



Cisco Desktop Administrator User Guide

CAD 6.6 for Cisco Unified Contact Center Express Release 7.0
Cisco Unified Communication Manager Express Edition
September 2009

Americas Headquarters

Cisco Systems, Inc.
170 West Tasman Drive
San Jose, CA 95134-1706
USA
<http://www.cisco.com>
Tel: 408 526-4000
800 553-NETS (6387)
Fax: 408 527-0883

THE SPECIFICATIONS AND INFORMATION REGARDING THE PRODUCTS IN THIS MANUAL ARE SUBJECT TO CHANGE WITHOUT NOTICE. ALL STATEMENTS, INFORMATION, AND RECOMMENDATIONS IN THIS MANUAL ARE BELIEVED TO BE ACCURATE BUT ARE PRESENTED WITHOUT WARRANTY OF ANY KIND, EXPRESS OR IMPLIED. USERS MUST TAKE FULL RESPONSIBILITY FOR THEIR APPLICATION OF ANY PRODUCTS.

THE SOFTWARE LICENSE AND LIMITED WARRANTY FOR THE ACCOMPANYING PRODUCT ARE SET FORTH IN THE INFORMATION PACKET THAT SHIPPED WITH THE PRODUCT AND ARE INCORPORATED HEREIN BY THIS REFERENCE. IF YOU ARE UNABLE TO LOCATE THE SOFTWARE LICENSE OR LIMITED WARRANTY, CONTACT YOUR CISCO REPRESENTATIVE FOR A COPY.

The Cisco implementation of TCP header compression is an adaptation of a program developed by the University of California, Berkeley (UCB) as part of UCB's public domain version of the UNIX operating system. All rights reserved. Copyright © 1981, Regents of the University of California.

NOTWITHSTANDING ANY OTHER WARRANTY HEREIN, ALL DOCUMENT FILES AND SOFTWARE OF THESE SUPPLIERS ARE PROVIDED "AS IS" WITH ALL FAULTS. CISCO AND THE ABOVE-NAMED SUPPLIERS DISCLAIM ALL WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING, WITHOUT LIMITATION, THOSE OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE AND NONINFRINGEMENT OR ARISING FROM A COURSE OF DEALING, USAGE, OR TRADE PRACTICE.

IN NO EVENT SHALL CISCO OR ITS SUPPLIERS BE LIABLE FOR ANY INDIRECT, SPECIAL, CONSEQUENTIAL, OR INCIDENTAL DAMAGES, INCLUDING, WITHOUT LIMITATION, LOST PROFITS OR LOSS OR DAMAGE TO DATA ARISING OUT OF THE USE OR INABILITY TO USE THIS MANUAL, EVEN IF CISCO OR ITS SUPPLIERS HAVE BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES.

CCDE, CCENT, Cisco Eos, Cisco HealthPresence, the Cisco logo, Cisco Lumin, Cisco Nexus, Cisco StadiumVision, Cisco TelePresence, Cisco WebEx, DCE, and Welcome to the Human Network are trademarks; Changing the Way We Work, Live, Play, and Learn and Cisco Store are service marks; and Access Registrar, Aironet, AsyncOS, Bringing the Meeting To You, Catalyst, CCDA, CCDP, CCIE, CCIP, CCNA, CCNP, CCSP, CCVP, Cisco, the Cisco Certified Internetwork Expert logo, Cisco IOS, Cisco Press, Cisco Systems, Cisco Systems Capital, the Cisco Systems logo, Cisco Unity, Collaboration Without Limitation, EtherFast, EtherSwitch, Event Center, Fast Step, Follow Me Browsing, FormShare, GigaDrive, HomeLink, Internet Quotient, IOS, iPhone, iQuick Study, IronPort, the IronPort logo, LightStream, Linksys, MediaTone, MeetingPlace, MeetingPlace Chime Sound, MGX, Networkers, Networking Academy, Network Registrar, PCNow, PIX, PowerPanels, ProConnect, ScriptShare, SenderBase, SMARTnet, Spectrum Expert, StackWise, The Fastest Way to Increase Your Internet Quotient, TransPath, WebEx, and the WebEx logo are registered trademarks of Cisco Systems, Inc. and/or its affiliates in the United States and certain other countries.

All other trademarks mentioned in this document or website are the property of their respective owners. The use of the word partner does not imply a partnership relationship between Cisco and any other company. (0812R)

Any Internet Protocol (IP) addresses used in this document are not intended to be actual addresses. Any examples, command display output, and figures included in the document are shown for illustrative purposes only. Any use of actual IP addresses in illustrative content is unintentional and coincidental.

Cisco Desktop Administrator User Guide

© 2008, 2009 Cisco Systems, Inc. All rights reserved.

© 2008, 2009 Calabrio, Inc. All rights reserved.

Contents

Preface 9

- Introduction 9
 - What's New In This Release 10
 - Cisco Desktop Administrator Feature Levels 10
 - Related Documentation 10
-

1 Getting Started with Cisco Desktop Work Flow Administrator 11

- Introduction 11
- Starting Desktop Work Flow Administrator 12
- Automated Updates 13
- The Desktop Work Flow Administrator Interface 14
 - Toolbar 14
 - Navigation Tree Pane 15
 - Display Pane Navigation 15
- User Privileges in Windows XP and Vista 16
- Passwords 17
 - Configuring a Password in Desktop Work Flow Administrator 17
 - Setting Up a Password 17
 - Changing a Password 18
 - Deleting a Password 18
 - Restoring the Default Password 18
 - Client Applications 19
- CAD Configuration Setup Utility 20
 - Overview 20
 - Modifying Configuration Data 21
 - Resetting the Administrator Password 22
 - Resetting Client Installation Files 22
 - ConfigurationSetup Step Windows 23
 - CAD-BE Servers Step 23

Contents

- VoIP Monitor Service Step 24
- Services Configuration Step 25
- Terminal Services Step 26
- SNMP Configuration Step 27
- Synchronizing Directory Services 29

2 Work Flow Configuration 31

- Reason Codes 33
 - Assigning Reason Codes 36
 - Enabling or Disabling Reason Codes 37
- Wrap-up Data 38
 - Creating Wrap-up Data Descriptions 39
 - Assigning Wrap-up Data Descriptions 41
 - Enabling or Disabling Wrap-up Data 41
 - Automatic State Changes 42
- Monitor/Record Notification 43
- Work Flow Groups 44
 - Maintaining Work Flow Groups 45
- Enterprise Data 47
 - Data 47
 - Call Activity 48
- CAD, CAD-BE, and IP Phone Agent 50
 - CAD Agent 50
 - CAD-BE Agent 50
 - IP Phone Agent 50
- User Interface 51
 - Toolbar 51
 - Adding and Removing Toolbar Buttons 51
 - Associating Actions with Task Buttons 52
 - Changing a Task Button's Hint 53
 - Customizing Button Icons 53
 - Show Data Fields 55

Contents

Configuring and Renaming Data Fields	55
Show Duration	56
Miscellaneous	57
Browser Setup	58
Enabling the Integrated Browser	59
Enabling Access to Other Websites	59
Configuring the Number of Browser Tabs	59
Setting Up the Home Page	59
Setting Up Work Sites	59
Remote Access	60
IPC Make Call Action	62
IPC High Priority Chat Action	62
IPC Record Action	63
IPC Agent Notification Action	63
IPC Set Variable Action	64
■ Voice Contact Work Flows	65
Creating a Voice Contact Work Flow	66
Setting Up a New Voice Contact Classification	66
Setting Up a New Work Flow	68
Data Field Conditions	69
Wild Card Searches	71
Modifying a Voice Contact Work Flow	71
Deleting a Voice Contact Work Flow	72
■ Agent Management Work Flows	73
Creating an Agent Management Work Flow	74
■ Actions	78
Action Availability	79
Adding a New Action	80
Editing an Action	81
Deleting an Action	81
Importing and Exporting Actions	81
Agent Notification Action	85
Agent State Action	87
Automated Reason Codes for Agent State Changes	87

Contents

- Delay Action 89
- HTTP Action 89
 - Reserved Characters 93
 - Example of an HTTP Request 94
- IPC Action 97
- Launch External Application Action 99
- Run Macro Action 101
 - Macro Recording Tips 102
 - Allowed Macro Keystrokes 104
 - Recording Macros 105
 - Data Fields 109
- Set Enterprise Data Action 112
- Timer Action 114
- Utility Action 115
 - High Priority Chat Messages 115

3 Getting Started with Desktop Administrator 119

- Introduction 119
- Accessing Desktop Administrator 120
- Using the Search Function 121
- Configuring a Password in Desktop Administrator 122

4 Services Configuration 125

- Introduction 125
- Configuring Enterprise Data 126
- Fields 127
 - Creating a Custom Field 127
 - Editing a Field 129
 - Deleting a Field 129
- Layouts 131

Contents

- Creating a Custom Layout 131
- Copying a Layout 132
- Editing a Layout 133
- Deleting a Layout 133
- **Configuring Desktop and Server Monitoring and Recording 134**
 - Enabling Desktop Monitoring 134
 - Configuring a Default Monitor Service 135
 - Assigning Phone Devices to a Specific VoIP Monitor Service 136
 - Removing a VoIP Monitor or Recording & Playback Service from Directory Services 136
- **Synchronizing Directory Services 139**

5 Personnel Configuration 141

- Introduction 141
- **Configuring Agents 142**
 - Changing an Agent's Work Flow Group 142

6 Configuring Agent E-Mail 143

- Introduction 143
 - Prerequisites 143
 - Overview 143
- **Configuring Global Settings 145**
- **Configuring Contact Service Queue Settings 148**
 - Finding a CSQ 148
 - Configuring a CSQ 148
- **Configuring Templates 150**
 - Adding a Template 150
 - Copying a Template 152
 - Deleting a Template 152

Contents

Index 153

Preface

Introduction

Cisco Desktop Administrator consists of two parts:

- Desktop-based Cisco Desktop Work Flow Administrator
- Web-based Cisco Desktop Administrator

Cisco Desktop Work Flow Administrator enables you to configure the following:

- Dial strings
- Phone books
- Reason codes
- Wrap-up data
- Record/monitor notification
- Work flow groups

Cisco Desktop Administrator enables you to configure the following:

- Enterprise Data
- Personnel
- Agent E-Mail Settings

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

What's New In This Release

- Web-based Cisco Desktop Administrator
- Agent E-Mail integration
- Support for Cisco Agent Desktop—Browser Edition
- Support for multiple browser tabs in Cisco Supervisor Desktop and Cisco Agent Desktop

Cisco Desktop Administrator Feature Levels

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

Feature	Standard	Enhanced	Premium
Configure CAD interface		x	x
Configure work flows		x	x
Configure server and desktop monitoring		x	x
Wrap-up data		x	x
Agent E-Mail			x

Related Documentation

The following documents contain additional information about CAD 6.6:

- *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*
- *Cisco CAD Troubleshooting Guide*
- *Cisco CAD Error Code Dictionary*
- *Integrating CAD with Citrix Presentation Server or Microsoft Terminal Services*
- *Configuring and Troubleshooting VoIP Monitoring*

Getting Started with Cisco Desktop Work Flow Administrator

1

Introduction

Cisco Desktop Work Flow Administrator comes with one license, so only one person can view and/or edit data in it at any one time. More than one instance of Desktop Work Flow Administrator can be open concurrently.

If someone is using Desktop Work Flow Administrator when you try to access it, an error message appears that identifies the IP address of the other user's computer.

For this reason, it is important that you close Desktop Work Flow 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 it.

Starting Desktop Work Flow Administrator

To start Desktop Work Flow Administrator:

1. Click Start > Programs > Cisco > Desktop > Admin. Desktop Work Flow Administrator starts.
2. Click the Call Center 1 node to expand the navigation tree. By default, Desktop Work Flow Administrator is not password-protected and the tree will expand. If a password has been configured, you are asked to enter it now.

For more information about passwords, see ["Passwords" on page 17](#).

Automated Updates

Every time you start Desktop Work Flow Administrator, the application checks to see if there is an updated version available, or if there was a system configuration change that requires a Windows registry change. If either condition exists, the application 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 any option other than Never is selected.

NOTE: If your system is configured with two Unified CCX servers, and one server is upgraded while your instance of Desktop Work Flow Administrator is connected to the older Unified CCX, and your system administrator performs a failover to switch all agents to the upgraded server, your instance of Desktop Work Flow Administrator will not automatically upgrade when you log into the new server. You must shut down Desktop Work Flow Administrator and start it again for the automatic upgrade to take place.

When an update is available, you will see a dialog box notifying you that your copy of Desktop Work Flow Administrator will be updated. Click OK to proceed with the update.

A progress bar is displayed to show you the status of the download.

When the update is finished, you will see a final dialog box that tells you the update is complete, and which applications were updated. If you have other CAD applications (Cisco Agent Desktop and Cisco Supervisor Desktop) on your PC, they will all have been updated.

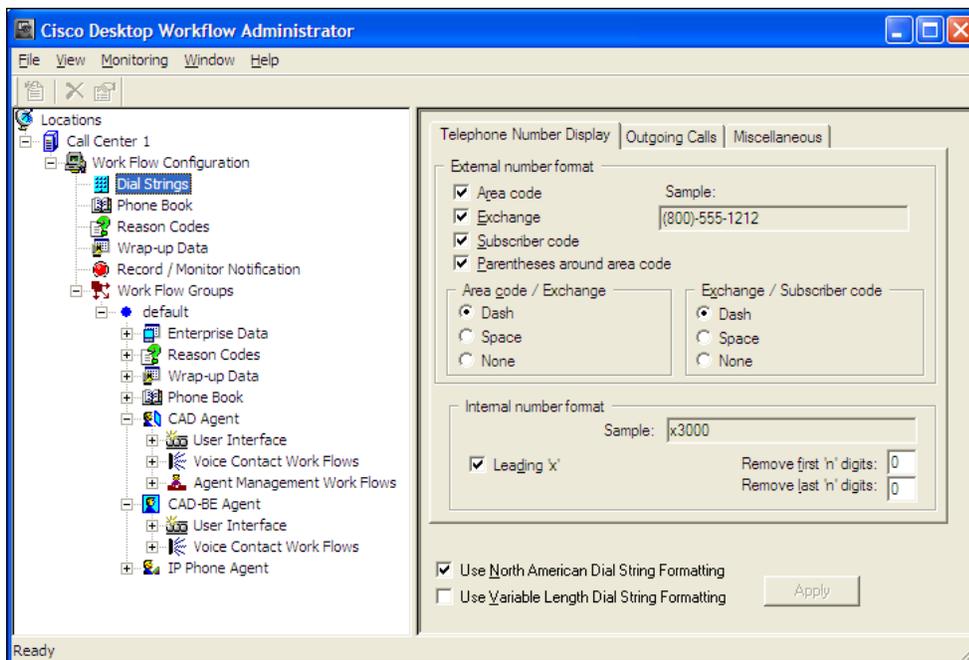
NOTE: Because Agent Desktop is automatically installed when Supervisor Desktop is installed, only Supervisor Desktop will be listed as having been updated in the final dialog box. Agent Desktop will be listed only if Supervisor Desktop is not present on your PC.

When you click OK to close the dialog box, any CAD application that had been running on your desktop restarts automatically.

The Desktop Work Flow Administrator Interface

The Desktop Work Flow 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. Desktop Work Flow Administrator interface



Toolbar

When you select a node on the navigation tree, the Desktop Work Flow 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 Work Flow Administrator toolbar buttons

Button	Name	Description
	About	Displays copyright and version information
	Delete	Removes the selected work flow group
	Help	Accesses Help files

Table 1. Desktop Work Flow Administrator toolbar buttons — *Continued*

Button	Name	Description
	New	Adds a new work flow group
	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 rename or 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 XP and Vista

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

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

Passwords

You can use a password to protect both Desktop Work Flow Administrator and Desktop Administrator. If you set a password in either application, that password applies to both applications.

If you do not want Desktop Work Flow Administrator to be password-protected, you must not configure a password in Desktop Administrator.

For information on configuring passwords in Desktop Administrator, see ["Configuring a Password in Desktop Administrator" on page 122](#).

Configuring a Password in Desktop Work Flow Administrator

A password is optional for Desktop Work Flow Administrator. If a password is configured, when you select the logical contact center node you will be prompted to provide the password before you can access any of the subnodes.

NOTE: Any password you set in Desktop Work Flow Administrator is also the password for Desktop Administrator.

Setting Up a Password

To set up a password:

1. In the navigation pane, select the Call Center 1 node.
2. From the menu bar, choose Setup > Change Password.

The Administrator Password dialog box appears ([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 can consist of up to a maximum of 32 alphanumeric characters.

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

Changing a Password

To change your password:

1. In the left pane, select the Call Center 1 node
2. From the menu bar, choose Setup > Change Password. The Change Password dialog box appears.
3. Enter your old password, a new password, and your new password again to confirm it, and then click OK.

The password is now changed. You must restart Desktop Work Flow Administrator for the change to go into effect.

Deleting a Password

To remove password protection:

When you remove the password from Desktop Work Flow Administrator, you automatically reset the password in Desktop Administrator to the default value, which is blank.

1. In the left pane, select the Call Center 1 node
2. From the menu bar, choose Setup > Change Password. The Change Password dialog box appears.
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 Work Flow Administrator unprotected. Click Yes. The password is removed. You must restart the application for the change to go into effect.

Restoring the Default Password

The Reset Administrator Password option can be used In the event you forget a password you set up. This option resets the password back to its default value (blank) without requiring that you know the previous password.

This menu option is available only in CAD Configuration Setup located on the Unified CCX server.

To restore the default password:

1. On the Unified CCX server, navigate to the C:\Program Files\Cisco\Desktop\bin folder.
2. Double-click postinstall.exe to launch CAD Configuration Setup.
3. Choose File > Reset Administrator Password. The utility runs and resets the password to blank.

Client Applications

User IDs and passwords are administered in Unified CCX for the following applications:

- Cisco Agent Desktop
- Cisco Agent Desktop—Browser Edition
- Cisco Supervisor Desktop
- Cisco IP Phone Agent

The user's password is verified on the CTI server when a user starts the application.

CAD Configuration Setup Utility

You can use the CAD Configuration Setup utility to:

- Configure the CAD services
- Reset the Administrator password
- Reset the client install files

Overview

CAD Configuration Setup runs initially as part of the CAD installation process when the Unified CCX system is installed. After initial installation, you can change your configuration settings by launching it from Desktop Administrator or running PostInstall.exe (located in the ... \Program Files \Cisco \Desktop \bin folder on each CAD computer).

CAD Configuration Setup displays different step windows, depending on which host computer it runs on. [Table 2](#) shows which step windows appear when CAD Configuration Setup is run on a specific host computer. Refer to this table to determine where you should run Configuration Setup to change the desired configuration setting.

NOTE: If you run CAD Configuration Setup on a computer that hosts only Desktop Work Flow Administrator, and no other CAD application or service, you will receive a message that there is nothing to configure on that computer. Run CAD Configuration Setup on another computer that hosts CAD services or applications.

Table 2. CAD Configuration Setup windows displayed per host computer

Step Name	Base *	VoIP	Rec	CAD CSD	CWA
CAD-BE Servers Step (page 23)	x				
VoIP Monitor Service Step (page 24)		x		x	
Services Configuration Step (page 25)	x	x	x		
Terminal Services Step (page 26)				x	
SNMP Configuration Step (page 27)	x	x	x		

* Header key: Base—Base services; VoIP—VoIP Monitor service; Rec—Recording service; CAD CSD—Cisco Agent Desktop, Cisco Supervisor Desktop—CWA: Cisco Work Flow Administrator

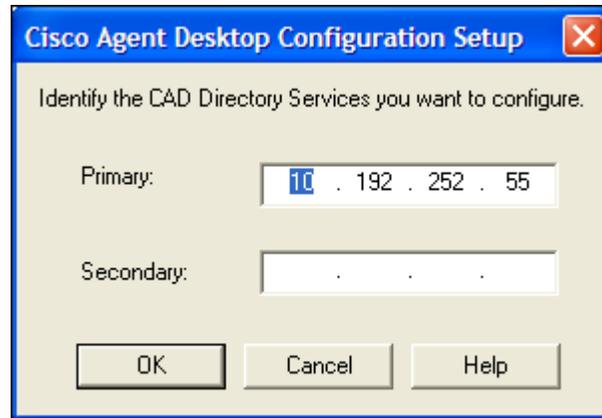
Modifying Configuration Data

To modify configuration data:

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

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

Figure 3. CAD 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 utility is displayed, with the Unified CM 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 step window you want to modify from the left pane, enter the new data in the right pane, and then click Apply.
 - You can display the step windows in any order you wish.
 - If you modify something in a step window, you must click Apply to save your changes before you move on to another window.
4. When you are done making your changes, choose File > Exit from the menu or click Close.

