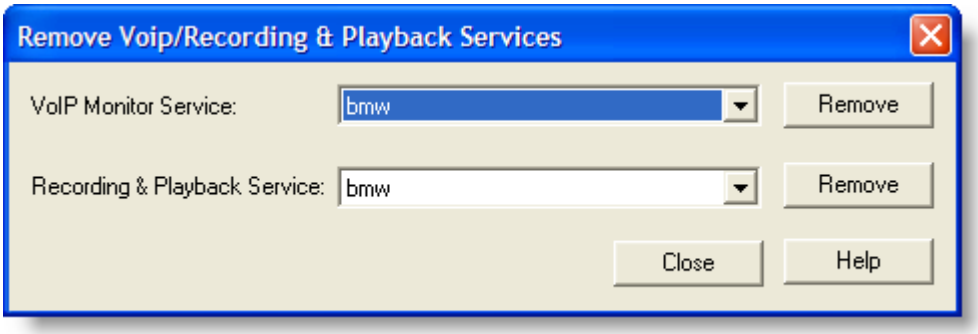
> **NOTE:** Removing a VoIP Monitor service can result in devices becoming unmonitored.

***To remove a VoIP Monitor or Recording & Playback service from Directory Services:***

1. From the menu bar, choose **Edit > Remove Services**, or click the **Remove VoIP, Recording/Playback Services** button on the toolbar.

   The Remove VoIP/Recording & Playback Server dialog box is displayed (see Figure 26).

**Figure 26. The Remove VoIP/Recording & Playback Server dialog box.**




2. From the appropriate drop-down list, select the service you want to remove from Directory Services.
3. Click the **Remove** button next to the selected service.

   The selected service is removed from Directory Services.
4. Click **Close** to close the dialog box.

***To restore a removed service to Directory Services:***

1. Stop and then restart the removed service from the Windows Services dialog box.
2. Stop and then restart Desktop Administrator.

The service is restored to the list of available services.

# Work Flow Configuration

# 3

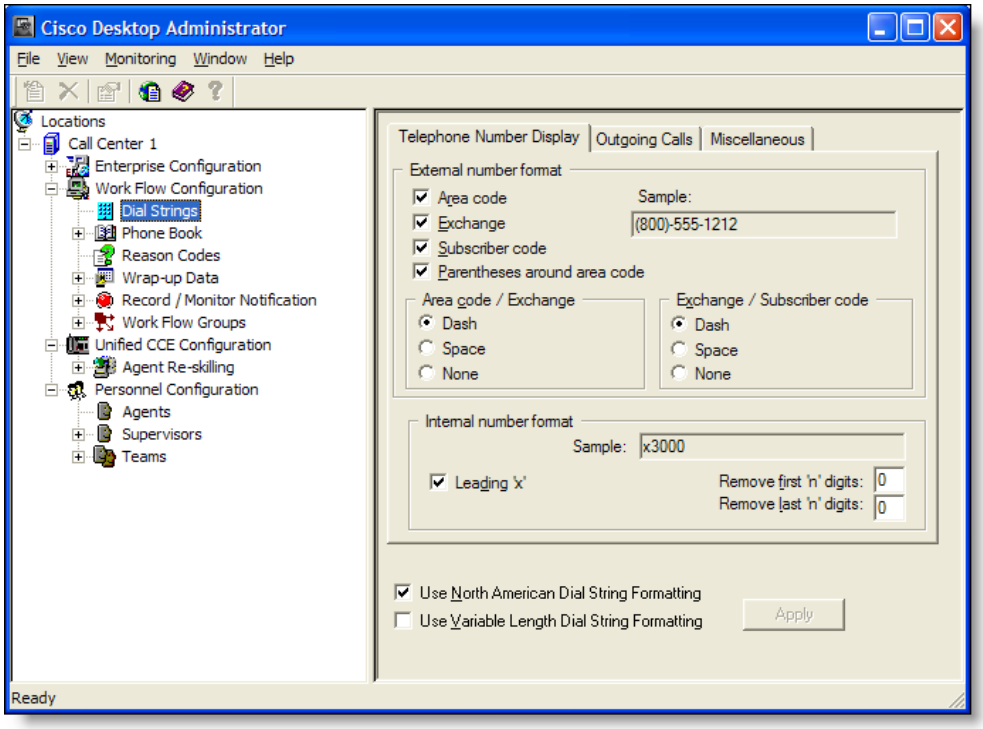
## Introduction

Work Flow Configuration enables you to configure and maintain the appearance and behavior of Agent Desktop, CAD-BE, and IP Phone Agent. Work Flow Configuration has 6 functions:

- Dial Strings (page 69)
- Phone Books (page 78)
- Reason Codes (page 82)
- Wrap-up Data (page 86)
- Record/Monitor Notification (page 91)
- Work Flow Groups (page 92)

To use any Work Flow Configuration application, select its node in the left navigation pane of the Desktop Administrator window (see Figure 27). The right display pane shows the selected node.

Figure 27. The Work Flow Configuration window (Dial Strings node selected).



# Dial Strings

Use the Dial Strings function to configure the way desktop applications display and dial phone numbers.

**NOTE:** Dial strings for CAD-BE are not configurable.

Select the appropriate check box at the bottom of the Dial Strings pane to choose the dial string format you will use. The available formats are:

- North American Dial String Format
- Variable Length Dial String Format

Different tabs display depending on your choice.

## North American Dial String Format

If you choose the North American dial string format, the following three tabs are active:

### Telephone Number Display

The Telephone Number Display tab (see Figure 28) enables you to configure how phone numbers are displayed in Agent Desktop.

The selections you make are reflected in the sample fields. (An exception is if you enter a value in either of the “Remove first ‘n’ digits” and “Remove last ‘n’ digits” fields. In that case, the sample does not change.)

**Figure 28. Telephone Number Display tab.**

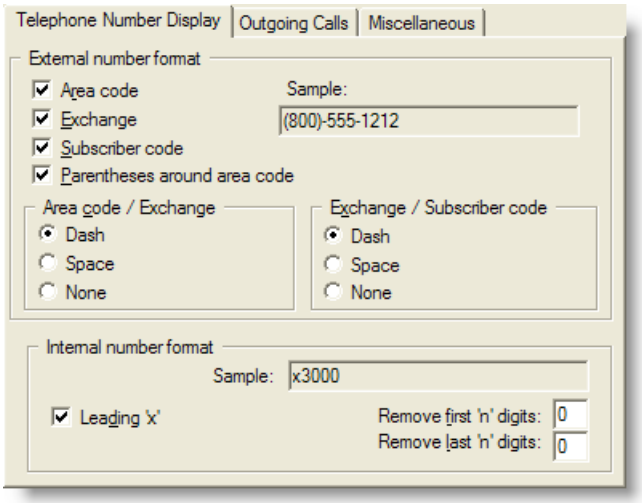


Table 4. Telephone Number Display tab sections.

| Tab Section | Description |
|---|---|
| External number format | Specify the calling number and called number phone numbers format |
| Area code/Exchange | Specify the separator between the area code and exchange |
| Exchange/Subscriber code | Specify the separator between the exchange and the subscriber code |
| Internal number format | Specify the internal phone numbers format. You may include an X (extension) and remove the leading or trailing digits (in the event that extension numbers are less than 4 digits long). |

***To configure the telephone number display:***

- Select or clear the check boxes and radio buttons on the Telephone Number Display tab as desired, and then click **Apply** to save your changes.

## Outgoing Calls

The Outgoing Calls tab (see Figure 29) enables you to configure your local area codes and exchanges.

Figure 29. Outgoing Calls tab.

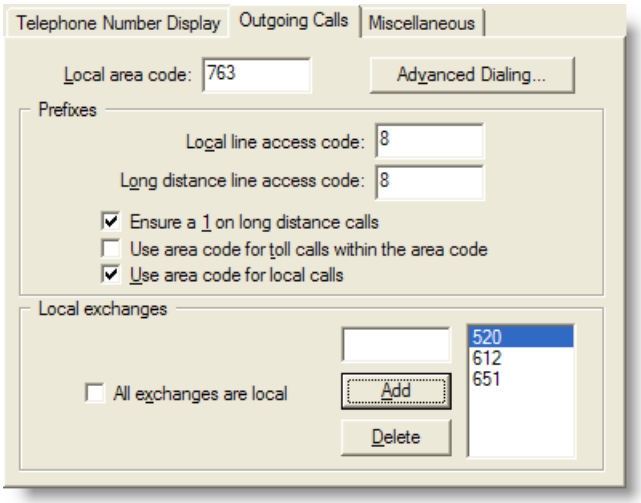


Table 5. Outgoing Calls tab sections.

| Tab Section | Description |
|---|---|
| Local area code | Enter the local 3-digit area code. **NOTE**: If you must dial the area code for local calls, leave this field blank. |
| Advanced Dialing... | Click to configure Advanced Internal Dialing and Advanced External Dialing. |
| Prefixes | • Local line access code. Enter the number required to access an outside local line<br>• Long distance line access code. The number required to access an outside long distance line<br>• Ensure a 1 on long distance calls. Check to automatically add a 1 at the beginning of a long distance phone number<br>• Use area code for toll calls within the area code. Check to automatically add the local area code to any calls dialed to numbers not included in the local exchange list.<br>• Use area code for local calls. Check to automatically add the local area code to any calls dialed to numbers included in the local exchange list. |
| Local exchanges | Check **All exchanges are local** or click **Add** to build a list of exchanges for which it is NOT necessary to add a 1 before dialing |

***To configure outgoing calls:***

- Enter information and select or clear the appropriate check boxes on the Outgoing Calls tab as desired, and then click **Apply** to save your changes.

## Advanced Internal Dialing

The Advanced Internal Dialing tab (see Figure 30) enables you to configure more internal dialing options. Access it by clicking the Advanced Dialing button on the Outgoing Calls tab.

Figure 30. Advanced Internal Dialing tab.

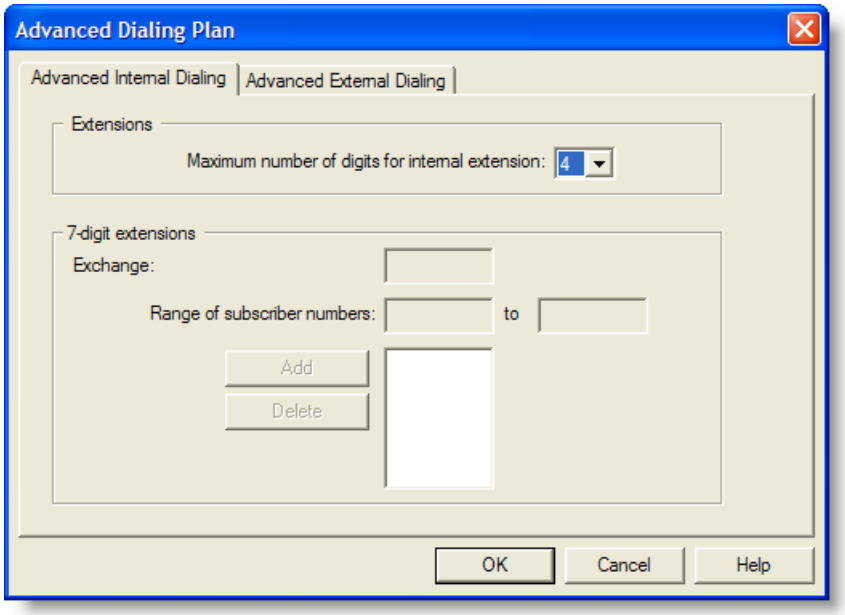



Table 6. Advanced Internal Dialing tab sections.

| Tab Section | Description |
|---|---|
| Extensions | The maximum number of digits in an internal extension number, from 1–12. If you select 7, you must specify the internal exchange and the corresponding range of subscriber numbers so the application can distinguish between a 7-digit internal phone number and a 7-digit outgoing call. |
| 7-digit extensions | If you specified a 7-digit extension number, enter the internal exchange and the corresponding range of extension numbers from low to high. Click **Add** to add them to the list. |

## Advanced External Dialing

The Advanced External Dialing tab (see Figure 31) enables you to configure more external dialing options. Access it by clicking the Advanced Dialing button on the Outgoing Calls tab.

Figure 31. Advanced External Dialing tab.

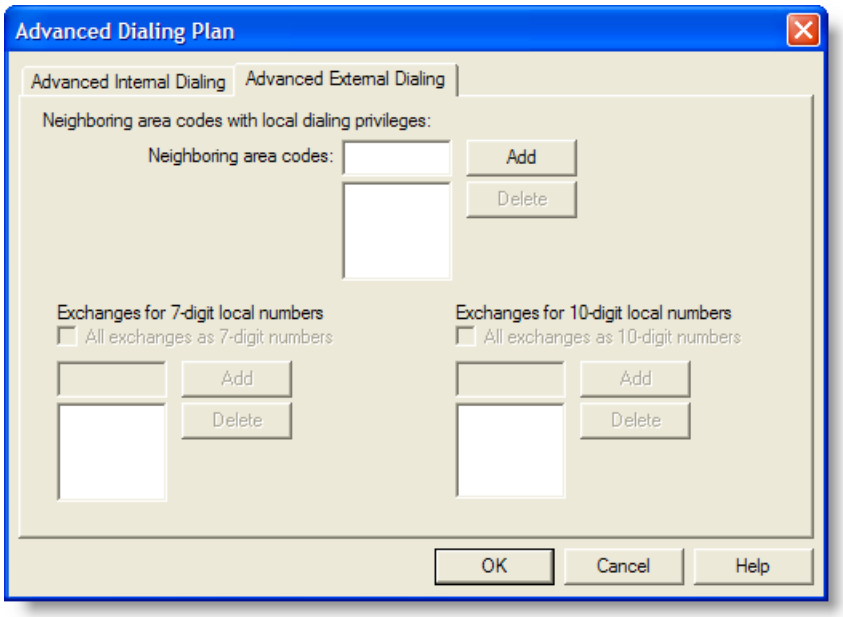



Table 7. Advanced External Dialing tab sections.

| Window Section | Description |
|---|---|
| Neighboring area codes with local dialing privileges | The area codes to which you can place non-toll calls. Click **Add** to add a new area code to the list and click **Delete** to remove an area code from the list. |
| Exchanges for 7-digit local numbers | Choose the neighboring area code, then enter the exchanges within that area code which do not require you to dial 1 or the area code. Check **All exchanges as 7-digit numbers** if no exchange requires you to dial 1 or an area code. |
| Exchanges for 10-digit local numbers | Choose the neighboring area code, then enter the exchanges within that area code that require you to dial the area code but not a 1. Check **All exchanges as 10-digit numbers** if all exchanges require you to dial an area code but not a 1. |

## Miscellaneous

The Miscellaneous tab (Figure 32) sets up further dialing properties.

> **NOTE:** This tab is the same for the North American and variable length dial string formats.

Figure 32. Miscellaneous tab.

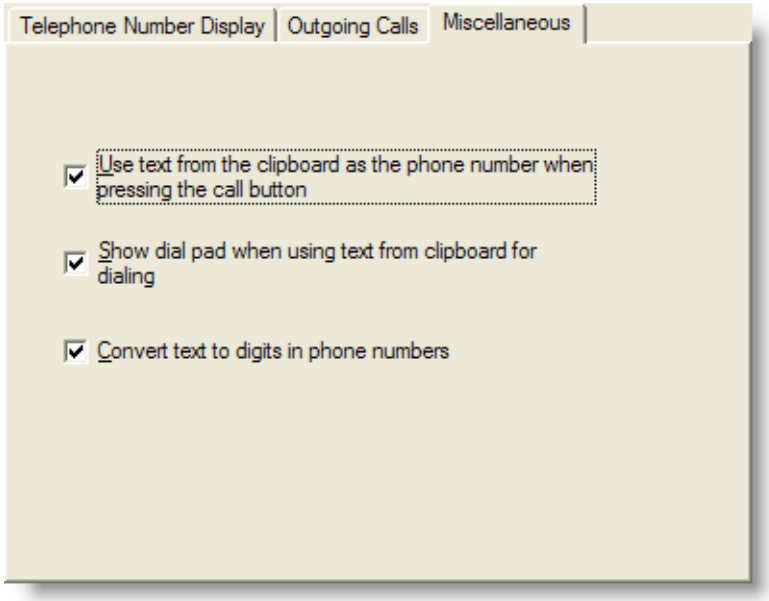



Table 8. Miscellaneous tab sections.

| Tab Section | Description |
|---|---|
| Use text from the clipboard as the phone number when pressing the call button | Check to enable Agent Desktop to use text on the clipboard as the dialed number when the Call button is pressed, as long as the text on the clipboard is a valid text string. |
| Show the dial pad when using text from the clipboard for dialing. | Available only if “Use text from the clipboard...” is enabled. Check to display the dial pad before dialing a number copied from the clipboard. If this box is not checked, Agent Desktop dials the number without displaying the dial pad. |
| Convert text to digits in phone numbers | Converts phone numbers expressed in alpha characters (for example, 1-800-ANYWORD) to their numeric equivalents before dialing. |

***To configure the miscellaneous options:***

- Select or clear the appropriate check boxes on the Miscellaneous tab as desired, and then click **Apply** to save your changes.

## Variable Length Dial String Format

If you choose the variable length dial string format, the following three tabs are active:

### Telephone Number Display

The Telephone Number Display tab (see Figure 33) enables you to configure how phone numbers are displayed in Agent Desktop.

The selections you make are reflected in the Sample fields. (An exception is if you enter a value in either of the “Remove first ‘n’ digits” and “Remove last ‘n’ digits” fields. In that case, the sample does not change.)

> **NOTE:** The number of digits displayed in each section of the sample phone number is for illustration only. The samples do not reflect the number format you set up on the Phone Number Format tab.

**Figure 33. Telephone Number Display tab.**

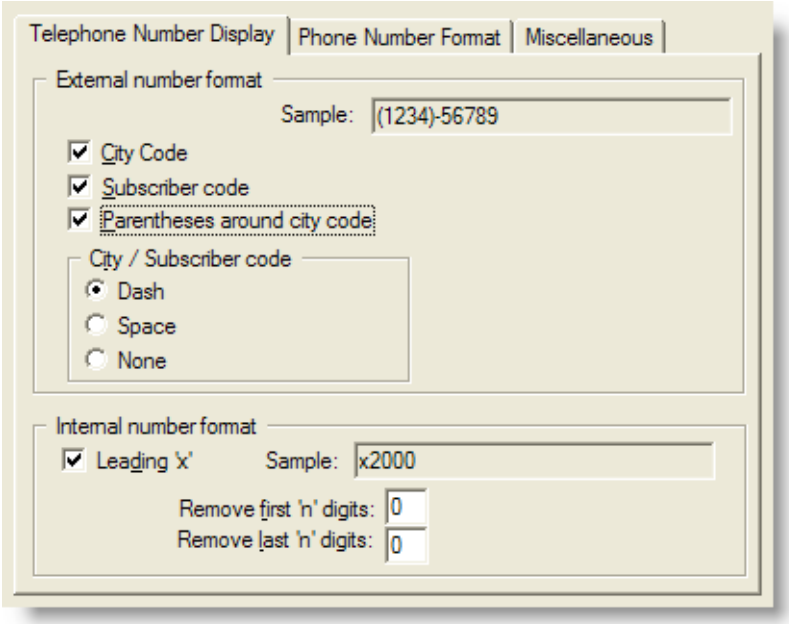



**Table 9. Telephone Number Display tab sections**

| Tab Section | Description |
|---|---|
| External number format | Specify how you want to view the calling number and called number phone numbers. |

Table 9. Telephone Number Display tab sections — <Emphasis>Continued

| Tab Section | Description |
|---|---|
| City/subscriber code | Specify the separator you want to display between the city code and the subscriber code. |
| Internal number format | Specify how internal phone numbers are displayed. You may include an X (extension) and remove the leading or trailing digits (in the event that extension numbers are less than 4 digits long). |

***To configure the telephone number display:***

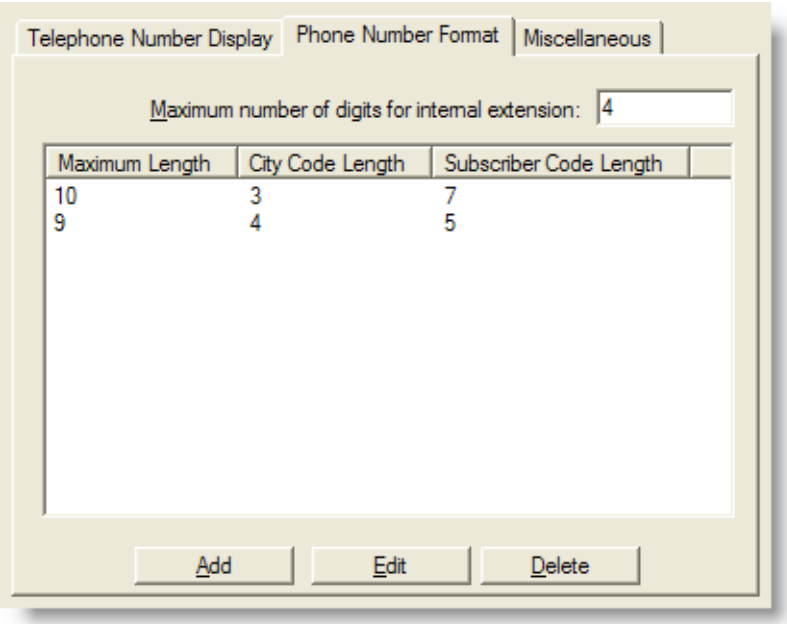
- Enter data and select or clear the appropriate check boxes and radio buttons on the Telephone Number Display tab as desired, and then click Apply to save your changes.

## Phone Number Format

The Phone Number Format tab (Figure 34) enables you to establish the format for phone numbers that do not follow the North American dial string format. You can also set the maximum number of digits in an internal phone extension.

You can establish as many formats as you want, as long as each one has a unique total length.

Figure 34. Phone Number Format tab.



*To add a new phone number format:*

1. Click **Add**.

   The Add City/Subscriber Code Lengths dialog box appears.

2. Enter the number of digits in the city code and the subscriber code, and then click **OK**.

   The numbers you entered are displayed in the phone number format pane, along with the calculated total length of the format. You cannot enter another format with the same total length.

3. Click **Apply**.

   The new phone number format is saved.

*To edit a phone number format:*

1. Choose the number format, and then click **Edit**.

   The Edit City/Subscriber Code Lengths dialog box appears.

2. Make your changes, and then click **OK**.
3. Click **Apply** to save your changes.

   The phone number format is changed.

*To delete a phone number format:*

1. Choose the number format, and then click **Delete**.
2. Click **Apply** to save your changes.

   The phone number format is deleted.

## Miscellaneous

The Miscellaneous tab for the variable length dial string format is the same as the tab for the North American dial string format.

See "Miscellaneous" on page 73 for a description of the Miscellaneous tab.

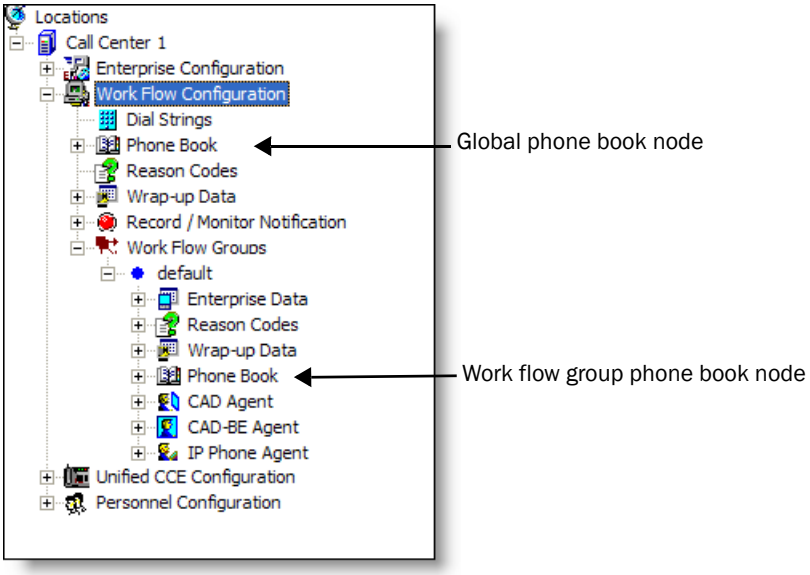
## Phone Books

Agents have several lists of phone numbers available to them:

- The Recent Call List, a dynamic list of up to 100 recently called phone numbers kept by Agent Desktop
- A personal phone book with unlimited entries, created and maintained by the agent (and enabled/disabled by the system administrator)
- Up to 256 global phone books, each with unlimited entries, created by the system administrator with the global Phone Book function
- Work flow group phone books, created by the system administrator with the work flow group Phone Book function

Global phone books are created and maintained using the Phone Book node under the Work Flow Configuration node. Work flow group phone books are created and maintained using the Phone Book node under the specific work flow group's node (see Figure 35).

**Figure 35. Global and work flow phone book nodes.**

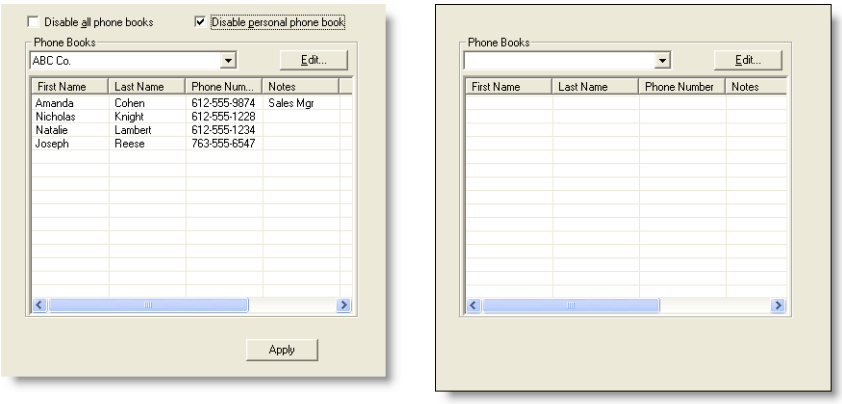



The global Phone Book window (see Figure 36, left) enables you to set up and manage the global phone books that are shared by all agents, and to disable all phone books or just personal phone books.

The work flow group Phone Book window (see Figure 36, right) enables you to set up and manage the work flow group phone books that are shared by agents in specific work flow groups.

Phone books and phone book entries are created and maintained in the Phone Book Editor dialog box (see Figure 37).

**Figure 36. Phone Book window.**




Global level Work flow group level

The Phone Book Editor enables you to set up and maintain pone books.

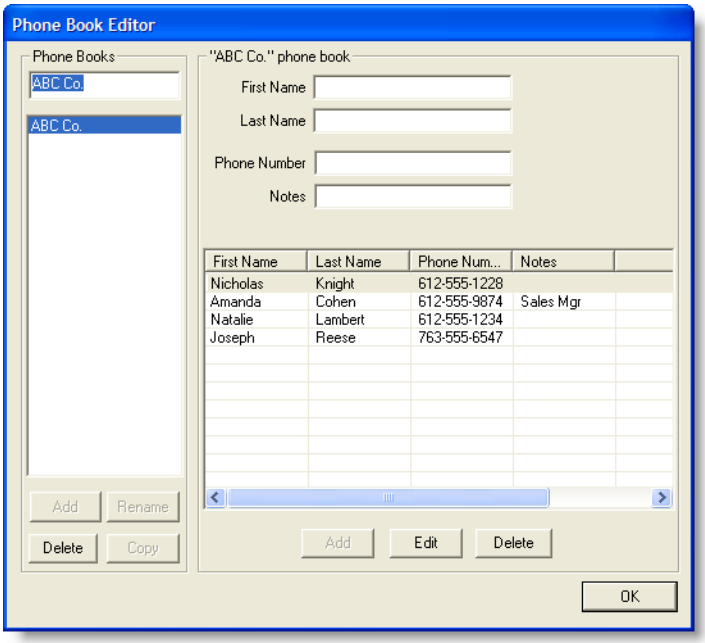
## Creating Phone Books

***To set up a new phone book:***

1. In the global or work flow group Phone Book window, click **Edit**.

   The Phone Book Editor dialog box appears (see Figure 37).