CAD Configuration Setup closes.

5. Stop and restart the modified service and all desktops for the change to go into effect.

Resetting the Administrator Password

Use the Reset Administrator Password option on the File menu to set the Desktop Work Flow Administrator/Desktop Administrator password back to the default. See ["Restoring the Default Password" on page 18](#) for more details.

Resetting Client Installation Files

Use the Reset Client Install option on the File menu to recreate the client application installation files that are downloaded from the Unified CCX server. This process might become necessary if, for example, the IP address of the VoIP service is changed.

This option is available only in CAD Configuration Setup located on the Unified CCX server.

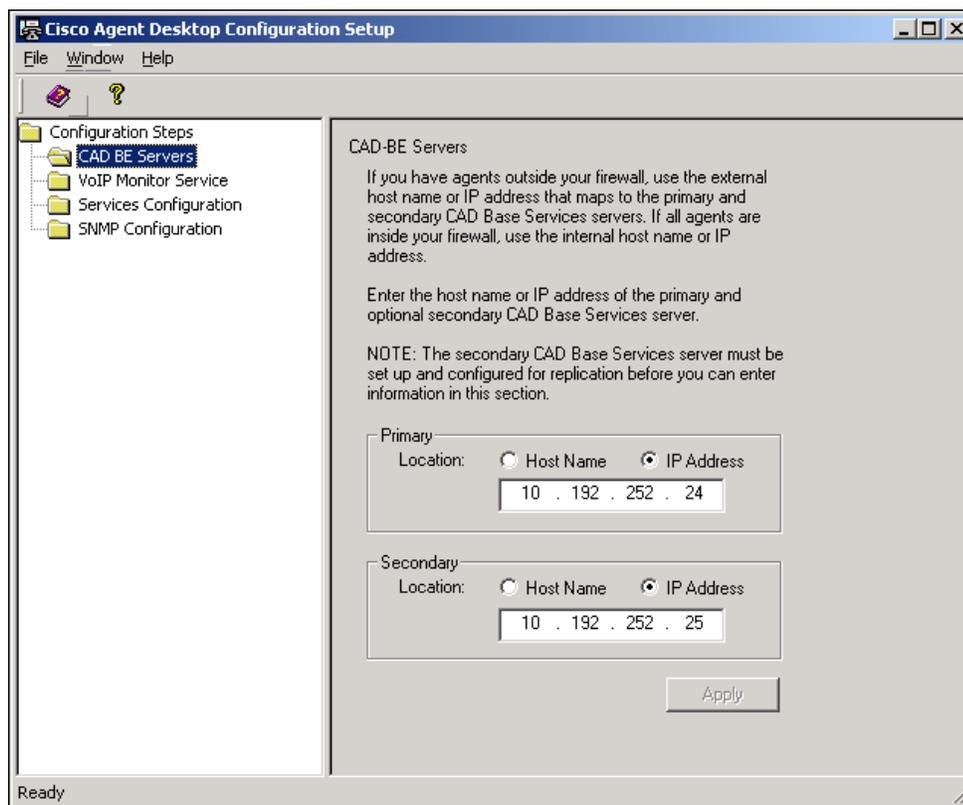
To reset the client installation files:

1. On the Unified CCX server, navigate to the C:\Program Files\Cisco\Desktop\bin folder.
2. Double-click postinstall.exe to launch CAD Configuration Setup.
3. Choose File > Reset Client Installs. The following MSI files are recreated:
 - Cisco Desktop Administrator.msi
 - Cisco Supervisor Desktop.msi
 - Cisco Agent Desktop.msi

ConfigurationSetup Step Windows

CAD-BE Servers Step

Figure 4. CAD-BE Servers step window



The CAD-BE Servers step window appears only in update mode.

Enter the host name or IP address of the CAD Base Services server in the Primary Location field. Apache Tomcat, which is required to run CAD-BE, is installed on this server.

If some of your agents are outside the firewall, use the external hostname/IP address that maps to the server. If all your agents are inside the firewall, use the internal hostname/IP address.

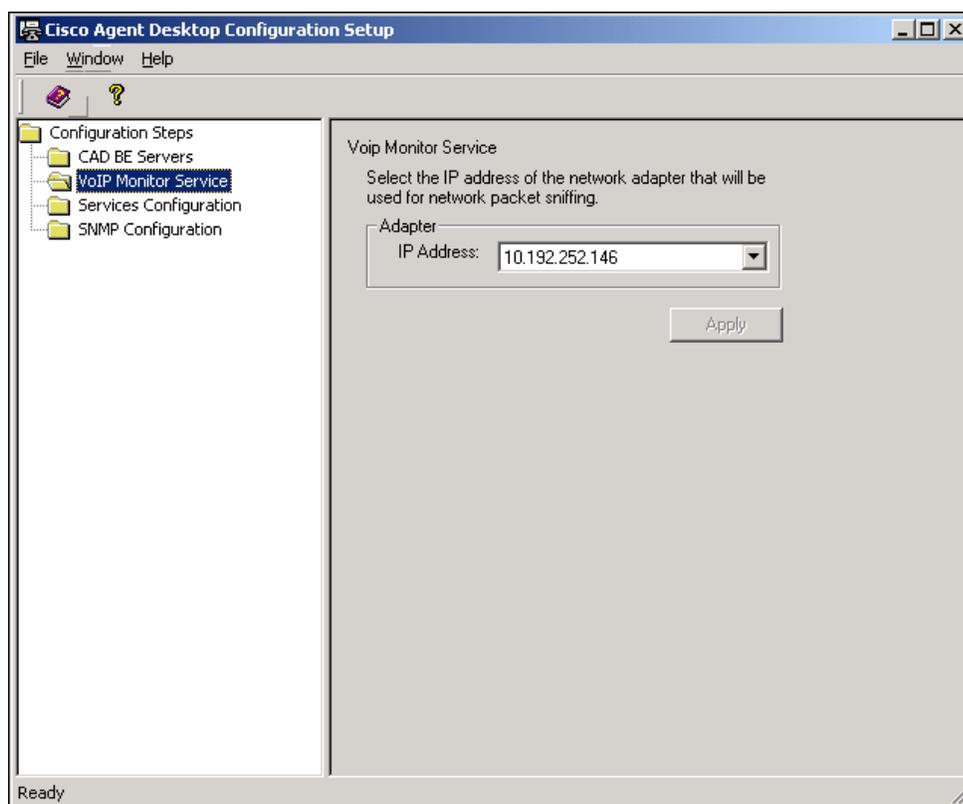
If your configuration includes a second server that hosts the CAD Base Services and you have configured replication between the primary and secondary servers, enter the location of the second server in the Secondary Location field.

NOTE: If you establish replication in initial mode, the Secondary Location field is filled automatically.

The Secondary Location field is not enabled until you configure the second CAD Base Services server and establish replication.

VoIP Monitor Service Step

Figure 5. VoIP Monitor Service step window



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).

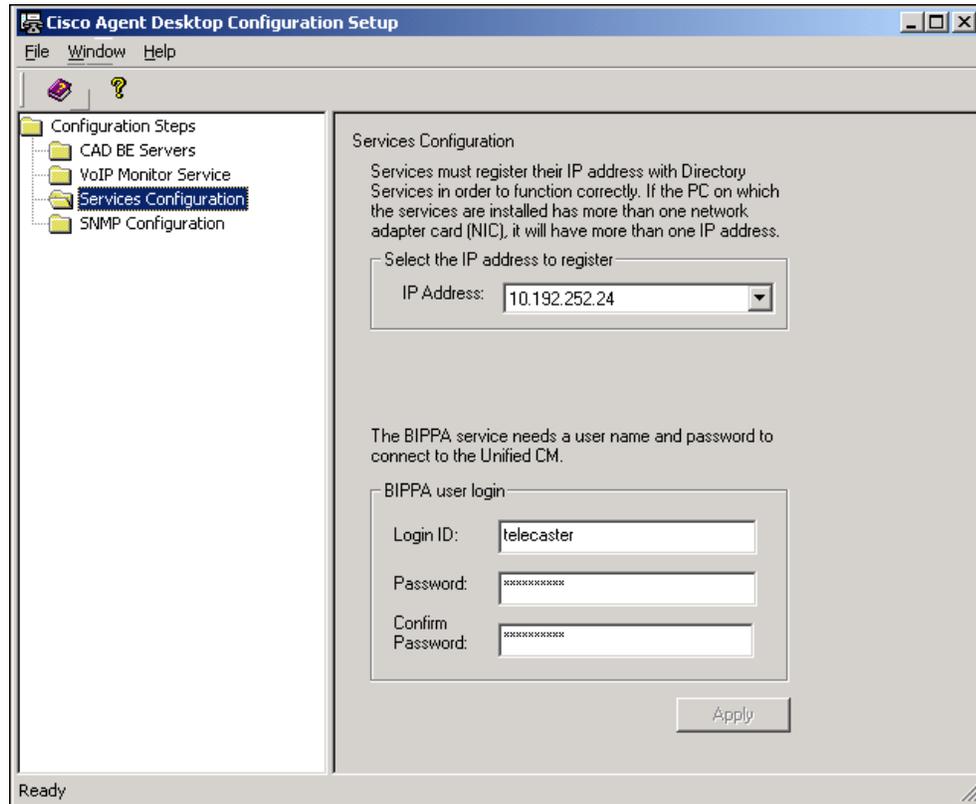
- On a VoIP Monitor Service server, it is the IP address of the NIC that is connected to the port configured for SPAN.
- On a client desktop computer, it is the IP address of the NIC on which the computer is daisy-chained to the phone.

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 CAD Configuration Setup) to ensure that the change is registered with them properly.

Services Configuration Step

Figure 6. Services Configuration step window



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.

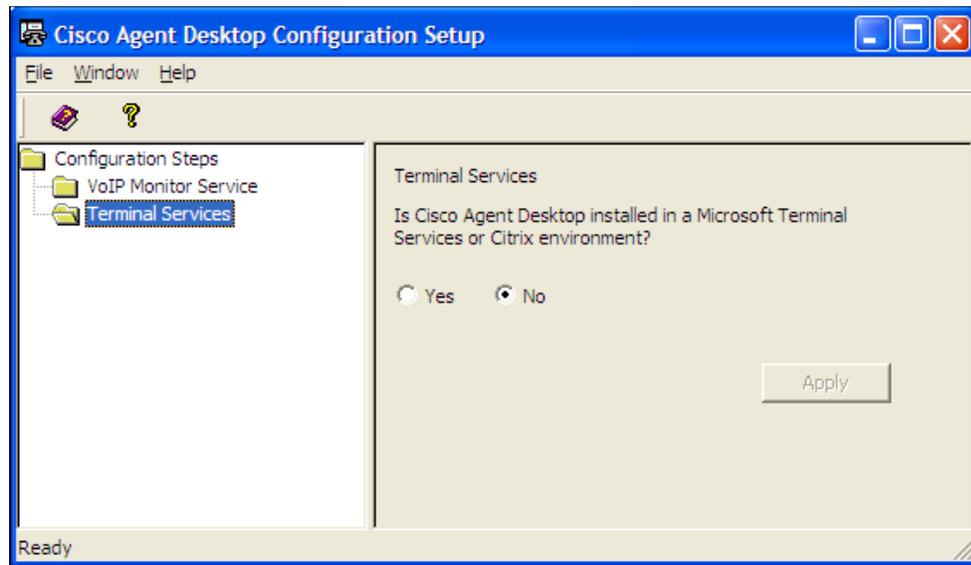
In order to connect to the Unified CM, the Browser and IP Phone Agent (BIPPA) service must have a user ID and password. This user ID and password are also set up in Unified CME (see “Configuring IP Phones for Use With a Localized BIPPA Service” in the *Cisco CAD Installation Guide*). You can complete these fields before actually setting up the user in Unified CME, but the user ID and password must be identical in both places. If they are changed in this window or in Unified CMCME, they must be changed in both.

NOTE: If Directory Services is not running when you view this step, the IPPA login information cannot be changed.

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

Terminal Services Step

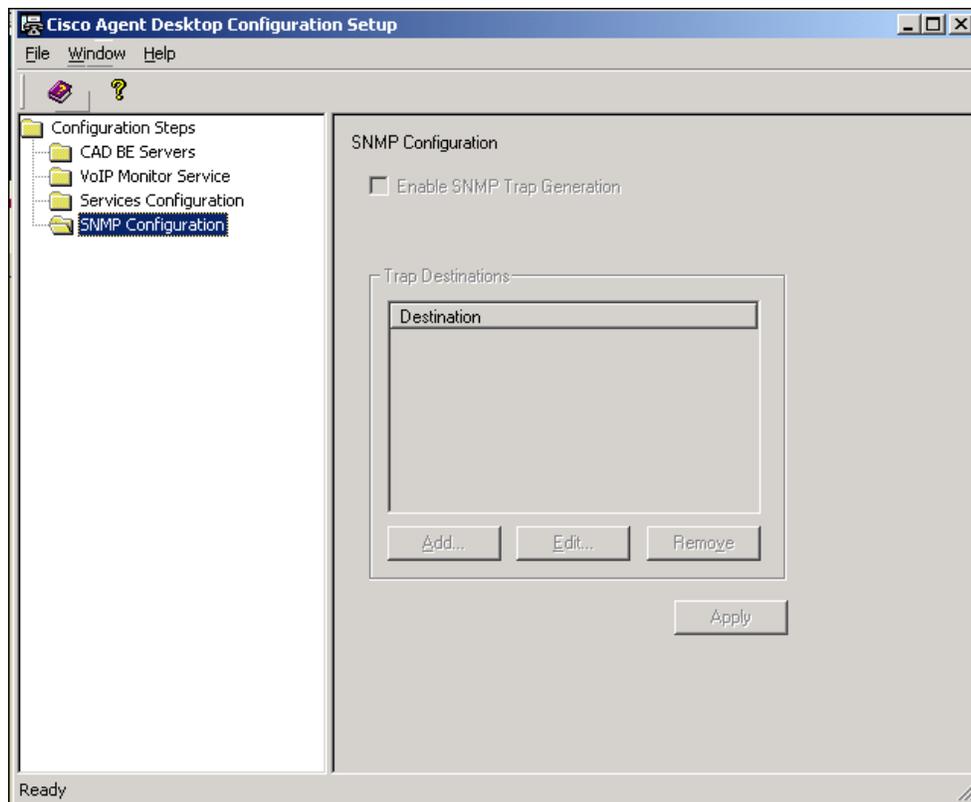
Figure 7. Terminal Services step window



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

SNMP Configuration Step

Figure 8. SNMP Configuration step window



The SNMP Configuration step window appears only during update mode if the Microsoft Simple Network Management Protocol (SNMP) service is installed on the CAD Base 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.

For more information on using this tool, see Microsoft SNMP documentation.

Synchronizing Directory Services

The Directory Services database should be synchronized with the master Unified CCX agent database. The databases are synced automatically whenever the master Unified CCX database changes. However, you can manually sync them with the Synchronize Directory Services command.

NOTE: You can synchronize Directory Services manually from the Desktop Administrator web application also. See "[Synchronizing Directory Services](#)" on page 139 for more information.

To synchronize the databases manually:

1. In the left pane, select the Call Center 1 node.
2. From the menu, choose Setup > Synchronize Directory Services.

When the synchronization is complete, the system displays a confirmation message that Directory Services was successfully synchronized.

Introduction

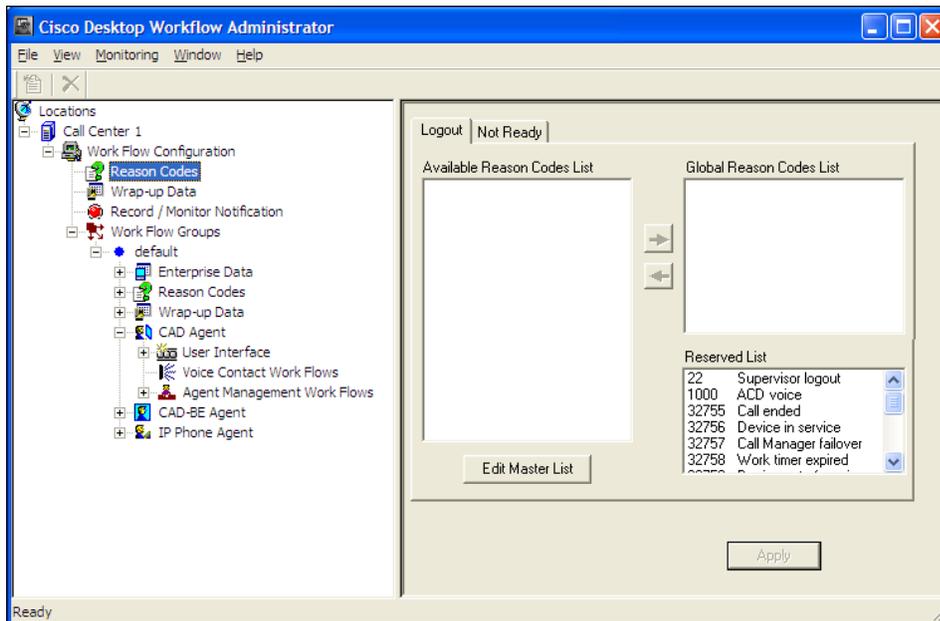
Work Flow Configuration enables you to configure and maintain the appearance and behavior of Agent Desktop, Agent Desktop—Browser Edition, and IP Phone Agent. Work Flow Configuration has the following functions:

- [Reason Codes \(page 33\)](#)
- [Monitor/Record Notification \(page 43\)](#)
- [Work Flow Groups \(page 44\)](#)

To use any Work Flow Configuration application, select its node in the left navigation pane of the Desktop Work Flow Administration window ([Figure 9](#)). The right display pane shows the selected node.

The CAD client applications must be restarted for any configuration changes you make to go into effect.

Figure 9. Work Flow Configuration window, Reason Codes node selected



NOTE: When configuring the name or ID of objects (examples are work groups, work flows, agent login names, server names, and macro names), do not use the "=" character. This can cause problems when backing up and restoring data.

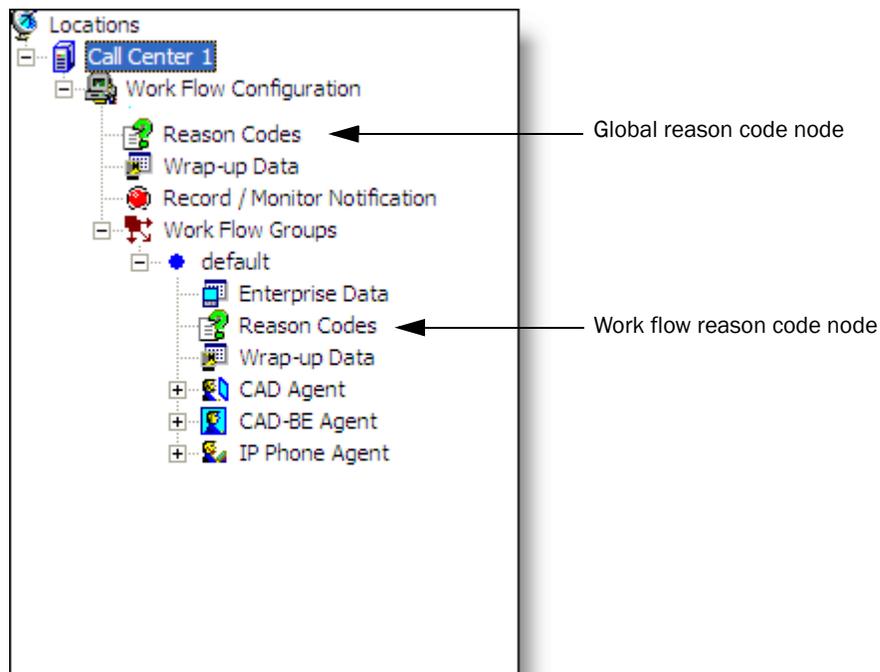
Reason Codes

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

A maximum of 999 reason codes can be set up for CAD and CAD-BE. IP Phone Agent has a limit of 100 reason codes.