Figure 37. Phone Book Editor dialog box.




2. Enter a new phone book name in the Phone Books field, and then click **Add**.

   The name of the new phone book is added to the list of phone books.

3. Click **OK**.

   The new phone book is saved and the Phone Book Editor dialog box closes.

***To add phone book entries:***

1. In the Phone Book window, choose the phone book you want to edit from the drop-down list, and then click **Edit**.

   The Phone Book Editor dialog box appears.

2. Enter a name, phone number, and note (optional) for a person or company, and then click **Add** to add the information to the phone book.

   The Phone Number field allows only the characters 0–9, aA–zZ, ‘ ( ) + ; / : . = ? and a space. If you enter any other character you are advised you used a disallowed character. The disallowed character will be replaced by a question mark so you can change it to an allowed character.

3. Repeat Step 2 as needed to enter all entries to the phone book. When all entries are completed, click **OK**.

   Your entries are saved and the Phone Book Editor dialog box closes.

*To edit phone book entries:*

1. In the Phone Book window, choose the phone book you want to edit from the drop-down list, and then click **Edit**.

   The Phone Book Editor dialog box appears.

2. Choose an entry in the phone book, and then take one of these actions:
   - Click **Edit** to modify the entry
   - Click **Delete** to delete the entry
3. When all edits are completed, click **OK**.

   Your changes are saved and the Phone Book Editor dialog box closes.

## Enabling or Disabling Phone Books

Phone books can be enabled or disabled only on the global level.

*To enable or disable phone books:*

1. In the global Phone Book window:
   - Select or clear the **Disable all phone books** check box to remove agent access to all global and work flow group phone books.
   - Select or clear the **Disable personal phone book** check box to remove access to all agents' personal phone books.
2. Click **Apply**.

## Reason Codes

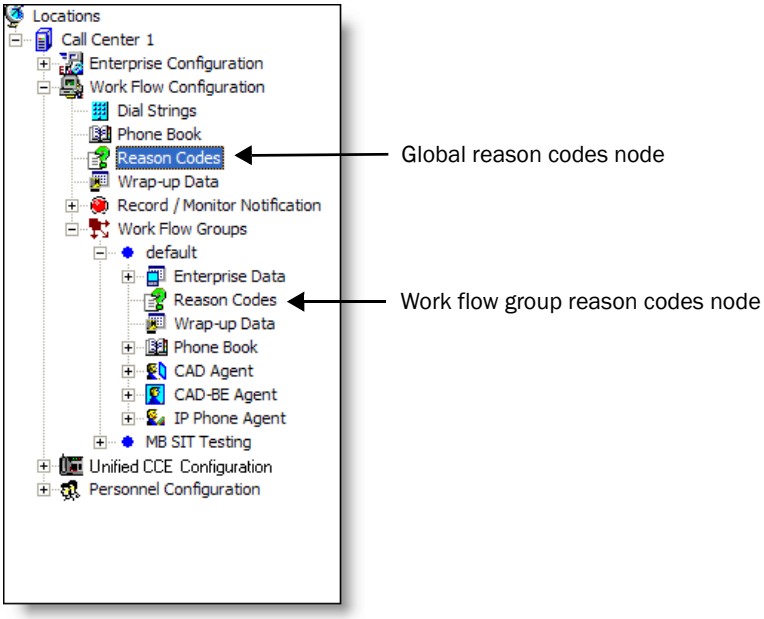
Reason codes describe why an agent has changed to the Not Ready agent state or has logged out.

There is no limit on how many reason codes can be set up for CAD and CAD-BE. IP Phone Agent has a limit of 100 reason codes.

Reason codes are set up and maintained in ICM using the Cisco Unified Contact Center Enterprise Web Administration Tool (if you use System IPCC) or ICM Configuration Manager (if you use anything other than System IPCC, for example, ICM Enterprise/Hosted or Unified CC Enterprise/Hosted). You use Desktop Administrator to assign reason codes to agents on both a global and work flow group level.

Global reason codes are assigned using the Reason Codes node under the Work Flow Configuration node. Work flow group reason codes are assigned using the Reason Codes node under the specific work flow group's node (see Figure 38).

**Figure 38. Global and work flow reason code nodes.**




Global reason codes are available for use by all agents. Work flow reason codes are available only to those agents in that specific work flow group.

Reserved reason codes are predefined in LDAP and cannot be created or deleted. These reason codes are automatically applied to events over which agents have no control, such as being logged out by a supervisor or because of a system failure. They

are not visible to the agent, but appear only in reports and in the global Reason Codes window.

> NOTE: It is recommended that reason codes created in ICM do not use the same reason code numbers as the reserved reason codes. If there are duplicated reason code numbers, errors in reporting and other problems might result.

The reserved reason codes are:

Table 10. Reserved reason codes

| Reason Code | Description |
|---|---|
| -3 | Extension modified while logged in |
| -2 | PG failure |
| -1 | Peripheral restarted |
| 22 | Supervisor logout |
| 33 | Supervisor not ready |
| 20001 | Not Ready for force logout |
| 20002 | Force logout |
| 20003 | Not Ready for logout |
| 32767 | Ring no answer |
| 50001 | CTI OS disconnect |
| 50002 | CTI OS component disconnect |
| 50003 | Device out of service |
| 50004 | Agent inactivity |
| 50010 | Routed call NOT delivered |
| 50020 | Agent Re-skill |

Not Ready and Logout reason codes are enabled or disabled on the work flow group level.

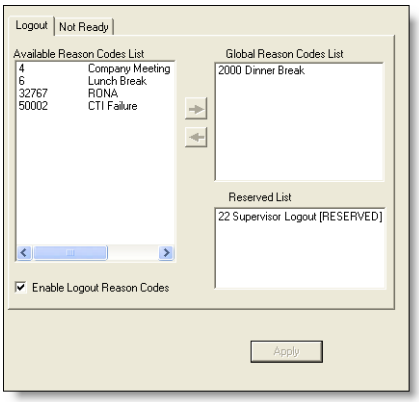
> NOTE: You can configure reason codes within the Cisco Unified Contact Center Enterprise Web Administration Tool (if you use System IPCC) or the ICM Configuration Manager (if you use anything other than System IPCC) so that they are required when logging out or going to the Not Ready state. However, Agent Desktop cannot detect these

settings. It is recommended that the enterprise desk settings “Idle reason required” and “Logout reason required” be left unselected and that the enabling or disabling of reason codes be done within Desktop Administrator.

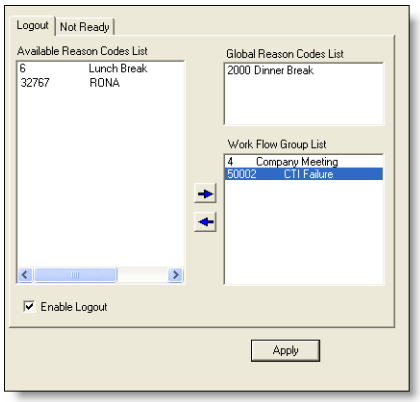
**NOTE:** Agents must restart CAD, CAD-BE, and IP Phone Agent to see any changes you make to reason codes.

**NOTE:** For Chinese, Japanese, and Korean localized sites, reason codes may not appear correctly in IP Phone Agent due to the phone limitations on multi-byte characters.

**Figure 39. Reason Code window.**




Global level




Work flow group level

## Assigning Reason Codes

***To assign global reason codes:***

1. Select the global Reason Codes node in the navigation tree to display the Reason Codes window (see Figure 39, left).
2. Select the appropriate tab for the type of reason codes you want to assign: Logout or Not Ready.
3. From the Available Reason Codes List, select the reason codes you want available to all agents, and then click the right arrow button to move them to the Global Reason Codes List.
4. Click **Apply**.

*To assign work flow reason codes:*

1. Select the Reason Codes node under the desired work flow group in the navigation pane to display the Reason Codes window (see Figure 39, right).
2. Select the appropriate tab for the type of reason codes you want to assign, **Logout** or **Not Ready**.
3. From the Available Reason Codes List, select the reason codes you want available to agents in that work flow group, and then click the right arrow button to move them to the Work Flow Group List.
4. Select the **Enable Logout Reason Codes** or **Enable Not Ready Reason Codes** check box to enable that type of reason code for the agents in that work flow group. This includes any global reason codes set up.
5. Click **Apply**.

## Enabling or Disabling Reason Codes

Reason codes can be enabled or disabled only on the work flow group level, and must be done individually for every work flow group.

*To enable or disable reason codes:*

1. Select the Reason Codes node under the work flow group whose reason codes you want to enable or disable.
2. Select the appropriate tab and then select or clear the **Enable Logout Reason Codes** or **Enable Not Ready Reason Codes** check box.
3. Click **Apply**.

## Wrap-up Data

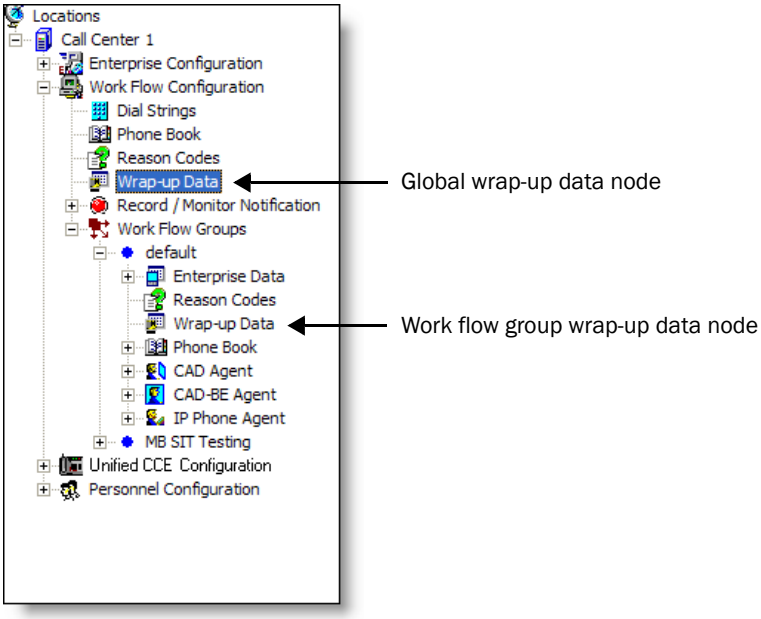
Wrap-up data descriptions are used by contact centers for purposes such as tracking the frequency of different activities and identifying the account to which to charge a call, among others. Wrap-up data is set up and maintained, and automated state changes are enabled, using the Wrap-up Data window.

There is no limit on how many wrap-up data descriptions can be set up for CAD and CAD-BE. IP Phone Agent has a limit of 100 wrap-up data descriptions.

> **NOTE:** CAD and CAD-BE agents must log out, exit, and restart the application for changes to take effect.

Global wrap-up data descriptions are created and assigned using the Wrap-up Data under the Work Flow Configuration node. Work flow group wrap-up data descriptions are created and assigned using the Wrap-up Data node under the specific work flow group's node (see Figure 40).

**Figure 40. Global and work flow wrap-up data nodes.**




In Agent Desktop, CAD-BE, and IP Phone Agent, the agent selects the appropriate wrap-up data description at the beginning of the wrap-up work time for a call. The value the agent selects appears in the Termination_Call_Detail record for the call in the ICM database.

IP Phone Agent is limited to a maximum of 100 wrap-up data descriptions.

To enable Desktop Administrator to properly manage wrap-up data, you must configure the following Enterprise Desk Settings options in ICM Configuration Manager as optional:

- Work mode on Incoming
- Work mode on Outgoing

Within ICM Configuration Manager, you can configure wrap-up data so that it is required when transitioning to the Work Ready or Work Not Ready states. However, Agent Desktop cannot detect these settings. Leave the ICM Configuration Manager settings as optional and enable or disable wrap-up data within Desktop Administrator.

When creating wrap-up data descriptions, follow these guidelines:

- Descriptions may consist of up to 39 alphanumeric characters. No punctuation or other characters are allowed.

  NOTE: For Chinese, Japanese, and Korean localized sites, descriptions may not appear correctly in IP Phone Agent due to the phone limitations on multi-byte characters.

- Duplicate descriptions are not allowed.

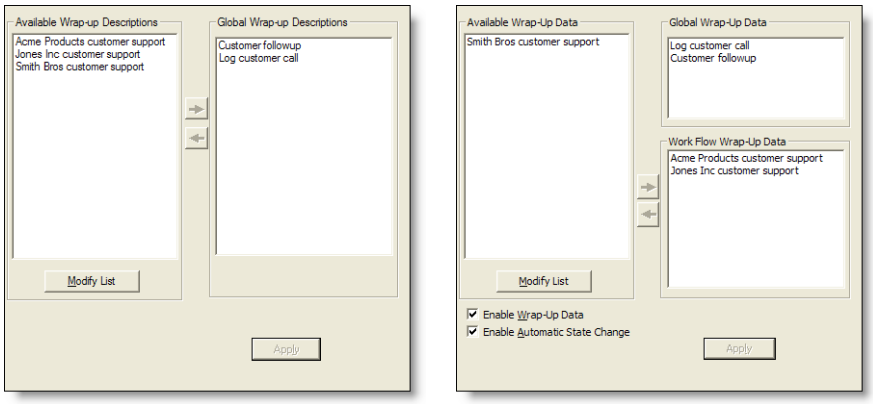
## Creating Wrap-up Data Descriptions

You can create and modify wrap-up data descriptions on both the global and work flow group level.

***To create a wrap-up data description:***

1. Select the global or work flow group Wrap-up Codes node in the navigation tree to display the Wrap-up Codes window (see Figure 41).

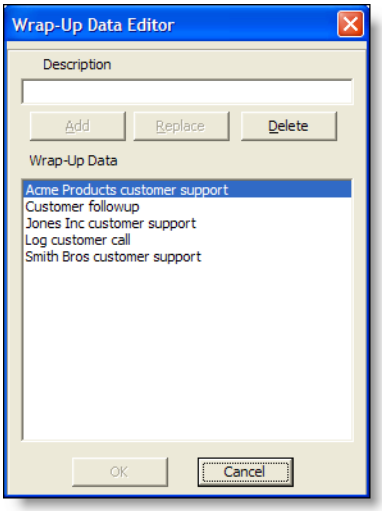
Figure 41. Wrap-up Data window.




**Global level** **Work flow group level**

2. Click **Modify List** to display the Wrap-up Data Editor dialog box (see Figure 42).

Figure 42. Wrap-up Data Editor dialog box.




3. Type the new wrap-up data description in the Description field, and then click **Add**.

   The wrap-up data description is added to the Wrap-up Data list.

4. Click **OK** close the dialog box, and then click **Apply** to save your changes.

***To edit a wrap-up data description:***

1. Select the global or work flow group Wrap-up Data node in the navigation tree to display the Wrap-up Data window (see Figure 41).
2. Click **Modify List** to display the Wrap-up Data Editor dialog box (see Figure 42).

3. Double-click the wrap-up data description you want to edit.
4. In the pop-up dialog box, edit the description as desired and then click **OK.**
5. Click **OK** to close the Wrap-up Data Editor dialog box, and then click **Apply** to save your changes.

***To delete a wrap-up data description:***

1. Select the global or work flow group Wrap-up Data node in the navigation tree to display the Wrap-up Data window (see Figure 41).
2. Click **Modify List** to display the Wrap-up Data Editor dialog box (see Figure 42).
3. Select the wrap-up data description you want to delete, and then click **Delete**.
4. Click **OK** to close the dialog box, and then click **Apply** to save your changes.

## Assigning Wrap-up Data Descriptions

Wrap-up data descriptions can be assigned at the global and at the work flow group level. Global wrap-up data descriptions are available to all agents. Work flow group level wrap-up data descriptions are available only to the agents in that specific work flow group.

***To assign global wrap-up data descriptions:***

1. Select the global Wrap-up Data node in the navigation tree to display the Wrap-up Data window (see Figure 41, left).
2. From the Available Wrap-up Descriptions list, select the descriptions you want available to all agents, and then click the right arrow button to move them to the Global Wrap-up Descriptions list.
3. Click **Apply**.

***To assign work flow wrap-up data descriptions:***

1. Select the Wrap-up Data node under the desired work flow group in the navigation pane to display the Wrap-up Data window (see Figure 41, right).
2. From the Available Wrap-up Data list, select the descriptions you want available to agents in that work flow group, and then click the right arrow button to move them to the Work Flow Wrap-up Data list.
3. Select the **Enable Wrap-up Data** check box to enable wrap-up data for the agents in that work flow group. This includes any global wrap-up data descriptions set up.
4. Click **Apply**.

## Enabling or Disabling Wrap-up Data

Wrap-up data can be enabled or disabled only on the work flow group level.

***To enable or disable wrap-up data:***

1. Select the Wrap-up Data node under the work flow group whose wrap-up data descriptions you want to enable or disable.
2. Select or clear the **Enable Wrap-up Data** check box.
3. Click **Apply**.

## Automatic State Changes

If automatic state changes are enabled, agents are automatically changed from the Work Not Ready state to the Not Ready state, and from the Work Ready state to the Ready state, when they enter wrap-up data.

Automatic state changes can be enabled or disabled only on the work flow group level.

> **NOTE:** It is possible to set a timer in ICM that will override the automatic state change. If an agent doesn't enter wrap-up data within the time set by the timer, the system will change the agent's state to the next state (Not Ready or Ready) and close the Wrap-up Data dialog box without anything being entered.

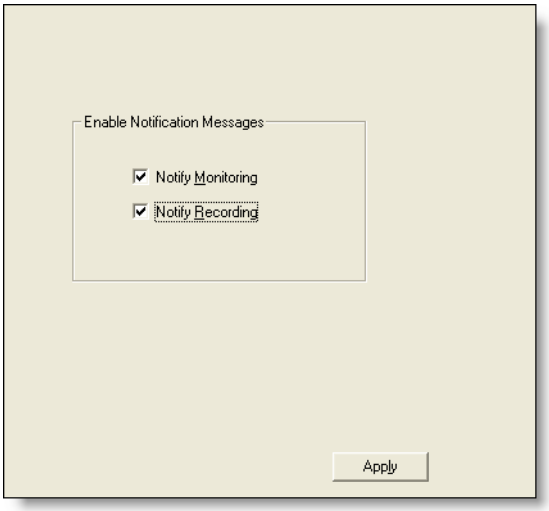
***To enable or disable automatic state changes:***

1. Select the Wrap-up Data node under the work flow group whose automatic state changes you want to enable or disable.
2. Select or clear the **Enable Automatic State Change check** box.
3. Click **Apply**.

## Record/Monitor Notification

The Record/Monitor Notification window is used at the global level to enable or disable messages to agents that they are being recorded or monitored, or both.

**Figure 43. Record/Monitor Notification window.**

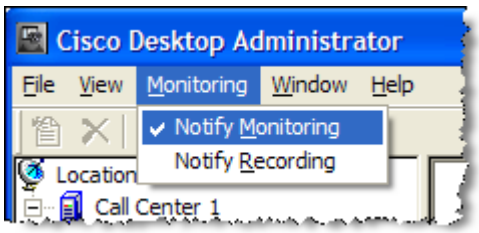



***To enable or disable notification:***

1. Select the Record/Monitor Notification node in the navigation tree.
2. In the Record/Monitor Notification window, select or clear the **Notify Monitoring** and/or **Notify Recording** check boxes, and then click **Apply**.

   You can also enable/disable monitoring and recording from the menu bar.

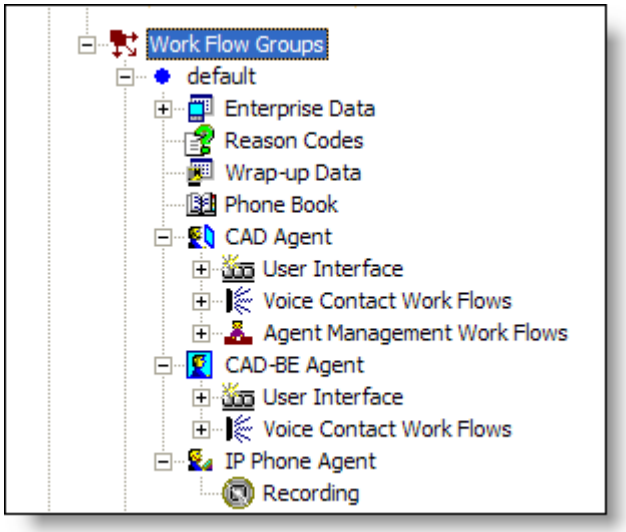
1. Select the Work Flow Configuration node or any of its subnodes in the navigation tree.
2. From the menu bar, choose **Monitoring**.
3. Choose **Notify Monitoring** and/or **Notify Recording** from the menu. A check mark appears next to the option when it is enabled.



## Work Flow Groups

Use the Work Flow Groups function to create and configure agent work flow groups.

**Figure 44. Accessing Work Flow Group functions in the navigation tree.**




Under the Work Flow Groups node are individual work flow groups. Initially there is a default work group, which can be edited, renamed, or deleted. You can also create additional work flow groups.

When you click on a work flow group, the elements that make up that work flow group appear as subnodes:

- Enterprise Data. Configure enterprise data on the agent desktop for the selected work flow group.
- Reason Codes. Assign reason codes for the selected work flow group.
- Wrap-up Data. Create and edit wrap-up data for the selected work flow group.
- Phone Book. Create and edit phone books for the selected work flow group.
- CAD Agent. Configure the user interface, voice contact work flows, and agent management work flows for agents using Cisco Agent Desktop.
- CAD-BE Agent. Configure the user interface and voice contact work flows for agents using Cisco Agent Desktop Browser Edition.
- IP Phone Agent. Enable agent-initiated recording for agents using the Cisco IP Phone Agent service.

## Maintaining Work Flow Groups

You can add, delete, or edit work flow groups under the Work Flow Groups node.

> **NOTE:** If you choose to delete the default work flow group, make sure that all agents are assigned to a custom work flow group you have set up. If an agent is not assigned to a work flow group, and there is no default work flow group, that agent will not be able to start Cisco Agent Desktop.

***To add a new work flow group:***

1. In the Navigation tree, select the **Work Flow Groups** node.
2. Choose **File > New**, or click **New** on the toolbar.

   The Work Flow Group Name Editor dialog box appears.

**Figure 45. Work Flow Group Name Editor dialog box.**


3. Enter a new work flow group name.

   If you want to copy an existing work flow group, select the **Copy the following work flow group** check box and choose a work flow group from the drop-down list.
4. Click **OK**.

   The new work flow group appears in the Navigation pane under the Agents node.

***To delete an existing work flow group:***

1. In the Navigation pane, select the work flow group you want to delete.
2. Choose **File > Delete**, or click **Delete** on the toolbar.

   You are warned that all agents belonging to the work flow group you want to delete must be reassigned to other work flow groups. Click **Yes** to confirm the deletion, or **No** to cancel it.

If you do not reassign the agents, you will not be able to delete the work flow group.

3. Click **OK** to close the dialog box.

You cannot rename an existing work flow group directly. Instead, you must set up a new work flow group and copy the existing work flow group's settings to the new work flow group.

***To rename a work flow group:***

1. Add a new work flow group, giving it the name you want to change the existing work flow group's name to.
2. Select the **Copy the following work flow group** check box and select the existing work flow group from the drop-down list, and then click **OK**. The copy process may take some time.
3. Delete the old work flow group.

# Enterprise Data

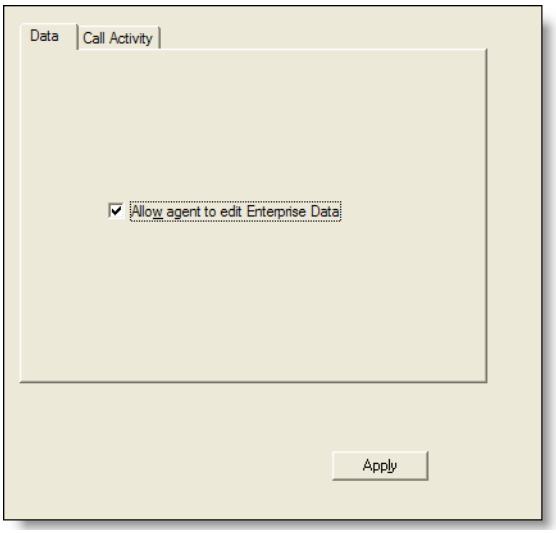
The Enterprise Data window enables you to:

- Configure Agent Desktop so that so that agents in the selected work flow group can edit enterprise data
- Set thresholds for call duration at a particular type of device while a call is in the contact center

## Data

The Data tab (see Figure 46) controls whether or not an agent in the work flow group is allowed to edit the enterprise data displayed in Agent Desktop.

**Figure 46. Data tab.**




***To enable enterprise data editing:***

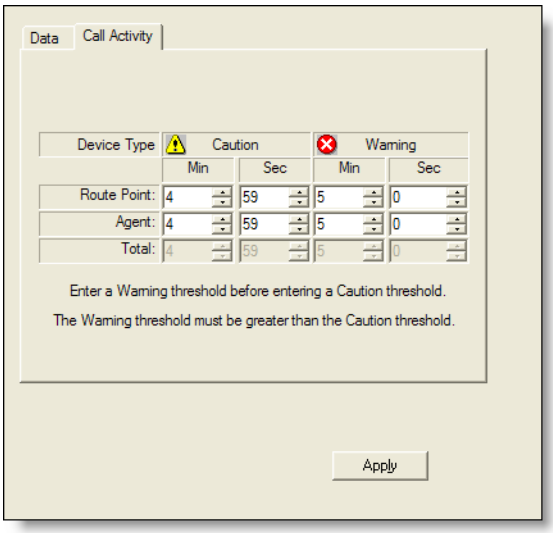
- Select the **Allow agent to edit Enterprise Data** check box, and then click **Apply**.

## Call Activity

The Call Activity tab (see Figure 47) enables you to set the thresholds for the selected work flow group for call duration at a particular type of device (Route Point and Agent) while a call is in the contact center.

If a call remains at a device longer than the defined Caution or Warning threshold, a Caution or Warning icon is displayed next to the device name in the Agent Desktop call activity pane.

Figure 47. Call Activity tab.




***To set up call activity thresholds:***

1. On the Call Activity tab, enter the threshold times as desired.

   Enter values in the Warning fields before entering values in the Caution fields. Desktop Administrator will not accept data entered in the Caution fields if no data appears in the Warning fields.

   The Warning threshold value must be greater than the Caution threshold value. If you enter a greater value in the Caution field, Desktop Administrator automatically changes it so that it is one second less than the Warning value.

   Maximum Warning value:59 minutes, 59 seconds
   Maximum Caution value:59 minutes, 58 seconds

2. Click **Apply** to save your changes.

# CAD, CAD-BE, and IP Phone Agent

The CAD Agent, CAD-BE Agent, and IP Phone Agent nodes enable you to configure various functions for each type of agent within the selected work flow group.

## CAD Agent

You can configure the following for agents using Cisco Agent Desktop:

- User Interface (page 98)
- Voice Contact Work Flows (page 111)
- Agent Management Work Flows (page 118)

## CAD-BE Agent

You can configure the following for agents using Cisco Agent Desktop Browser Edition:

- User Interface (page 98)
- Voice Contact Work Flows (page 111)

## IP Phone Agent

The Recording node under the IP Phone Agent node enables agent-initiated recording for agents who use the Cisco IP Phone Agent service.

> **NOTE:** If your CAD system is configured to use Cisco Unified Communications Manager-based monitoring, the IP Phone Agent node is not available.

When enabled, the IP Phone Agent service has soft key options for starting and stopping recording. The IPPA agent can then record his or her own phone conversations, and these recordings can be reviewed by the supervisor using Supervisor Record Viewer.

See the *Cisco IP Phone Agent User Guide* and the *Cisco Supervisor Desktop User Guide* for more information.

***To enable IPPA agent-initiated recording:***

1. Select the **Enable IPPA Recording** check box.
2. Click **Apply** to save your changes.

# User Interface

The User Interface window enables you to configure the appearance and behavior of Agent Desktop (when accessed under the CAD Agent node) and Agent Desktop Browser Edition (when accessed under the CAD-BE Agent node).

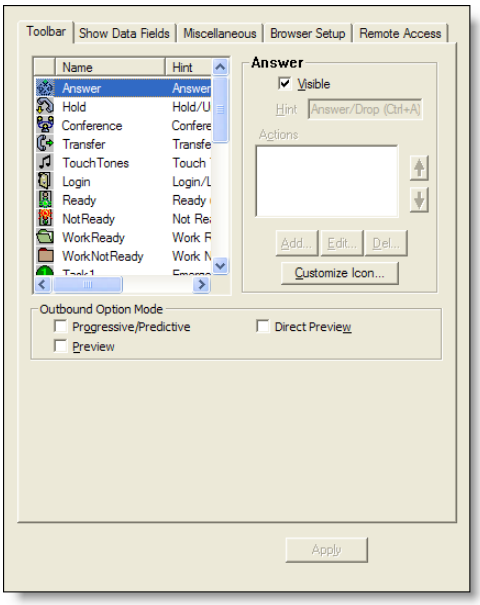
> **NOTE:** The User Interface windows for CAD Agent and CAD-BE Agent are slightly different to allow for the differences in the two applications. The following section will discuss the CAD Agent version and note where it is different for CAD-BE Agent.

## Toolbar

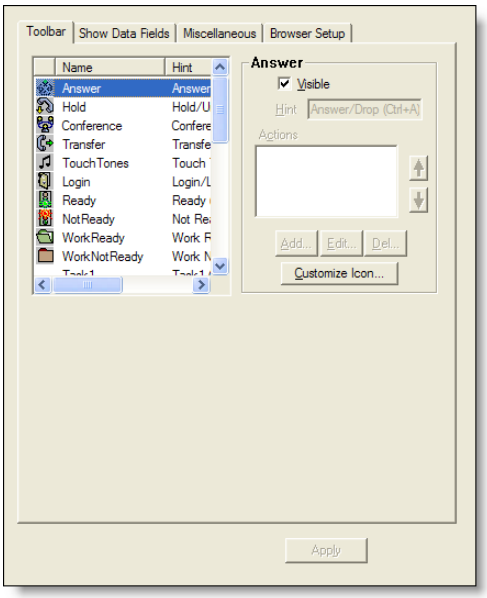
The Toolbar tab (see Figure 48) enables you to:

- Adding and Removing Toolbar Buttons (page 99)
- Associating Actions with Task Buttons (page 99)
- Changing a Task Button's Hint (page 100)
- Customizing Button Icons (page 100)
- Show Data Fields (page 101)

**Figure 48. Toolbar tab.**




**CAD Agent version**




**CAD-BE Agent version**

### Adding and Removing Toolbar Buttons

The pane on the left of the Toolbar tab displays the buttons that are available to be used on the Agent Desktop toolbar. Buttons that are assigned show an icon next to them; unassigned buttons do not show an icon.

You cannot change the hint or the shortcut key combination on any of the standard buttons, or assign an additional action to them. You can, however, customize the icon displayed on the button (see "Customizing Button Icons" on page 100).

***To add a button to the toolbar:***

1. In the list of buttons, select the available button you want to add.
2. Select the **Visible** check box, and then click **Apply**.

***Removing a button from the toolbar:***

1. In the list of buttons, select the button you want to remove.
2. Clear the **Visible** check box, and then click **Apply**.

### Adding the Cisco Unified Outbound Dialer Toolbar

The Cisco Unified Outbound Dialer feature is available only for Agent Desktop users. You cannot add the Outbound Dialer toolbar to CAD-BE.

***To add an Outbound Dialer toolbar to Agent Desktop:***

- In the Outbound Dialer Mode section, check the type of dialing mode your calling campaign will use, and then click **Apply**.

  **NOTE:** The Outbound Dialer Mode section appears on the Toolbar tab only if Outbound Dialer is enabled in ICM. If it is not enabled, this section is blank.

  You can select more than one dialing mode check box.

  The appropriate buttons for that type of calling campaign are added to the Agent Desktop toolbar.

  For more information, see "Cisco Unified Outbound Dialer" on page 158.

### Associating Actions with Task Buttons

You can associate as many actions with a task button as you wish. The actions are executed sequentially in the order they are listed in the Actions window.

> **NOTE:** Bear in mind the amount of time it takes to execute actions. Generally, a maximum of two or three actions per task button is recommended.

The default task buttons display icons of the numbers 1 through 10. You can customize these icons if you wish.

***To associate an action with a task button:***

1. Select a task button from the list of available buttons.
2. Select the **Visible** check box.

   The Actions pane and its associated buttons become enabled.
3. Under the Actions pane, Click **Add**.

   The Select Action window appears.
4. Select the action you want to associate with the button.

   You can select an existing action or set up a new action. (See "Actions" on page 122 for more information on setting up new actions.)
5. Click **OK**.

   The Toolbar tab is displayed.
6. Type a short description of the action in the Hint field. You can replace only the hint; you cannot change the shortcut key combination.
7. Repeat Steps 3–6 if you want to add other actions to the same task button.
8. Click **Apply** to save your changes.

### Changing a Task Button's Hint

You can change the hint (the text an agent sees when the mouse hovers over a button) associated with a task button.

You cannot change the hint associated with a standard button, or change the shortcut key combination of any button.

***To change a task button's hint:***

1. Select the button whose hint you want to change.
2. In the Hint field, type the hint you want displayed to the agent.
3. Click **Apply** to save your changes.

### Customizing Button Icons

Buttons can be customized by applying different icons to them. A library of available icons is supplied with Desktop Administrator, or you can use icons of your own.

If you use your own icons, the icon file is written to Directory Services when it is applied to a button so that it is available to all instances of Agent Desktop.

Custom icons must meet the following specifications.

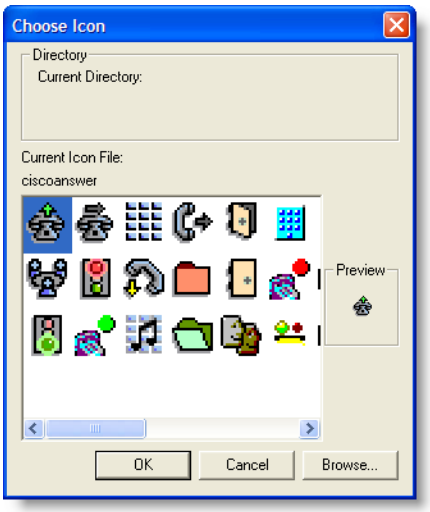
- ICO format
- 16 × 16 or 32 × 32 pixels
- up to 256 colors

***To customize an icon:***

1. Choose the button whose icon you want to customize.
2. Click **Customize Icon**.

   The Choose Icon dialog box appears (see Figure 49).

**Figure 49. Choose Icon dialog box.**




3. Choose an icon.

   The icon is displayed in the Preview area.

   You can also click **Browse** to navigate to another location if you wish to use your own icon.
4. Click **OK**.

   The button is displayed with the new icon on it in the button list.

## Show Data Fields

The Show Data Fields tab (see Figure 50) configures the data fields that appear in the contact appearance pane in Agent Desktop, and enables you to rename data fields.

**NOTE:** CAD-BE agents must logout, exit, and log in again for changes to take effect.

## Configuring and Renaming Data Fields

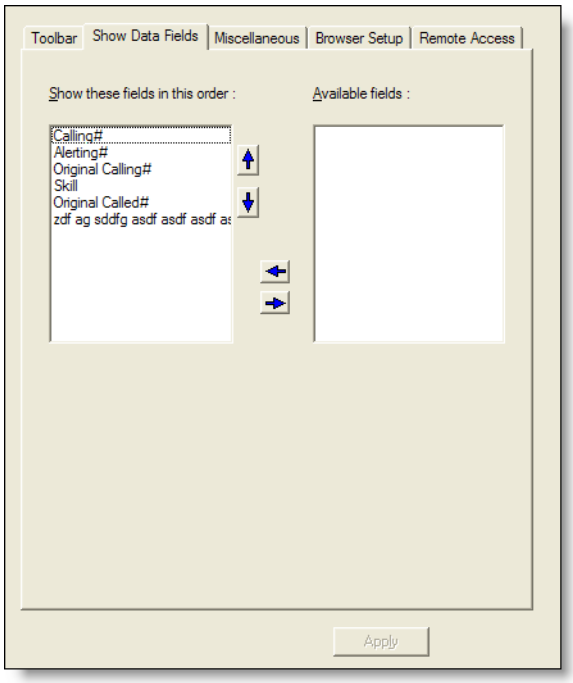
The left pane displays the fields that appear in Agent Desktop. The right pane displays the available fields.

**NOTE:** The left pane must contain at least one field.

***To configure the data fields that appear in Agent Desktop:***

1. Use the left and right arrows to move the available fields between the left and right panes, and the up and down arrows to set the left-to-right order in which the fields will appear in Agent Desktop.
2. Click **Apply** to save your changes.

**Figure 50. Show Data Fields tab.**

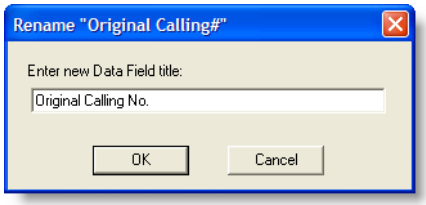



***To rename a data field:***

1. Double-click the field you want to rename.

   The Rename dialog box appears (see Figure 51).

Figure 51. Rename dialog box.

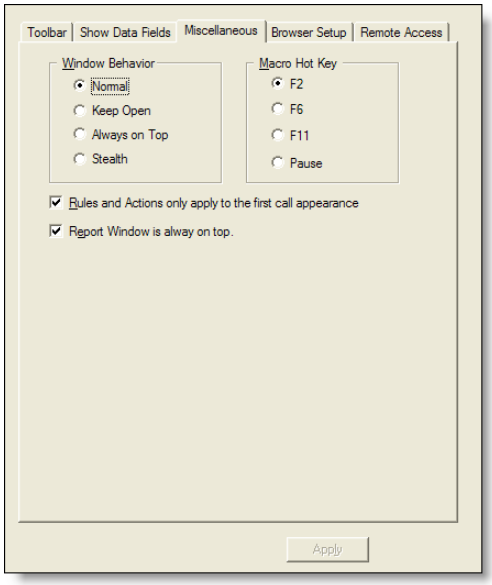



2. Enter a new name, and then click **OK**.

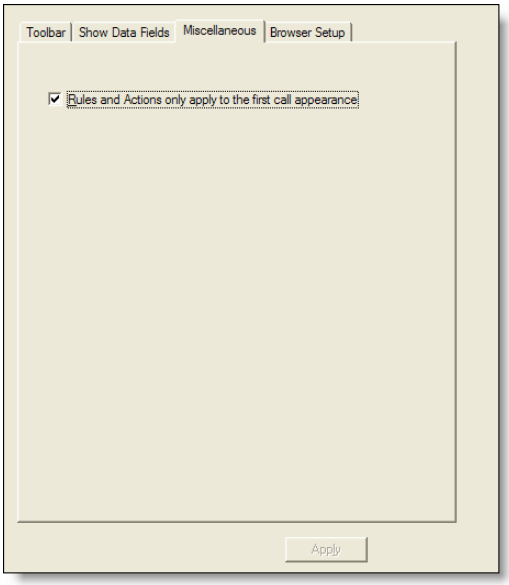
## Miscellaneous

Use the Miscellaneous tab (Figure 52) to configure other user interface options. Select or check your desired settings, and then click **Apply** to save your changes.

Figure 52. Miscellaneous tab.




CAD Agent version




CAD-BE Agent version

Table 11. Miscellaneous tab options.

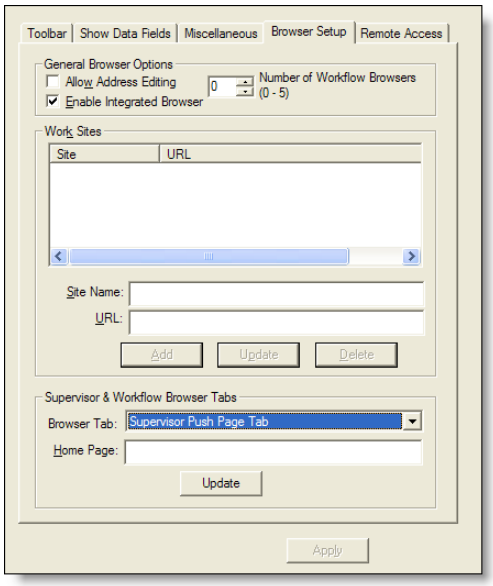
| Option | Description |
|---|---|
| Window Behavior | Specify how you want the Agent Desktop window to behave:<br>• Normal. The window appears when calls are present and minimizes when idle.<br>• Keep Open. The window is always visible, but may be hidden by other open applications.<br>• Always on Top. The window is always visible and on top of other open applications.<br>• Stealth. The window appears as an icon in the system tray. |
| Macro Hot Key | Specify the key you want to use to pause macro recording and display the Suspend Macro Recording dialog. The default is F2. |
| Rules and Actions only apply to the first call appearance | Select to invoke rules processing only for the oldest (top) call appearance. If the box is not selected, rules processing is invoked for all inbound calls. |
| Report Window is always on top | Configures the Agent Desktop Reports window to stay on top any other application whenever it is opened. |

## Browser Setup

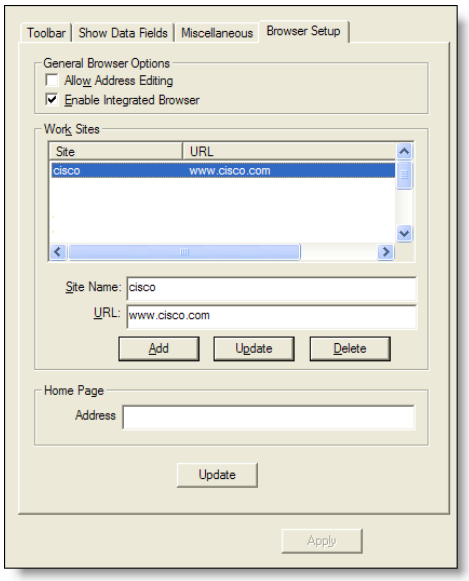
Use the Browser Setup tab (Figure 53) to configure the Integrated Browser portion of Agent Desktop. On this tab you can:

- Enable/disable the integrated browser window
- Set the default web page displayed by the browser
- Enable up to 5 browser tabs
- Enable/disable agents' access to other websites
- Add work sites (or "favorites") so agents can quickly access frequently-used websites

Figure 53. Browser Setup tab (left—CAD Agent, right—CAD-BE Agent).




CAD Agent version




CAD-BE Agent version

## Enabling the Integrated Browser

Enable or disable the integrated browser in Agent Desktop/CAD-BE by selecting or clearing the Enable Integrated Browser check box.

## Enabling Access to Other Websites

Enable or disable an agent's access to other websites by selecting or clearing the Allow Address Editing check box. When selected, the Address field appears in the integrated browser window, and agents can enter the URL of a website they wish to view. When deselected, the Address field does not appear in the integrated browser window.

## Configuring the Number of Browser Tabs

Choose 0 to 5 in the Number of Workflow Browsers field to set how many browser tabs appear in Agent Desktop (this feature is not available in CAD-BE). If you choose 0, only the supervisor push page tab appears—it is always enabled. If you choose 1 to 5, that many tabs in addition to the supervisor push page tab appear.

Work flow HTTP actions can be set up to display web pages in a specific browser tab. See "HTTP Action" on page 132 for more information.

## Setting Up the Home Page

A home page is the website that appears in an integrated browser tab when Agent Desktop is started. The default home page is www.cisco.com. If no home page is configured (the default is deleted), the integrated browser tab is blank.

Each browser tab can have its own home page.

***To configure a home page:***

1. From the **Browser Tab** drop-down list, select the tab where you want the home page to appear.
2. In the Home Page field, type the web address (URL) of the website you want to appear by default in the integrated browser.
3. Click **Update**.
4. Repeat steps 1 through 3 for each tab as desired.
5. Click **Apply** to save your changes.

   The home page is set.

## Setting Up Work Sites

A work site is a website that is frequently accessed by agents to assist them in their jobs. They are similar to the “favorites” you can set up in a web browser.

Work sites you set up appear in a drop-down list in the agent’s integrated browser, and are available no matter which tab is displayed. When the agent selects a work site from the list, it is displayed in the integrated browser window. This allows the agent quick access to the site without having to type its address in the (optional) Address field.

***To add a work site:***

1. In the Site Name field, type the name of the website you wish to add as a work site.
2. In the URL field, enter the web address of the website.
3. Click **Add**.

   The work site is added to the list in the Work Sites pane.
4. Click **Apply** to save your changes.

***To update a work site:***

1. In the Work Sites field, select the work site you wish to update.

   The information for the website appears in the Site Name and URL fields.
2. Edit the information as needed, and then click **Update**.

The updated information appears in the Work Sites pane.

3. Click **Apply** to save your changes.

***To delete a work site:***

1. In the Work Sites pane, select the work site you wish to delete.

   The information for the website appears in the Site Name and URL fields.

2. Click **Delete**.

   The work site is deleted from the Work Sites pane.

3. Click **Apply** to save your changes.

## Remote Access

The Remote Access tab (see Figure 54) is used to enable the IPC Receive Event feature and configure the port used by the feature.

> **NOTE:** The Remote Access feature is not available for CAD-BE.

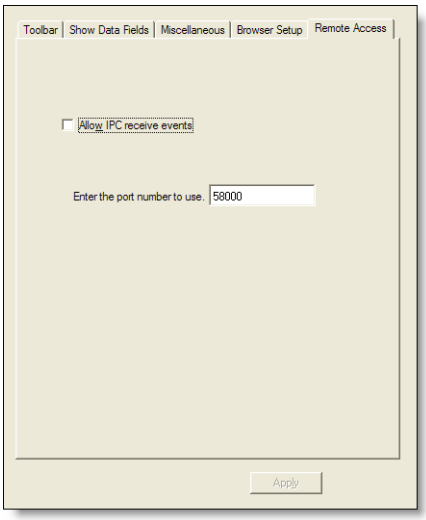
An IPC Receive Event occurs when a third party application sends a message to Agent Desktop over a UDP socket. These messages must adhere to a predefined XML schema (see examples below) and cannot exceed 4000 bytes.

When Agent Desktop receives an IPC Receive Event message, it does not send a reply back. IPC Receive Events are queued so no messages are lost.

By default, IPC Receive Events are disabled. The default port number is Port 58000.

> **NOTE:** The Remote Access action provides for receiving an asynchronous event. Even if the event is solicited by an IPC Action request being sent out, the request may never be delivered, and there is no assurance that a response will arrive because of the nature of UDP.

Figure 54. Remote Access tab.




Four actions are supported by the IPC Receive Event:

- IPC Make Call
- IPC High Priority Chat
- IPC Record
- IPC Agent Notification

### IPC Make Call Action

For the IPC Make Call action to be successful:

- The agent must be in the Not Ready state
- There can be no call appearance present in Agent Desktop
- The Make Call dialog box must be closed (if it is open, the action will close it)

The message sent to Agent Desktop must conform to this XML format. **Bold** text indicates a variable that must be replaced with your own values.

```
<?xml version="1.0"?>
<!-- IPC Receive Event Message -->
<IPCActions>
<IPCMakeCallAction>
<ActionName>IPC Make Call Action</ActionName>
<PhoneNumber>2961</PhoneNumber>
<DisplayError>true</DisplayError>
</IPCMakeCallAction>
</IPCActions>
```

### IPC High Priority Chat Action

For the IPC High Priority Chat action to be successful, the agent must be logged in.

The message sent to Agent Desktop must conform to this XML format. **Bold** text indicates a variable that must be replaced with your own values.

```
<?xml version="1.0"?>
<!-- IPC Receive Event Message -->
<IPCActions>
<IPCHighPriorityChatAction>
<ActionName>IPC High Priority Chat Action</ActionName>
<MessageText>Need help from supervisor</MessageText>
</IPCHighPriorityChatAction>
</IPCActions>
```

### IPC Record Action

For the IPC Record action to be successful:

- A call appearance must be present in Agent Desktop
- The call must be connected, on hold, or conferenced
- The call must be the first call appearance listed in Agent Desktop

The message sent to Agent Desktop must conform to this XML format. The action supports two commands: **start** and **stop**.

```
<?xml version="1.0"?>
<!-- IPC Receive Event Message -->
<IPCActions>
<IPCRecordAction>
<ActionName>IPC Record Action</ActionName>
<Command>start</Command>
<DisplayError>true</DisplayError>
</IPCRecordAction>
</IPCActions>
```

### IPC Agent Notification Action

For the IPC Agent Notification action to be successful, the agent must be logged in.

The message sent to Agent Desktop must conform to this XML format. **Bold** text indicates a variable that must be replaced with your own values.

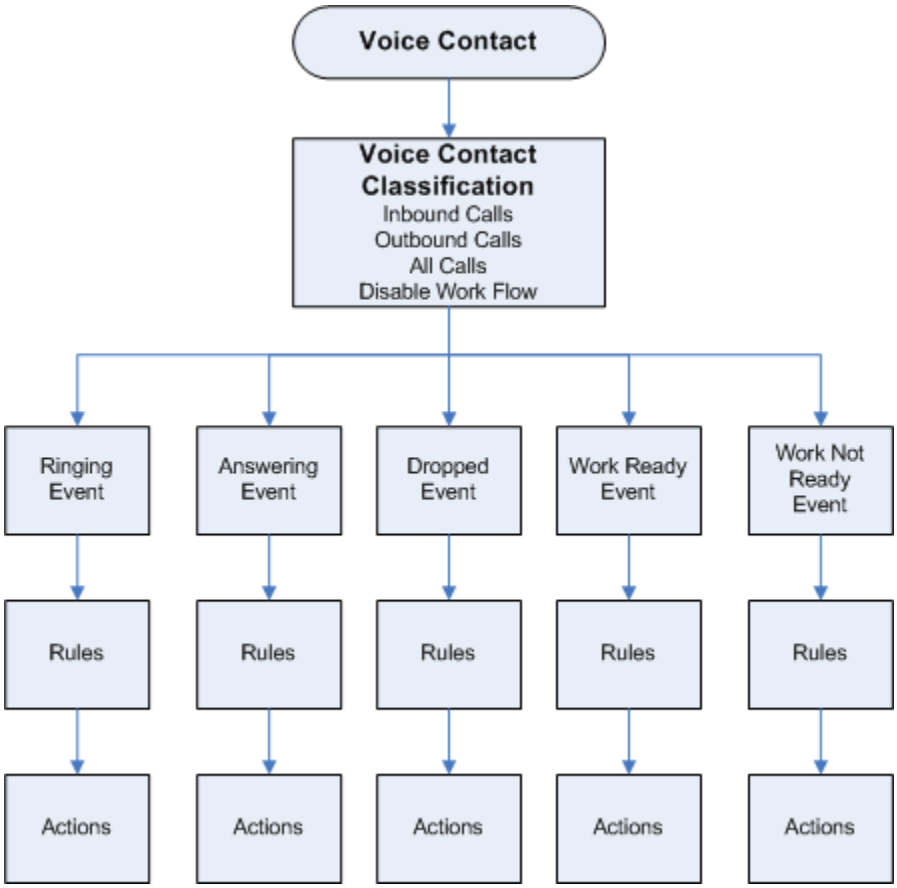
```
<?xml version="1.0"?>
<!-- IPC Receive Event Message -->
<IPCActions>
<IPCAgentNotificationAction>
<ActionName>IPC Agent Notification Action</ActionName>
<MessageText>Go to Not Ready state!</MessageText>
</IPCAgentNotificationAction>
```

```
</IPCActions>
```

## Voice Contact Work Flows

Voice contact work flows manage agent activity based on voice call events. Once a call is classified it is further filtered according to events, rules, and actions. Voice contact work flows are available to CAD and CAD-BE agents.

**Figure 55. Voice Contact Work Flows flow chart.**




For example, a voice contact work flow could be set up as follows:

1. A call comes into the contact center and is routed to an agent in the Ready state.
2. The Voice Contact Classification filter determines which work flow to select. It examines the inbound call's enterprise data (original dialed number) and determines that it is a call for Product A technical support and thus meets the data conditions of Work Flow 1. The call is now subject to the second layer of filtering set up in Work Flow 1.

3. Work Flow 1 says that any ringing event on the Product A support line triggers an HTTP action. This action takes the customer-entered account information from the IVR (part of the call's enterprise data) and pops a web page in Agent Desktop's or CAD-BE's integrated browser that displays the customer's account information to the agent.
4. The agent answers the phone call and is ready to assist the customer.

## Creating a Voice Contact Work Flow

The general procedure for creating a voice contact work flow is as follows:

1. Set up a new voice contact classification filter:
   a. Select the type of call the work flow applies to—inbound, outbound, or all calls.

   **NOTE:** Depending on which Outbound Dialer dialing mode you are using, a customer call can appear as inbound or outbound. Therefore, when creating an Outbound Dialer work flow, select **all calls** as your voice classification filter.

   b. If required, further classify the call by specifying it must meet various data field conditions.
2. Set up the second level of filtering:
   a. Select the call or agent state event—Ringing, Answered, Dropped, Work Ready, or Work Not Ready.
   b. If required, set up one or more rules with data field conditions that the call must meet.
   c. Set up one or more actions that will take place if the call or agent event meets the rules' data field conditions.
3. Set up as many second level filters as needed for calls selected by the first level filter. You can set up rules and actions for each of the filtered call's call or agent events.

   **NOTE:** It is possible to set rules and conditions that are contradictory so that a work flow cannot function. Desktop Administrator does not check a work flow's logic and validity. If a work flow fails to operate as expected, make sure that the rules and conditions you set up are logically valid.

### Setting Up a New Voice Contact Classification

When you select the Voice Contact Work Flow node in the navigation tree, the Voice Contact Work Flow List window is displayed. This window shows all the existing voice contact work flows, and enables you to edit them or to set up new ones.

The Voice Contact Classification is the first level of filtering in a voice contact work flow.

***To set up a new voice contact classification:***

1. In the Voice Contact Work Flow List window, click **Add**.

   The New Work Flow Name dialog box is displayed.

2. Enter a name for your new voice contact work flow, and then click **OK**.

   The Edit Voice Contact Classification dialog box appears. Note that the work flow name you just created is shown in the dialog box.

3. Set up the criteria for the first level filter in this dialog box.

   a. Select the type of call you want the filter to apply to from the drop-down list: inbound calls, outbound calls, or all calls.

      Note that there is also the option to disable the work flow. You can select this option later on if and when you want to disable the work flow, but want to keep the work flow on file for enabling at a later date.

   b. Apply up to three data field conditions. Click **Edit** to display the Data Field Condition dialog box. For information on setting up a data field condition, see "Data Field Conditions" on page 115.