Global reason codes, which are available to all agents, are assigned using the Reason Codes node under the Work Flow Configuration node. Work flow group reason codes, which are available only to agents in that specific work flow group, are assigned using the Reason Codes node under the specific work flow group's node (Figure 10).

Figure 10. Global and work flow Reason Codes nodes



Reserved reason codes (identified by [RESERVED] after the description) are predefined in Directory Services and cannot be created or deleted.

There are also Unified CCX-generated reason codes that are entered when an agent is automatically put in the Not Ready or Logout state. For instance, when an agent receives a non-ACD call, the agent is put into the Not Ready state by Unified CCX and the reason code "32761-Non-ACD Call" is entered.

The reserved reason codes are listed in [Table 3](#).

Table 3. Reserved reason codes

Code	State	Description
22	Logout	Supervisor logout.
33	Not Ready	Supervisor Not Ready.
1000		ACD voice.
32755	Not Ready	Call ended. The system issues this reason code when an agent is moved to the Not Ready state after handling a Unified CCX call.
32756	Not Ready	Device in service (phone up). The system issues this reason code when the agent's phone comes up after it has been through a Phone Down state.
32757	Not Ready	CallManager failover. The system issues this reason code when the Unified CM fails over and the agent is moved to the Not Ready state.
32758	Not Ready	Work timer expired. The system issues this reason code when an agent's state is changed from Work to Not Ready. This change occurs if the Work state for that agent's CSQ is associated with an expired wrap-up time.
32759	Not Ready	Device out of service (phone down). The system issues this reason code if the agent's phone crashes and that agent is placed in the unavailable state.
32760	Not Ready	Logon. The system issues this reason code when an agent logs in and is automatically placed in the Not Ready state.
32761	Not Ready	Non-ACD call. The system issues this reason code when the agent is logged on to Agent Desktop or IP Phone Agent and then receives a call that is not queued on the Unified CCX platform.
32762	Not Ready	Off hook. The system issues this reason code when the agent goes off the hook to place a call. If the agent remembered to do this task the corresponding agent-triggered reason code is displayed. If the agent did not remember to do this task, the system issues this reason code.
32763	Not Ready	Ring no answer. The system issues this reason code when the agent fails to answer a Unified CCX call within the specified timeout period.

Table 3. Reserved reason codes — *Continued*

Code	State	Description
32764	Logout	CRS failover. The system issues this reason code when the active server becomes the standby server and the agent loses connection to the Unified CCX platform.
32765	Logout	Connection down. The system issues this reason code when IP Phone Agent or Agent Desktop crashes due to any reason or if the connection is disrupted.
32766	Logout	Force logout (close Agent Desktop). The system issues this reason code when an agent closes Agent Desktop without logging off.
32767	Logout	Force login (agent relogin). The system issues this reason code when an agent is already logged in to one device (computer or phone) and then tries to relog in to a second device.

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

When creating reason codes, follow these guidelines:

- Descriptions can consist of up to 40 alphanumeric characters. No punctuation or other characters are allowed.
- No agent state can contain duplicate numbers and descriptions among its reason codes.
- Reason code numbers can be any number from 0 to 999.

NOTE: While 0 is an allowed reason code number, it is strongly recommended that you do not use it. Using 0 as a reason code can result in control failures or missing agent state events in Unified CCX.

- Reason codes are either all enabled or all disabled for both the Not Ready and Logout agent states. You cannot enable reason codes for one state and disable them for another.
- You cannot enable reason codes unless at least one user-defined reason code exists for Logout and one exists for Not Ready.

NOTE: Agents must restart Agent Desktop, Agent Desktop–Browser Edition, and IP Phone Agent to see any changes you make to reason codes.

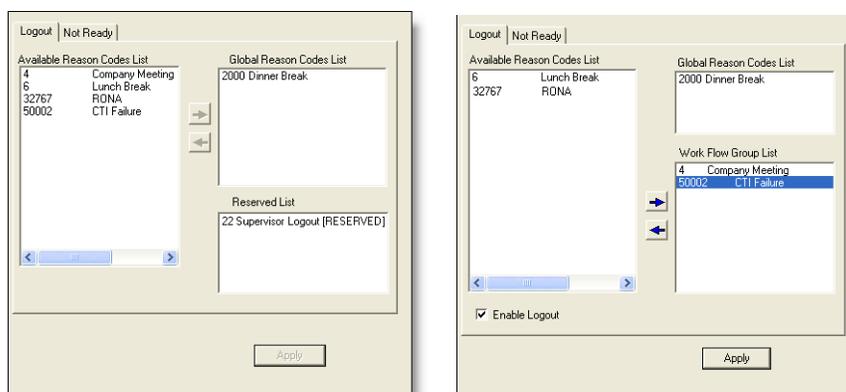
NOTE: For Chinese, Japanese, and Korean localized sites, reason codes might not appear correctly in IP Phone Agent due to the phone limitations on multi-byte characters.

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 (Figure 11, left).

Figure 11. Reason Code window



Global level

Work flow group level

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 (Figure 11, 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

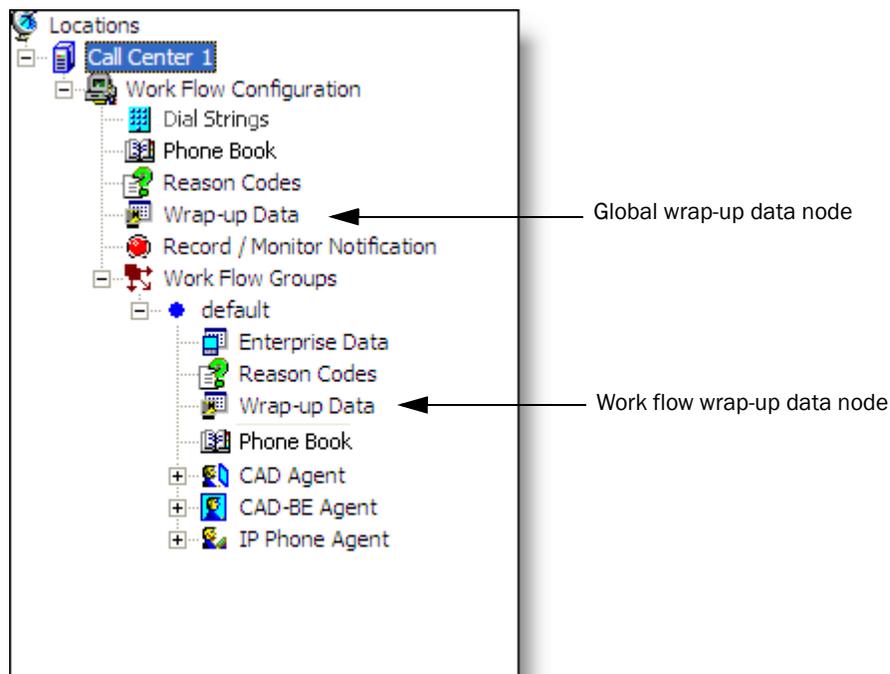
Wrap-up data descriptions are used by contact centers for purposes such as tracking the frequency of different activities and identifying the account to which to charge a call, among others. Wrap-up data is set up and maintained, and automated state changes are enabled, using the Wrap-up Data window.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

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, which are available to all agents, are created and assigned using the Wrap-up Data under the Work Flow Configuration node. Work flow group wrap-up data descriptions, which are available to agents only in that specific work flow group, are created and assigned using the Wrap-up Data node under the specific work flow group's node (Figure 12).

Figure 12. 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 or sent e-mail.

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

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

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

- Duplicate descriptions are not allowed.

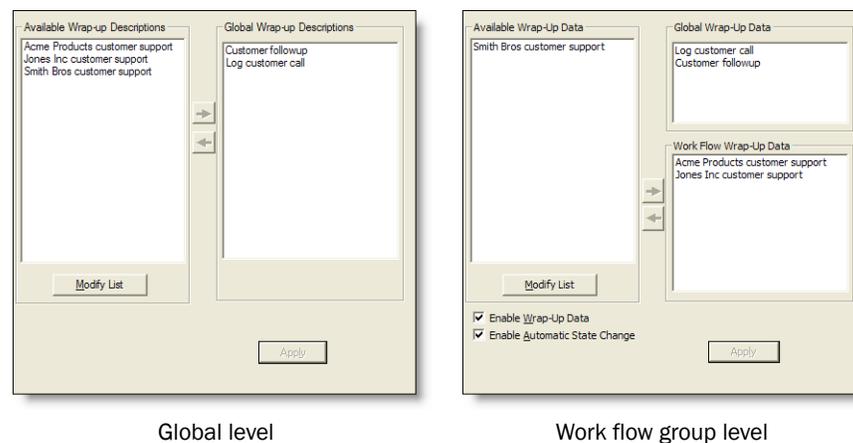
Creating Wrap-up Data Descriptions

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:

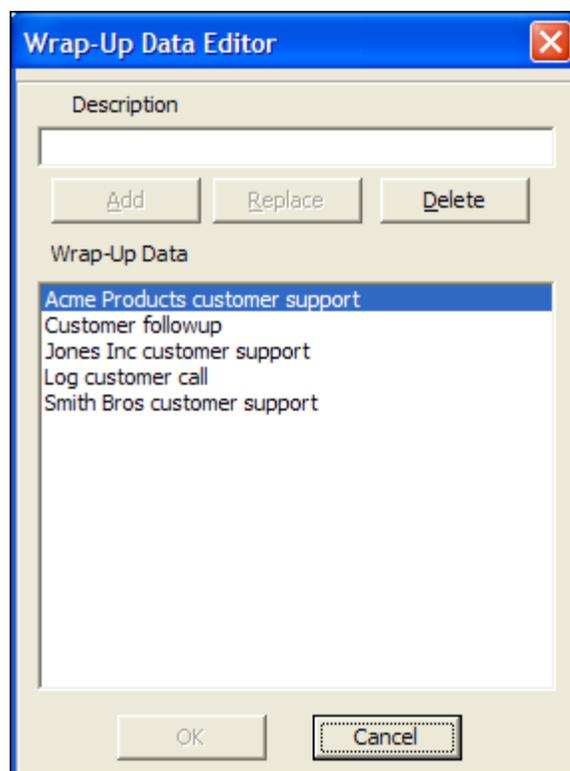
1. Select the global or work flow group Wrap-up Codes node in the navigation tree to display the Wrap-up Codes window (Figure 13).

Figure 13. Wrap-up Data window



2. Click Modify List to display the Wrap-up Data Editor dialog box (Figure 14).

Figure 14. 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 (Figure 13).
2. Click Modify List to display the Wrap-up Data Editor dialog box (Figure 14).
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 (Figure 13).
2. Click Modify List to display the Wrap-up Data Editor dialog box (Figure 14).
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 (Figure 13, 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 (Figure 13, 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

By default, automatic state changes are not enabled. After agents enter wrap-up data, they remain in the Work state for the length of time set for the wrap-up timer or until they change states manually, whichever happens first. (The wrap-up timer value is configured in Unified CCX Administration.)

If automatic state changes are enabled, agents are automatically changed from the Work state to the Ready state (or to the Not Ready state, if they select that state while still on a call) after they enter wrap-up data.

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

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.

Monitor/Record Notification

The Monitor/Record Notification window (Figure 15) is used at the global level to enable or disable messages to agents that they are being recorded or monitored, or both.

Figure 15. Monitor/Record Notification window



To enable or disable agent 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.

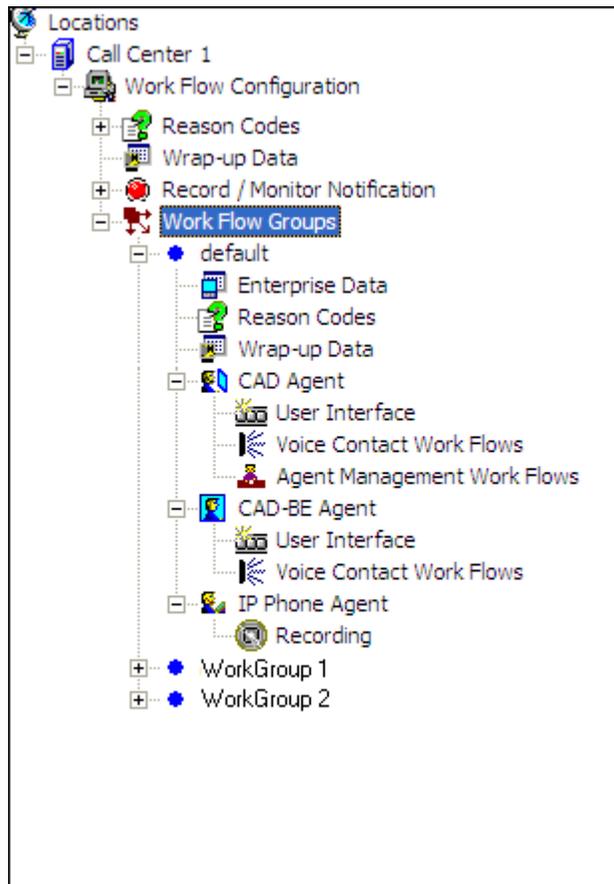
To enable or disable agent notification from the menu bar:

- From the menu bar, choose Monitoring > Notify Monitoring and/or Monitoring > Notify Recording. 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 16. Accessing the Work Flow Group functions in the navigation pane



Under the Work Flow Groups node are individual work flow groups. Initially there is a default work flow 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 and apply only to that work flow group appear as subnodes:

- Enterprise Data—Configure enterprise data on the agent desktop.
- Reason Codes—Assign reason codes.
- Wrap-up Data—Create and edit wrap-up data.

- CAD Agent—Configure the user interface and voice contact work flow, 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 Agent Desktop.

To add a new work flow group:

1. In the Navigation pane, choose the Agents node or work flow group subnode (for example, under Agents, choose the Default work flow group).
2. From the menu bar, choose File > New. The Work Flow Group Name Editor dialog box appears (Figure 17).

Figure 17. Work Flow Group Name Editor dialog box



3. Enter a new work flow group name. The name can be a maximum of 64 characters long.

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. The new work flow group has the same setup as the default work flow group.

To delete an existing work flow group:

1. In the Navigation pane, choose the work flow group you want to delete.
2. From the menu bar, choose File > Delete.

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.

To rename a work flow group:

1. Add a new work flow group.

Name the new work flow group with the name you want the existing work flow group to be renamed.

Select the “Copy the following work flow group” check box and select the existing work flow group from the drop-down list.

2. Delete the old work flow group.

Enterprise Data

The Enterprise Data window enables you to:

- Configure Agent Desktop 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 (Figure 18) controls whether or not an agent in the work flow group is allowed to edit the enterprise data displayed in Agent Desktop.

Figure 18. 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 (Figure 19) enables you to set the thresholds for the selected work flow group for call duration at a particular type of device (CSQ 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 19. Call Activity tab

Device Type	Caution 		Warning 	
	Min	Sec	Min	Sec
CSQ:	0	0	0	10
Agent:	0	0	0	10
Total:	0	0	0	10

Enter a Warning threshold before entering a Caution threshold.
The Warning threshold must be greater than the Caution threshold.

Apply

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. If you enter values in the Caution fields first, Desktop Work Flow Administrator automatically enters values one second greater 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 Work Flow 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 Agent Desktop:

- [User Interface \(page 51\)](#)
- [Voice Contact Work Flows \(page 65\)](#)
- [Agent Management Work Flows \(page 73\)](#)

CAD-BE Agent

You can configure the following for agents using CAD-BE:

- [User Interface \(page 51\)](#)
- [Voice Contact Work Flows \(page 65\)](#)

IP Phone Agent

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

NOTE: If your CAD system is configured to use Unified CM-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 CAD-BE (when accessed under the CAD-BE Agent node).

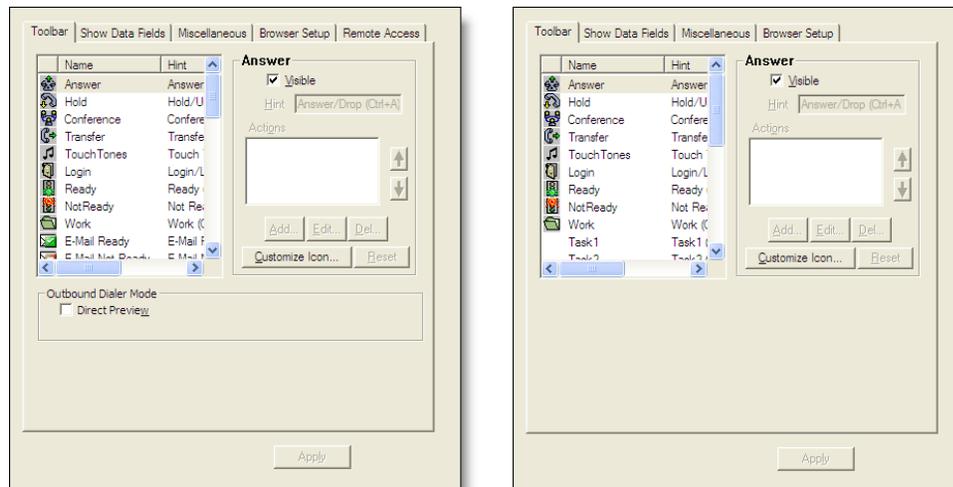
NOTE: The User Interface windows for CAD Agent and CAD-BE Agent are slightly different to allow for the differences in the two applications. The following section will discuss the CAD Agent version and note where it is different for CAD-BE Agent.

Toolbar

The Toolbar tab (Figure 20) enables you to:

- [Adding and Removing Toolbar Buttons \(page 51\)](#)
- [Associating Actions with Task Buttons \(page 52\)](#)
- [Changing a Task Button's Hint \(page 53\)](#)
- [Customizing Button Icons \(page 53\)](#)
- [Show Data Fields \(page 55\)](#)

Figure 20. 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 53](#)).

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.

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 78](#) 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 Work Flow Administrator, or you can use icons of your own.

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

Custom icons must meet the following specifications.

- ICO format
- 50 Kb file size limit
- 16 × 16 or 32 × 32 pixels
- up to 256 colors

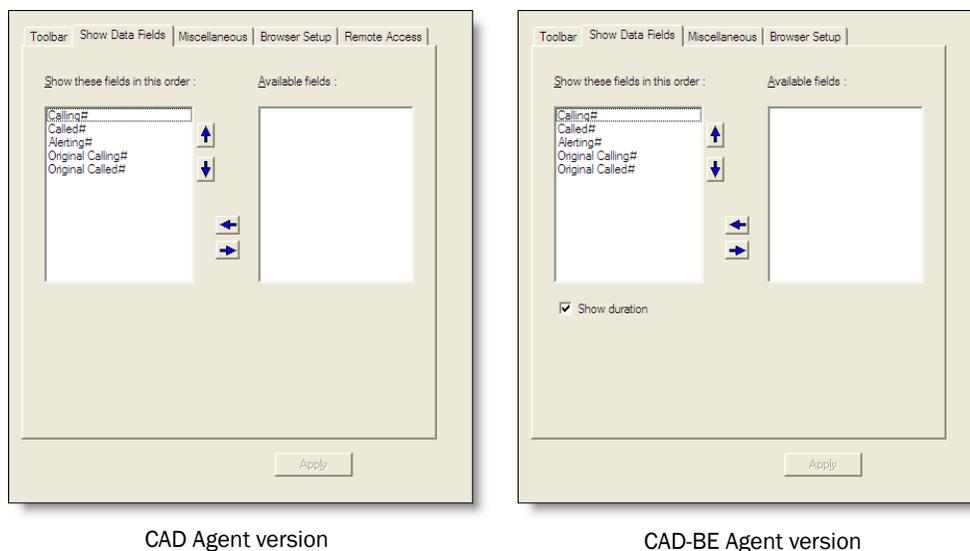
To customize an icon:

1. Choose the button whose icon you want to customize.

Show Data Fields

The Show Data Fields tab (Figure 22) configures the data fields that appear in the contact appearance pane in Agent Desktop and CAD-BE, and enables you to rename data fields. It also allows you to enable/disable incrementing duration fields in CAD-BE.