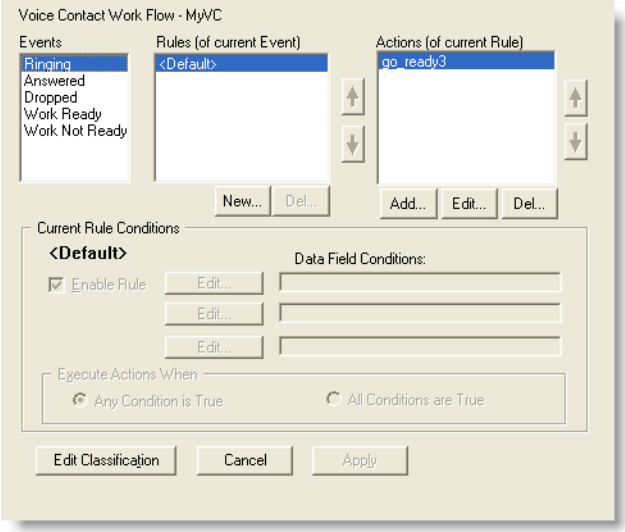
   c. Select if you want the filter to apply when ALL conditions are true, or if ANY conditions are true.

4. Click **OK** to complete setting up the first level filter in the new voice contact work flow.

### Setting Up a New Work Flow

After a new voice contact classification is created, Desktop Administrator takes you to the Voice Contact Work Flow window (see Figure 56). In this window you set up the second level of filtering, consisting of events and rules, and the resulting actions for your new voice contact work flow.

Figure 56. Voice Contact Work Flow window.




When an event occurs, the rules associated with the event are evaluated in the order they are listed in the Rules pane. When a rule is met, the actions associated with that rule are executed in the order they are listed in the Actions pane. Subsequent rules are not evaluated.

If no rules are met, the default rule governs, and all actions associated with the default rule are executed. Default rules cannot be changed or deleted.

The default action might be <no action>.

***To set up a new work flow:***

1. Select the event that triggers the work flow from the Event pane. The available events are:
   - **Ringing**. The agent's phone rings.
   - **Answered**. The agent answers the phone.
   - **Dropped**. The call terminates.
   - **Work Ready**. The agent transitions to the Work Ready agent state.
   - **Work Not Ready**. The agent transitions to the Work Not Ready agent state.
2. Under the Rules pane, click **New** to set up a new rule.

   The New Rule Name dialog box appears.
3. Enter the name of the new rule, and then click **OK**.

   The fields in the Current Rule Conditions section of the window are enabled.

4. Add up to 3 data field conditions (see "Data Field Conditions" on page 115 for more information) and specify when the actions should be executed—when any one of the data field conditions is met, or when all of the data field conditions are met.

   When a data field condition is established, the Enable Rule check box is automatically selected.

5. Under the Actions pane, click **Add** to choose one or more actions to run when the event occurs and the rules are met.

   You can select an existing action, or create a new action. If the action you select cannot be associated with the event, you will receive an error message. See "Actions" on page 122 for more information.

6. Repeat steps 1 through 5 for as many events as desired.

7. When you are finished associating events with rules and actions, click **Apply** to save the new voice contact work flow.

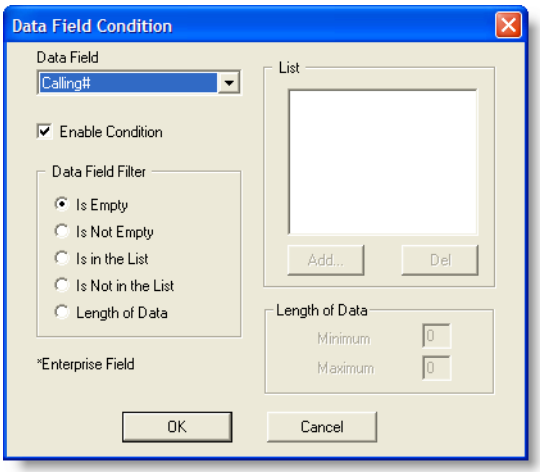
## Data Field Conditions

Data field conditions are criteria that a call's selected enterprise data fields must meet in order for a voice contact classification or a work flow rule to be enforced.

You can configure up to 3 data field conditions for a voice contact classification filter and for a work flow rule. You specify if all the data field conditions must be met (an AND statement) or if any of the data field conditions must be met (an OR statement).

To do this you use the Data Field Condition dialog box (for a voice contact classification) or the Current Rule Conditions section of the Voice Contact Work Flow window (for a work flow rule).

**Figure 57. Data Field Condition dialog box.**



***To set up data field conditions:***

1. In the Voice Contact Classification dialog box, click **Edit**. In the Voice Contact Work Flow window, add a new rule and then click **Edit** in the Current Rule Conditions section of the window.
2. Select a data field from the Data Field drop-down list.

   The Data Field lists all the enterprise data fields used in your system.

   Not all data fields are available for all events, for instance, Calling# and Called# are not available for the Ringing event.
3. Specify one of the data field filters:
   - **Is Empty**. The data field is empty.
   - **Is Not Empty**. The data field is not empty.
   - **Is In the List**. The data field is compared to the list you set up in the List pane to determine if it is in that list. Click **Add** to add an item to the list of strings. Strings are not case sensitive. You can use wild cards (* and ?) to simplify your list. See "Wild Card Searches" on page 116.
   - **Is Not in the List**. The data field is compared to the list you set up in the List pane to determine if it is not in that list. Click Add to add an item to the list of strings. Strings are not case sensitive. You can use wild cards (* and ?) to simplify your list. See "Wild Card Searches" on page 116.
   - **Length of Data**. The length of the data field is between a minimum and maximum number of characters that you set.
4. Ensure that the **Enable Condition** check box is selected, and then click **OK**.

### Wild Card Searches

You can use wild cards when entering strings in the data field conditions list pane. This enables you to avoid having to enter many strings if the strings you want to list have common elements.

Wild card characters used are the asterisk (*) and the question mark (?).

An asterisk in a string replaces any quantity of characters, as long as the other characters in the string match. For instance, **ABC*** matches strings that begin with ABC but end in any quantity of any characters.

A question mark in a string replaces any character, but the length of the string must be exactly as represented. For instance, **ABC??** matches strings that begin with ABC and end in 2 other characters.

Double quotes around a string searches for the exact characters within the double quotes, including the wild card characters (*) and (?). For instance, **"123*ABC"** matches only the string 123*ABC, and does not allow the asterisk to act as a wild card.

## Modifying a Voice Contact Work Flow

You can modify both any custom work flows you create and the default work flow.

> **NOTE:** The classification filter for the Default work flow is Inbound Calls. This cannot be changed.

***To modify a voice contact work flow:***

1. From the Voice Contact Work Flow List, select the work flow you want to modify, and then click **Edit**.

   If you selected a custom work flow, the Edit Voice Contact Classification dialog box appears.

   If you select the default work flow, the Voice Contact Work Flow window appears. The default work flow does not classify voice contacts, and so bypasses the Edit Voice contact Classification dialog box.

2. Modify the voice contact classification if desired, and then click **OK** to proceed to the Voice Contact Work Flow window.
3. Modify the work flow as desired, and then click **Apply** to save your changes.

## Deleting a Voice Contact Work Flow

You can delete any custom work flow you create. You cannot delete the default work flow.

***To delete a voice contact work flow:***

1. From the Voice Contact Work Flow List, select the work flow you want to delete, and then click **Delete**.

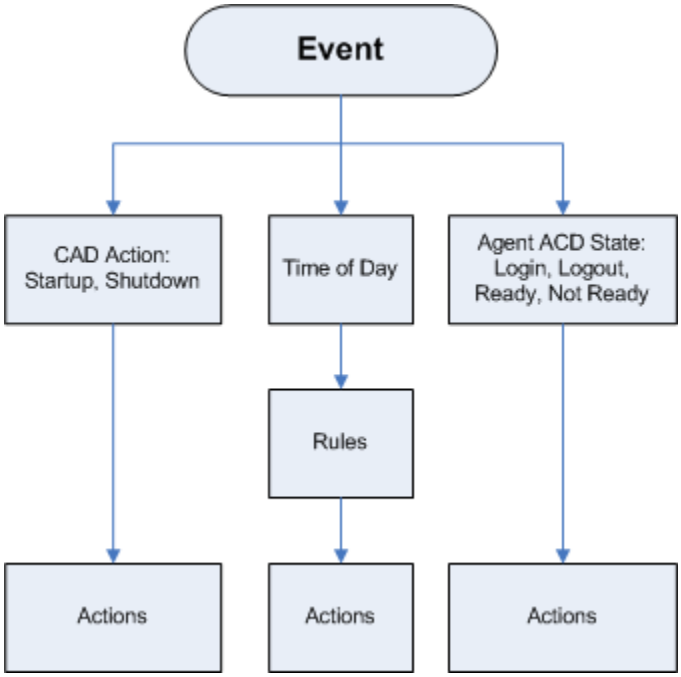
   A popup window appears asking you to confirm you want to delete the work flow.

2. Click **OK** to confirm the deletion.

## Agent Management Work Flows

Agent management work flows manage agent activity based on Agent Desktop activity, agent ACD states, and time of day. The work flows follow the event—rule—action behavior used by voice contact work flows. There is a major difference—there is no initial filtering similar to the voice contact classification applied to voice contacts.

**Figure 58. Agent Management Work Flows flow chart**




For example, agent management work flows could be set up as follows:

- Every work day at 4:30, agents receive a popup message reminding them to complete their time cards.
- Whenever Agent Desktop starts up, Notepad is launched on the agent's desktop.
- Whenever an agent logs in, the customer database is launched.

### Creating an Agent Management Work Flow

The general procedure for creating an agent management work flow is as follows:

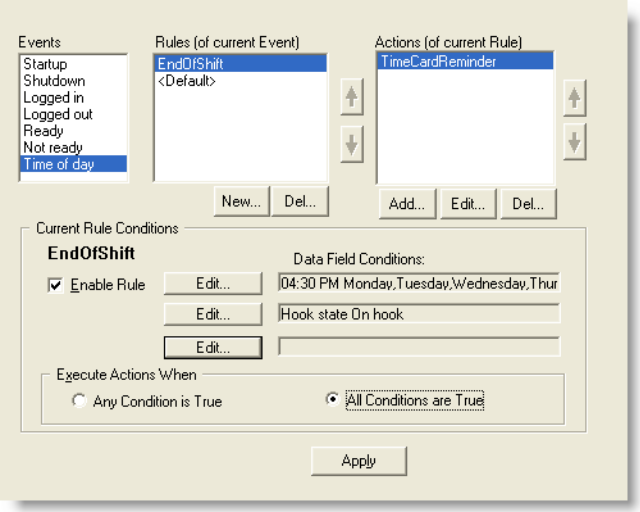
1. Select the event that triggers the work flow.
2. If the event is time of day, set up a rule with one or more data conditions that the event must meet.

NOTE: It is possible to set rules and conditions that are contradictory so that a work flow cannot function. Desktop Administrator does not check a work flow's logic and validity. If a work flow fails to operate as expected, make sure that the rules and conditions you set up are logically valid.

3. Set up one or more actions that will take place whenever the event occurs, or, if a time of day event, whenever the rule is met.

When you select the Agent Management Work Flow node, the Work Flow window appears (see Figure 59).

**Figure 59. Work Flow window.**




Unlike rules in voice contact work flows, rules in agent management work flows can be applied only to a time of day event, not to all events.

Not all actions are available for agent management work flows. See "Action Availability" on page 123 for more information.

***To set up a CAD activity or agent state work flow:***

1. Select the event that triggers the work flow from the Event pane. The available events are:
   - **Startup**. Agent Desktop starts.
   - **Shutdown**. Agent Desktop closes.
   - **Logged in**. The agent logs into Agent Desktop.
   - **Logged out**. The agent logs out of Agent Desktop.

— **Ready**. The agent transitions to the Ready state.

— **Not Ready**. The agent transitions to the Not Ready state.

2. Under the Actions pane, click **Add** to choose one or more actions to run when the selected event occurs.

   You can select an existing action, or create a new action. See "Actions" on page 122 for more information.

3. Repeat steps 1 and 2 for as many events as desired.
4. When you are finished associating events with actions, click **Apply** to save the agent management work flow.

***To set up a time of day work flow:***

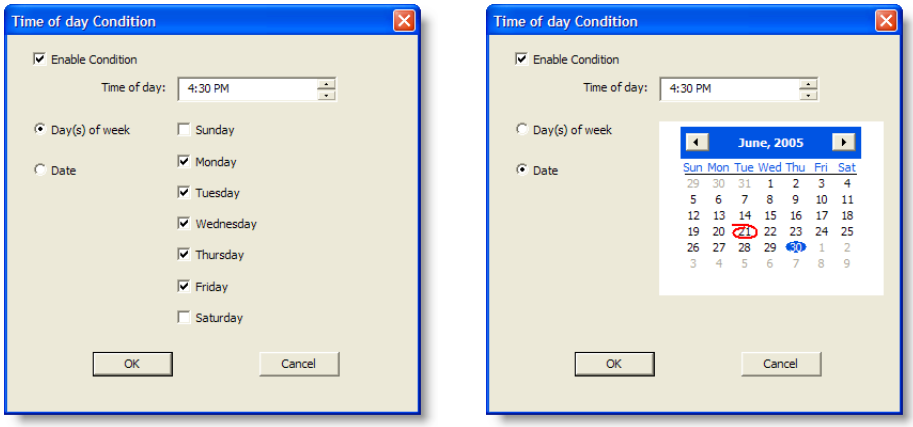
1. Select the **Time of day** event from the Event pane.
2. Under the Rules pane, click **New** to set up a new rule.

   The New Rule Name dialog box appears.

3. Enter the name of the new rule, and then click **OK**.

   The fields in the Current Rule Conditions section of the window are enabled, and the Time of Day Condition dialog box appears.

**Figure 60. Time of Day Conditions dialog box with Days of the week selected (left) and Date selected (right),**




4. Set up the day or date conditions for the rule, and then click **OK**.

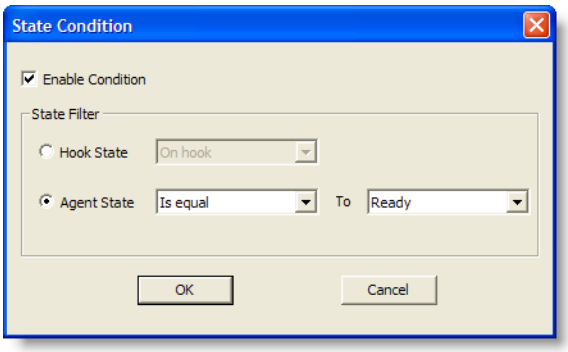
   a. To specify that an action takes place every week on certain days or at a certain time, select **Day(s) of the week** and then check the desired days. You must specify a time of day as well.

b. To specify that an action takes place on a specific date, select **Date**, and then select the desired date from the calendar. Today's date is circled in red. You must specify a time of day as well.

The condition you set up is automatically entered in the first Data Field Conditions line in the Current Rule Conditions section of the Work Flow window, and the Enable Rule check box is automatically selected.

5. Click **Edit** next to the 2 remaining Data Field Conditions fields to further define the rule, if desired:
   - Specify if the agent is on hook or off hook
   - Specify if the agent state is or is not equal to Ready or Not Ready

**Figure 61. State Condition dialog box**




6. Under the Actions pane, click **Add** to choose one or more actions to run when the event occurs and the rules are met.

   You can select an existing action, or create a new action. See "Actions" on page 122 for more information.

7. Click **Apply** to save the new time of day work flow.

## Actions

Actions are stored independently of events and rules. You can use an action in more than one event, and you can assign actions to more than one task button in Agent Desktop.

While actions are processed, events are queued. It is generally a good idea to avoid long actions.

Table 12. Actions and their availability to CAD and CAD-BE agents

| Action Type and Description | CAD | CAD-BE |
|---|---|---|
| Importing and Exporting Actions (page 125). Displays a popup message on the agent's desktop. | × | |
| Agent State Action (page 129). Sets an agent state. | × | |
| Call Control Action (page 131). Answers, drops, conferences, transfers, or makes a call, or inputs touch tones during a call. | × | |
| HTTP Action (page 132). Enables the Agent Desktop integrated browser to interact with a web application. | × | × |
| IPC Action (page 139). Passes enterprise data or user-defined data from the agent desktop to a custom third-party application. | × | |
| Launch External Application Action (page 141). Starts a third-party application. | × | |
| Run Macro Action (page 143). Plays back a recorded sequence of keystrokes. | × | |
| Set Enterprise Data Action (page 153). Automatically changes an enterprise data field in Agent Desktop to a selected desktop variable or static text. | × | |
| Timer Action (page 154). Triggers actions after a specified time has elapsed. | × | |
| Utility Action (page 156). Run a utility, such as start and stop recording or sending a predefined, high-priority chat message to a supervisor. | × | × |

## Action Availability

Not all actions are available for all events or for all types of agents. Table 13 shows which actions are available for the three types of work flows and for each type of agent (CAD agents and CAD-BE agents).

**Table 13. Action availability per work flow type and agent type***

| | Voice Contact | | Agent Mgmt | | Time of Day | |
|---|---|---|---|---|---|---|
| **Action Type** | **CAD** | **CBE** | **CAD** | **CBE** | **CAD** | **CBE** |
| Agent Notification | × | — | × | — | × | — |
| Agent State | × | — | — | — | × | — |
| Call Control | × | — | — | — | — | — |
| HTTP | × | × | × | — | × | — |
| IPC | × | — | × | — | — | — |
| Launch External Application | × | — | × | — | — | — |
| Run Macro | × | — | × | — | — | — |
| Set Enterprise Data | × | — | — | — | — | — |
| Timer | × | — | — | — | — | — |
| Utility | × | × | — | — | — | — |

* "×" indicates the action is available: "—" indicates the action is not available.

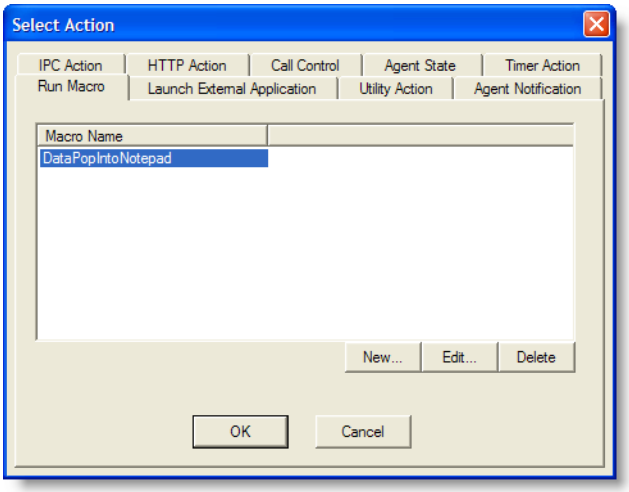
## Adding a New Action

***To add a new action:***

1. Access the Voice Contact Work Flow or Agent Management Work Flow window.
2. Select the event to be associated with the new action.
3. Under the Actions pane, click **Add**.

   The Select Action dialog box appears (see Figure 62).

Figure 62. The Select Action dialog box.




4. Choose the tab for the type of action you want to associate with the event.
5. If the action already exists, select it, and then click **OK**.

   If the action does not yet exist, click **New** and follow the instructions for setting up that type of action as outlined below.
6. Click **OK**.

   The Select Action dialog box closes and you return to the Work Flow window. The new action is listed in the Actions pane.

## Editing an Action

***To edit an action:***

1. In the Work Flow window, select the appropriate event, and then select the action you want to edit from the Actions pane.
2. Click **Edit**.

   The edit dialog box for that action appears.
3. Make your changes, and then click **OK**.

   The action is now changed.

## Deleting an Action

To permanently delete an action, you must first delete it from any event it is associated with, and then delete the action itself.

*To permanently delete an action:*

1. In the Work Flow window, select each event. If the action you want to delete is associated with that event, select the action in the Action pane and then click **Delete** to remove it from that event.

   The action is now removed from all events.

2. Under the Actions pane, click **Add**.

   The Select Actions dialog box appears.

3. Choose the appropriate tab, and then select the action you want to delete.
4. Click **Delete**.

   The action is deleted.

5. Click **Cancel**.

   The Select Action dialog box closes and you return to the Work Flow window.

## Importing and Exporting Actions

You can export actions associated with a specific work flow group and import them to other work flow groups. The actions are exported to any location you choose, locally or on a network drive.

> **NOTE:** If you export actions to the default location (C:\Program Files\Cisco\Desktop\config\Action) they will be lost in the event that a client desktop is reinstalled.

The actions you export can also be imported by other instances of Desktop Administrator, belonging to your system or any other system, as long as those instances are the same version of Desktop Administrator and can access the file storage folder.

Types of actions that can be exported and imported are:

- Run Macro action
- HTTP action
- IPC action
- Launch External Application action

The rules and events associated with the actions are not part of this function and cannot be exported or imported.

You can export only one action at a time. For example, if there are five actions you want to export from a work flow group, you must export each action individually.

You can add a description (limited to 255 characters) to the exported action for easier identification when importing to another work flow group.

If an imported action has the same name as an action already present in the work flow group, you will be prompted to rename the imported action.

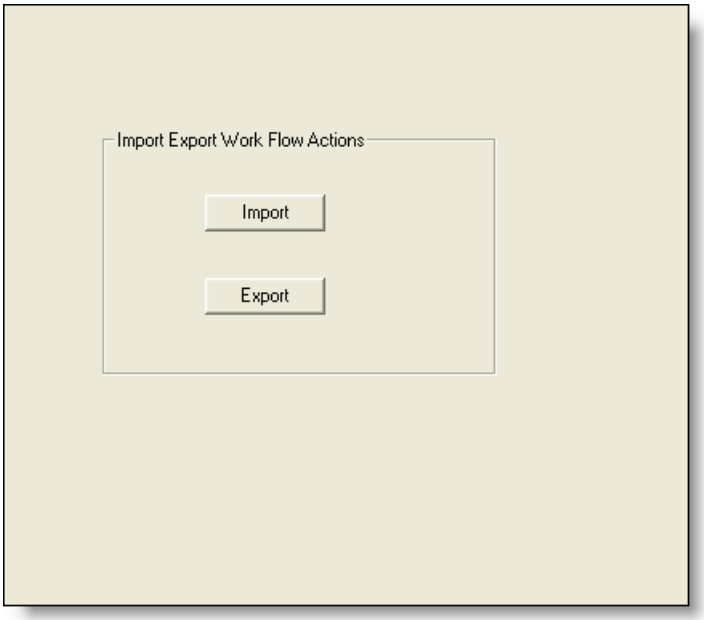
***To export a work flow action:***

1. Select the work flow group whose action you want to export.

   The Import Export Work Flow Actions window appears (see Figure 63).

   If there are actions available for import and/or export, the Import and/or Export button is enabled. If there are no actions available for the specific action, that button is disabled.

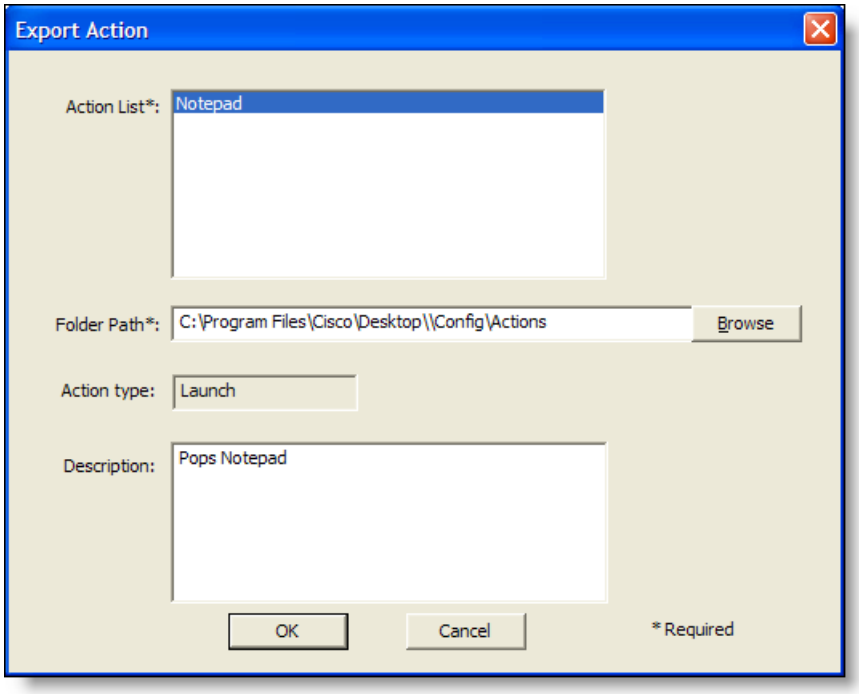
**Figure 63. Import Export Work Flow Actions window.**




2. Click Export.

   The Export Action dialog box appears (see Figure 64).

Figure 64. Export Action dialog box.




3. Select the action you want to export from the Action List, and then complete the fields in the dialog box:
   - Folder Path: Select the default path shown or browse to any other local or network folder location.
   - Description (optional): Enter a description of the action. Maximum length of the description is 255 characters.
4. Click **OK**.

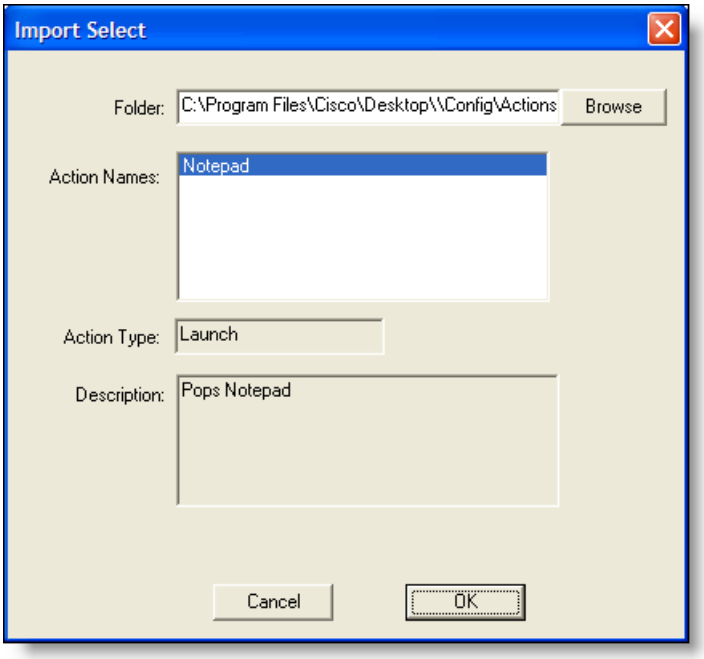
***To import a work flow action:***

1. Select the work flow group to which you want to import an action.

   The Import Export Work Flow Actions window appears (see Figure 63).
2. Click **Import**.

   The Import Select dialog box appears (see Figure 65).

Figure 65. Import Select dialog box.




3. Navigate to the folder where actions are stored. The field is autofilled with the default path.
4. From the **Action Names** list, select the action you want to import to the work flow group. You can import only one action at a time.
5. Click **OK**.

## Agent Notification Action

An Agent Notification action displays a custom message popup window on the agent's desktop when a certain event occurs. For instance, when an agent logs out, a popup window reminding the agent to complete his time card could pop up on his desktop.

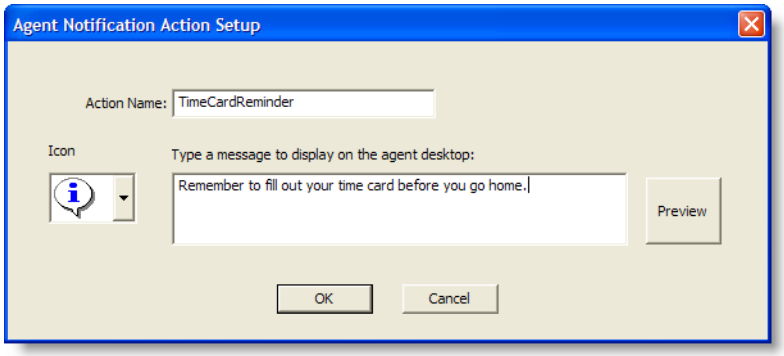
***To set up an Agent Notification action:***

1. Set up a new action. See "Adding a New Action" on page 123.

   The Select Action window appears.
2. Select the **Agent Notification** tab, and then click **New**.

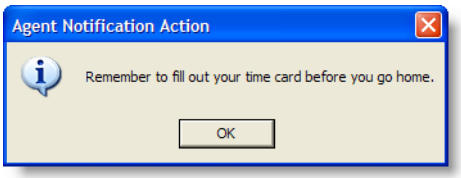
   The Agent Notification Action Setup dialog box appears (see Figure 66).

Figure 66. Agent Notification Action Setup dialog box.




3. Enter an action name, select the icon you want to appear in the popup window, and then type your message.
4. Click **Preview** to see what the popup window will look like (see Figure 67).

Figure 67. Preview of an Agent Notification popup window.




The title bar on the actual popup window may contain truncated text, because Windows automatically adds “Cisco Agent Desktop” to the beginning of the title bar text and the popup window does not resize.

5. Click **OK**.

## Agent State Action

An Agent State action enables you to select an agent state to associate with an event.

Agent State actions may be associated only with Answered and Dropped events. The only valid agent states are Ready, Not Ready, Work Ready, and Work Not Ready.

> **NOTE:** You can associate these states with the Dropped event, but if agent state transitions are configured in ICM, that setting will probably take precedence over the agent state action you configure here.

***To set up an Agent State action:***

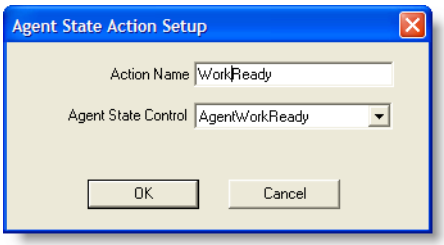
1. Set up a new action. See "Adding a New Action" on page 123.

   The Select Action window appears.

   Select the **Agent State** tab, and then click **New**.

The Agent State Action Setup box appears (see Figure 68).

**Figure 68. Agent State Action Setup dialog box.**




2. Enter a name for the action, select the agent state control from the drop-down list, and then click **OK**.

## Automated Reason Codes for Agent State Changes

You can enable automated reason codes when you set up an agent state action for transitioning to Logout or Not Ready.

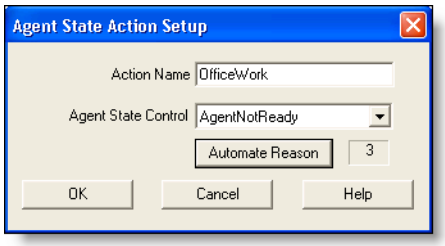
If you enable automated reason codes, the agent does not have to choose the appropriate reason code when an agent state action to transition to Logout or Not Ready is triggered.

***To enable automated reason codes***

1. Set up a new Agent State action (see "Agent State Action" on page 129) or edit an existing Agent State action (see "Editing an Action" on page 124).
2. In the Agent State Action Setup dialog box, enter a name for the action, select either AgentNotReady or AgentLogout from the Agent State Control drop-down list.

   The Automate Reason button appears in the dialog box (see Figure 69).

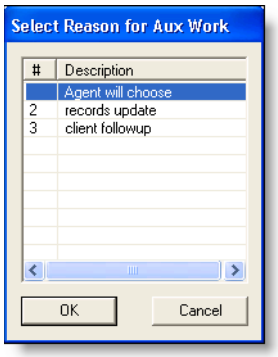
**Figure 69. Agent State Action dialog box with Automate Reason button.**




3. Click **Automate Reason**.

   The Select Reason dialog box appears (see Figure 70).

Figure 70. Select Reason dialog box.




4. Select the reason code you want to be entered automatically when the action is triggered, and then click **OK**.

   The default is “Agent will choose.” If you select this, the agent will have to manually enter the reason code.

   The dialog box closes and the Agent State Action Setup dialog box is displayed, with the number of your chosen reason code entered in the gray box next to the Automate Reason button.

5. Click **OK**.

## Call Control Action

Call Control actions include:

- Blind transfer
- Supervised transfer
- Supervised Conference
- Blind Conference
- Call
- Answer
- Drop
- TouchTones

These actions can be associated with an event or a task button. For example, a task button could be configured to execute a call control action that blind transfers a call to the agent’s supervisor.

***To set up a Call Control action:***

1. Set up a new action. See "Adding a New Action" on page 123.

The Select Action window appears.

Select the **Call Control** tab, and then click **New**.

The Call Control Action Setup dialog box appears (see Figure 71).

**Figure 71. Call Control Action Setup dialog box.**


2. Enter the following information:
   - A name for the call control action.
   - The type of action selected from the Call Control drop-down list.
   - A phone number if required by the type of action. For example, for Blind Transfer, enter the phone number to which a call is transferred.
3. Click **OK**.

**NOTE:** A blind conference call control action must be used in conjunction with rules. If no rules are configured, then the blind conference action occurs every time the event it is associated with occurs. For example, if you set up a blind conference action on an answered event and do not configure rules, it executes on every answered call. To prevent this, you must set up rules that allow the action to occur only when desired, such as only on incoming calls from the route point.

**NOTE:** A work flow set up to answer a call on the Ringing event does not work for mobile agents in Call-by-Call mode because the agent must answer incoming calls manually.

## HTTP Action

This action is available to CAD agents at the Premium level (Post and Get), and to CAD-BE agents at the Enhanced and Premium levels (Get only).

HTTP actions enable an agent to use call-based data to interact with a website or a web application in the Integrated Browser window.

For example, an HTTP action can be set up so the enterprise data of an incoming call is used to retrieve a customer record and display it in the Integrated Browser.

**NOTE:** For more information on HTTP requests and the HTTP protocol in general, see the website of the World Wide Web Consortium, www.w3.org.

**NOTE:** Keep in mind that a URL, including arguments, is limited by the HTTP service to a maximum of 2075 characters. If you create an HTTP action that results in a URL longer than that, it will not work correctly.

***To set up an HTTP action:***

1. Set up a new action. See "Adding a New Action" on page 123.

   The Select Action window appears.

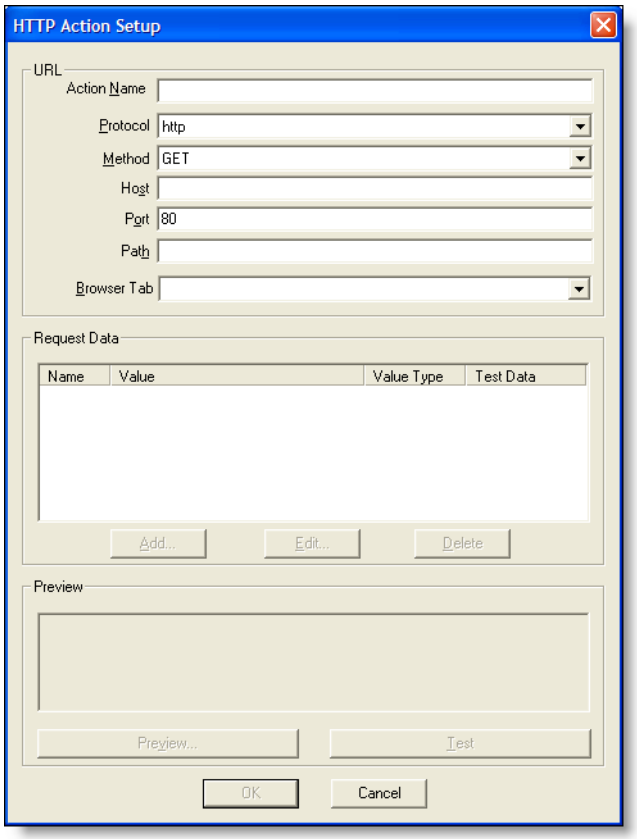
   Select the **HTTP Action** tab, and then click **New**.

   The HTTP Actions Setup dialog box appears (see Figure 72).

2. Complete the HTTP Actions Setup dialog box as follows:

| Field | Description |
|---|---|
| Action Name | Enter a name for the new action. |
| Protocol | Select the protocol to be used by the browser: http (default) or https. |
| Method | Select the http method to be used by the browser: GET (default, CAD and CAD-BE agents) or POST (CAD agents only). |
| Host | Enter the host name or IP address of the website. Do not include the http or https prefix. |
| Port | Enter the port (0–65535) that the host is listening on (for http the default is 80; for https, the default is 443). |
| Path | Enter the path portion of the URL (optional). Default is blank. Do not include a leading slash. |
| Browser Tab | Select the browser tab in which you want the action results to be displayed. (For CAD-BE agents there is only 1 tab available so this field is not present.)<br>If the tab you select is removed later, the action will be displayed in the first tab (ordinarily reserved for supervisor page push). |

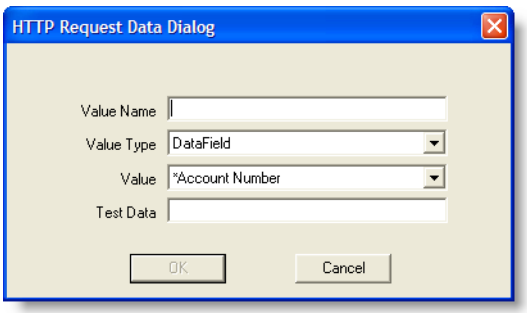
Figure 72. HTTP Actions Setup dialog box.




3. Click Add to display the HTTP Request Data dialog box (see Figure 73).

   The fields added with this dialog box make up the query or post data portion of the request. The fields are optional and are blank by default.

Figure 73. HTTP Request Data dialog box



4. Complete the HTTP Request Data dialog box as follows:

| Field | Description |
|---|---|
| Value Name | Enter the name of the field in the web application. |
| Value Type | Select one of the following:<br>• DataField to use an enterprise data variable as the source of the data. This is inserted in the URL following the <name>=<value> format.<br>• UserDefined to use a specific string entered in the Value field. This is inserted in the URL following the <name>=<value> format.<br>• DataFieldOnly to insert any value selected from the Value drop-down list **without** following the <name>=<value> format. |
| Value | If you selected a value type of DataField or DataFieldOnly, select the enterprise data variable from the drop-down list. If you selected UserDefined, enter the value to be used. |
| Test Data | Enter a string of test data to simulate DataField or DataFieldOnly data. This field is enabled only if you select a Value Type of DataField or DataFieldOnly. |

5. Continue to build your request using the Add, Edit, and Delete buttons as needed.
6. When you have completed building the request, click **Preview** to view the request. Note that Desktop Administrator has added the special characters needed for a valid HTTP request. Supported formats are as follows:
   - If a path is specified and there is request data, there will be a "/" after the port and a "?" after the path.

     Example: http://www.site.com:80/index.jsp?name=value
   - If a path is not specified, there is request data, and the first request data is *not* DataFieldOnly, there will be a "?" after the port and no "/".

     Example: http://site.com:80?name=value
   - If a path is not specified, there is request data, and the first request data *is* DataFieldOnly, there will be a "/" after the port and no "?".

     Example: http://www.site.com:80/value

- If a path is not specified, there is more than one request data, and the first request data is DataFieldOnly, there will be a "/" after the port and no "?".

  Example: http://www.site.com:80/value&value&value...

7. When you are satisfied your request is correctly formatted, click **Test** to test it using the test data you entered when adding the request data.

### Reserved Characters

There are characters that must not be used in an HTTP request. These characters are:

| Symbol | Description |
|---|---|
| & | Ampersand |
| @ | At sign |
| \ | Back slash |
| ^ | Carat |
| : | Colon |
| , | Comma |
| $ | Dollar sign |
| " | Double quote |
| = | Equal sign |
| ! | Exclamation point |
| < | Left angle bracket |
| [ | Left square bracket |
| % | Percent |
| + | Plus |
| # | Pound sign |
| ? | Question mark |
| > | Right angle bracket |
| ] | Right square bracket |

| Symbol | Description |
|---|---|
| ; | Semi-colon |
| ‘ | Single quote |
| / | Slash |

### Example of an HTTP Request

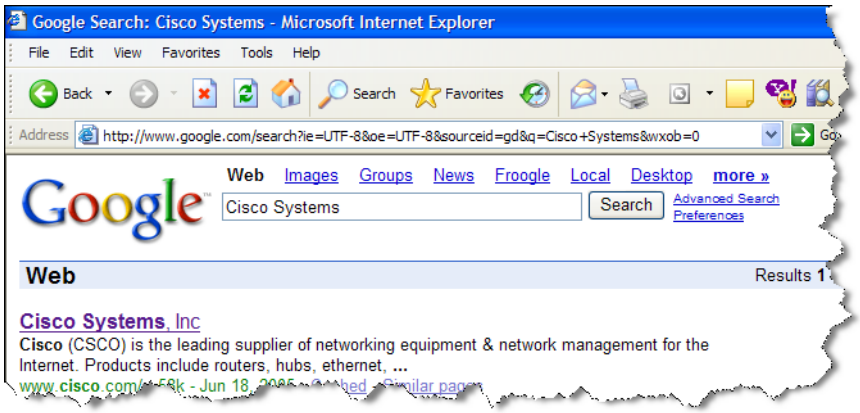
To illustrate how to create a basic HTTP request, we will write a request that uses the Google search engine to search the web for “Cisco Systems.”

***To learn what value names and values go into the Google search:***

1. Open your web browser and navigate to www.google.com.
2. Type **Cisco Systems** in the search field and then click **Google Search**.

   The address bar shows the HTTP request we will create in Administrator (see Figure 74).

**Figure 74. Google Search results page.**




3. The Address bar shows this string:

   www.google.com/search?ie=UTF-8&oe=UTF-8&sourceid=gd&q=Cisco+Systems&wxob=0

The portion of the string before the question mark is the host and the path. After that, all the request data is listed, separated by ampersands ( & ).

| Name | Value |
|---|---|
| Host | www.google.com |
| Path | search |
| Browser Tab | HTTP Web Browser Tab 1 |
| Request Data | ie=UTF-8 |
| | oe=UTF-8 |
| | sourceid=gd |
| | q=Cisco+Systems |
| | wxob=0 |

***To create the HTTP request:***

1. Complete the HTTP Actions Setup dialog box with the information you gathered from the manual Google search (see Figure 74).

   The values are all user-defined. The value name is on the left side of the equal sign, and the value is on the right side of the equal sign.

   Note that Google inserted a plus sign (+) between the words Cisco and Systems in the request string. You do not need to include that character in the HTTP Request Data dialog box. Desktop Administrator will add an acceptable string to indicate the space between the words.

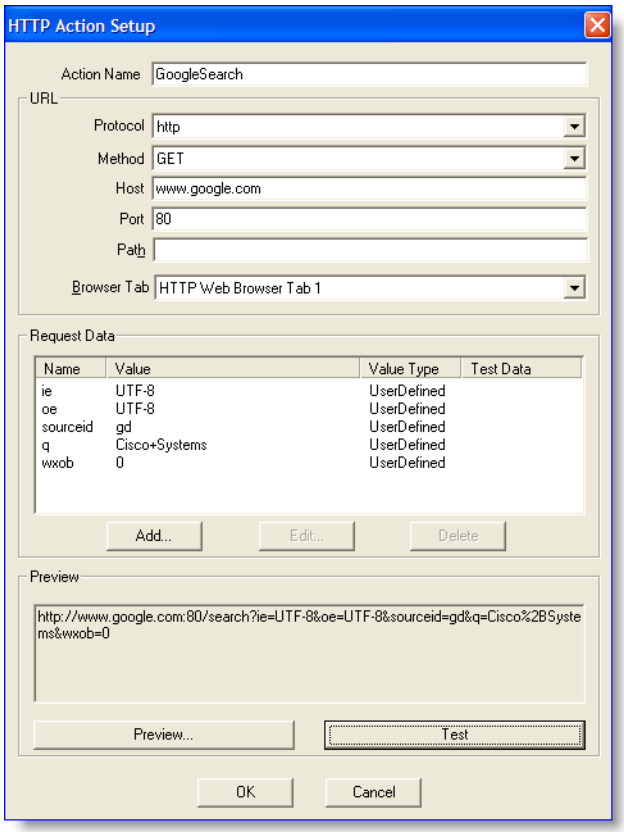
2. After you have entered the request data, click **Preview** to view the resulting request string.

   It should be identical to the string displayed in the Google search results address bar. If you used a plus sign between the words Cisco and Systems, you will see “%2B” instead of the plus sign; if you used a space, you will see “%20”. These strings indicate a space and are an acceptable substitute for the plus sign.

3. Click **Test** to test your HTTP request.

   The request should open your browser, navigate to the Google Search page, and run a search for Cisco Systems.

Figure 75. Google Search HTTP Action Setup dialog box.




## IPC Action

This action is available to CAD agents at the Premium level.

IPC actions pass information in the form of UDP (user datagram protocol) messages from the agent desktop to a third-party application using IPC (interprocess communication) methods. The third-party application can be located on the agent's PC or anywhere on the network.

> NOTE: You must have a custom application written that listens for data sent to a specific IP address and port.

An IPC action is one-way—that is, when CAD sends data using an IPC action, it does not receive a response or any acknowledgement that the message was received by the recipient third-party application.

The data sent is enterprise data or user-defined data. It is sent in the format:

```
valuename=value&name=value&name=value…
```

***To set up an IPC action:***

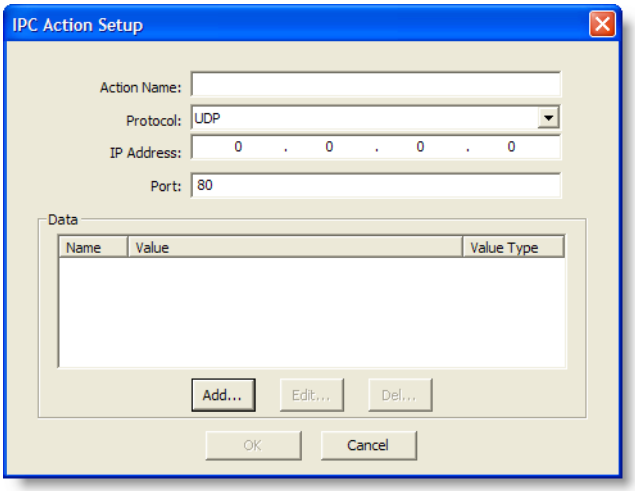
1. Set up a new action. See "Adding a New Action" on page 123.

   The Select Action window appears.

2. Select the **IPC Action** tab, and then click **New**.

   The IPC Action Setup dialog box appears (see Figure 76).

**Figure 76. IPC Action Setup dialog box.**



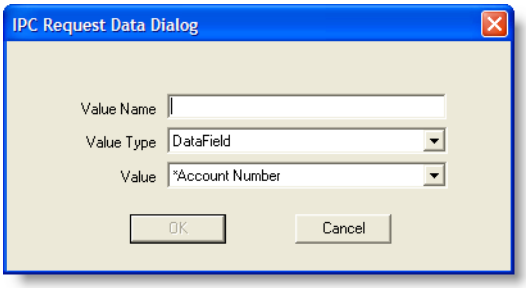

3. Complete the IPC Action Setup dialog box as follows:

| Field | Description |
|---|---|
| Action Name | Enter a name for the new action. |
| Protocol | The default (and only) protocol is UDP. |
| IP Address | Enter the IP address of the third-party application that will receive the data. |
| Port | Enter the port number the third-party application is listening on for data. |

4. Click **Add** to display the IPC Request Data dialog box (see Figure 77).

   The fields added with this dialog box make up the query portion of the request.

Figure 77. IPC Request Data dialog box




5. Complete the IPC Request Data dialog box as follows:

| Field | Description |
|---|---|
| Value Name | Enter the name of the field. |
| Value Type | Select DataField to use an enterprise data variable as the source of the data. Select UserDefined to use a specific string entered in the Value field. |
| Value | If you selected a value type of DataField, select the enterprise data variable from the drop-down list. If you selected UserDefined, enter the value to be used. |

6. Continue to build your request using the Add, Edit, and Delete buttons as needed.
7. When you have completed building the request, click **OK**.

## Launch External Application Action

Launch External Application actions start a third-party application in a new window.

To ensure applications are running before macros attempt to use them, start them with launch actions assigned to the Startup event.

> **NOTE:** An application started by a launch action must use the same path on the agent's PC as it does on the administrator's PC or it must be on a network drive, or the launch action will not be successful.

When using launch actions, Agent Desktop can pass parameters such as command line arguments in two ways.

The first method is to add parameters after the application path name. For example, the command to start Microsoft Excel and open a spreadsheet named mrmtest.xls is:

"c:\program files\excel.exe" "c:\my documents\mrmtest.xls"

**NOTE:** Program names and command line arguments that contain spaces must be in quotes so that they appear as one argument rather than as multiple arguments.

The second method involves passing data fields as arguments. You can pass any valid data field while launching an application. Note that if a launch action takes place on the Startup event, call data may not be present. Empty or blank data fields will contain the string <NULL>.

***To set up a Launch External Application action:***

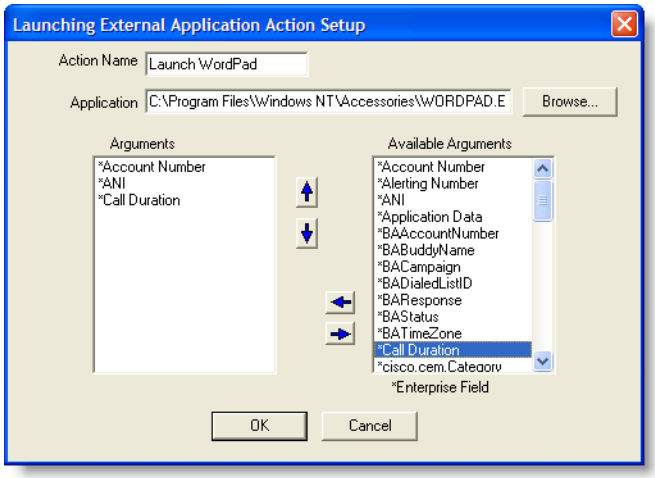
1. Set up a new action. See "Adding a New Action" on page 123.

   The Select Action window appears.

2. Select the **Launch External Application Action** tab, and then click **New**.

   The Launching External Application Action Setup dialog box appears (see Figure 78).

**Figure 78. Launching External Application Action Setup dialog box.**




3. Enter a name for the action and enter the path to the desired application's location.

   Make sure the application is located so that it is available to Agent Desktop at runtime.

4. Add any arguments you wish to pass to the application.

   Choose the desired argument in the Available Arguments list, and use the left arrow to add it to the Argument list. Use the up and down arrows to reorder the Argument list.

5. When you have finished entering information, click **OK**.

For more examples of setting up this type of action, see Chapter 6, “Tutorials.”

## Run Macro Action

A macro is a shortcut for a sequence of keystrokes. For example, you might record a macro that performs the following tasks with each incoming call:

1. Copy the ANI (Automatic Number Identification) from Agent Desktop to Microsoft Outlook
2. Open a contact list
3. Find the ANI in a database or spreadsheet
4. Display a screen containing the caller’s account information

**NOTE:** Do not use a Run Macro action to perform tasks that can be accomplished by one of the other types of actions available. For example, use a Call Control action to transfer a call, and an Agent State action to change agent states.

**NOTE:** Run Macro actions do not work correctly when Chinese and Korean characters (and potentially any multi-byte characters) are used.

For examples of creating macros, see Chapter 6, “Tutorials.”

### Macro Recording Tips

If your macro accesses a third-party application, make sure that the application is open. If the macro enters text into the third-party application, make sure that application has Windows focus.

Keystroke macros play back to the top level window they were recorded in. If you are running a keystroke macro to a Terminal Services window, you must make sure that the appropriate application in that Terminal Services window always has focus, otherwise the keystrokes will be sent to the wrong application.

Before you begin to record the macro, make a test run with the third-party application, writing down all of the keystrokes required for the tasks you wish to perform.

Avoid using:

- the tab or arrow keys in your macro because the cursor may not always be in the same position each time a window opens.

- mouse clicks and movements, because the macro recorder does not record them.

Use keyboard shortcut keys instead to perform actions in the application.

> **NOTE:** When a macro is executed, it can be impacted by the current keyboard settings of the client PC. Care should be taken to ensure that keyboard settings, such as Caps Lock, are not inadvertently left on. Agents should also be cautioned not to enter keystrokes while a macro is running, since that can also affect the macro.

Shortcut keys are indicated by an underlined letter in the button name, field name, or description. You press Alt, Ctrl, or Shift plus the underlined letter to perform the action. For instance:


In this case, pressing Alt-E clicks the Edit button.

The exact keystrokes for a keyboard shortcut are listed in the application's menu. For instance, in Microsoft Word, to find out what the shortcut is to save a document, choose File from the menu bar. On the drop-down menu the Save option is followed by its shortcut, Ctrl-S.

Common Windows shortcut keys are:

| Shortcut Key | Description |
|---|---|
| Esc | Cancels an action. |
| Enter | Clicks **OK** or the default button in a dialog box. (Default buttons have a heavier border surrounding them.) |
| Ctrl-A | Selects all text. |
| Ctrl-C | Copies selected text to the clipboard. |
| Ctrl-P | Prints the document. |
| Ctrl-S | Saves the document. |
| Ctrl-V | Pastes text into the window at the cursor position. |
| Ctrl-X | Cuts selected text to the clipboard. |

A macro may include keystrokes for multiple applications. For example, one macro may include keystrokes for word processing, spreadsheet, and database applications. To switch between applications when recording a macro, use the mouse to select the application. Do not press Alt-Tab. If you do, these keystrokes are recorded and may not select the correct application when you play back the macro.

> NOTE: Do not press Ctrl-Esc to click the Microsoft Windows Start button, or the Macro Recorder stops recording without providing a message showing that recording has stopped. All keystrokes recorded up to this point are deleted. To click Start without causing an error or stopping recording, use your mouse.

## Allowed Macro Keystrokes

Table 14. Allowed Macro Keystrokes—Keys

| Key Type | Key | Macro Notation |
|---|---|---|
| Character | 0 1 2 3 4 5 6 7 8 9<br>A B C D E F G H I J K L M N O P Q R S T U V W X Y Z<br>* + ; = , - . / ` [ \ ] ' | |
| Non-Character | Tab | [TAB] |
| | Backspace | [BACKSPACE] |
| | Enter/Return | [ENTER] |
| | Shift | [SHIFT] |
| | Control/Ctrl | [CONTROL] |
| | Alt | [ALT] |
| | Pause/Break | [PAUSE] |
| | Caps Lock | [CAPSLOCK] |
| | Esc | [ESC] |
| | Space/Space Bar | [SPACE] |
| | Page Up/PgUp | [PAGE-UP] |
| | Page Down/PgDn | [PAGE-DOWN] |
| | End | [END] |
| | Home | [HOME] |
| | Left Arrow | [LEFT-ARROW] |
| | Up Arrow | [UP-ARROW] |
| | Right Arrow | [RIGHT-ARROW] |
| | Down Arrow | [DOWN-ARROW] |
| | Print Scrn | [PRINTSCREEN] |
| | Insert | [INSERT] |
| | Delete | [DELETE] |
| | F1 through F24 | [F1] ... [F24] |

Table 15. Allowed Macro Special Commands

| Special Command | Description |
|---|---|
| [ENTERPRISE FIELD:] | Inserts an Enterprise Data field. |
| [DATA FIELD:] | Inserts data from Agent Desktop. |
| [SYSTEM FIELD:] | Inserts data from Agent Desktop system fields. |
| [APPLICATION:=] | Changes focus to an application window. The equal sign ( = ) is used as a separator between the application and the window title. If either the application name or window title is missing, Agent Desktop attempts to find the correct application and window to play the macro to, based on the parameters present. |
| [DELAY] | Time, in milliseconds, to wait before performing the next macro command.<br>Example: **[DELAY] 1000** delays the next macro key or command by 1 second. |

## Recording Macros

Follow these steps to record a macro.