Figure 22. Show Data Fields tab



NOTE: Agent Desktop and CAD-BE agents must log out, 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 and CAD-BE. The right pane displays the available fields.

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

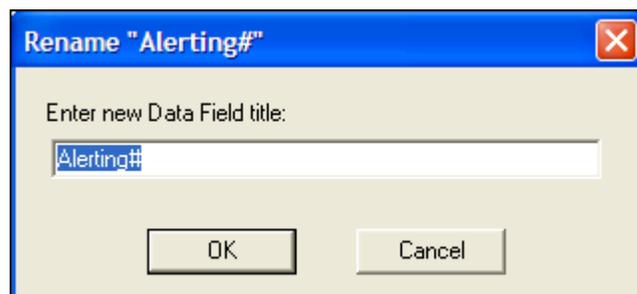
To configure data fields:

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.
2. Click Apply to save your changes.

To rename a data field:

1. Double-click the field you want to rename. The Rename dialog box appears (Figure 23).

Figure 23. Rename dialog box



2. Enter a new name and then click OK.

Show Duration

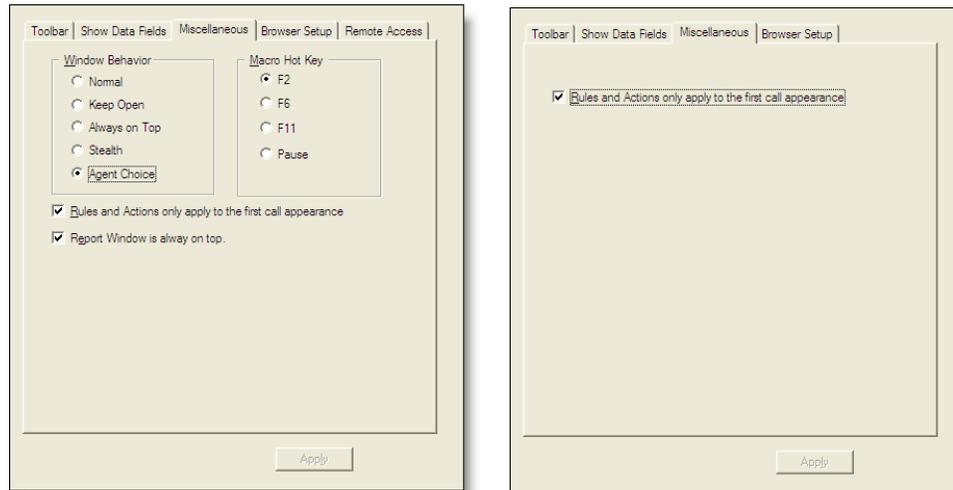
For CAD-BE agents, select the Show Duration check box to enable the Duration field in CAD-BE to increment during a call. By default this option is enabled. However, a continually changing field can cause difficulties for screen readers, so this field might be disabled for agents who are visually impaired.

For CAD agents, this feature is enabled/disabled in the Agent Desktop Preferences.

Miscellaneous

Use the Miscellaneous tab (Figure 24) to configure other user interface options. Select or check your desired settings, and then click Apply to save your changes.

Figure 24. Miscellaneous tab



CAD Agent version

CAD-BE Agent version

Table 4. Miscellaneous Tab options

Option	Description
Window Behavior	<p>Specify how you want the Agent Desktop window to behave. The default setting is Agent's Choice.</p> <ul style="list-style-type: none"> • Normal. The window appears when calls are present and minimizes when idle. • Keep Open. The window is always visible, but can be hidden by other open applications. • Always on Top. The window is always visible and on top of other open applications. • Stealth. The window appears as an icon in the system tray. • Agent's Choice. Behavior is set locally by the agent. The local setting persists until reset or until you choose something other than Agent's Choice. On the agent's desktop, the default setting is Normal.

Table 4. Miscellaneous Tab options

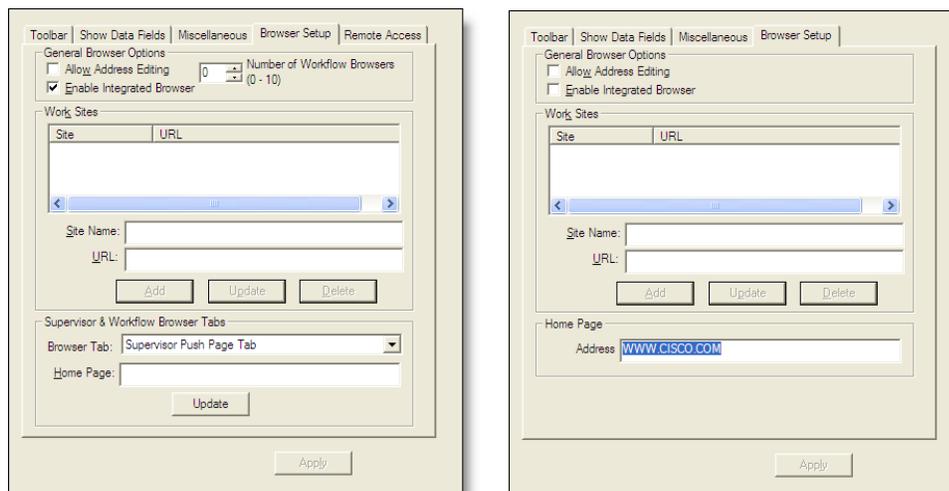
Option	Description
Macro Hot Key	Specify the key you want to use to pause macro recording and display the Suspend Macro Recording dialog. The default is F2.
Rules and Actions only apply to the first call appearance	Select to invoke rules processing only for the oldest (top) call appearance. If the check box is not selected, rules processing is invoked for all inbound calls.

Browser Setup

Use the Browser Setup tab (Figure 25) to configure the Integrated Browser portion of Agent Desktop and CAD-BE. On this tab you can:

- Enable/disable the integrated browser window
- Set the default web page displayed by the browser
- Enable up to 10 browser tabs
- Enable/disable agents' access to other websites
- Add work sites (or “favorites”) so agents can quickly access frequently-used websites

Figure 25. Browser Setup tab



CAD Agent version

CAD-BE Agent version

Enabling the Integrated Browser

You can enable/disable the integrated browser in Agent Desktop/CAD-BE by selecting or clearing the Enable Integrated Browser check box at the bottom of the Browser Setup tab.

Enabling Access to Other Websites

You can enable/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 disabled, the Address field does not appear in the integrated browser window.

Configuring the Number of Browser Tabs

Choose 0 to 10 in the Number of Work Flow 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 10, 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 89](#) for more information.

Setting Up the Home Page

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

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. 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:

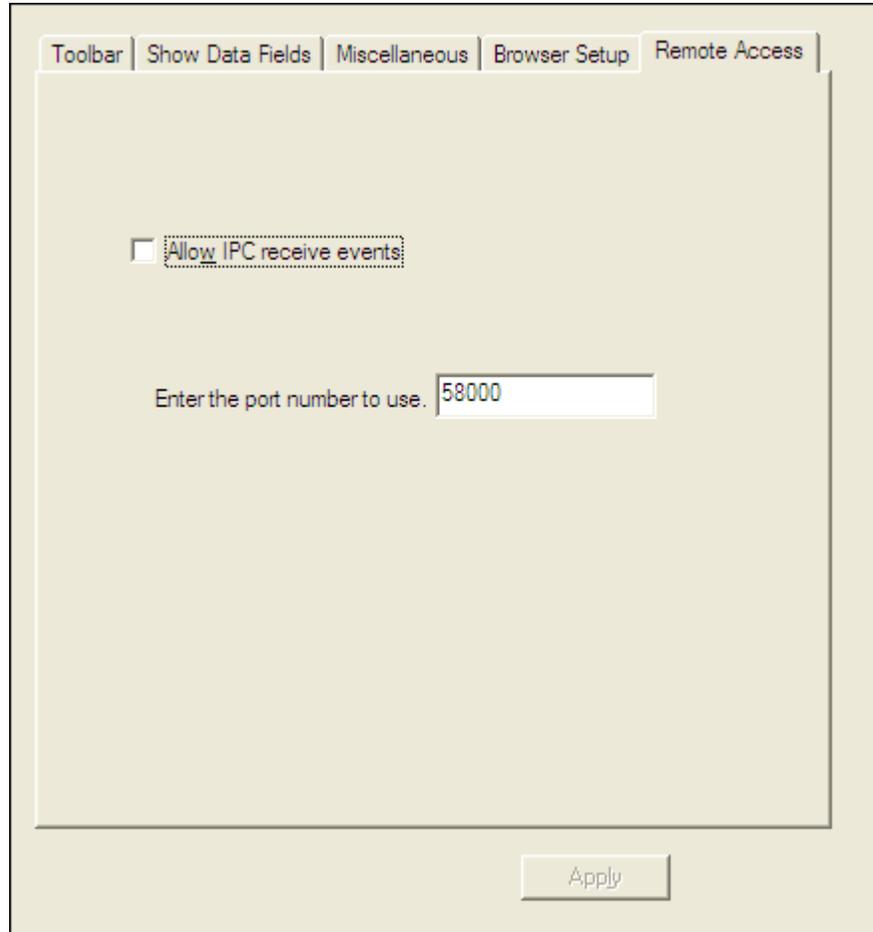
1. In the Work Sites pane, select the work site you wish to delete. The information for the website appears in the Site Name and URL fields.
2. Click Delete. The work site is deleted from the Work Sites pane.
3. Click Apply to save your changes.

Remote Access

The Remote Access tab ([Figure 26](#)) is used to enable the IPC Receive Event feature and configure the port used by the feature. The IPC Receive Event feature is available in the Enhanced and Premium bundles only.

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

Figure 26. Remote Access tab



The screenshot shows a dialog box with a tabbed interface. The tabs are 'Toolbar', 'Show Data Fields', 'Miscellaneous', 'Browser Setup', and 'Remote Access'. The 'Remote Access' tab is selected. Inside the dialog, there is a checkbox labeled 'Allow IPC receive events' which is currently unchecked. Below this checkbox is a text input field with the label 'Enter the port number to use.' and the value '58000' entered. At the bottom right of the dialog is an 'Apply' button.

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.

Unlike work flow actions, IPC Receive Event actions do not require configuration or setup in Desktop Administrator. All attributes that IPC Receive Event actions require in order to execute are a part of the IPC Receive Event message content. All incoming IPC Receive Event messages must adhere to a strict predefined XML schema. The required schemas are defined below.

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.

Five actions are supported by the IPC Receive Event:

- [IPC Make Call Action \(page 62\)](#)
- [IPC High Priority Chat Action \(page 62\)](#)
- [IPC Record Action \(page 63\)](#)
- [IPC Agent Notification Action \(page 63\)](#)
- [IPC Set Variable Action \(page 64\)](#)

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. **Blue** 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. **Blue** 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. **Blue** 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>

```

IPC Set Variable Action

For the IPC Set Variable action to be successful, the agent must be logged in.

The IPC Set Variable action receives data values (for example, Cisco Outbound Dialer variables prefixed with "BA") from a third party application in UDP format. The action sends these data values to the CTI server.

All variables (ECC variables, call variables, and Outbound Dialer variables) can be set with this action.

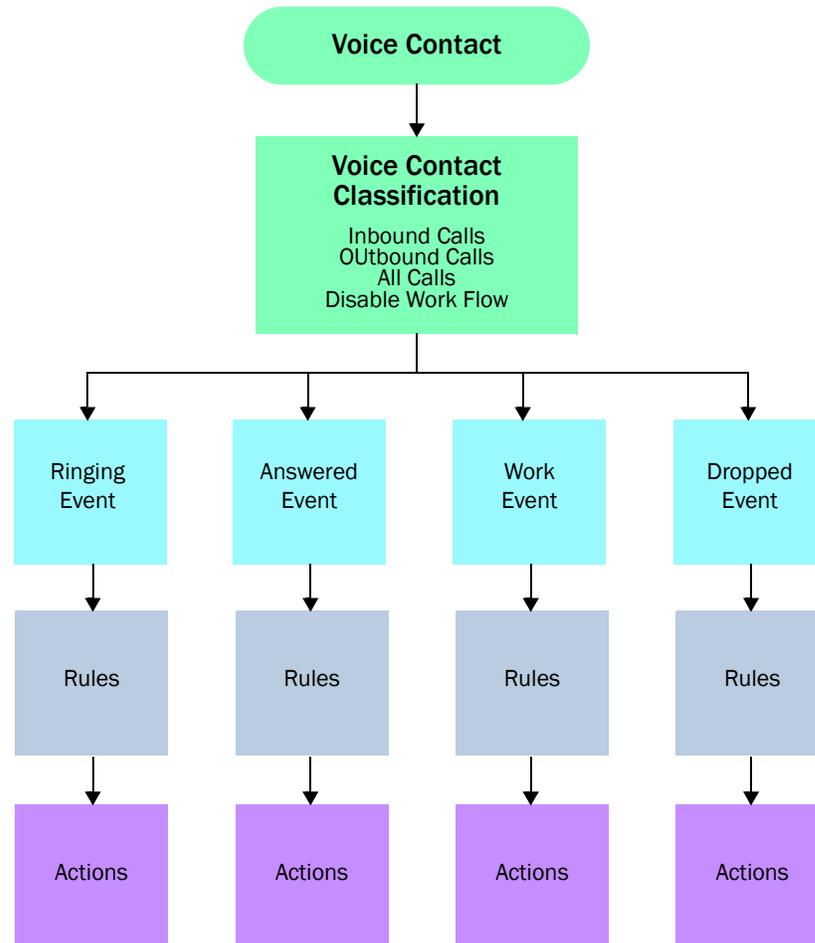
The message sent to Agent Desktop must conform to this XML format. **Bold** text indicates a variable that must be replaced with your own values.

```
<?xml version="1.0"?>
<!-- IPC Receive Event Message -->
<IPCActions>
  <IPCSetVariableAction>
    <ActionName>IPC Set Variable Action</ActionName>
    <Variable>BAResponse</Variable>
    <DataValue>03/05/2009 05:45</DataValue>
  </IPCSetVariableAction>
</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 Agent Desktop and CAD-BE agents.

Figure 27. 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.
 - 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, Work, or Dropped.
 - 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 Work Flow 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

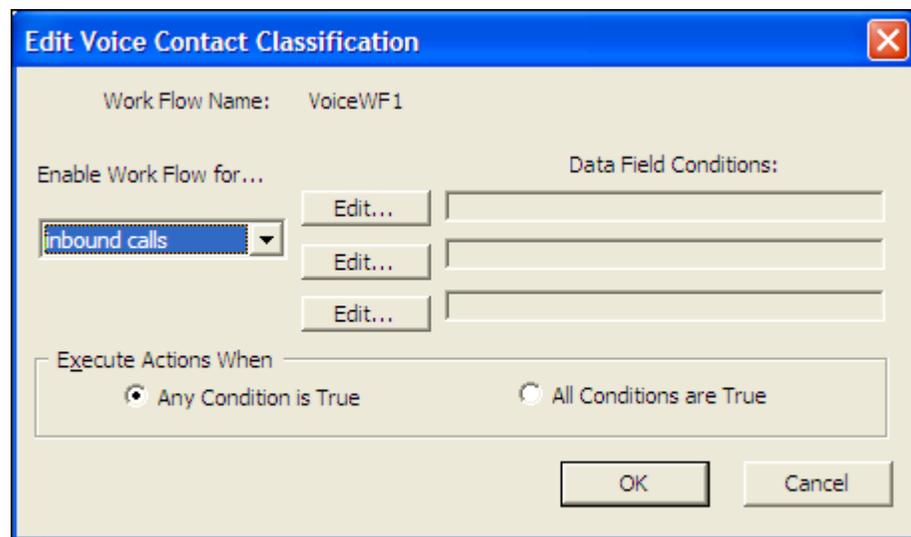
When you select the Voice Contact Work Flow node in the navigation tree, the Voice Contact Work Flow List window is displayed. This window shows all the existing voice contact work flows, and enables you to edit them or to set up new ones.

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 (Figure 28). Note that the work flow name you just created is shown in the dialog box.

Figure 28. Edit Voice Contact Classification dialog box

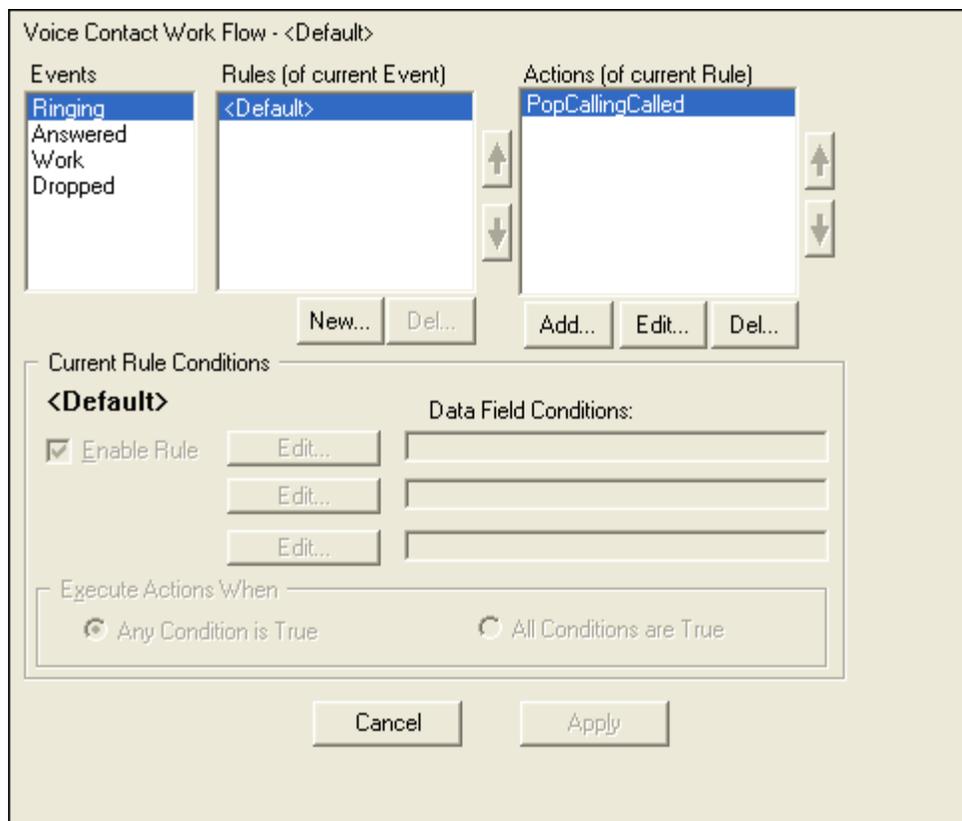


3. Set up the criteria for the first level filter in this dialog box.
 - a. Select the type of call you want the filter to apply to from the drop-down list: inbound calls, outbound calls, or all calls.
 Note that there is also the option to disable the work flow. You can select this option later on if and when you want to disable the work flow, but want to keep the work flow on file for use 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 69](#).
 - 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 Work Flow Administrator takes you to the Voice Contact Work Flow window (Figure 27). 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 29. 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 is terminated.
 - Work. The agent transitions to the Work 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 69](#) 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.

NOTE: You cannot use a route point phone number when configuring a rule for inbound ACD calls.

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 78](#) 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.