***To record a macro:***

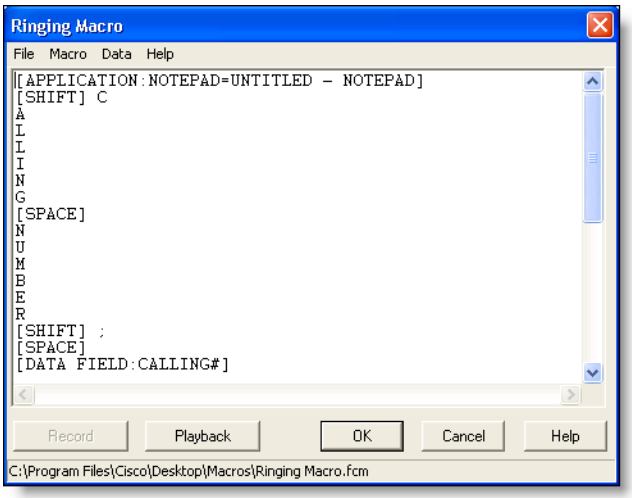
1. Start any third-party applications you want to include in the new macro, and then minimize them.
2. Set up a new action. See "Adding a New Action" on page 123.

   The Select Action window appears.
3. Select the **Run Macro** tab, and then click **New**.

   The New Macro dialog box appears.
4. Enter a new macro action name, and then click **OK**.

   The Macro Editor window appears (see Figure 79).

Figure 79. Macro Editor window (with a macro script displayed; the window name is the name of the macro).




5. Click **Record**.

   The Macro Editor window minimizes and the macro recorder starts. Anything you type from now on is entered in the new macro.

6. Maximize the third-party application and begin typing.

   The macro recorder records your keystrokes.

7. If you wish to insert an Agent Desktop data field into the macro, press the Pause Macro hot key (the default is F2).

   The Macro Recorder Suspended dialog box appears (see Figure 80).

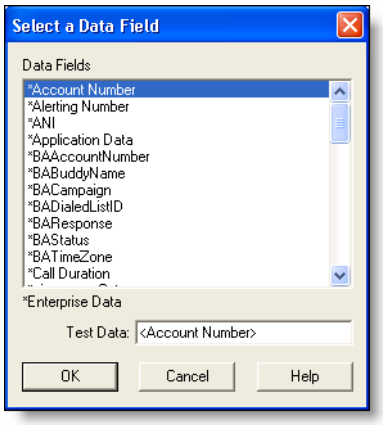
   **NOTE:** Do not change the window focus away from the third-party application to the macro recorder before pressing the Pause Macro hot key and inserting a data field. If you do this, you will receive an error message and your macro recording will be interrupted.

Figure 80. Macro Recorder Suspended dialog box.

8. Click **Insert Data**.

   The Select a Data Field dialog box appears (see Figure 81). See "Data Fields" on page 150 for more information.

Figure 81. Select a Data Field dialog box.




9. Choose the desired data field from the list, enter test data if desired, and then click **OK**.

   The test data you enter is displayed in the application only when the macro is tested using the Playback function.

   The Macro Recording Suspended dialog box appears.

10. Click **Resume Recording** to continue recording the macro.

11. Once you have finished recording the macro, press the macro hot key.

    The Macro Recording Suspended dialog box appears.

12. Click **End Recording**.

    You are returned to the Macro Editor window.

13. You can take any of the following actions:

    - Click **OK** to save the macro as recorded.

      If there are no errors, the macro is saved and you are returned to the Select Action dialog box.

      If there are errors, the macro editor displays the line and highlights the text in question. Correct it and click **OK** again.

    - Click **Playback** to test the macro.

      If there are errors, the macro editor displays the line and highlights the text in question. Correct it and click **Playback** again.

      If there are no errors, the macro is played back. If it works as you want it to, click OK to save it and return to the Select Action dialog box.

To change test data, choose **Data > Change Test Data** in the macro editor and enter new test data.

- Click **Cancel** to cancel the macro.

  The macro is canceled and the Select Action dialog box appears.

### Data Fields

The Select a Data Field dialog box (Figure 81) enables you to select and insert a Agent Desktop data field into a macro. Access this dialog box either through the Suspend Macro Recording dialog box or from the Data menu in the Macro Editor window.

There are three types of data fields:

- Standard. Data from the switch.
- System. System data, for example the date and time. These fields are enclosed in square brackets [ ].
- Enterprise. Data from the Enterprise service. These fields are marked with an asterisk ( * ).

**NOTE:** When selecting data fields to be used in actions or rules, keep in mind that not every data field is available for every event. For example, the calling number is not available during the Startup event. If an unavailable field is used, <N/A> is displayed in the application the macro pops.

These fields can be included in the Run Macro and Launch External Application work flow actions.

The available data fields are:

**Table 16. Enterprise Data Fields**

| Data Field | Description |
|---|---|
| *Account Number | The customer’s account number. |
| *Alerting Number | The number of the ringing device. |
| *ANI | The number of the phone that made a call. |
| *Application Data | The ISDN user-to-user information element. |
| *BAAccountNumber | Outbound Dialer: The customer’s account number. |
| *BABuddyName | Outbound Dialer: The customer's first and last name separated by a comma. |

Table 16. Enterprise Data Fields — <Emphasis>Continued

| Data Field | Description |
|---|---|
| *BACampaign | Outbound Dialer: The name of the campaign to which the call belongs. |
| *BADialedListID | Outbound Dialer: Unique key identifying a specific customer record within the Dialing_List table located in the BA private database. |
| *BAResponse | Outbound Dialer: Multi-purpose placeholder that sends data from Agent Desktop to the BA Dialer. This variable responds to the reservation call, schedule and cancel callbacks, and changes to the callback phone number. |
| *BAStatus | Outbound Dialer: Two characters indicating the mode and direction of the BA Dialer-initiated call. The first character identifies the call mode:<br>• R: Reservation call, Predictive or Progressive mode<br>• P: Reservation call, Preview mode<br>• C: Customer call<br>• A: Reservation call, personal callback<br>During a reservation call, the first character is P, R, or A. When a customer call is transferred to an agent, the first character is C.<br>The second character of BAStatus indicates the call direction:<br>• O: Outbound<br>• I: Inbound<br>• B: Blended |

Table 16. Enterprise Data Fields — <Emphasis>Continued

| Data Field | Description |
|---|---|
| *BATimeZone | Outbound Dialer: Indicates the GMT offset, in minutes, for the customer's time zone and obtains the customer's local time. The format of this ECC variable is +/-#####.<br>This field's first character is either a positive or negative sign, followed by 5 digits. For example:<br>• This example indicates that the customer is one hour behind GMT:<br>BATimeZone = -00060<br>• This example indicates that the customer is two hours ahead of GMT:<br>BATimeZone = +00120 |
| *Call Duration | The difference between the call's end time and start time. The time is read from the Enterprise server's clock. |
| *cisco.com.Category | Reserved for future use. |
| *cisco.com.MessageKey | Reserved for future use. |
| *cisco.com.Priority | Reserved for future use. |
| *Collected Digits | Digits entered by the caller in response to IVR prompting. |
| *DNIS | The number of the phone that received a call. |
| *ICM Call Variable 1...<br>*ICM Call Variable 10 | Call-related variable data. There are 10 available variables. |
| *Last Called Number | The last number dialed. |
| *Last Calling Number | The last device that made a call. |
| *Last Connected Number | The last monitored device that joined the call. |
| *Last Queued Time | The amount of time spent in queue the last time the call was queued. The time is read from the Enterprise server's clock. |
| *Last Redirection Number | The last number the call was redirected from. |
| *Layout | The name of the enterprise data layout. |

Table 16. Enterprise Data Fields — <Emphasis>Continued

| Data Field | Description |
|---|---|
| *Trunk ID | Device ID of the trunk. |
| *UCID | Not applicable. |
| [AGENT_ID] | The agent's identification. |
| [CALL_DURATION] | The difference between the call's end time and start time. The time is read from the agent's PC's clock. |
| [CALL_END_TIME] | The end time of the current call. If the call has not yet ended, it is the current time. The time is read from the agent's PC's clock. |
| [CALL_START_TIME] | The start time of the current call. If there is no call, this data is empty. The time is read from the agent's PC's clock. |
| [COMPUTER_NAME] | The name of the computer the agent is currently logged onto. |
| {LOCAL_PHONE_EXT] | The agent's extension. |
| Alerting# | The number of the ringing phone. |
| Called# | The number of the phone that received a call. |
| Calling# | The number of the phone that made a call. |
| Original Called# | The original number that received a call. |
| Original Calling# | The original number that made a call. |

## Set Enterprise Data Action

This action enables you to set one enterprise data field variable that appears in the Cisco Agent Desktop enterprise data pane to a desktop variable or static text of your choosing.

The action is available only for the Ringing and Answered events.

> **NOTE:** Do not include a Set Enterprise Data action in the same work flow as the following Call Control actions: supervised transfer, blind transfer, conference, or blind conference. This can cause a critical race condition that results in the enterprise data not being available.

***To set up a Set Enterprise Data action:***

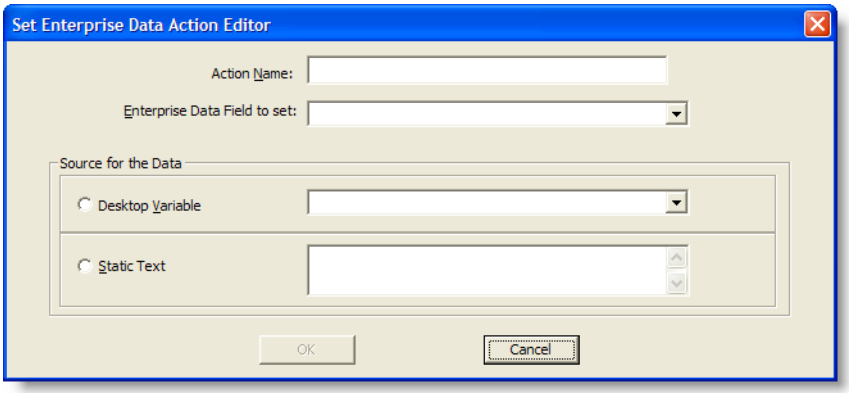
1. Set up a new action. See "Adding a New Action" on page 123.

The Select Action window appears.

2. Select the **Set Enterprise Data** tab, and then click **New**.

   The Set Enterprise Data Action Setup Editor dialog box appears (see Figure 82).

Figure 82. Set Enterprise Data Action Editor dialog box.




3. Complete the dialog box as follows:

| Field | Description |
|---|---|
| Action Name | Enter a name for the new action. |
| Enterprise Data Field to Set | Select the enterprise data field you whose content you want to set. Only ICM call variables and all user-created ECC variables are available for selection from the drop-down list. |
| Select one of the following data sources: | |
| Desktop Variable | From the drop-down list, select the desktop variable you want to be entered automatically in the enterprise data field. Your choices are Agent ID, System Name, System Time, or Skill Group. |
| Static Text | Enter the static text you want to be entered automatically in the enterprise data field. Maximum length of text is 210 characters. |

4. Click **OK**.

## Timer Action

This action is available to CAD agents at the Enhanced and Premium levels.

The timer action enables you to trigger Agent State, HTTP, or Agent Notification actions after a certain amount of time has elapsed under specified circumstances.

For instance, you can configure the Timer action to change the agent's state to Ready if the agent has been in the Work Ready state for 3 minutes.

***To set up a Timer action:***

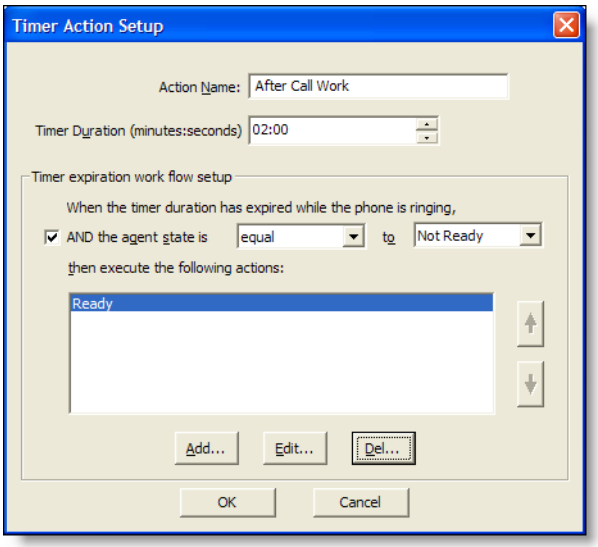
1. Set up a new action. See "Adding a New Action" on page 123.

   The Select Action window appears.

2. Select the **Timer Action** tab, and then click **New**.

   The Timer Action Setup dialog box appears (see Figure 83).

**Figure 83. Timer Action Setup dialog box.**




3. Complete the Timer Action Setup dialog box as follows:

| Field | Description |
|---|---|
| Action Name | Enter a name for the new action. |
| Timer Duration | Set the amount of time the agent must spend in the selected agent state before the action executes. |
| Timer Expiration Work Flow Setup section | In this section, specify the actions that will execute when the time duration has expired. You can specify that the agent state must also be equal or not equal to either Ready or Not Ready. |

4. Click **Add** to select or set up the actions you want to execute when the timer has expired.
5. When you have configured the Timer Expiration Work Flow, click **OK**.

## Utility Action

There are three utility actions:

- Start recording
- Stop recording
- Send a predefined, high-priority chat message to the agent's supervisor

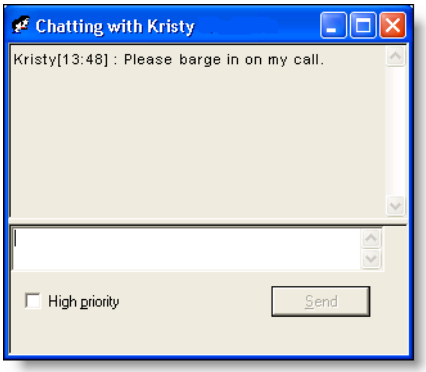
### High Priority Chat Messages

A high priority chat message is a predefined message that appears in a supervisor's Chat window (see Figure 84). The message behaves just like a regular chat message that is tagged as high priority—it pops up on the supervisor's screen on top of all other windows to attract the supervisor's attention.

You can configure a task button on the Agent Desktop toolbar to send such a message from an agent to the agent's supervisor(s).

> **NOTE:** For CAD-BE agents, a high priority chat message can be sent but it cannot be replied to by the supervisor, because CAD-BE agents do not have chat capability.

**Figure 84. Sample high-priority chat message.**




***To set up a utility action:***

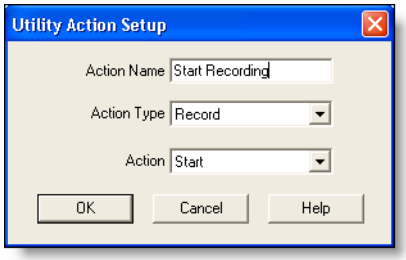
1. Set up a new action. See "Adding a New Action" on page 123.

   The Select Action window appears.

2. Select the **Utility Action** tab, and then click **New**.

   The Utility Action Setup dialog box appears (see Figure 85).

Figure 85. Utility Action Setup dialog box.




3. Enter a name for the new action, select an action type from the drop-down list, and then click **OK**.

   - If you select **Record** as the action type, select **Start** or **Stop** from the Action field.
   - If you select **HighPriorityChat**, type the message you want to send as the predefined, high-priority chat message in the Message field.

   **NOTE:** When the dialog box initially opens, only the Action Name and Action Type fields are visible. When you choose the Record action type, the Action field appears. When you choose the High Priority Message action type, the Message field appears.

   **NOTE:** If a Record action is part of a voice contact work flow, the agent being recorded will see a recording icon in the contact appearance pane even if notification is turned off.

## Cisco Unified Outbound Dialer

Cisco Unified Outbound Dialer is an ICM/Unified Contact Center Enterprise feature that enables automated outbound dialing to customers. These outbound calls appear as inbound calls to the agent, and information about the call appears in the Enterprise Data pane.

> NOTE: Unified Outbound Dialer is available only for Agent Desktop.

> NOTE: Cisco Unified Mobile Agent call-by-call mode does not support Outbound Dialer. Nailed mode does support Outbound Dialer.

A supervisor or administrator sets up a calling campaign in ICM that consists of various elements that will present calls to agents and provide information so the agent can handle the call successfully. (See the *Cisco ICM/IP Contact Center Enterprise Edition Setup and Configuration Guide* for information on setting up calling campaigns.)

Outbound Dialer has four modes that determine what type of dialing is done to make the outbound calls:

- Predictive Dialing Mode. In this mode, agents are reserved and a number of customers are dialed simultaneously. When a customer is contacted, the call is transferred to an available reserved agent. The customer's data is displayed in the agent's Enterprise Data window. Predictive dialing mode optimizes agent usage by calculating the average time an agent waits to receive a call and their average call handling time to determine the number of lines to dial per agent so that wait time is kept to a minimum.
- Progressive Dialing Mode. This mode is similar to Predictive Dialing mode, except that the system does not calculate the number of lines to dial per agent. Rather, the user configures a fixed number of lines to be dialed per agent.
- Preview Dialing Mode. In this mode, an agent is reserved and then presented with a customer call along with customer information in the Enterprise Data window. Based on this information, the agent can decide to accept, skip, or reject the call.
- Direct Preview Dialing Mode. This mode is similar to Preview Dialing mode, except that the agent can categorize the phone call presented as Voice, Answering Machine, Invalid, and Fax Modem.

All four dialing modes use the personal callback feature. This features enables an agent to reschedule a customer call at the customer's request for a more convenient time.

Callbacks can be configured so that, when the call is redialed, the call is directed to any agent (regular callback) or the call is directed to the agent who made the callback reservation (personal callback). The callback type is configured at the campaign level and is not controlled by the agent.

## Outbound Dialer Actions

Based on the enterprise data information, the agent selects the appropriate Outbound Dialer action button on the Outbound Dialer toolbar.

The available Outbound Dialer actions are:

- Accept. The system dials the customer and connects the call to the agent.
- Reject. The system rejects the current call and releases the agent from the outbound calling reservation. At this point, the system may deliver to the agent another outbound call or a new inbound call.
- Reject Close. The system rejects the current call and closes the record so the customer will not be called again.
- Skip. The system skips the current call and presents the agent with another customer call.
- Skip Close. The system skips the current call and closes the record so the customer will not be called again.
- Skip Next. The system skips the call and displays a menu of these options:
  - Wrong Number. The agent is informed that the number called is a wrong number. After the call terminates, the system calls other customer phone numbers.
  - Not Home. The agent is informed that the customer is not home. After the call terminates, the system calls other customer phone numbers.
- Callback. Displays the Callback Properties dialog box, which the agent uses to set a time and date to call back the customer. This action is enabled only if the agent is in the talking or wrap-up agent state. The agent also uses this dialog box to cancel a previously-scheduled callback of the current customer. This action works only if the agent is in a talking or wrap-up state during an ICM-generated call.
- Reclassify. Displays a menu that enables the agent to reclassify a customer phone number as voice, answering machine, fax/modem, or an invalid number.
- Cancel Reservation. The system releases the agent from the calling campaign and places the agent in the Not Ready state. To resume participating in the calling campaign, the agent must change the agent state to Ready.

## Outbound Dialer Toolbar

In order for the Outbound Dialer actions to be available for agents to use, you must configure the agent interface to include the Outbound Dialer toolbar.

The dialing mode used in the calling campaign determines which buttons appear in the toolbar (see Table 17).

**Table 17. Outbound Dialer toolbar buttons and the dialing mode in which they appear.**

| Icon | Button | Dir. Preview | Predictive | Preview | Progressive |
|---|---|---|---|---|---|
| | Accept | × | | × | |
| | Reject | × | | × | |
| | Reject Close | × | | × | |
| | Skip | × | | × | |
| | Skip Close | × | | × | |
| | Skip-Next | × | × | × | × |
| | Callback | × | × | × | × |
| | Reclassify | × | | | |
| | Cancel Reservation | × | × | × | × |

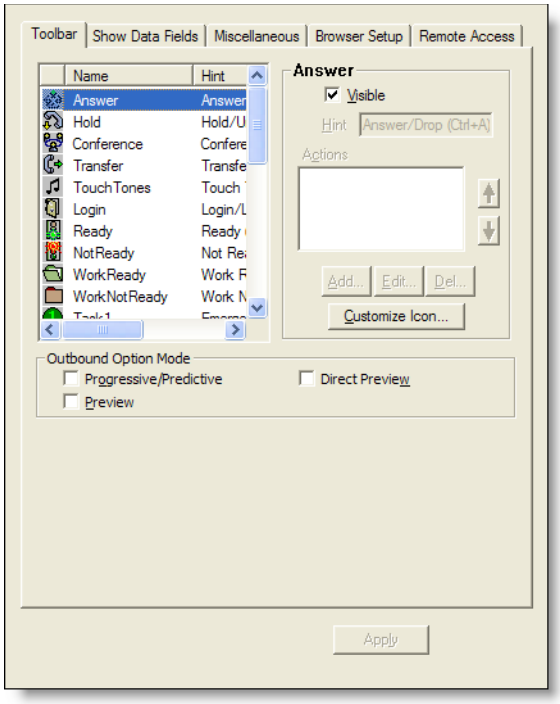
***To configure the Outbound Dialer toolbar to display in Agent Desktop:***

1. In the User Interface window, select the Toolbar tab.
2. In the Outbound Dialer Mode section, select the check box next to the dialing mode used by your calling campaign (see Figure 86).

   The appropriate buttons are enabled in the button selection pane.
3. Click **Apply** to save your changes.

   The Outbound Dialer toolbar will now appear on the Agent Desktop interface.

Figure 86. Toolbar tab of the User Interface window.




## Outbound Dialer Enterprise Data

In order for Outbound Dialer enterprise data to appear in the Enterprise Data window, you must edit the Default layout to include some or all Outbound Dialer fields (see Table 18). All Outbound Dialer fields are prefixed with the letters “BA”.

See "Layouts" on page 55 for information on editing the Default layout.

Table 18. Cisco Outbound Dialer enterprise data fields

| Variable | Comment |
|---|---|
| BAAccountNumber [200] | |
| BABuddyName [201] | |
| BACampaign [202] | |
| BADialedListID [203] | Required for Preview and Direct Preview dialing modes in order for the Skip function to work |
| BAResponse [204] | |

Table 18. Cisco Outbound Dialer enterprise data fields — <Emphasis>Continued

| Variable | Comment |
|---|---|
| BAStatus [205] | Required for all dialing modes. If this field is not included in the layout, no other Outbound Dialer fields will be displayed.<br><br>If a call is part of a Preview dialing mode campaign, the first letter in the BAStatus field entry is a P. If a call is part of a Direct Preview dialing mode campaign, the first letter is a D. |
| BATimeZone [206] | Required for all dialing modes in order for the Callback function to work. |

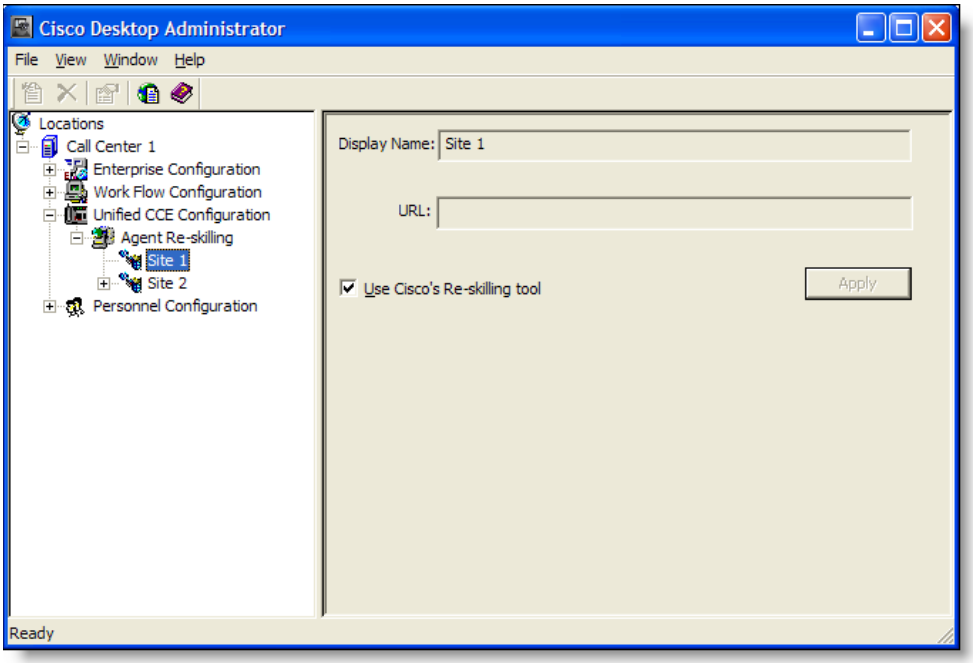
# Unified CCE Configuration

# 4

## Introduction

The Unified CCE Configuration node enables you to configure the websites that supervisors use to dynamically re-skill their agents (see Figure 87).

**Figure 87. Unified CCE Configuration node.**

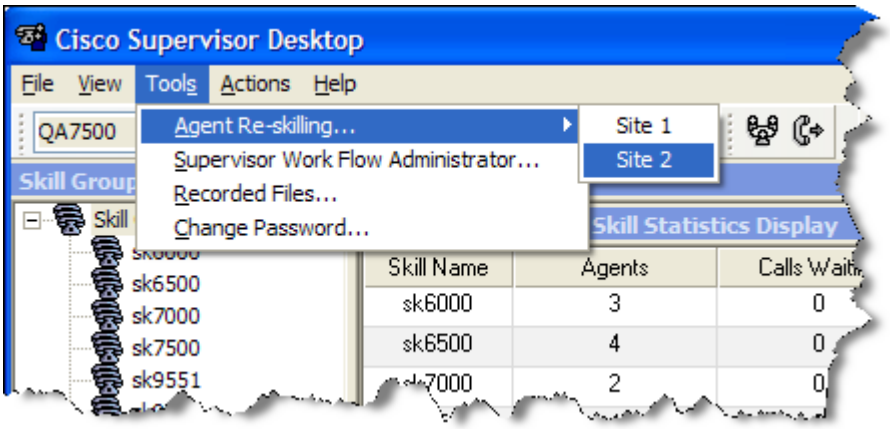



By default, the websites listed under Agent Re-Skilling are not configured. This node enables you to specify alternative websites to the default Cisco Unified Contact Center Enterprise Web Administration Agent Re-skilling website.

## Alternate Agent Re-Skilling Websites

You can specify two alternative agent re-skilling websites to appear in Cisco Supervisor Desktop's Tools menu (see Figure 88).

Figure 88. Cisco Supervisor Desktop Tools menu.




By default, these menu options both lead to the default Cisco Unified Contact Center Enterprise Web Administration Agent Re-skilling website on the ICM.

***To set up an alternative agent re-skilling website:***

1. Under the Agent Re-skilling node, select **Site 1** or **Site 2**.
2. In the right pane, clear the **Use Cisco's Re-skilling tool** check box.

   The URL field and Apply button are enabled.
3. Enter the URL of the alternative site you want supervisors to use, and then click **Apply**.

   **NOTE:** You cannot change the display name.

***To remove an alternative agent re-skilling website:***

1. Under the Agent Re-skilling node, select the site you want to return to the default re-skilling website.
2. Select the **Use Cisco's Re-skilling tool** check box, and then click **Apply.**

### Agent Re-skilling Notes

- Any changes you make to the re-skilling website location are not registered by Cisco Supervisor Desktop until it is restarted.

- Any URL you enter is not checked by the system for accuracy.
- You can enter up to 256 characters in the URL field.
- You an enter any type of URL (for example, http, https, file, or ftp).

# Personnel Configuration

# 5

## Introduction

Personnel Configuration allows you to view information about agents, supervisors, and teams within a logical contact center.

Some of the data for agents, supervisors, and teams is configured in Cisco Intelligent Contact Management (ICM) and is only viewable, not editable, from within Desktop Administrator.

## Agents

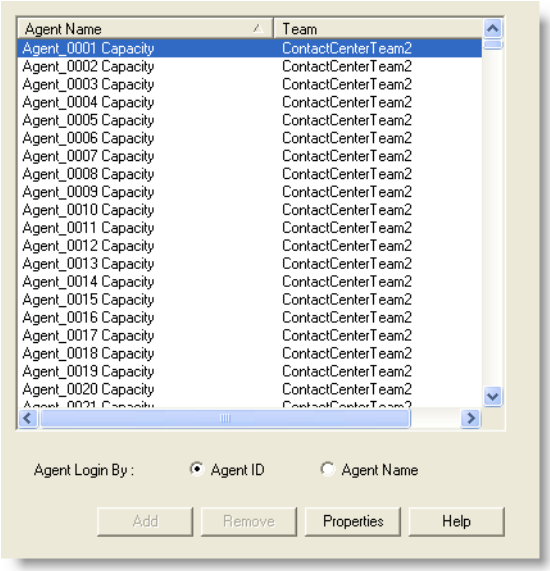
The Agents window (see Figure 89) displays a list of all the agents configured in ICM.

From this window you can view an agent's properties and change the agent's work flow group affiliation. You can also select the method of login for both agents and supervisors—by agent ID or by agent name.

> **NOTE:** When using System IPCC, the only option supported is login by login name. If you are not using System IPCC, run CAD Configuration Setup and reset this option. See the *Cisco CAD Installation Guide* for more information.

You cannot change the agent's user ID, password, display name, or team name—that information must be administered through ICM.

**Figure 89. The Agents window.**




***To view an agent's properties:***

1. Select the agent from the agent list, and then click **Properties**.

   The Agent Properties dialog box appears (see Figure 90).

2. Click **OK** to close the window after reviewing the agent's properties.

*To change agents' login method:*

- Click either **Agent ID** or **Agent Name** to select which an agent should use to log into Agent Desktop.

  **NOTE:** If an agent attempts to log in at the same time you change the login method, the agent will receive an error message. The agent must restart Agent Desktop and then use the new login method.

## Changing an Agent's Work Flow Group

An agent can belong to only one work flow group at a time. All agents are assigned to the Default work flow group until reassigned to another one.

*To change an agent's work flow group:*

1. Select the agent from the agent list, and then click **Properties**.

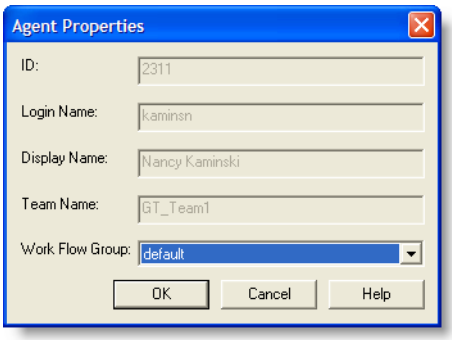
   You can also double-click or right-click the agent's name to display the Properties dialog box.

   The Agent Properties dialog box appears (see Figure 90).

2. Select a work flow group from the drop-down list, and then click **OK**.

   The agent is now assigned to a new work flow group.

**Figure 90. Agent Properties dialog box.**




| Field | Description |
|---|---|
| ID | The agent's Agent Desktop/IP Phone Agent user ID |
| Login Name | The agent's login name |

| Field | Description |
|---|---|
| Display Name | The agent's name, as seen in Agent Desktop/Supervisor Desktop |
| Team Name | The team to which the agent is assigned |
| Work Flow Group | The work flow group that controls the agent's desktop and work flow configurations |

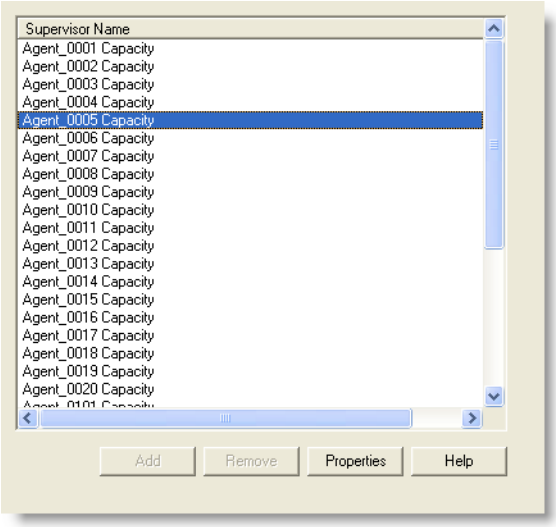
## Supervisors

The Supervisors window (see Figure 91) displays a list of all the supervisors configured in ICM.

From this window you can view a supervisor's properties and change the supervisor's password (it can also be changed from within Supervisor Desktop).

You cannot change the supervisor's user ID, display name, or team affiliation—that information must be administered through ICM.

**Figure 91. The Supervisors window.**




***To view supervisor properties:***

1. Select the supervisor from the supervisor list, and then click **Properties**.

   You can also double-click or right-click the supervisor's name to display the Properties dialog box.

   The Supervisor Properties dialog box appears (see Figure 92).

2. Click **OK** to close the window after reviewing the supervisor's properties.

### Changing a Supervisor's Password

Initially, a supervisor's password is blank. The supervisor can then change the password to what he or she wants.

In the event the supervisor forgets the password, you can reset it from the Supervisor Properties dialog box. The supervisor can then change that password to one of his or her own choosing.

***To change a supervisor's password:***

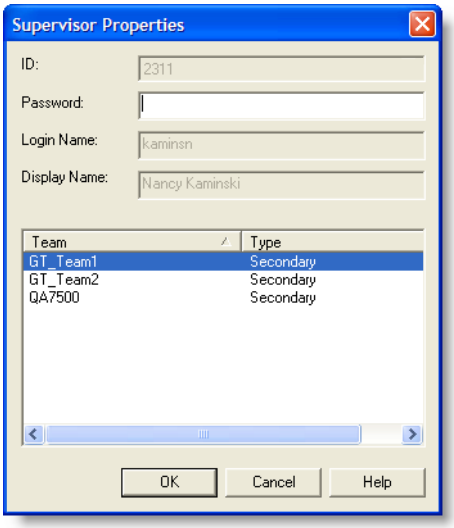
1. Select the supervisor from the supervisor list, and then click **Properties**.

   The Supervisor Properties dialog box appears (see Figure 92).

2. Enter a new password in the Password field (it will appear as asterisks), and then click **OK**.

   The password is changed.

**Figure 92. The Supervisor Properties dialog box.**




| Field | Description |
|---|---|
| ID | The supervisor's Supervisor Desktop user ID |
| Password | The supervisor's password |
| Login Name | The supervisor's login name |
| Display name | The supervisor's name as seen in CAD/CSD |
| Team/Type pane | The team the supervisor is assigned to, and the type of supervisor (primary or secondary) |

# Teams

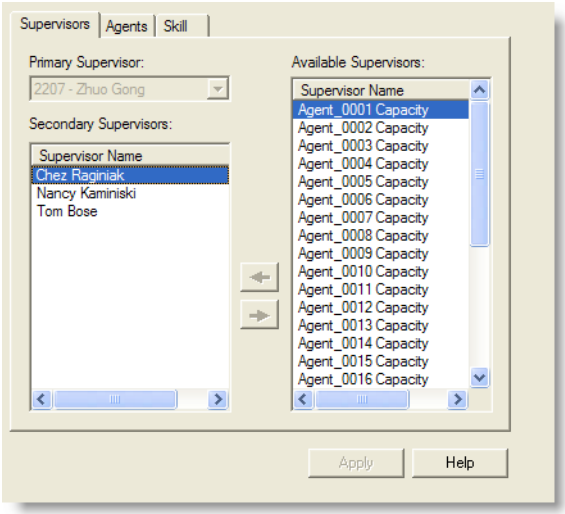
The Teams window enables you to view the supervisors, agents, and skills for a particular team. All this information is administered through ICM. You can only view the information in Personnel Configuration.

## Supervisors

The Supervisors tab (see Figure 93) displays the primary supervisor, secondary supervisors, and available supervisors for the team you selected.

> **NOTE:** Each team must have a primary supervisor. If there is no primary supervisor, secondary supervisors will not see that team in the Team List in Supervisor Desktop. Also, if that team is a secondary supervisor's only team, the supervisor won't be able to log into Supervisor Desktop.

**Figure 93. Supervisors tab.**



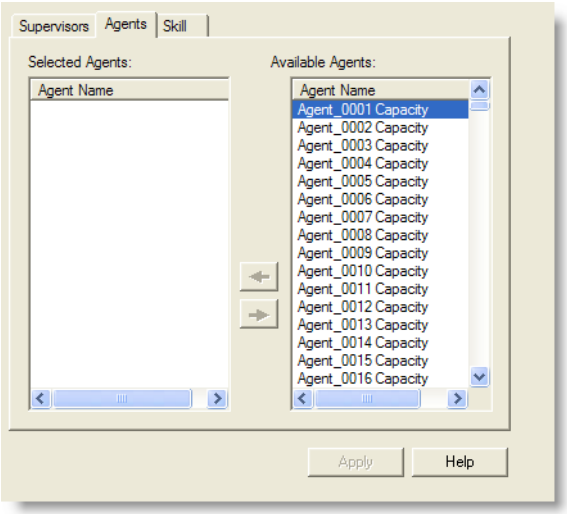

## Agents

The Agents tab (see Figure 94) displays a list of the agents who belong to the team you selected, as well as a list of all available agents. Agents are assigned to teams from within ICM.

> **NOTE:** An agent can belong to only one team in ICM. However, the Available Agents pane lists all agents not on the selected team, even if they are already assigned to another team.

**NOTE:** If you move an agent from one team to another in ICM, you must log the agent out of CAD and then log back in for the team change to register within Supervisor Desktop.

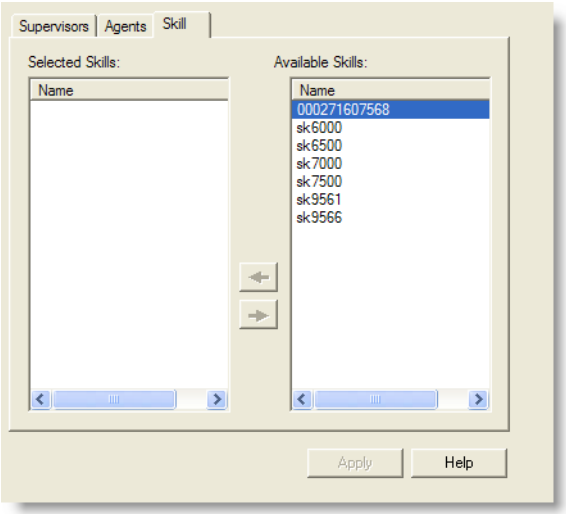
**Figure 94. The Agents tab.**




## Skills

The Skills tab displays a list of the skill groups that route calls to the selected team, as well as a list of all available skill groups. This relationship is set up within ICM.

**Figure 95. The Skills tab**



NOTE: Due to the way ICM works, an ICM-generated default skill group will be displayed in Available Skills pane. This skill group's name is usually a long string of numbers. For example, in Figure 95, it is 000271607568. No agents are assigned to this skill group, and it can safely be ignored.

# Tutorials

# 6

## Introduction

This chapter shows you how to perform a number of common tasks. The tasks are presented as tutorials, and each task includes step-by-step instructions and keystroke macro examples.

The tutorials are based on a fictional company called Rock Coast Products. The tutorials are:

- Setting Up an ANI-Based Screen Pop (page 178)
- Using a Terminal Emulator Package (page 182)
- Setting Up a Task Button to Transfer to a Specified Number (page 187)
- Setting Up a Task Button for After-Call Work (page 188)
- Setting Up a Launch External Application Action (page 197)
- Using Wild Card Data Conditions (page 198)

NOTE: The macros used in these tutorials may need fine-tuning, depending on the PC used and the third-party software accessed.

## Setting Up an ANI-Based Screen Pop

**Premise**

Rock Coast Products wants to use the ANI as the basis for a screen pop containing customer contact information.

**Procedure**

Set up a macro to search for the ANI in a Microsoft Outlook 2000 contact list.

> **NOTE:** This example uses Microsoft Outlook 2000 SR-1(9.0.0.3821). If you have a different version, your keystrokes may vary.

1. Start Microsoft Outlook.
2. In the Navigation pane of Desktop Administrator, click **Desktop Configuration > Work Flow Groups > Agents**, select a work flow group, and then click **Voice Contact Work Flow**.
3. Create a new work flow, and configure it so that it applies to all inbound calls.

   The Voice Contact Work Flows window appears (see Figure 56 on page 114).
4. Select **Ringing** from the Events list box, and then click **New** under the Rules area.

   The New Rule Name dialog box appears.
5. Enter a name (for example, CustContact), and then click **OK**.

   The new rule appears in the Rules list.
6. Select the new rule, and then click **Edit** next to the first Data Field Conditions field.

   The Data Field Conditions dialog box appears (see Figure 57 on page 115)
7. Select **Calling#** from the **Data Field** drop-down list, check the **Is Not Empty** data field filter, and then click **OK**.

   The Data Field Conditions dialog box closes.
8. Click **Any Condition is True**.
9. Click **Add** under the Actions area to create a new action for the event.

   The Select Action dialog box appears.
10. In the Select Action dialog box, select the **Run Macro** tab and then click **New**.
11. In the New Macro dialog box, enter a new macro action name (for example, LookUpPhoneNumber) and then click **OK**.

    The Macro Editor dialog box appears.
12. In the Macro Editor dialog box, note that the macro name entered in step 11 appears in the title bar. Click **Record**.

The Macro Editor dialog box minimizes.

13. Use your mouse to maximize Outlook and begin typing the following macro keystrokes; the Macro Recorder records your keystrokes.

| Macro Keystrokes | Action |
|---|---|
| ALT-V | Access the View menu |
| G | Select **Go to...** |
| O | Select **Contacts** |
| ALT-T | Access the Tools menu |
| D | Select **Advanced Find** |
| ALT-C | Moves the cursor to the **Search for the word(s) field** |
| Press F2 (or whichever key has been set up as the macro hot key) | Pause macro recording and bring up the **Macro Recording Suspended** dialog box |

14. Click **Insert Data**.

    The Select a Data Field dialog box appears.

15. Select the **CALLING#** data field from the list, and then click **OK**.

    The Macro Recording Suspended dialog box appears.

16. Click **Resume Recording** and enter the remaining macro keystrokes, shown below.

| Macro Keystrokes | Action |
|---|---|
| ALT-I | Selects the **In** field |
| P | Toggles to the **Phone number fields only** option |
| ALT-N | Clicks the **Find Now** button |
| Press F2 (or whichever key has been set up as the macro hot key) | Pause macro recording and bring up the **Macro Recording Suspended** dialog box |

17. The macro is now complete. To test it, click **Playback**.

    You can make changes to the macro in the edit window, and you can test the changes by clicking **Playback**.

**NOTE:** You might see multiple [ALT] entries in the macro. These are extraneous and can be deleted. If left in the macro, they will not cause errors.

18. Once you are satisfied with the macro, click **OK** to save it and add it to the list of available macros that can be selected as actions.
19. Select the new macro and click **OK**.

    The Voice Contact Work Flow window appears. Notice that the macro has been added to the list of actions for the selected rule and event.

**Macro Text**

The following text appears in the Macro Editor dialog box:

```
[APPLICATION:RCTRL_RENWND32=INBOX - MICROSOFT OUTLOOK]
[ALT] V
G
O
[ALT] T
D
[APPLICATION:RCTRL_RENWND32=ADVANCED FIND]
[ALT] C
[DATA FIELD:CALLING#]
[ALT] I
P
[ALT] N
```

Now you must record a second macro to close the **Advanced Find** dialog box. Make sure to keep Outlook and the **Advanced Find** dialog box open.

1. In the Voice Contact Work Flow window, select **Dropped** from the Events list box.
2. Under the Actions list, click **New** to create a new action.
3. In the Select Action dialog box, select the **Run Macro** tab and then click **New**.
4. In the New Macro dialog box, enter a new macro action name (for example, CloseAdvFind) and then click **OK**.
5. In the Macro Editor dialog box, note that the macro name entered in Step 4 appears in the title bar. Click **Record**.

   The Macro Editor dialog box minimizes.
6. Use your mouse to maximize the **Advanced Find** dialog box and begin typing the following macro keystrokes; the **Macro Recorder** records your keystrokes.

| Macro Keystrokes | Action |
|---|---|
| ALT-F | Access the File menu |

| | |
|---|---|
| C | Close the Advanced Find dialog box |
| Press F2 (or whichever key has been set up as the macro hot key) | Pause macro recording and bring up the Macro Recording Suspended dialog box |

NOTE: You must add a delay at the beginning of the macro. See "Macro Text" below.

7. Once you have finished recording the macro, press the macro hot key to bring up the **Macro Recording Suspended** dialog box, and then click **End Recording.**
8. To test your macro, click **Playback**.
9. Once you are satisfied with the macro, click **OK** to save it and add it to the list of available macros that can be selected as actions.
10. Select the new macro and click **OK**.

    The Voice Contact Work Flow window appears. Notice that the macro has been added to the list of actions for the selected rule and event.

### Macro Text

The following text appears in the Macro Editor dialog box:

```
[DELAY] 1500
[APPLICATION:RCTRL_RENWND32=ADVANCED FIND]
[ALT] F
C
```

## Using a Terminal Emulator Package

### Premise

Rock Coast Products would like to use a terminal emulation program to find the caller's name based on the ANI, and then automatically create an e-mail message each time a call is received.

### Steps

This example uses the following software:

- Terminal emulation software: HostExplorer for Windows 95/98, file version 6.1.0.0. from Hummingbird Communications, Ltd.
- E-mail program: Microsoft Outlook 98 (8.5.5104.6)

Use two macros since each can potentially be reused with other actions. It is easier to create and debug small macros and then run them as two actions in a sequence to do larger tasks.

- The first macro accesses the terminal emulation program and copies the caller's name to the clipboard.
- The second macro copies the number from the clipboard and uses it in an e-mail message.

> **NOTE:** Terminal emulation packages can be unpredictable when used with macros. The keyboard/terminal emulation must be correct for the macros to record and play back correctly. Some terminal emulation packages do not have a provision for highlighting and copying text from a screen.

Make sure both programs are running before recording the macros. Also make sure that the terminal program is logged in to a server, and open a text file using Vi (a Unix editor). The text file layout is shown below:

```
Phone         NumberName
612-555-2000  Spanlink Communications
612-555-1234  John Smith
612-555-0000  Mary Nelson
612-555-5555  Ned Marvin
```

Set up the Vi macro:

1. Open Vi, log into the server, and open the text file.
2. Start Desktop Administrator, click **Voice Contact Work Flow,** and add a new action for the **Ringing** event.
3. In the Select Action dialog box, click **New** in the **Run Macro** dialog box.
4. Enter a new macro action name (for example, **GetNamePutInClipBoard**) and then click **OK**.

5. In the Macro Editor dialog box, click **Record**.

   The **Macro Editor** dialog box minimizes.

6. Maximize Vi, and begin typing the following macro keystrokes; the m**acro recorder** records your keystrokes.

| Macro Keystrokes | Action |
|---|---|
| H | Place the cursor in the “home” position |
| / | Search |
| F2 (or whichever key has been set up as the macro hot key) | Pause macro recording and bring up the Macro Recorder Suspended dialog box |

7. In the Macro Recorder Suspended dialog box, click **Insert Data**.

   The Select a Data Field dialog box appears.

8. Select the data field you wish to insert from the list, and then click OK.

   The Macro Recording Suspended dialog box appears.

9. Click **Resume Recording**. Begin typing the following keystrokes.

| Macro Keystrokes | Action |
|---|---|
| ENTER | Search<br>Positioned on the **Phone Number** field |
| / | Search |
| <SPACE> | Search for a space to get to the **Name** column |
| ENTER | Search<br>Positioned after the **Phone Number** field |
| L | Move right one character (over the first space) |
| L | Move right one character (over the second space) |

| | |
|---|---|
| [SHIFT] [CONTROL] [RIGHT-ARROW] | The next three key stroke combinations select the caller's name |
| [SHIFT] [CONTROL] [RIGHT-ARROW] | |
| [SHIFT] [CONTROL] [RIGHT-ARROW] | |
| [ALT]-E | Vi **Edit** menu |
| C | Copy the selected text to the clipboard |
| Press F2 (or whichever key has been set up as the macro hot key) | Pause macro recording and bring up the **Macro Recorder Suspended** dialog box |

10. Once you have finished recording the macro, press the macro hot key to bring up the **Macro Recorder Suspended** dialog box, and then click **End Recording**.

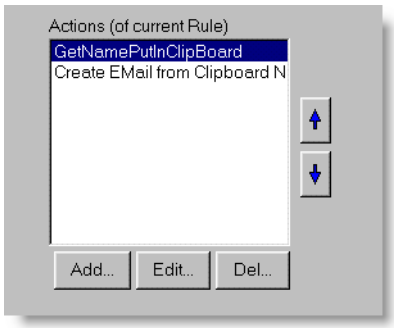
    The Macro Editor window appears.

11. To test your macro, click **Playback**. You can make changes to the macro in the **Edit** window, and you can test the changes by clicking **Playback**.
12. Once you are satisfied with the macro, click **OK** to save it and add it to the list of available macros that can be selected as actions.
13. Select the new macro and click **OK**.

    The Voice Contact **Work Flow** window appears. Notice that the macro has been added to the list of actions for the selected rule and event.

After you have recorded both macros, notice that both appear in the Actions pane. Make sure that they appear in the order shown in Figure 96.

**Figure 96. Macros in the Actions pane.**




### Vi Macro Text

The following text appears in the Macro Editor dialog box:

```
[APPLICATION:HOSTEXPLORER=1 - DEFAULT (DEACON)]
[SHIFT] H
/
[DATA FIELD:CALLING#]
[ENTER]
/
[SPACE]
[ENTER]
L
L
[SHIFT] [CONTROL] [RIGHT-ARROW]
[SHIFT] [CONTROL] [RIGHT-ARROW]
[SHIFT] [CONTROL] [RIGHT-ARROW]
[ALT] E
C
```

#### Outlook Macro Text

The following text appears in the macro recorder dialog box:

```
[APPLICATION:RCTRL_RENWND32=INBOX - MICROSOFT OUTLOOK]
[SHIFT] [CONTROL] B
[APPLICATION:ABCLS=ADDRESS BOOK]
[ALT] Y
[CONTROL] V
[CONTROL] N
[SHIFT] R
E
G
A
R
D
I
N
G
[SPACE]
[SHIFT] Y
O
U
R
[SPACE]
[SHIFT] C
A
L
L
[SPACE]
O
N
[SPACE]
[SYSTEM FIELD:CALL_START_TIME]
[TAB]
```

```
[SHIFT] D
E
A
R
[SPACE]
[CONTROL] V
.
```

## Setting Up a Task Button to Transfer to a Specified Number

**Premise**

Rock Coast Products wants to set up a call control button that will allow agents to easily transfer calls to their supervisor.

**Steps**

1. In Desktop Administrator, click **Desktop Configuration > Work Flow Groups > Agents** and select a work flow group, and then click **User Interface**.

   The User Interface window appears.
2. On the Toolbar tab, select the task button you want to configure.
3. Select the **Visible** check box.
4. Type a brief hint to describe the action (for instance “Xfer to Super”) in the hint field.
5. Click **Add**.
6. In the Select Action dialog box, select the **Call Control** tab, and then click **New**.
7. In the Setup Call Control Action dialog box, enter a name for the action in the **Action Name** field, select the call control type, and then enter the supervisor’s telephone number in the **Phone Number** field.
8. Click **OK** to save the settings.
9. On the Call Control tab, the new action is highlighted. Click **OK**.
10. On the Toolbar tab, the new action is now associated with the task button you are configuring.
11. Click **OK** to save the changes.

## Setting Up a Task Button for After-Call Work

**Premise**

Rock Coast Products wants to set up a task button that prepares a Microsoft Outlook 2000 e-mail message for after-call work.

This example retrieves customer information (e-mail address, name, and amount of sale) from an Access 2000 database and pastes that information into an Outlook 2000 e-mail message.

**Assumptions**

- The agent has been looking at the customer's record in the Access database in form view
- Outlook is open on the agent's desktop and is displaying the In Box.
- The agent reviews the automatically-generated e-mail and sends it manually.

**Steps**

1. In Desktop Administrator, click **Desktop Configuration > Work Flow Groups > Agents**, select a work flow group, and then click **User Interface**.

   The User Interface Setup window appears.
2. On the Toolbar tab, select the task button you wish to configure.
3. Select the **Visible** check box.
4. Type a brief hint to describe the action (for instance "After Call Email") in the hint field.
5. Click **Add**.
6. In the Select Action dialog box, select the **Run Macro** tab and then click **New**.

   The New Macro dialog box appears.
7. In the New Macro dialog box, type a name for the new macro (for instance, "AfterCallEmail"), and then click **OK**.

   The Macro Editor window appears.
8. Click **Record** to start recording the macro.
9. Use your mouse to maximize Access, and then begin typing the following macro keystrokes; the m**acro recorder** records your keystrokes.

| Macro Keystrokes | Action |
|---|---|
| [HOME] | Press Home to position the cursor in the first field in the form. |
| [TAB] | Press the tab as many times as needed to go to the e-mail address field. |

| | |
|---|---|
| [CONTROL] C | Copy the e-mail address. |
| [HOME] | Press Home to position the cursor in the first field in the form. |

10. Use your mouse to maximize Outlook, and then type the following macro keystrokes.

| | |
|---|---|
| [CONTROL] N | Open a blank e-mail message. |
| [CONTROL] V | Paste the e-mail address in the To: field in the e-mail message. |
| [TAB] | Tab down to the Subject line. |
| [TAB] | |
| [SHIFT] Y | Type “Your Order” in the Subject line. |
| O | |
| U | |
| R | |
| [SPACE] | |
| [SHIFT] O | |
| R | |
| D | |
| E | |
| R | |
| [TAB] | Tab to the body of the message. |
| [SHIFT] D | Type the salutation “Dear ” |
| E | |
| A | |
| R | |
| [SPACE] | |

11. Use your mouse to maximize Access, and then type the following macro keystrokes.

| | |
|---|---|
| [TAB] | Tab as many times as needed to get to the Name field. |
| [CONTROL] C | Copy the customer's name. |

12. Use your mouse to maximize Outlook, and then type the following macro keystrokes.

| | |
|---|---|
| [CONTROL] V | Paste the customer's name after the salutation. |
| [ENTER] | Press the Return key twice to start a new line for the body of the message. |
| [ENTER] | |
| [SHIFT] T | Type the message: "Thank you for your order in the amount of ". |
| H | |
| A | |
| N | |
| K | |
| [SPACE] | |
| Y | |
| O | |
| U | |
| [SPACE] | |

| | |
|---|---|
| F | |
| O | |
| R | |
| [SPACE] | |
| Y | |
| O | |
| U | |
| R | |
| [SPACE] | |
| O | |
| R | |
| D | |
| E | |
| R | |
| [SPACE] | |
| I | |
| N | |
| [SPACE] | |
| T | |
| H | |
| E | |
| [SPACE] | |
| A | |
| M | |
| O | |
| U | |

| | |
|---|---|
| N | |
| T | |
| [SPACE] | |
| O | |
| F | |
| [SPACE] | |
| [TAB] | Tab as many times as needed to get to the Amount of Sale field. |
| [CONTROL] C | Copy the amount of sale. |

13. Use your mouse to maximize Outlook, and then type the following macro keystrokes.

| | |
|---|---|
| [CONTROL] V | Paste the amount of sale in the body of the message. |
| . | Add a period to the sentence. |
| [SPACE] | Type “Your order is in the mail.” to finish the e-mail message. |
| [SHIFT] Y | |
| O | |
| U | |
| R | |
| [SPACE] | |
| O | |
| R | |
| D | |
| E | |
| R | |
| [SPACE] | |

| | |
|---|---|
| I | |
| S | |
| [SPACE] | |
| I | |
| N | |
| [SPACE] | |
| T | |
| H | |
| E | |
| [SPACE] | |
| M | |
| A | |
| I | |
| L | |
| . | |

14. Once you have finished recording the macro, press the macro hot key to display the **Macro Recording Suspended** dialog box, and then click **End Recording.**
15. To test your macro, click **Playback**. You can make changes to the macro in the Macro Editor window and then test them by clicking **Playback** again.