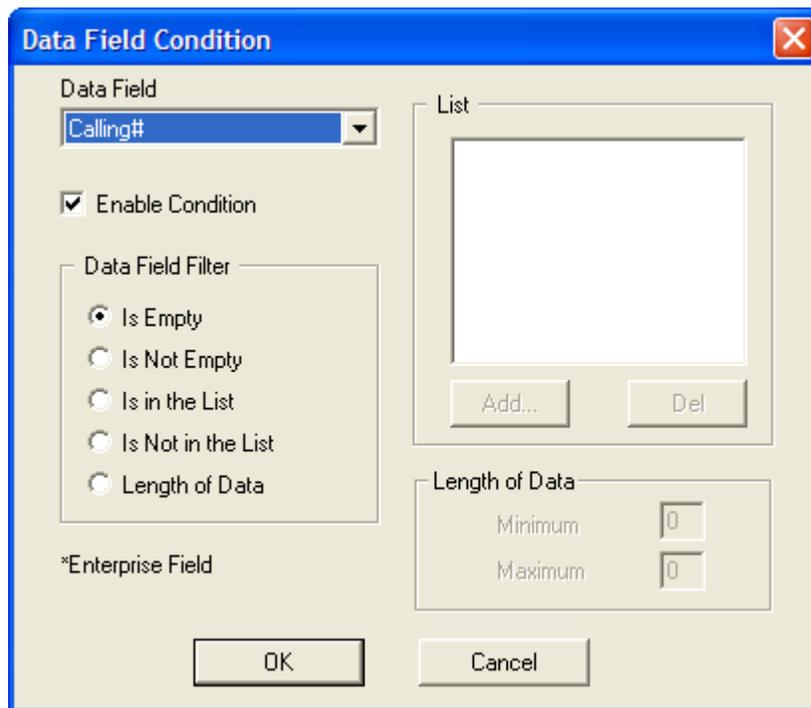
Data Field Conditions

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) (Figure 30) or the Current Rule Conditions section of the Voice Contact Work Flow window (for a work flow rule).

Figure 30. 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. There is no data in the data field.
 - Is Not Empty. There is data in the data field.

- 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 71](#).
 - 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 71](#).
 - 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 the default work flow and any custom work flows you create.

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.

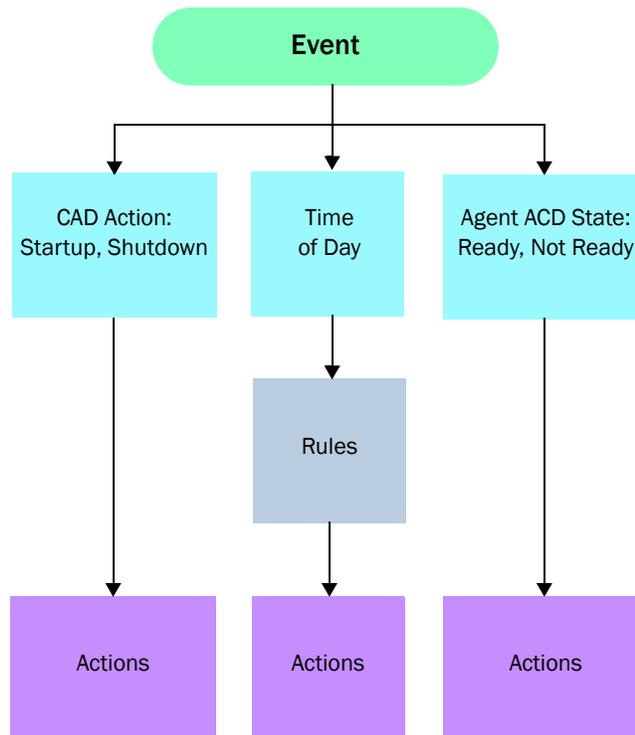
To delete a voice contact work flow:

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 and CAD-BE 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 31. 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 enters the Ready state, 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 (Figure 32).

Figure 32. Work Flow window

The screenshot shows the 'Work Flow' configuration window. It has three columns for configuration:

- Events:** A list box containing 'Startup', 'Shutdown', 'Ready', 'Not ready', and 'Time of day' (highlighted).
- Rules (of current Event):** A list box containing 'EndOfShift' (highlighted) and '<Default>'. It has 'New...' and 'Del...' buttons below it.
- Actions (of current Rule):** A list box containing 'TimeCardReminder'. It has 'Add...', 'Edit...', and 'Del...' buttons below it.

Below the columns are 'New...', 'Del...', 'Add...', 'Edit...', and 'Del...' buttons. The 'Current Rule Conditions' section is expanded for the 'EndOfShift' rule:

- Enable Rule:** A checked checkbox with an 'Edit...' button.
- Data Field Conditions:** Two text boxes containing '04:30 PM Monday, Tuesday, Wednesday, Thur' and 'Hook state On hook', each with an 'Edit...' button.
- Execute Actions When:** Two radio buttons: 'Any Condition is True' (unselected) and 'All Conditions are True' (selected).

An 'Apply' button is located at the bottom center of the 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 79](#) for more information.

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

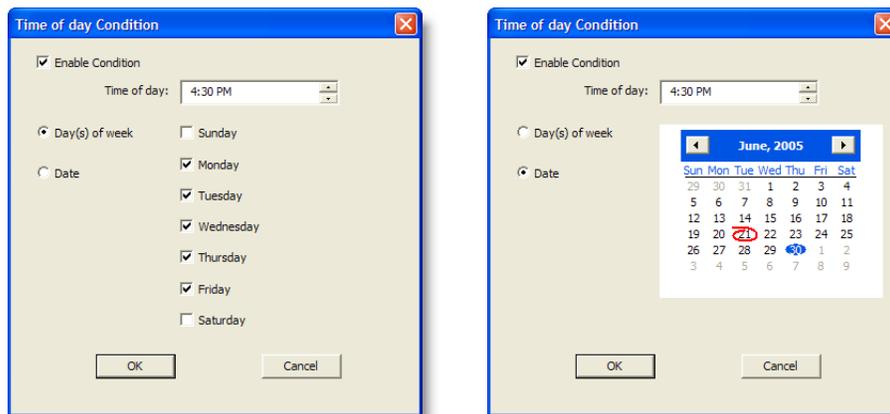
1. Select the event that triggers the work flow from the Event pane. The available events are:
 - Startup. Agent Desktop/CAD-BE starts.
 - Shutdown. Agent Desktop/CAD-BE closes.
 - Ready. The agent transitions to the Ready state.
 - Not Ready. The agent transitions to the Not Ready state.
2. Under the 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 78](#) 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 33).

Figure 33. Time of Day Conditions dialog box



Days of the Week view

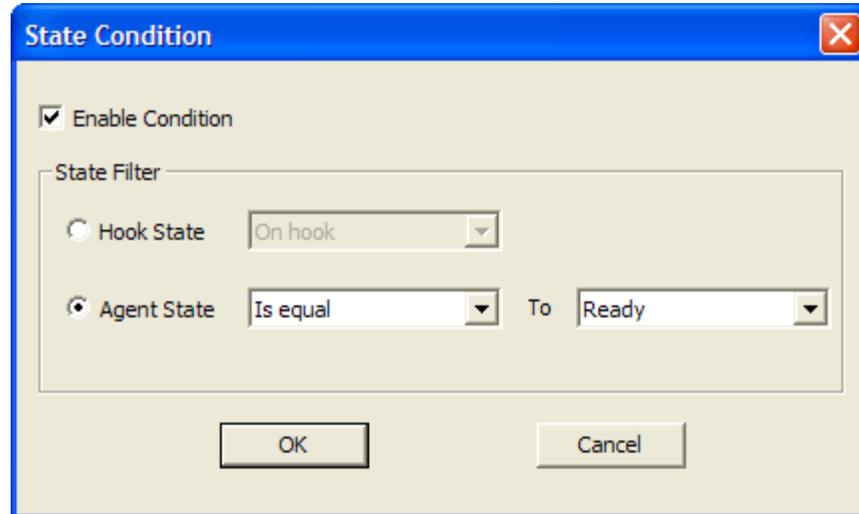
Date selection view

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 select 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 display the State Condition dialog box (Figure 34), and 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 34. 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 78](#) 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 and CAD-BE.

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

Table 5. Action types and descriptions

Action Type	Description
Importing and Exporting Actions (page 81)	Displays a popup message on the agent's desktop
Agent Notification Action (page 85)	Displays a custom message popup window on the agent's desktop when a certain event occurs
Agent State Action (page 87)	Sets an agent state
Delay Action (page 89)	Inserts delay time in series of actions
HTTP Action (page 89)	Enables the Agent Desktop and CAD-BE integrated browser to interact with a web application
IPC Action (page 97)	Passes enterprise data or user-defined data from the agent desktop to a custom third-party application
Launch External Application Action (page 99)	Starts a third-party application
Run Macro Action (page 101)	Plays back a recorded sequence of keystrokes.
Set Enterprise Data Action (page 112)	Automatically changes an enterprise data field in Agent Desktop to a selected desktop variable or static text
Timer Action (page 114)	Triggers actions after a specified time has elapsed
Utility Action (page 115)	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 6](#) 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 6. Action availability per work flow type and agent type *

Action Type	Voice Contact		Agent Mgmt		Time of Day	
	CAD	CBE	CAD	CBE	CAD	CBE
Agent Notification	x	—	x	—	x	—
Agent State	x	—	—	—	x	—
Delay	x	—	x	—	—	—
HTTP	x	x	x	—	x	—
IPC	x	—	x	—	—	—
Launch External Application	x	—	x	—	—	—
Run Macro	x	—	x	—	—	—
Set Enterprise Data	x	—	—	—	—	—
Timer	x	—	—	—	—	—
Utility	x	x	—	—	—	—

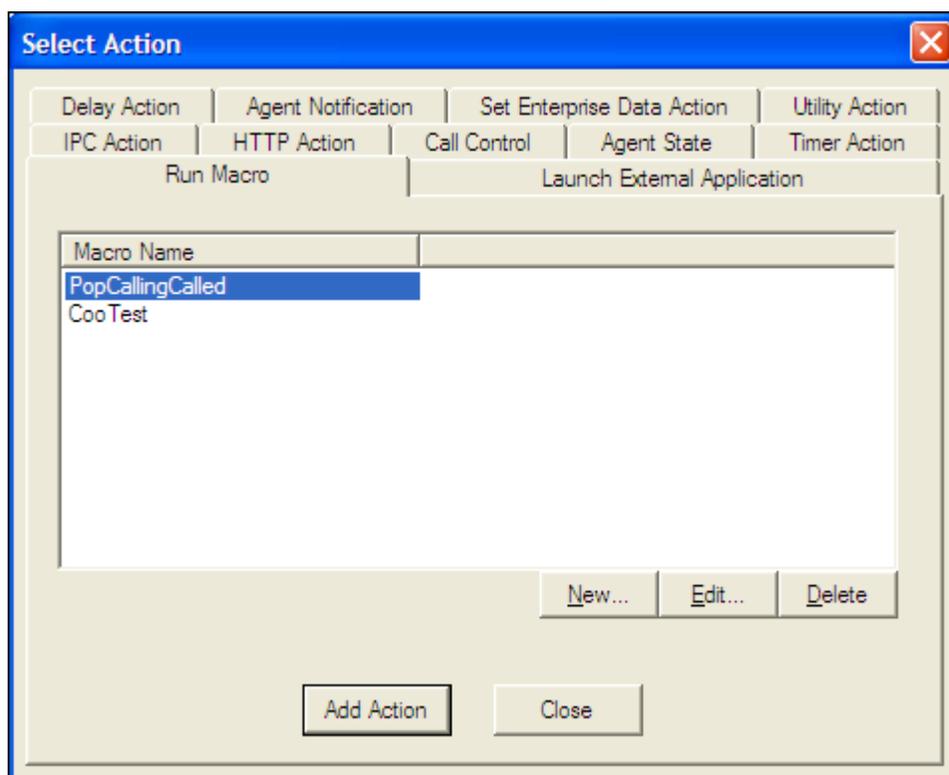
* “x” indicates the action is available: “—” indicates the action is not available.

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 (Figure 35).

Figure 35. 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 Add Action.
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 Add Action. 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 Close. 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. To avoid this, choose a location other than the CAD installation directory.

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

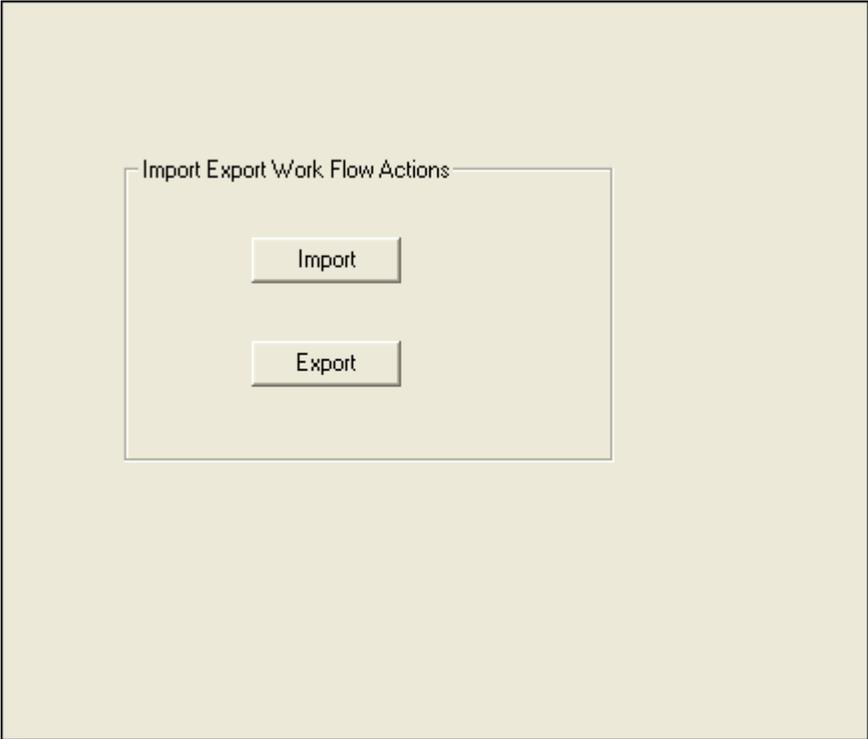
To export a work flow action:

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

The Import Export Work Flow Actions window appears ([Figure 36](#)).

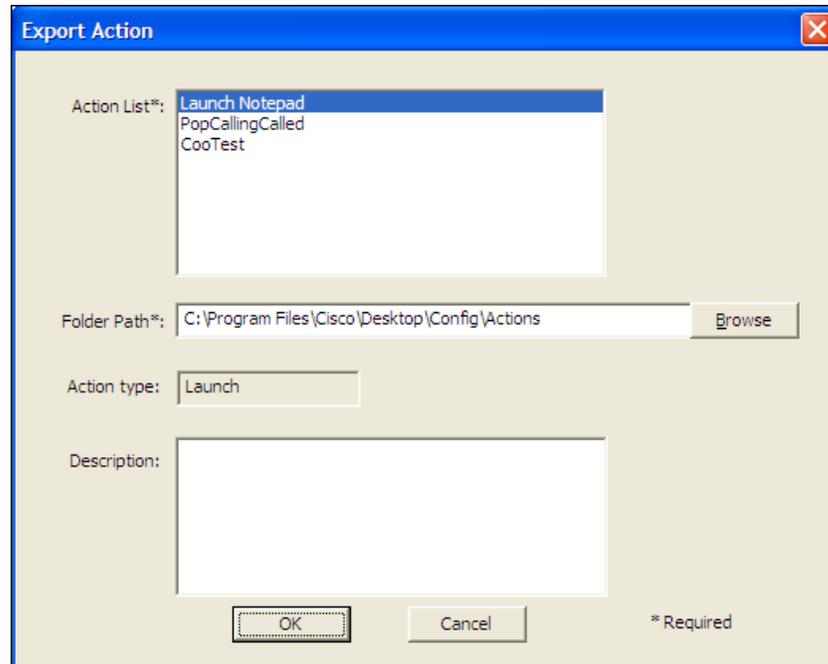
If there are actions available for import and/or export, the Import and/or Export button is enabled. If there are no actions available for the specific action, that button is disabled.

Figure 36. Import Export Work Flow Actions window



2. Click Export. The Export Action dialog box appears (Figure 37).

Figure 37. Export Actions dialog box



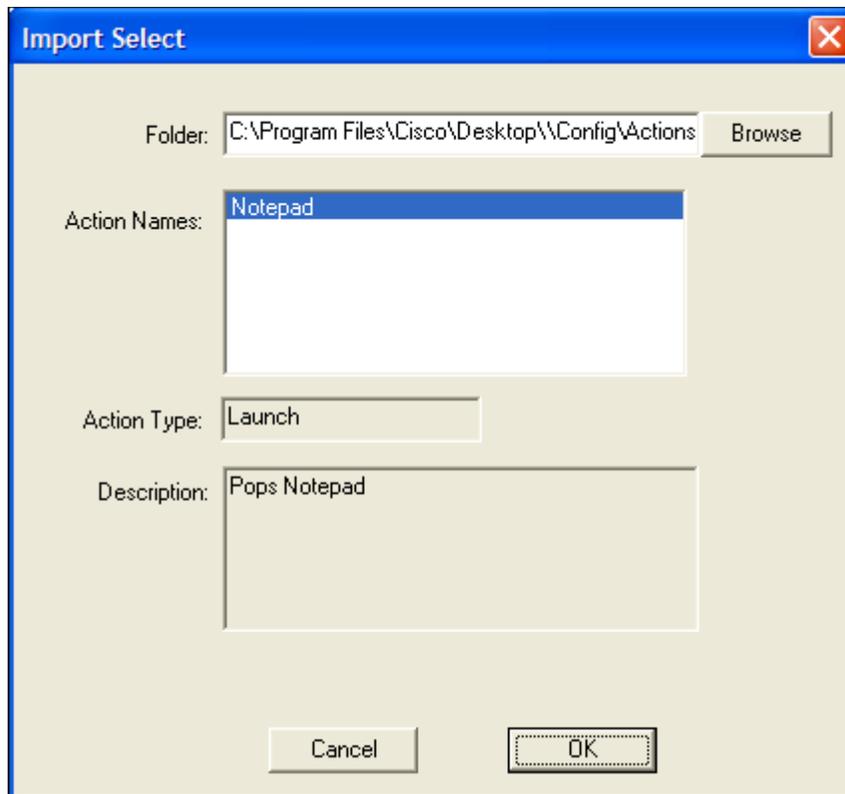
3. Select the action you want to export from the Action List, and then complete the fields in the dialog box:
 - Folder Path: Select the default path shown or browse to any other local or network folder location.
 - Description (optional): Enter a description of the action. Maximum length of the description 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 (Figure 36).

2. Click Import. The Import Select dialog box appears (Figure 38).

Figure 38. 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

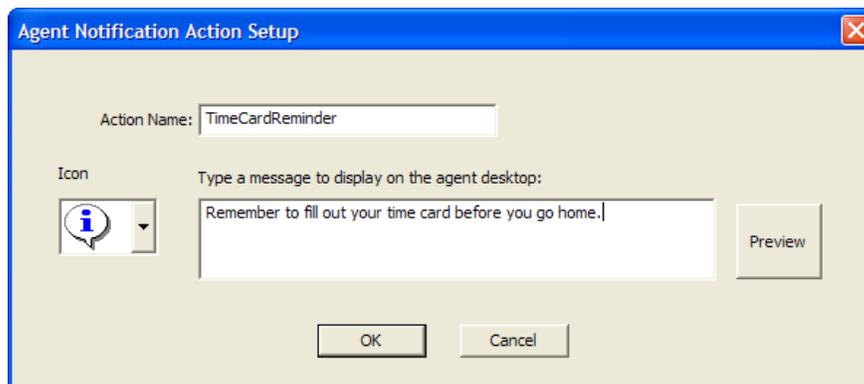
An Agent Notification action displays a custom message popup window on the agent's desktop when a certain event occurs. For instance, when an agent logs out, a popup window reminding the agent to complete his time card could pop up on his desktop.

To set up an Agent Notification action:

1. Set up a new action. See [“Adding a New Action” on page 80](#). The Select Action window appears.

2. Select the Agent Notification tab, and then click New. The Agent Notification Action Setup dialog box appears (Figure 39).

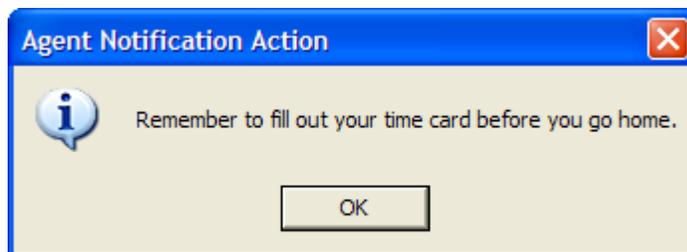
Figure 39. Agent Notification Action Setup dialog box



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 (Figure 40).

NOTE: The title bar on the actual popup window might 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.

Figure 40. Preview of an Agent Notification popup window



5. Click OK.

Agent State Action

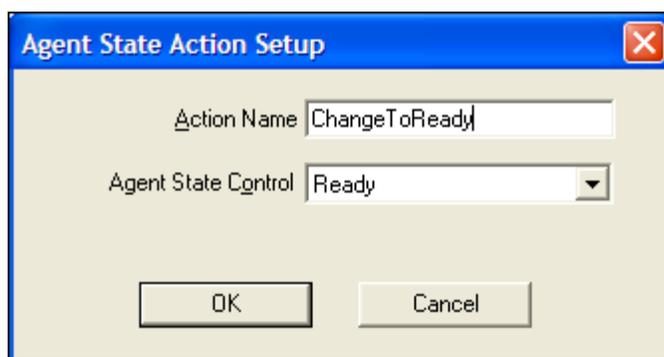
An Agent State action enables you to select an agent state to associate with an event.

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

To set up an Agent State action:

1. Set up a new action. See [“Adding a New Action” on page 80](#). The Select Action window appears.
2. Select the Agent State tab, and then click New. The Agent State Action Setup box appears ([Figure 41](#)).

Figure 41. Agent State Action Setup dialog box



3. 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.

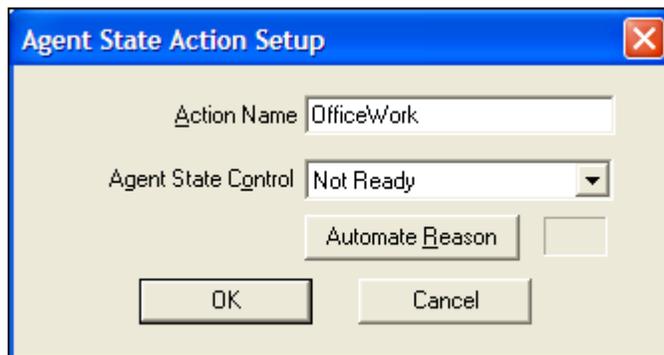
If you enable automated reason codes, the agent does not have to choose the appropriate reason code when an agent state action to transition to Logout or Not Ready is triggered.

To enable automated reason codes

1. Set up a new Agent State action (see [“Agent State Action” on page 87](#)) or edit an existing Agent State action (see [“Editing an Action” on page 81](#)).

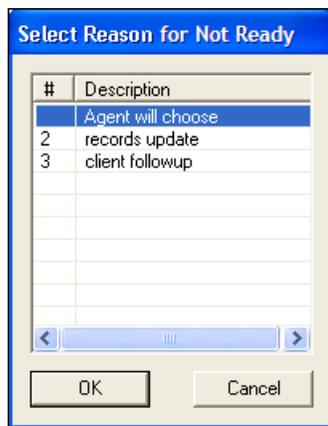
2. In the Agent State Action Setup dialog box, enter a name for the action, select either AgentNotReady or AgentLogout from the Agent State Control drop-down list. The Automate Reason button appears in the dialog box (Figure 42).

Figure 42. Agent State Action dialog box with Automate Reason button



3. Click Automate Reason. The Select Reason dialog box appears (Figure 43). This dialog box contains the reason codes already set up in the system.

Figure 43. 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.

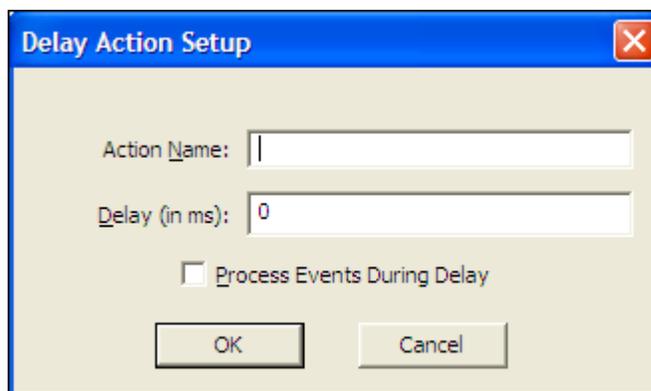
Delay Action

Delay actions are used to add delay time between actions in a series of actions. For example, the delay action can be added to a work flow that includes a series of macros that need delay time between execution of those macros.

To set up a Delay action:

1. Set up a new action. See [“Adding a New Action” on page 80](#). The Select Action window appears.
2. Select the Delay Action tab, and then click New. The Delay Action Setup dialog box appears ([Figure 44](#)).

Figure 44. Delay Action Setup dialog box



3. Enter the following information:
 - A name for the delay action
 - The length of delay time, in milliseconds
 - Select the Process Events During Delay check box if you want events to be processed in the background during the delay period
4. Click OK.

HTTP Action

This action is available to Agent Desktop 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.

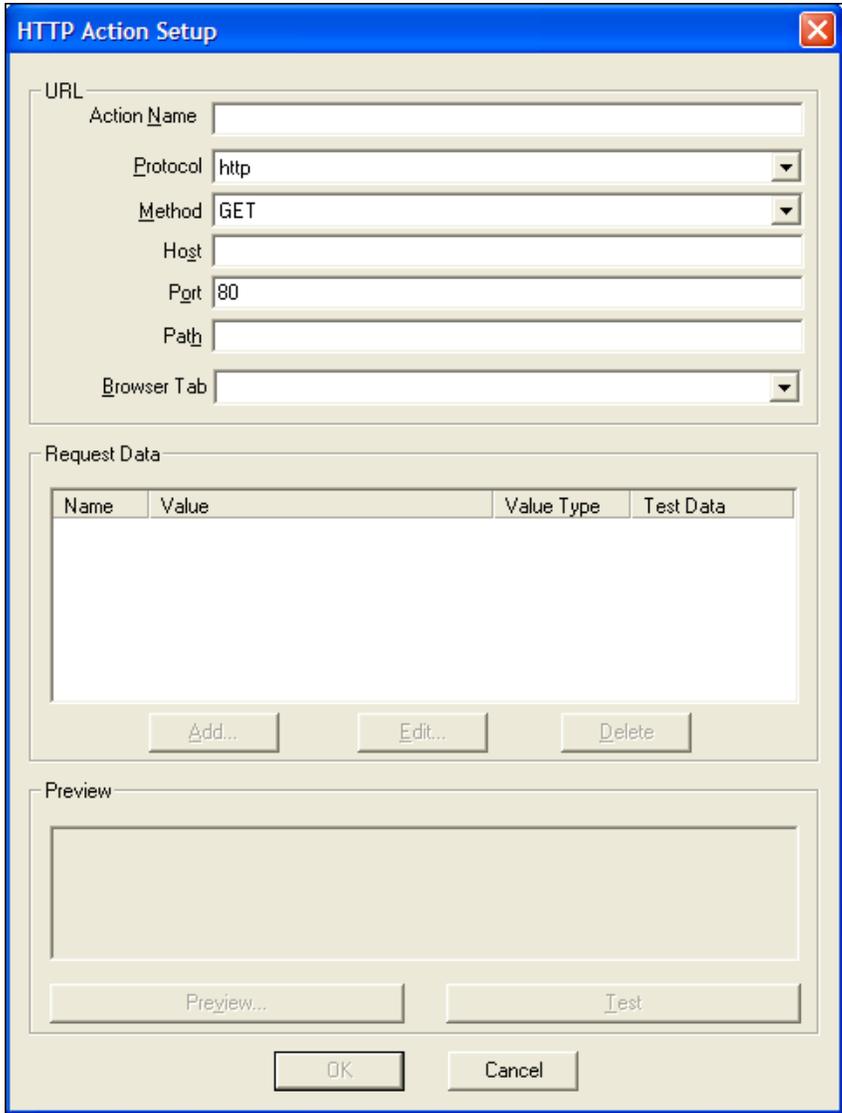
NOTE: Keep in mind that a URL, including arguments, is limited by the HTTP service to a maximum of 2075 characters. If you create an HTTP action that results in a URL longer than that, it will not work correctly.

To set up an HTTP action:

1. Set up a new action. See “Adding a New Action” on page 80. The Select Action window appears.
2. Select the HTTP Action tab, and then click New. The HTTP Actions Setup dialog box appears (Figure 45.).
3. Complete the HTTP Actions Setup dialog box as follows:

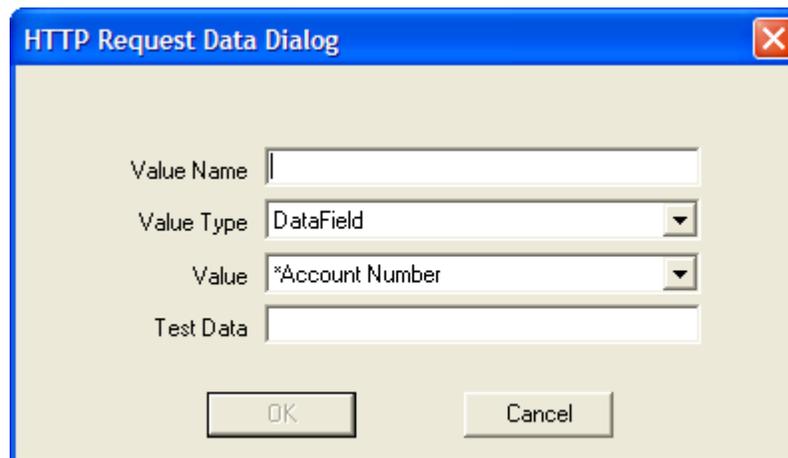
Field	Description
Action Name	Enter a name for the new action.
Protocol	Select the protocol to be used by the browser: http (default) or https.
Method	Select the http method to be used by the browser: GET (default, CAD and CAD-BE agents) or POST (CAD agents only).
Host	Enter the host name or IP address 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.) If the tab you select is removed later, the action will be displayed in the first tab (ordinarily reserved for supervisor page push).

Figure 45. HTTP Actions Setup dialog box



- Click Add to display the HTTP Request Data dialog box (Figure 46). 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 46. HTTP Request Data dialog box



- 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: <ul style="list-style-type: none"> DataField to use an enterprise data variable as the source of the data. This is inserted in the URL following the <name>=<value> format. UserDefined to use a specific string entered in the Value field. This is inserted in the URL following the <name>=<value> format. DataFieldOnly to insert any value selected from the Valuedrop-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.

6. Continue to build your request using the Add, Edit, and Delete buttons as needed.
7. When you have completed building the request, click Preview to view the request. Note that Desktop Work Flow Administrator has added the special characters needed for a valid HTTP request.
 - 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...`
8. 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 listed in [Table 7](#).

Table 7. HTTP request reserved characters

Symbol	Description
&	Ampersand
@	At sign
\	Back slash
^	Carat
:	Colon
,	Comma
\$	Dollar sign
“	Double quote
=	Equal sign

Table 7. HTTP request reserved characters — *Continued*

Symbol	Description
!	Exclamation point
<	Left angle bracket
[Left square bracket
%	Percent
+	Plus
#	Pound sign
?	Question mark
>	Right angle bracket
]	Right square bracket
;	Semicolon
'	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 Desktop Work Flow Administrator(Figure 47).

Figure 47. 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
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 (Figure 48).

Figure 48. Google search information entered in the HTTP Action Setup dialog box

HTTP Action Setup

Action Name: GoogleSearch

URL

Protocol: http

Method: GET

Host: www.google.com

Port: 80

Path:

Browser Tab: HTTP Web Browser Tab 1

Request Data

Name	Value	Value Type	Test Data
ie	UTF-8	UserDefined	
oe	UTF-8	UserDefined	
sourceid	gd	UserDefined	
q	Cisco+Systems	UserDefined	
wwob	0	UserDefined	

Preview

http://www.google.com:80/search?ie=UTF-8&oe=UTF-8&sourceid=gd&q=Cisco%2BSystems&wwob=0

Buttons: Add..., Edit..., Delete, Preview..., Test, OK, Cancel

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 Work Flow 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.

IPC Action

This action is available to Agent Desktop 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:

```
valuenam=value&name=value&name=value...
```

To set up an IPC action:

1. Set up a new action. See [“Adding a New Action” on page 80](#).
The Select Action window appears.
2. Select the IPC Action tab, and then click New.

The IPC Action Setup dialog box appears (Figure 49).

Figure 49. IPC Action Setup dialog box

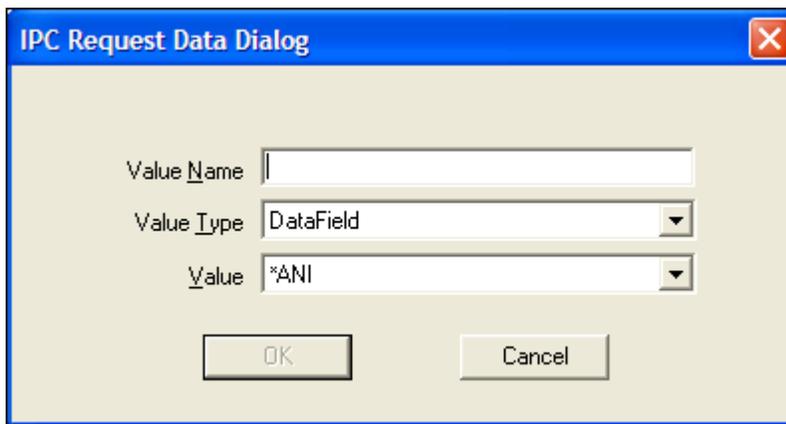
- Complete the IPC Action Setup dialog box as follows:

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.

- Click Add to display the IPC Request Data dialog box (Figure 50).

The fields added with this dialog box make up the query portion of the request.

Figure 50. 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.

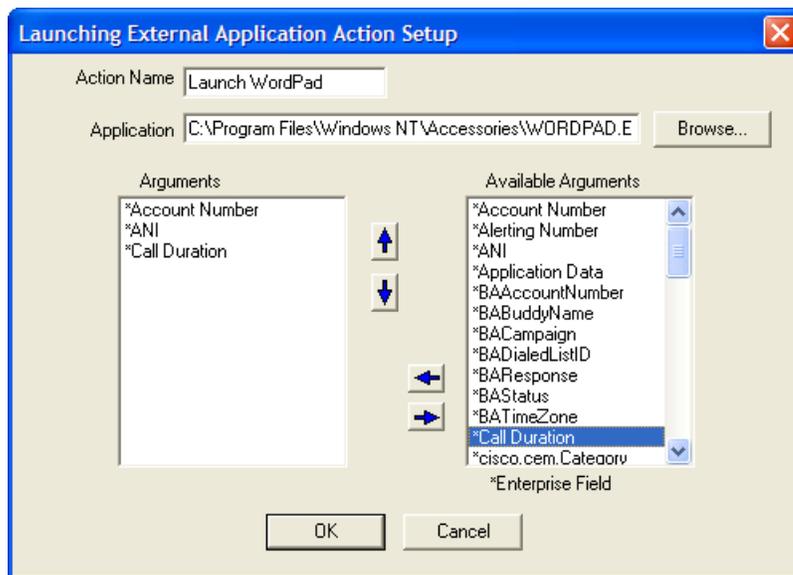
The second method involves passing data fields as arguments. You can pass any valid data field while launching an application. Note that if a launch action takes place on the Startup event, call data may not be present. Empty or blank data fields will contain the string <NULL>.

To set up a *Launch External Application* action:

1. Set up a new action. See ["Adding a New Action" on page 80](#). 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 (Figure 51).

Figure 51. 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.

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.

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:

- 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 can include keystrokes for multiple applications. For example, one macro might 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 might 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 8. Allowed Macro Keystrokes—Keys

Key Type	Key	Macro Notation
Character	0 1 2 3 4 5 6 7 8 9 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 * + ; = , - . / ` [\] '	
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 9. 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. Example: [DELAY] 1000 delays the next macro key or command by 1 second.

Recording Macros

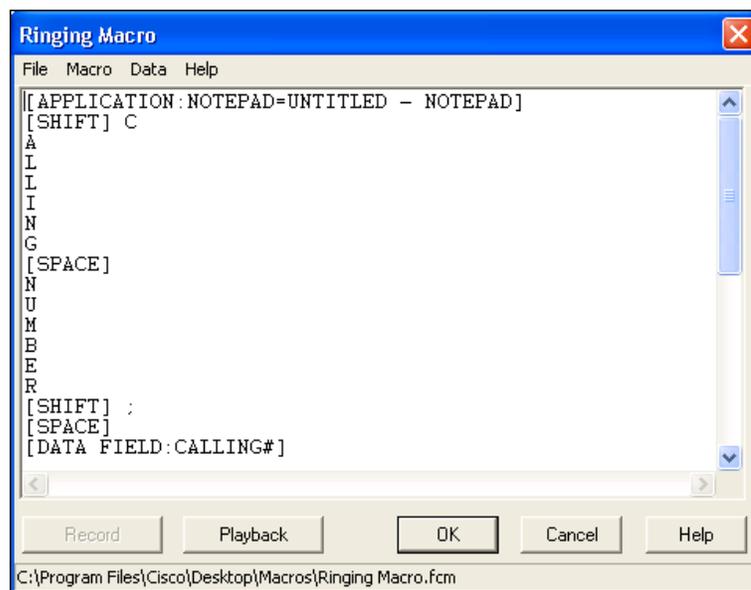
Follow these steps to record a macro.

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 80](#). 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 (Figure 52).

Figure 52. Macro Editor window with a macro script displayed



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 want to insert an Agent Desktop or CAD-BE data field into the macro, press the Pause Macro hot key (the default is F2). The Macro Recorder Suspended dialog box appears (Figure 53).

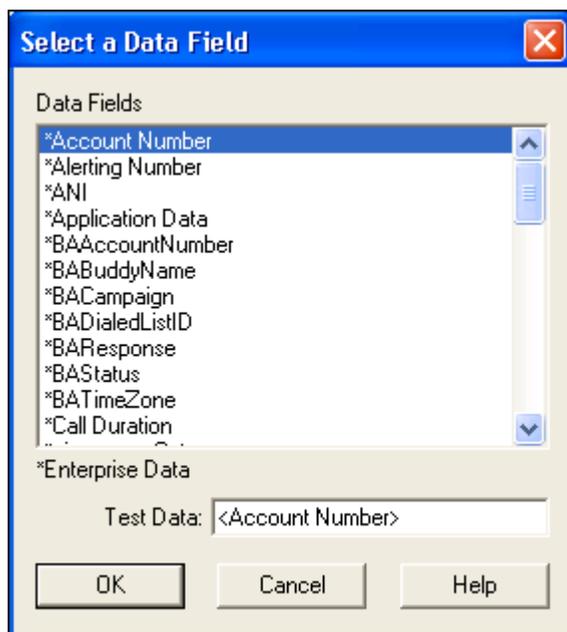
Figure 53. Macro Recorder Suspended dialog box



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.

8. Click Insert Data. The Select a Data Field dialog box appears (Figure 54). See “Data Fields” on page 109 for more information.