    To slow down the macro so you can watch the steps, insert the command [DELAY] 1000 before and after the commands for maximizing Outlook and Access. This will help you debug the macro. For instance:

```
[DELAY] 1000
[APPLICATION:OMAIN=MICROSOFT ACCESS - [CUSTOMERS : FORM]
[DELAY]1000
```

16. Once you are satisfied with the macro, click **OK** to save it and add it to the list of available macros that can be selected as actions.
17. On the Run Macros tab, the new macro is highlighted. Click **OK** to return to the **User Interface Setup** window.
18. In the User Interface Setup window's Toolbar tab, the new macro action is now associated with the task button you are configuring.
19. Click **OK** to save the changes.

### Sample Macro Text

The following text appears in the macro recorder dialog box:

```
[APPLICATION:OMAIN=MICROSOFT ACCESS - [CUSTOMERS : FORM]
[HOME]
[TAB]
[TAB]
[TAB]
[TAB]
[TAB]
[TAB]
[TAB]
[TAB]
[TAB]
[TAB]
[TAB]
[TAB]
[TAB]
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## Setting Up a Launch External Application Action

### Premise

Rock Coast Products wants to set up a task button that automatically launches a third-party application.

### Steps

In this example you set up an action that launches Microsoft WordPad and then associates the action with a task button on the agent's toolbar.

1. In Desktop Administrator, click **Desktop Configuration > Work Flow Groups > Agents**, select a work flow group, and then c**lick User Interface**.

   The User Interface Setup window appears.
2. On the Toolbar tab, select the task button you want to configure.
3. Select the **Visible** check box.
4. Type a brief hint to describe the action (for instance, "WordPad") in the hint field.
5. Click **Add**.
6. In the Select Action dialog box, select the Launch External Application tab, and then click **New**.
7. In the Setup Launching External Application Action dialog box, enter a name for the action in the Action Name field and browse to the application's executable (Wordpad.exe) in the Application field.

   Remember that the application should be located on a network drive so it is accessible to all agents. If you must use an application located on the agent's PC, make sure that the application is accessible by an identical path on each agent's PC.
8. If you want, add any of the available arguments to pass to WordPad. Select the arguments from the right Available Arguments pane and use the left and right arrows to add or remove them to the left Arguments pane. Use the up and down arrows to rearrange the order in which they will appear.
9. Click **OK** to return to the Launch External Application tab with the new action highlighted in the list of actions.
10. Click **OK** to return to the User Interface Setup window.
11. In the User Interface Setup window's Toolbar tab, the new action is now associated with the task button you are configuring.
12. Click **OK** to save the changes.

## Using Wild Card Data Conditions

### Premise

Rock Coast Products is located in a city with two neighboring area codes. The east metro area code is 651 and the west metro area code is 612. Rock Coast's Customer Service Division has one agent who assists east metro callers and one agent who assists west metro callers.

If an east metro caller dials the main Customer Service number, Rock Coast wants that call directed automatically to the agent who handles east metro calls.

To separate east metro callers, Rock Coast sets up rules using the data conditions Is in the List and Is not in the List. These data conditions return as true only if there is an exact string match.

Entering hundreds or even thousands of telephone numbers into a list is not feasible, so Rock Coast uses wild card data conditions. This operation is similar to the function of the Find tool in Windows. You can enter part of a string or a whole string to find what you're looking for. See "Wild Card Searches" on page 116 for more information on using wild cards.

### Procedure

Set up a wild card data condition that will transfer calls from the 651 area code to the east metro agent:

1. In Desktop Administrator, click **Desktop Configuration > Work Flow Groups > Agents**, select a work flow group, and then click **Voice Contact Work Flow**.

   The Voice Contact Work Flow window appears.
2. Select the Default voice contact work flow, and then click **Edit**.

   The Voice Contact Work Flow window appears.
3. Select the Ringing event.
4. Under the Rules pane, click **New**.
5. Create a new rule named East Metro.
6. In the Voice Contact Work Flow window, note that the new rule appears in the Rules list. With the new rule highlighted, click **Edit** next to the first Data Field Conditions field.
7. Select **Calling#** from the Data Field drop-down list.
8. Check **Enable Condition**.
9. Check **Is in the list.**
10. Add the wild card data condition **651*** to the list.
11. Click **OK**, and then click **Apply**.

# Glossary

# 7

**ACD**
See automatic call distribution.

**action**
An occurrence that takes place when a rule is met. More than one action can take place as a result of meeting a rule.

**administrator**
The person who administers Cisco Agent Desktop. The administrator defines work flows and teams, and the look and feel of the agent's desktop.

**agent**
The person who interacts with customers in a contact center.

**Agent Desktop**
The Cisco desktop application used by a contact center agent to handle customer calls.

**agent state**
An agent's current ACD status. Possible statuses are Ready, Not Ready, Work Ready, Work Not Ready, Reserved, Hold, Talking, and Logged Out.

**Agent State action**
An action type that changes an agent's ACD agent state.

**Always on Top mode**
A display mode in which the interface is always on top of all other windows and does not minimize.

**Always Open mode**
A display mode in which the interface is always visible, but may be hidden by other open applications.

**ANI**
See automatic number identification.

area code
A 3-digit code designating a toll center in the United States and Canada.

array variable
An ICM extended call context (ECC) variable that stores multiple pieces of data.

automatic call distributor (ACD)
Optional software that resides on the PBX. Its role is to monitor various parameters within the system and call center and to intelligently route calls based on that information.

automatic number identification (ANI)
A series of digits at the front of a phone call that delivers the billing number (which is not necessarily the phone number) of the caller.

barge-in
A feature in Supervisor Desktop that allows a supervisor to forcibly join an agent's call with a customer. It is a forced conference call.

bridged appearance
A situation in which two devices share the same phone number (for example, a secretary whose phone can also answer the boss's phone).

Browser and IP Phone Agent (BIPPA) service
The service that enables CAD-BE and IP phone agents to log in and out of ICM, change agent states, and enter wrap-up data and reason codes without having the Agent Desktop software. This service works in conjunction with the Services feature of Unified CM and Cisco IP phones.

CAD-BE
Cisco Agent Desktop—Browser Edition. A Java applet version of Cisco Agent Desktop that runs in a web browser.

call activity data
The information displayed Agent Desktop documenting the length of time a call is at a particular type of device or agent within the call center.

call center
A location where calls are made and answered. A call center typically has numerous agents and an automatic call distributor.

call control
The action of changing the state of a call, for instance, making, answering, transferring, or dropping a call.

Call Control action
An action that performs a call control function triggered by an event meeting a rule. Call control actions vary according to switch type.

**call history**
See call activity data.

**call log**
The record of calls made and received by a desktop while running Agent Desktop.

**call routing**
The automatic sending of calls to the desired destination, such as an extension or a queue.

**caller input**
Touchtone data entered by the caller in response to prompting.

**CallManager**
A Cisco software-based voice over IP telephone switch.

**Chat**
A feature of Agent Desktop and Supervisor Desktop that enables agents and supervisors to communicate via an instant messaging window.

**Chat service**
A service that acts as a message broker between the Chat clients and Supervisor Desktop. It is in constant communication with all agents and supervisor desktops.

**chat session**
A written exchange between agents or between agent and supervisor using the Chat application.

**Cisco Unified Mobile Agent**
Cisco Unified Mobile Agent provides the capability to use remote agents when staffing contact centers. It provides an encrypted, secure, IT-managed connection over broadband to the home. The agents have complete access to all the contact center applications.

**Computer telephony integration (CTI)**
The connection of a computer with a telephone switch that allows the computer to issue commands and receive event information for calls and agents.

**configuration file**
The computer file that stores the settings for an application.

**contact center**
An expansion of a call center, so that it can make and receive not only phone calls, but email, faxes, web chat messages, and so on.

**CORBA**
Common Object Request Broker Architecture. An architecture and specification for creating, distributing, and managing distributed program objects in a network. It

allows programs at different locations and developed by different vendors to communicate in a network through an interface broker.

**country code**
The 1–3 digit code that, in the world numbering plan, identifies each country or integrated numbering plan in the world.

**CTI**
See computer telephony integration.

**data field**
A piece of information about a phone call that is available for display in the Agent Desktop interface.

**data field condition**
A logical statement about call data that evaluates as either true or false.

**data router**
In networks, a device that connects any number of IP local area networks (LANs).

**data switch**
In networks, a device that filters and forwards packets between LAN segments.

**database**
A collection of data structured and organized in a disciplined fashion so that information of interest can be accessed quickly.

**deflected call**
A ringing call that is redirected to another extension without being answered first. This typically happens when the call is answered by voice mail.

**delimiter**
A word or character that marks the beginning or end of a segment of data.

**Desktop Administrator**
The application used to administer Cisco Agent Desktop.

**device**
A unit (for example, a telephone) connected to the telephone system.

**Dial Pad**
The soft phone screen that enables an agent to dial a number.

**dial plan**
A description of the dialing arrangements for customer use on a telephone network. For example, the local access code, local area code, etc.

**dialed number information service (DNIS)**
A telephony network feature that provides the number the caller dialed.

**Directory Services**
Also known as LDAP. The service that all other CAD services register with at startup. Clients use this service to request information about other CAD components.

**DNIS**
See dialed number information service.

**drop**
To hang up or disconnect a phone call.

**Dropped event**
An event which indicates a call is disconnected.

**DTMF**
See Dual Tone Multi-Frequency.

**dual tone multi-frequency (DTMF)**
The term for touchtone dialing. In DTMF, when you touch a button on a push button pad, it makes a tone which is actually a combination of two tones, one high frequency and one low frequency. These are the beeps you hear when you dial a phone number.

**duplex environment**
An operating environment that contains a primary and secondary service. If the primary service fails, the secondary service takes over.

**ECC variable**
See expanded call context variable.

**enterprise data**
A piece of data available to CAD via the Enterprise service.

**Enterprise service**
A server program that tracks calls in the system. It is used to attach IVR-collected data to a call in order to make real-time call activity data available at the agent desktop.

**Ethernet**
A local area network standard. Like other LAN technologies, Ethernet is used to connect computers, printers, workstations, terminals, servers, and other devices within the same building or campus.

**event**
An occurrence at the agent desktop. Events include: startup, shutdown, ringing, answered, and dropped.

**expanded call context variable**
An ICM term for a piece of information about a phone call. It must be defined within ICM.

**extension**
The internal telephone number at the agent desktop.

**external application**
A software application not belonging to CAD.

**host**
A server connected to a network.

**ICM**
See Intelligent Contact Management.

**Install Manager**
The program that helps you install CAD on your system.

**Intelligent Contact Management (ICM)**
A Cisco computer telephony integration application that collects data and profiles customers from the network to the agent's desktop, and coordinates the delivery of voice and data to a targeted answering resource across the enterprise. Using network-provided data, caller-entered digits, and information obtained from a customer profile database, ICM determines who is calling and why, and routes the call to the appropriate area in the contact center.

**interactive voice response (IVR)**
The use of a computer to interact verbally via a telephone with a caller. The computer plays announcements and questions to the caller, and the caller replies by entering information via touch tones, a rotary dial, or by speaking. "IVR" and "VRU" are often used interchangeably. See voice response unit (VRU).

**intercept**
An intercept occurs when a supervisor uses the Intercept button to force a transfer from an agent to the supervisor.

**Internet protocol (IP)**
This protocol specifies the format of packets, also called datagrams, and the addressing scheme. Most networks combine IP with a higher-level protocol called transport control protocol (TCP), which establishes a virtual connection between a destination and a source.

IP by itself is something like the postal system. It allows you to address a package and drop it in the system, but there's no direct link between you and the recipient.

TCP/IP, on the other hand, establishes a connection between two hosts so that they can send messages back and forth for a period of time.

**IP**
See Internet protocol.

**IP address**
The Internet protocol address of a device.

**IP Contact Center (IPCC)**
Now known as Cisco Unified Contact Center (CC). A Cisco solution for an IP contact center. Its components include IP IVR, Unified CM, and ICM.

IP IVR

Cisco IP IVR is an IP-powered interactive voice response application that provides an open and extensible foundation for the creation and delivery of IVR solutions via Internet technology. It automates the handling of calls by autonomously interacting with users.

**IP phone**
A phone that enables you to move multimedia traffic over any network that uses Internet protocol (IP).

**IP port**
In TCP/IP and UDP networks, an endpoint to a logical connection.

**IPCC**
See IP Contact Center.

**IVR**
See interactive voice response.

**LAN**
See local area network.

**Launch External Application action**
An action that starts an external application from within Agent Desktop.

**LCC**
See logical contact center.

**LDAP**
See lightweight directory access protocol.

**LDAP Monitor service**
The service that starts Directory Services and then monitors it to ensure that it keeps running.

LDAP service
The service that all other CAD services register with at startup. Clients use this service to request information about other CAD components.

License Administration
The application used to update the number of seats purchased in your CAD system.

Licensing and Resource Manager service
The service that distributes licenses to clients and oversees the health of the CAD services. In the event of a service failure, it initiates the failover process.

lightweight directory access protocol (LDAP)
Also known as Directory Services. LDAP defines a standard manner of organizing directory hierarchies and a standard interface for clients to access directory servers.

local area network (LAN)
Two or more computers, and other devices, connected by cable, generally within the same building or campus.

local extension
See extension.

logical contact center (LCC)
The root of the LDAP tree where CAD applications query for information. It is used to segregate logically separate call centers within the LDAP server.

macro
A series of prerecorded commands that accomplish a task.

macro hot key
In Desktop Administrator, the key used to pause the recording of a macro and to display the macro recording menu.

macro recorder
The feature in Desktop Administrator used to record a macro.

Normal mode
A display mode in which the interface appears when calls are present and minimizes when idle.

pane
Section of an application window.

password
A series of alphanumeric characters required to log onto an application or server.

PBX
See private branch exchange.

peripheral ID
The number within the ICM schema that identifies the peripheral device, for example, the peripheral interface managers (PIMs) for VRU/IVR, ACD, or Unified CM.

phone book
In Agent Desktop, any one of the stored phone directories. Agent Desktop contains global phone books as well as an employee phone book.

plain old telephone service (POTS)
The basic service supplying standard telephones, telephone lines, and access to the public switched network.

port
See IP port.

POTS
See plain old telephone service.

primary server
In a duplex environment, the main server used. If the primary server fails, the secondary server takes over.

private branch exchange (PBX)
A private telephone network used within an enterprise. Users of the PBX share a certain number of outside lines for making telephone calls external to the PBX.

PSTN
See public switched telephone network.

public network
A network operated by common carriers or telecommunications administrations for the provision of circuit switched, packet switched, and leased-line circuits to the public.

public switched telephone network (PSTN)
Refers to the world's collection of interconnected voice-oriented public telephone networks, both commercial and government-owned.

real-time transport protocol (RTP)
An Internet protocol for transmitting real-time data such as audio and video.

recent call list
A list of an agent's 100 most recently made phone calls, automatically kept in the Dial Pad window.

**Recording & Playback service**
The service that extends the capabilities of the VoIP Monitor service by allowing supervisors and agents to record and play back calls.

**Recording & Statistics service**
A service that maintains a 7-day history of agent and team statistics. It also manages call recording.

**Ringing event**
The event that occurs when the phone rings. See Event.

**RTP**
See real-time transport protocol.

**rule**
A set of 1–3 data field conditions. If any or all the conditions that constitute the rule are evaluated as true, then the rule is met. Rules that are met trigger events and actions.

**Run Macro action**
An action that starts and runs a macro.

**scalar variable**
An extended call context (ECC) variable that stores a single piece of data.

**screen pop**
The delivery of caller-specific information onto the agent's computer screen ("populating" the screen).

**seat**
An instance of Agent Desktop, Supervisor Desktop, or other CAD applications.

**secondary server**
In a duplex environment, the backup server. If the primary server fails, the secondary server takes over.

**shortcut key**
A keyboard key or key combination (also known as a "hotkey" or "keyboard accelerator key") that invokes a particular command that is generally faster to use than clicking the mouse through a menu.

**Shutdown event**
The event that occurs when Agent Desktop shuts down. See event.

**skill**
An ability (expertise in a particular type of software, fluency in a foreign language, for example) of a contact center agent. Calls can be routed based on agent skills (skill-based routing) for better customer service.

**soft phone**
A software phone, such as Agent Desktop's dial pad.

**Startup event**
The event that occurs when Agent Desktop starts up. See event.

**status bar**
The area on the Agent Desktop or Supervisor Desktop interface that displays the status of the agent and of the CAD system.

**Stealth mode**
A display mode in which an application appears as an icon in the system tray unless maximized by the agent.

**supervisor**
The leader and/or manager of a team of agents.

**Supervisor Desktop**
The application used by contact center supervisors to manage agent teams in real time.

**Sync service**
The service that connects to the ICM logger SQL database via and ODBC connection and retrieves agent, supervisor, team, and skill information. It then compares the information with the information in Directory Services and adds, updates, or deletes entries as needed to stay consistent with the ICM configuration.

**task button**
One of a series of up to 10 buttons on the Agent Desktop interface to which actions can be assigned.

**team**
A group of agents who report to the same supervisor.

**Team Performance Message (TPM)**
A message the supervisor can create to display in Agent Desktop for a set length of time to communicate important information. The TPM can be scrolling or non-scrolling, depending on how the supervisor configures it.

**threshold**
The acceptable amount of time a call can remain at a particular device or call center. Caution or warning icons are displayed in the Enterprise Data window when thresholds are met or exceeded for a call.

**touch tones**
See dual tone multi-frequency.

**TPM**
See Team Performance Message.

**transfer**
A phone switch feature that allows moving a call from one extension to another.

**transfer, blind**
A transfer in which the active call is transferred to the third party without ensuring that the transfer is successful (picked up at the other end).

**transfer, supervised**
A transfer in which you speak to the third party to whom the call is being transferred before connecting the active call, in order to confirm that the transfer can be made successfully.

**user ID**
An identifier that designates a particular user and that is required to log into an application or server.

**user interface**
An application's look and feel to the user.

**virtual private network (VPN)**
A network created by renting or acquiring some part of someone else's network (a phone company, an Internet provider) and used to communicate between a company's offices.

**voice gateway router**
A combination of hardware and software that links a POTS telephone network to an IP data network.

**voice monitoring**
The ability of a supervisor to monitor an agent's phone conversations without being heard and without letting the agent knowing it is happening.

**voice packet**
A digitized sample of a voice conversation sent over a network.

**voice response unit (VRU)**
The computer used to interact verbally via a telephone with a caller. The computer plays announcements and questions to the caller, and the caller replies by entering information via touch tones, a rotary dial, or by speaking. "VRU" and "IVR" are often used interchangeably. See interactive voice response (IVR).

**voice-over IP (VoIP)**
A category of hardware and software that enables people to use Internet protocol as the transmission medium for telephone calls.

**Voice over IP Monitor service**
A service that enables supervisors to silently monitor agents. The service accomplishes this by “sniffing” network traffic for voice packets.

**VoIP**
See Voice over IP.

**VPN**
See virtual private network.

**VRU**
See voice response unit.

**wild card**
Special characters used to represent one or more characters in a string. An asterisk (*) represents several characters and a question mark (?) represents a single character.

**work flow**
A sequence of actions that takes place when specific event/rule criteria are met.

**work flow group**
A group that shares a common set of work flows.

# Global Phone Book FAQ

# A

**Question** Is there a way to mass-import records to Cisco Agent Desktop global phone books?

**Answer** No, there is no way that phone book entries can be entered in bulk. All entries must be done manually through Cisco Desktop Administrator.

**Question** Where are global phone books stored?

**Answer** They are stored in the Directory Services (LDAP) database at SpanlinkCommunications > Company > [LCC name] > PhoneBook.

**Question** How are phone books synchronized between the active and standby Directory Services in a redundant system?

**Answer** Whenever an entry is made in the active Directory Services, it is immediately replicated on the standby system so that they remain synchronized.

**Question** Which logs should be collected to troubleshoot issues with global phone books?

**Answer** The Cisco Agent Desktop and Cisco Desktop Administrator logs (agent.log and administrator.log) and debug traces, set to the DEBUG level, (agent.dbg and administrator.dbg) are used to troubleshoot phone book issues.

**Question** Where are global phone books configured?

**Answer** Global phone books are created and populated by the administrator using Cisco Desktop Administrator. Agents cannot edit global phone books. They can edit their own employee phone books using Cisco Agent Desktop.

The administrator can enable and disable all phone books, or just employee phone books. See "Phone Books" on page 78 for instructions on administering phone books.

**Question** Do phone books run from the Directory Services database?

**Answer** Earlier versions of CAD loaded phone books from Directory Services every time the agent launched the dial pad. The current version of CAD loads phone books once and stores them in memory to avoid delays.

**Question** Can global phone books be linked back into the Cisco Unified Communications Manager/Unified CallManager LDAP user list so that it is available from the IP phone corporate directory?

**Answer** No.

**Question** Are phone books available to agents when they use their non-ACD extension?

**Answer** No.

**Question** Is there a maximum number of entries that can be put into a phone book?

**Answer** No, phone book size is limited only by the memory available to the agent's desktop. Phone books have been tested with up to 2,000 entries.

**Question** Can a global phone book be locked down so that only members of a certain team can view it?

No, global phone books are either available to all agents or no agents. However, there are work flow group phone books that are available to agents that are assigned to that particular work flow group. If a team is assigned to a work flow group, and there is a specific phone book for that work flow group, than no other teams can view that particular phone book. See "Phone Books" on page 78 for more information on the various types of phone books.

# Cisco Desktop Monitoring Console

# B

## Overview

The Cisco Desktop Monitoring Console is a Java application that monitors the status of the CAD services and Directory Services (LDAP).

The Monitoring Console requires Tomcat to run. Tomcat is automatically installed with the CAD base services.

> **NOTE:** The Monitoring Console is installed automatically when the CAD base services are installed. There is some manual setup and configuration that is required. See the *Cisco CAD Installation Guide* for more information.

The Monitoring Console application is located on any computer where the CAD base services are installed. The URL for a hyperlink to the application is:

```
http://<CAD Services IP address>:8088/smc/monitor.jsp
```

## Using the Monitoring Console

The Monitoring Console consists of 2 panes. The left pane displays a list of CAD servers and the CAD services located on those servers. The right pane displays either a summary view or a detail view of service status.

The summary view is displayed when you select the IP address of a server from the left pane (see Figure 97). The detail view is displayed when you select a specific service (see Figure 98).

**Figure 97. Cisco Desktop Monitoring Console, summary view**

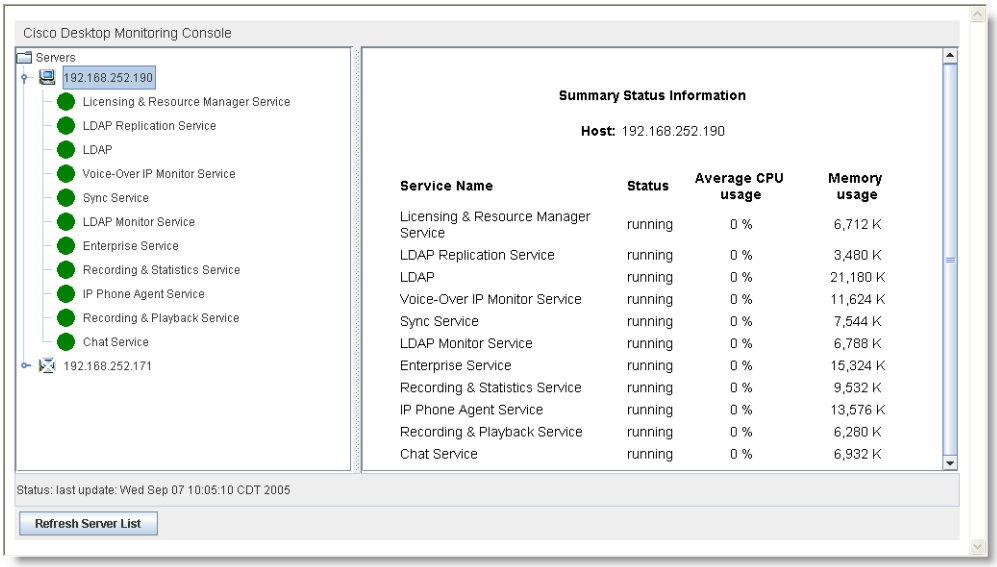
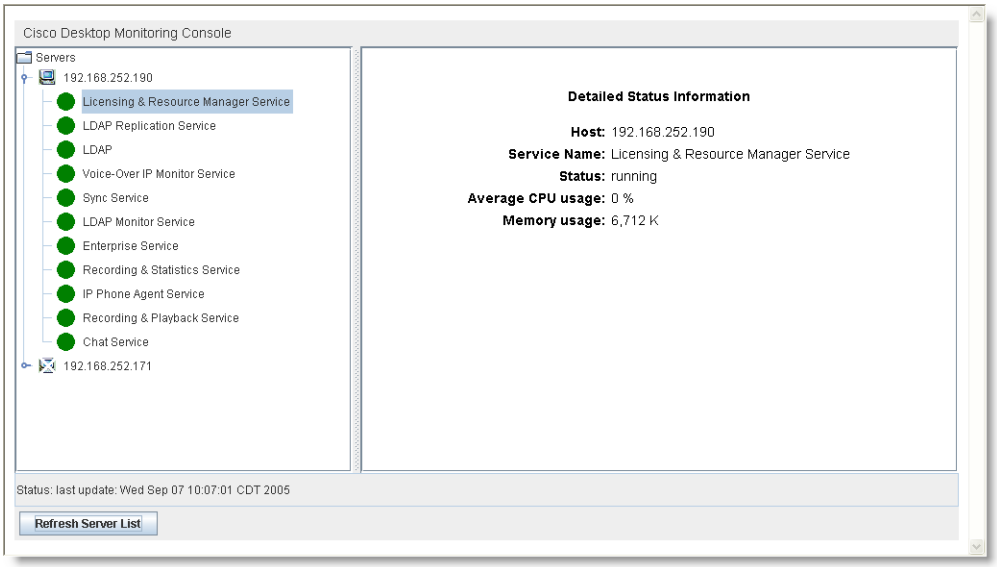


Figure 98. Cisco Desktop Monitoring Console, detail view




The services' status is indicated also by a colored icon next to each service in the left pane. If the service is running, a green circle is displayed; if the service is down, a red circle with a white X through it is displayed.

If a server is down, a gray computer with a white X through it is displayed.

> NOTE: Currently, the summary view and the detail view display the same information in different ways. In the future, more service details will be added to the detail view.

The information displayed, including the server list in the left pane, is refreshed every 15 seconds. It can also be manually refreshed at any time by clicking the **Refresh Server List** button.

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