Figure 54. 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 54) 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 10. 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 10. Enterprise Data Fields — *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	<p>Outbound Dialer: Two characters indicating the mode and direction of the BA Dialer-initiated call. The first character identifies the call mode:</p> <ul style="list-style-type: none"> • P: Reservation call, Preview mode • C: Customer call • A: Reservation call, callback • Z: Agent-to-agent transfer or conference customer call <p>During a reservation call, the first character is P or A. When a customer call is transferred to an agent, the first character is C.</p> <p>The second character of BASTatus indicates the call direction:</p> <ul style="list-style-type: none"> • O: Outbound • I: Inbound • B: Blended

Table 10. Enterprise Data Fields – Continued

Data Field	Description
*BATimeZone	<p>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 +/-#####.</p> <p>This field's first character is either a positive or negative sign, followed by 5 digits. For example:</p> <ul style="list-style-type: none"> This example indicates that the customer is one hour behind GMT: BATimeZone = -00060 This example indicates that the customer is two hours ahead of GMT: 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... *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 10. Enterprise Data Fields — *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 Agent Desktop or CAD-BE enterprise data pane to a desktop variable or static text of your choosing.

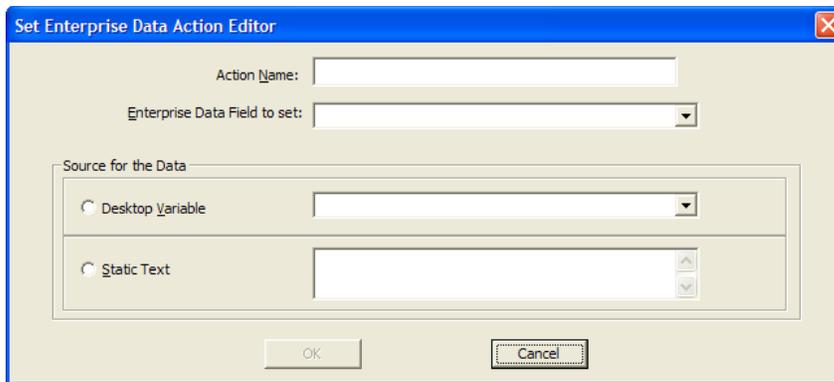
The action is available only for the Ringing and Answered events.

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 80](#). 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 ([Figure 55](#)).

Figure 55. 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. You can choose from among ECC, call, and BA (Cisco Outbound Dialer) variables.
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 for ECC fields is 210 characters, and for call variables, 39 characters.

4. Click OK.

Timer Action

This action is available to Agent Desktop and CAD-BE agents at the Enhanced and Premium levels.

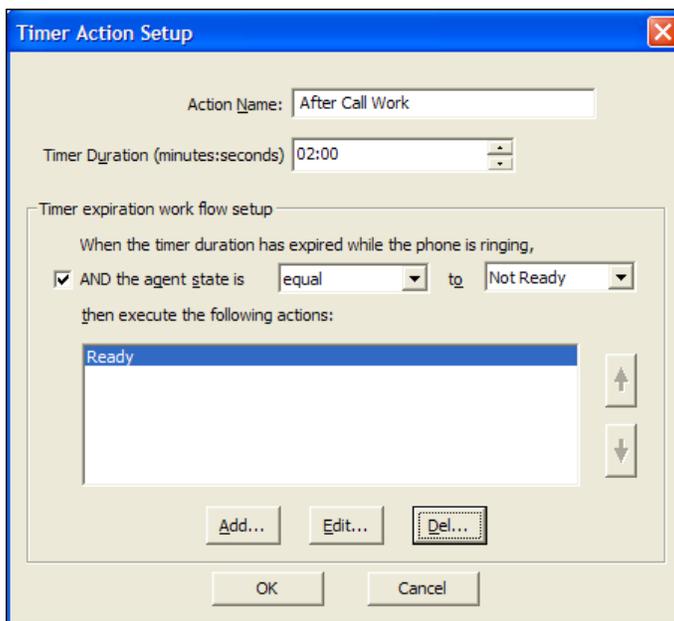
The timer action enables you to trigger Agent State, HTTP, Agent Notification or Set Enterprise Data actions after a certain amount of time has elapsed under specified circumstances.

For instance, you can configure the Timer action to change the agent’s state to Ready if the agent has been in the Work state for 3 minutes.

To set up a Timer action:

1. Set up a new action. See [“Adding a New Action” on page 80](#). The Select Action window appears.
2. Select the Timer Action tab, and then click New. The Timer Action Setup dialog box appears ([Figure 56](#)).

Figure 56. 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.

Field	Description
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. You can choose among the following types of actions:
 - [Agent Notification Action \(page 85\)](#)
 - [Agent State Action \(page 87\)](#)
 - [HTTP Action \(page 89\)](#)
 - [Set Enterprise Data Action \(page 112\)](#)
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. 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 or CAD-BE 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.

To set up a utility action:

1. Set up a new action. See [“Adding a New Action” on page 80](#). The Select Action window appears.

2. Select the Utility Action tab, and then click New. The Utility Action Setup dialog box appears (Figure 57).

Figure 57. 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.

Getting Started with Desktop Administrator

3

Introduction

Desktop Administrator enables you to configure the following CAD elements:

- Services Configuration—enterprise data and silent monitoring and recording
- Personnel—agents
- Cisco Unified Presence Settings
- Agent E-Mail Settings

Accessing Desktop Administrator

You can access Desktop Administrator by either of two methods:

- From the Desktop Work Flow Administrator menu bar, choose Desktop Administrator > Side A. If your system includes redundancy, you can also choose Side B.

- In your web browser, enter Desktop Administrator's URL:

`http://<CCX-server>:6293/teamadmin/main.cda`

where CCX-server is the hostname or IP address of the server that hosts Cisco Unified Contact Center Express.

By default, only a default username is required to log in unless a password has been configured. Password usage by Desktop Work Flow Administrator and Desktop Administrator is linked. See ["Passwords" on page 17](#) for more information.

Only one person at a time can make changes in Desktop Administrator. Until a user logs out or until that user's login times out after 15 minutes of inactivity, other users can only view information.

To log in to Desktop Administrator:

1. Access Desktop Administrator. The Login window appears.
2. By default, the username **admin** is autofilled in the Username field.
 - If a custom password has not been configured in either Desktop Administrator or in Desktop Work Flow Administrator, leave the Password field blank.
 - If a custom password has been configured in either Desktop Administrator or in Desktop Work Flow Administrator, enter that custom password in the Password field.
3. Click Login.

Using the Search Function

Follow these steps to search for one or more records on any Desktop Administrator page that contains the Search function.

NOTE: Searches are not case sensitive. For example, if you type a lowercase letter “s” in a search field, the results will include all items that begin with the lowercase letter “s” and the uppercase letter “S.”

To search for one or more records:

1. Enter your search criteria:
 - If you are searching for a text string, select the field name from the first drop-down list box, a search pattern from the second drop-down list box, and enter a text string in the third box.
 - If you are searching for a checked or cleared check box, select the check box name in the first drop-down list box, and True (checked) or False (cleared) in the second list box.
2. If necessary, complete any of the following actions.
 - If you want to add another criterion to the search query, click +. A new row appears. Repeat step 1 for the new row.
 - If you want to remove the last criterion from the search query, click —. The bottom row is deleted. If you click — and the search query only contains one criterion, no change occurs.
 - If you want to remove all of the criteria from the search query, click Clear Filter. All of the rows except the first row are deleted, and the first row is reset to the default value.
3. When you are done creating your search query, click Find. A list of results that match all of the criteria appears.

Configuring a Password in Desktop Administrator

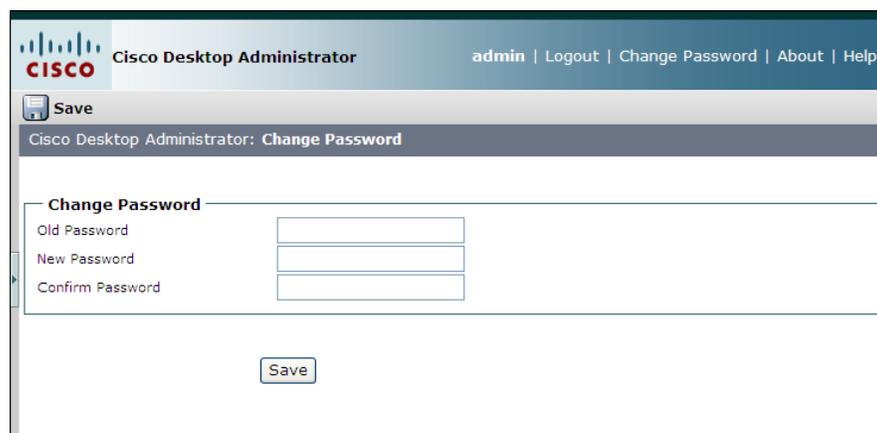
A password is not required to access Desktop Administrator. By default it is not password-protected. However, you can configure a password to protect access to Desktop Administrator.

NOTE: Any password you configure in Desktop Administrator is also the password for Desktop Work Flow Administrator.

To change the default password:

1. In Cisco Desktop Administrator, click Change Password. The Change Password window appears (Figure 58).

Figure 58. Change Password window



The screenshot shows the Cisco Desktop Administrator web interface. At the top, there is a navigation bar with the Cisco logo, the text "Cisco Desktop Administrator", and links for "admin", "Logout", "Change Password", "About", and "Help". Below the navigation bar is a "Save" button. The main content area is titled "Cisco Desktop Administrator: Change Password". It contains a form with three input fields: "Old Password", "New Password", and "Confirm Password". A "Save" button is located at the bottom of the form.

2. In the Old Password field, enter the default password, admin. In the New Password and Confirm Password fields, enter your new password, and then click Save.

Services Configuration

4

Introduction

You can perform the following tasks in the Services Configuration node:

- [Configuring Enterprise Data \(page 126\)](#)
- [Configuring Desktop and Server Monitoring and Recording \(page 134\)](#)
- [Synchronizing Directory Services \(page 139\)](#)

Configuring Enterprise Data

The Enterprise Data node has two pages, the Fields page and the Layout List page.

You can perform the following tasks on the Fields page:

- [Creating a Custom Field \(page 127\)](#)
- [Editing a Field \(page 129\)](#)
- [Deleting a Field \(page 129\)](#)

You can perform the following tasks on the Layout List page:

- [Creating a Custom Layout \(page 131\)](#)
- [Copying a Layout \(page 132\)](#)
- [Editing a Layout \(page 133\)](#)
- [Deleting a Layout \(page 133\)](#)

Enterprise data is information associated with an incoming call. It is displayed in the Contact Management pane of Agent Desktop and CAD-BE, and on the Caller Data screen in IP Phone Agent.

Fields

Enterprise data fields and layouts are configured under the Enterprise Data node.

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

The Field List displays both the predefined fields available for your switch type and the custom fields you create.

- Predefined fields have index numbers of 159–255. Only the display name of these fields is editable, with the exception of field 252, whose display name and field name can be edited. Note that when you click the Select All button, these fields are not selected.
- Custom fields have index numbers of 0–158, and are editable.

Creating a Custom Field

To create a custom field:

1. Choose Services Configuration > Enterprise Data > Fields. The Field List page appears (Figure 59).

Figure 59. Field List page

Selected	Field Name	Display Name	Expanded Call Context (ECC)	Field Index
<input type="checkbox"/>	ANI	Yes	No	255
<input type="checkbox"/>	BAAccountNumber	BAAccountNumber	Scalar	200
<input type="checkbox"/>	BABuddyName	Nope	Scalar	201
<input type="checkbox"/>	BACampaign	BACampaign	Scalar	202
<input type="checkbox"/>	BACustomerNumber	BACustomerNumber	Scalar	207
<input type="checkbox"/>	BADialedListID	BADialedListID	Scalar	203
<input type="checkbox"/>	BAResponse	BAResponse	Scalar	204
<input type="checkbox"/>	BASTatus	BASTatus	Scalar	205
<input type="checkbox"/>	BATimeZone	BATimeZone	Scalar	206
<input checked="" type="checkbox"/>	BVTest	BV Test	Scalar	0

2. Click Add New. The Add New page appears(Figure 60).

Figure 60. Add New page

3. Complete the fields as described below.

Field	Description
Field Name	<p>The variable's field name. The field name and value can be up to 29 characters long and can contain any character except:</p> <p>- ` ~ ! @ # \$ % ^ & * () - + = [] { < > , / ? \ \ : ; ' " and space</p> <p>If you use disallowed characters in the field name or value, the enterprise data field might not display in the IP Phone Agent service.</p>
Display Name	<p>The name that appears in desktop applications. The display name can be up to 29 characters long and can contain any character except:</p> <p>- ` ~ ! @ # \$ % ^ & * () - + = [] { < > , / ? \ \ : ; ' "</p>
Expanded Call Context (ECC)	<p>If the field is an ECC variable, select the appropriate check box:</p> <ul style="list-style-type: none"> • Scalar: A scalar ECC variable is one that stores a single piece of data. • Array: An array ECC variable is one that stores multiple pieces of data. <p>If you selected array, choose the number of elements in the array from the number field drop-down list.</p>

Field	Description
Field Index	<p>Choose a field index number from the drop-down list. The field automatically shows the next available number.</p> <p>If you selected Array in the ECC field, the Field Index field is automatically disabled. The system will assign indexes to each element in the array.</p>

4. Click Save to save your changes. The field is added.
5. When you are finished adding fields, click Return to Field list.

Editing a Field

To edit a field:

1. Choose Services Configuration > Enterprise Data > Fields. The Field List page appears ([Figure 59](#)).
2. If necessary, search for the field you want to edit. For instructions, see "[Using the Search Function](#)" on page 121.
3. Select the field by clicking its name. The Field Information page for that field appears.
4. Edit the field information as desired.
 - For predefined fields, you can edit only the display name.
 - For custom fields, you can edit all field information.

Note that if you are editing an array field, the field index numbers assigned to the array elements are listed, separated by commas.

5. When you are finished making changes, click Save, then click Return to Field list.

Deleting a Field

You cannot delete a predefined field. You can delete only custom fields.

If the field selected for deletion is the only field associated with a custom layout, you cannot delete it until another field is added to the custom layout, or the layout itself will be deleted. Either delete the custom layout, or add another field to it and then delete the field you originally intended to delete.

If the field selected for deletion is the only field associated with a default layout, you cannot delete it until another field is added to the default layout. Default layouts cannot be deleted, and must always contain at least one field.

To delete a custom field:

1. Choose Services Configuration > Enterprise Data > Fields. The Field List page appears ([Figure 59](#)).
2. If necessary, search for the field you want to delete. For instructions, see ["Using the Search Function" on page 121](#).
3. Select the check box corresponding to one or more custom fields, then click Delete Selected. The selected fields are no longer displayed in the Field list. However, the actual deletion is not performed until you click Save.

Layouts

The Layout List displays the field layouts available for use in the agent applications. Each layout can contain up to 16 fields chosen from the Field List.

There is one default layout, named “default.” This is the basic layout for normal operations.

Unified CCX automatically uses the default layout for normal call activity. If you want to use a custom layout, a custom script to pop that layout must be created.

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

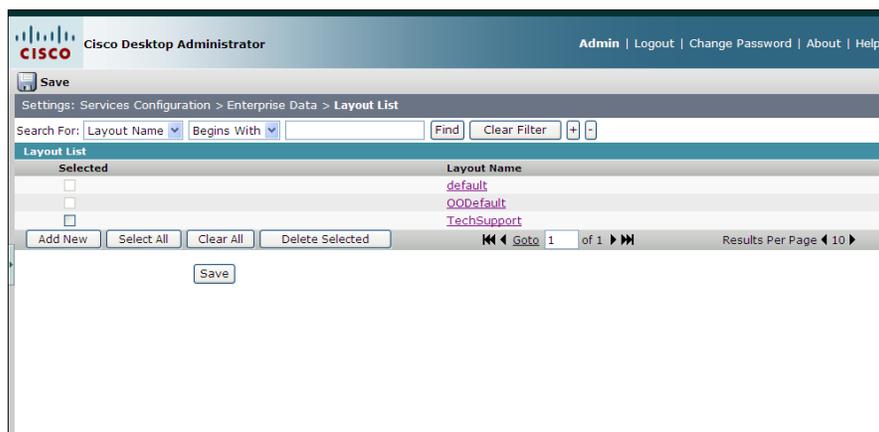
You can create up to 14 custom layouts in addition to the default layouts. Once the limit of custom layouts is reached, the Add New and Copy buttons are disabled.

Creating a Custom Layout

To create a custom layout:

1. Choose Services Configuration > Enterprise Data > Layouts. The Layout List page appears (Figure 61).

Figure 61. Layout List page



- Click Add New. The Add New page appears (Figure 60).

Figure 62. Add New page

- Complete the fields as described below.

Field	Description
Layout Name	The layout name must be unique and be no longer than 16 characters.
Available	The fields available to be used in the layout. The list shows the field's index number and display name.
Selected	The fields that have been selected to be in the layout. The list shows the field's index number and display name.

- Use the arrow buttons to move selected fields between the Available and Selected panes. Use the double arrow buttons to move all fields from one pane to the other. Use the Up and Down buttons to change the order of the fields in the Selected pane.
- Click Save to save the custom layout. The layout is added to the Layouts list page.
- When you are finished adding custom layouts, click Return to Layout list.

Copying a Layout

- Choose Services Configuration > Enterprise Data > Layouts. The Layout List page appears (Figure 61).

2. Select the layout you want to copy. The selected layout list page appears.
3. Click Copy.
4. Enter a name for the new layout and edit the fields as needed.
5. Click Save to save the copied layout. The layout is added to the Layouts list page.
6. If desired, repeat steps 4 and 5 to create more new layouts.
7. When you are finished, click Return to Layout list.

Editing a Layout

1. Choose Services Configuration > Enterprise Data > Layouts. The Layout List page appears ([Figure 61](#)).
2. Select the layout you want to edit. The selected layout list page appears.
3. Edit the layout as needed.
4. Click Save to save the edited layout.
5. When you are finished, click Return to Layout list.

Deleting a Layout

You cannot delete a default layout. You can delete only custom layouts.

To delete a custom layout:

1. Choose Services Configuration > Enterprise Data > Layouts. The Layout List page appears ([Figure 61](#)).
2. Select the check box corresponding to one or more custom layouts, then click Delete Selected. The selected layouts are no longer displayed in the Layout list. However, the actual deletion is not performed until you click Save.

Configuring Desktop and Server Monitoring and Recording

You can perform the following tasks on the VoIP Monitoring Device page of the Silent Monitoring & Recording node:

- [Enabling Desktop Monitoring \(page 134\)](#)
- [Configuring a Default Monitor Service \(page 135\)](#)
- [Assigning Phone Devices to a Specific VoIP Monitor Service \(page 136\)](#)
- [Removing a VoIP Monitor or Recording & Playback Service from Directory Services \(page 136\)](#)

The VoIP Monitoring Device page displays all phone devices configured in Unified CM.

If a phone is configured for extension mobility and a static extension is set up, the Extension field displays the static extension assigned to the device's MAC address. If no static extension is set up, the Extension field is blank.

NOTE: Assign a static extension to an extension mobility device to make administration easier.

Enabling Desktop Monitoring

When desktop monitoring is 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 or through a soft phone.

By default, desktop monitoring is enabled for all phone devices.

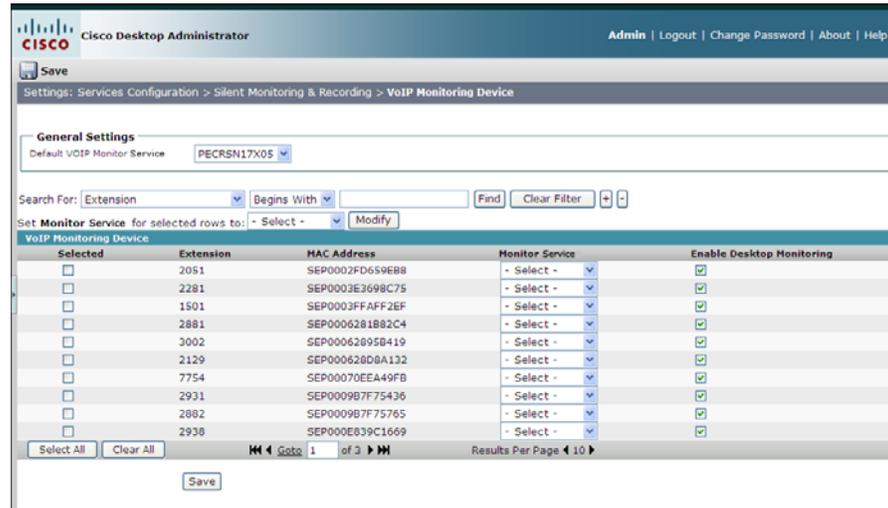
NOTE: Desktop monitoring does not function with some NIC cards that are unable to detect both voice packets and data packets in a multiple VLAN environment. For more information on this issue, and suggested work-arounds, see the *Cisco CAD Installation Guide*.

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 Agent Desktop is started.

To enable desktop monitoring:

1. Choose Services Configuration > Silent Monitoring & Recording > VoIP Monitoring Device. The VoIP Monitoring Device page appears (Figure 63).

Figure 63. VoIP Monitoring Device page



2. If necessary, search for the phone device for which you want to enable desktop monitoring. For instructions, see "Using the Search Function" on page 121.
3. Select the Enable Desktop Monitoring check box for the phone device and click Save. Desktop monitoring is enabled for that device.

Configuring a Default Monitor Service

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

NOTE: 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 service. The VoIP Monitor service assumes that each device is assigned to it as the only available monitor service.

Modifications you make on the VoIP Monitoring Device page go into effect immediately after you save your changes.

To configure a default VoIP Monitor service:

1. Choose Services Configuration > Silent Monitoring & Recording > VoIP Monitoring Device. The VoIP Monitoring Device page appears ([Figure 63](#)).
2. From the Default VoIP Monitor Service drop-down list, select the VoIP Monitor service you want to be the default service.
3. Click Save.

Assigning Phone Devices to a Specific VoIP Monitor Service

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

1. Choose Services Configuration > Silent Monitoring & Recording > VoIP Monitoring Device. The VoIP Monitoring Device page appears ([Figure 63](#)).
2. If necessary, search for the phone device you want to assign to a VoIP Monitor server. For instructions, see "[Using the Search Function](#)" on [page 121](#).
3. Select the Selected check box for the device, then select the desired VoIP Monitor service from the Monitor Service drop-down list.
 - To assign multiple devices, select the Selected check boxes for each device, then select the desired VoIP Monitor service from the drop-down list field above the list of devices, and then click Modify.
4. Click Save. The device or devices are now assigned to the specific VoIP Monitor service.

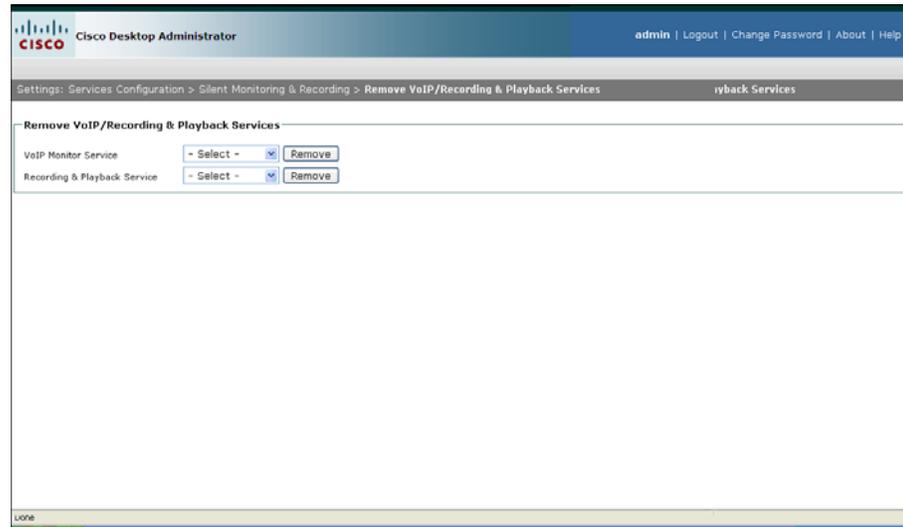
Removing a VoIP Monitor or Recording & Playback Service from Directory Services

The Remove VoIP/Recording/Playback Services page enables you to remove a VoIP Monitor service or Recording & Playback service from Directory Services and unregister it from the LRM service.

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

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

1. Choose Services Configuration > Silent Monitoring & Recording > Remove VoIP/Recording & Playback Services. The Remove VoIP/Recording & Playback Services page appears (Figure 64).

Figure 64. Remove VoIP/Recording & Playback Services page

2. From the appropriate drop-down list, select the service to be removed, and then click Remove. The service is removed from Directory Services.

When you remove a VoIP Monitor service from Directory Services, it also removes that service from the list of available VoIP Monitor services on the VoIP Monitoring Device page as well (Figure 63). This can result in devices becoming unmonitored.

If the selected VoIP Monitor service has been set as the default service, you are notified that this situation exists when you click Remove. When you click OK to confirm that you want to remove the default VoIP Monitor service, any device that was monitored by the default service will now be unmonitored. It is recommended that you select another VoIP Monitor service to be the default. See "[Configuring a Default Monitor Service](#)" on page 135 for more information.

If the VoIP Monitor service was selected to monitor specific devices, when you click OK the following can occur:

- The devices will be monitored by the default VoIP Monitor service (if one is configured)
- The devices will be monitored by desktop monitoring, if the Enable Desktop Monitoring checkbox is selected for each device
- The devices will be unmonitored

If devices become unmonitored, search for them on the VoIP Monitor Devices page and reassign them to the default monitor, a specific monitor, or enable desktop monitoring.

To restore a removed service to Directory Services:

1. Start the removed service.
 - If you uninstalled the service, reinstall it. See the *Cisco CAD Installation Guide* for information on installing CAD services.
 - If you have not uninstalled the service, stop the service and then restart it, using the Windows Services utility in Control Panel.
2. In Desktop Administrator, click the VoIP Monitoring Device node again. The refreshed page shows that the service is restored to the list of available services.

Synchronizing Directory Services

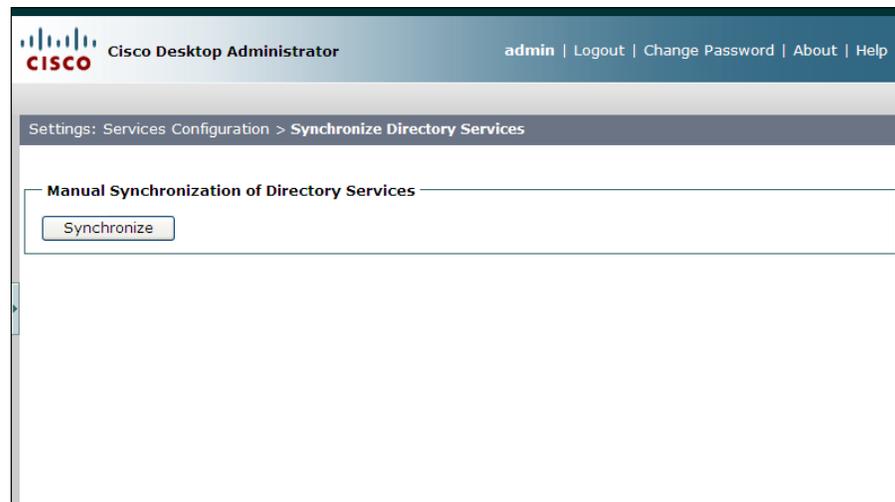
The Directory Services database should be synchronized with the master Unified CCX agent database. The databases are synced automatically whenever the master Unified CCX database changes. However, you can manually sync them with the Synchronize Directory Services command.

NOTE: You can also synchronize Directory Services manually from Work Flow Administrator. See ["Synchronizing Directory Services" on page 29](#) for more information.

To synchronize the databases manually:

1. Choose Services Configuration > Synchronize Directory Services. The Synchronize Directory Services page appears ([Figure 65](#)).

Figure 65. Synchronize Directory Services page



2. Click Synchronize. The databases are synchronized, and you will see the message, "Transaction successful" when the process is complete.

Personnel Configuration

5

Introduction

Personnel displays a list of agents configured in Unified CCX. This node enables you to view information about agents and assign agent to work flow groups.

Configuring Agents

You can perform the following tasks from the Agents page of the Personnel node:

- [Changing an Agent's Work Flow Group \(page 142\)](#)

Changing an Agent's Work Flow Group

1. Choose Personnel > Agents. The Agents List page appears ([Figure 66](#)).

Figure 66. Agents List page

The screenshot shows the 'Agents List' page in the Cisco Desktop Administrator interface. The page title is 'Cisco Desktop Administrator' with navigation links for 'Admin', 'Logout', 'Change Password', 'About', and 'Help'. Below the title is a 'Save' button and a breadcrumb trail 'Settings: Personnel > Agents'. A search bar is present with 'Search For: Last Name' and 'Begins With' dropdowns, and buttons for 'Find', 'Clear Filter', '+', and '-'. The main content is a table with the following data:

Selected	Last Name	First Name	Login ID	Team	Workflow Group
<input type="checkbox"/>	agent		bvagent	Default	default
<input type="checkbox"/>	Almquist		2281	Default	default
<input type="checkbox"/>	Baker	Scott	bakers	Default	default
<input type="checkbox"/>	Bendickson	Mike	bendicm	Default	default
<input type="checkbox"/>	Bonser	Boof	bonserb	Default	default
<input type="checkbox"/>	Brezinski	Tom	brezint	Default	default
<input type="checkbox"/>	Brezinski2Brezinski2	Tom2	brezint2	Default	default
<input type="checkbox"/>	cupsAgentMisra		5153	Default	default
<input type="checkbox"/>	cupsAgentSharmista	Misra	5152	Default	default
<input type="checkbox"/>	cupsAgentSm		5159	Default	default

At the bottom of the table, there are buttons for 'Select All' and 'Clear All', a pagination control showing 'Goto 1 of 7', and 'Results Per Page 10'. A 'Save' button is located below the table.

2. If necessary, search for the agent you want to assign to a work flow group. For instructions, see ["Using the Search Function" on page 121](#).
3. Select the Selected check box for the agent, then select the desired work flow group from the Work Flow Group drop-down list field.
 - To assign multiple agents to a work flow group, select the Selected check boxes for each agent, then select the desired work flow group from the drop-down list field above the list of agents, and then click Modify.
4. Click Save. The agent or agents are now assigned to the specific work flow group.

NOTE: If a recently-added work flow group does not appear in the drop-down list, or a recently-deleted work flow group does appear in the drop-down list, refresh the page by clicking the Personnel > Agents link again.

Configuring Agent E-Mail

6

Introduction

Agent E-Mail can be configured only if you have the Premium package. The Agent E-Mail Settings node is not displayed if you have the Standard or Enhanced package.

Prerequisites

Before the Agent E-Mail feature can function, there are settings that must be configured in Microsoft Exchange and Cisco Unified CCX Application Administration.

- Microsoft Exchange: Set up the Agent E-Mail user account, distribution lists, and mailboxes
- Unified CCX Application Administration: Set up CSQs and skills

See “Configuring Agent E-Mail” in the *Cisco CAD Installation Guide* for information on setting up these prerequisites, and for information on how the Agent E-Mail feature manages customer e-mails and agent replies to those e-mails.

Overview

Configuring Agent E-Mail in Desktop Administrator consists of the following tasks.

- [Configuring Global Settings \(page 145\)](#)
- [Configuring Contact Service Queue Settings \(page 148\)](#)
- [Configuring Templates \(page 150\)](#)

Customers can send e-mail to e-mail addresses assigned to specific customer service queues. The CSQs funnel the customer e-mails to agents who service those CSQs.

Agents put themselves in the E-Mail Ready state to receive customer e-mail. Going into the E-Mail Ready state signals Agent Desktop to deliver the configured number of customer e-mails to the agent’s desktop. Depending on how it is configured, an agent

can work on up to 5 customer e-mails at a time. The agent can also take the following actions:

- Re-queue the e-mail if the agent wants it to be handled by another agent in the same CSQ.
- Transfer the e-mail to a different, more appropriate CSQ.
- Save the e-mail as a draft so it can be worked on at a later time.
- Delete the e-mail, which actually transfers the e-mail to a specific e-mail address where supervisors can evaluate it for true deletion or for re-queueing if it needs to be handled.
- Send their response to the customer. Their response can include boilerplate text inserted from templates and attached files of any format.

The system can be configured to send an automated response to every customer e-mail, retention periods for keeping e-mail in the e-mail store, and other settings.

Configuring Global Settings

You can configure the following settings on the Global Settings page of the Agent E-Mail Settings node:

- IMAP server information
- SMTP server information
- Other global settings

To configure global e-mail settings:

1. Choose Agent E-Mail Settings > Global Settings. The Global Settings page appears (Figure 67).

Figure 67. Global Settings page

The screenshot shows the 'Global Settings' page in the Cisco Desktop Administrator interface. At the top, there's a navigation bar with 'Cisco Desktop Administrator' and user options like 'admin | Logout | Change Password | About | Help'. Below that is a 'Save' button and the breadcrumb 'Settings: Agent E-Mail Settings > Global Settings'. The main content area is titled 'Mail Server Settings' and includes a note: 'NOTE: After changing the IMAP or SMTP host name/IP address, all open instances of Agent Desktop must be restarted for the change to take effect. If not restarted, e-mail errors might occur.' There are two server configuration sections: 'IMAP Server' and 'SMTP Server'. Each has fields for 'Host/IP Address' (10.192.252.18), 'Port' (143), 'User Name' (userdemo), and 'Password' (masked with asterisks). Below these is an 'Other Settings' section with a dropdown menu set to '5', and several input fields for retention periods (30 days), checkboxes for 'Enable Outbound Attachments' and 'Enable Re-queue of E-mails on Agent Logout', and more input fields for attachment size (10 MB) and forwarding address. A 'Save' button is located at the bottom of the form.

2. Complete the fields as described below.

Field	Description
IMAP Server	
Host/IP Address	The hostname or IP address of the Internet Message Access Protocol (IMAP) server.

Field	Description
Port	The port used to access the IMAP server.
User Name	User name required to gain access to the IMAP server. NOTE: If the account you are using to log in to IMAP is an NT domain account, the login must be specified as NTDOMAIN/NTACCOUNT/ALIAS. For example, if your e-mail address is Jane.Doe@mydomain.com and your Windows NT login name is jdoe, then your NT domain name is mydomain and your Microsoft Exchange mailbox name is Jane.Doe. You would use the username mydomain/jdoe/Jane.Doe when logging in to the IMAP server.
Password	Password required to gain access to the IMAP server. NOTE: Supported authentication mechanisms are Basic Authentication (plainTextLogin) and Secure Password Authentication (SecureLogin) with SSL encryption.
SMTP Server	
Host/IP Address	The hostname or IP address of the Simple Mail Transfer Protocol (SMTP) server.
Port	The port used to access the SMTP server.
User Name	User name required to gain access to the SMTP server.
Password	Password required to gain access to the SMTP server. NOTE: Supported authentication mechanisms are Open Relay and Basic Authentication over non-encrypted connections. SSL/TLS (Secure Socket Layer/Transport Layer Security) is not supported.
Other Settings	
Maximum Number of E-Mails on Agent Desktop	The maximum number of e-mails an agent can have on the desktop at any one time. Minimum is 1, maximum is 5. The e-mails can be in draft or in process.
Retention Period for E-Mails Sent and Handled (Days)	The number of days that sent and handled e-mails are retained in the mail store. After the time period is up, the sent and handled e-mails are permanently deleted from the mail store.

Field	Description
Retention Period for E-Mails Pending Delete and System Status (Days)	The number of days that pending delete and system status e-mails are retained in the mail store. After the time period is up, the e-mails are permanently deleted from the mail store.
Enable Outbound Attachments	Select this check box to allow agents to attach files to outgoing e-mails. The files can be of any format allowed by the mail server.
Enable Requeue of E-Mails on Agent Logout	Select this check box to requeue all e-mails assigned to an agent to the same CSQ when the agent logs out or closes Agent Desktop so that other agents in the Ready state can work on them. The agent will lose any drafts in progress at the time of the logout. NOTE: In the event of a failover, even though the agent is automatically logged out of Agent Desktop, the agent's e-mails will not be requeued if this option is enabled. The agent will be able to continue working on the e-mails after failover.
Maximum Outbound Attachment Size (MB)	The maximum size of a file, in MB, that agents can attach to an outgoing e-mail. The default value is 10 MB, and the maximum allowed size is 50 MB. NOTE: This value must not exceed the maximum outbound attachment size limit set in the Microsoft Exchange Server, if that is less than 50 MB.
Forwarding Address for delete E-Mails	Optional. An external e-mail address to which all agent-deleted e-mails are sent. An administrator or supervisor can then review the deleted e-mails using a third-part e-mail client and determine if they should be re-queued or permanently deleted.

3. Click Save to save your changes.

Configuring Contact Service Queue Settings

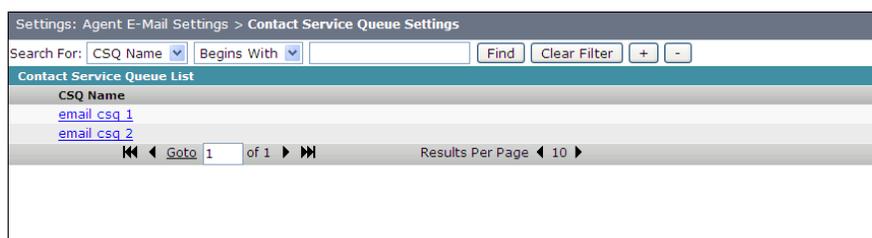
Use the Contact Service Queue Settings page to configure how e-mail that is sent to specific CSQs is handled.

Finding a CSQ

To find a specific CSQ:

1. Choose Agent E-Mail Settings > Contact Service Queue Settings. The Contact Service Queue List page appears (Figure 68). This page contains a list of all the E-Mail CSQs configure in Unified CCX.

Figure 68. Contact Service Queue List page

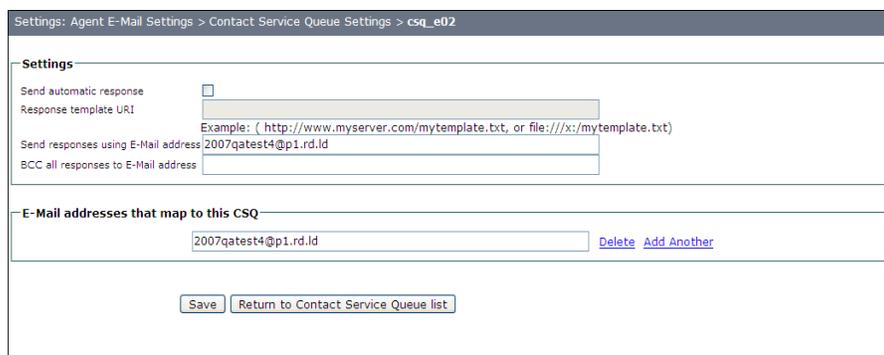


2. If necessary, search for the contact service queue you want to edit. For instructions, see "Using the Search Function" on page 121.

Configuring a CSQ

1. When you have found the contact service queue you want to configure, click its name. The settings page for the selected contact service queue appears.

Figure 69. Contact Service Queue Settings page



2. Complete the fields as described below.

Field	Description
Settings	
Send Automatic Response	Select this check box if you want to send an automated response to all who send an e-mail to this CSQ. Note that when sending a single e-mail to multiple addresses that are mapped to multiple e-mail CSQs, only one of the CSQs will get the e-mail, and therefore only the single auto-response will be sent if configured for that CSQ.
Response Template URI	The Uniform Resource Indicator (URI) of the automated response. This field is enabled only if you select Send Automatic Response. URIs should follow either of these formats: <ul style="list-style-type: none"> • http://www.myserver.com/mytemplate.txt • file:///x:/mytemplate.txt File URIs must be accessible from the CAD server(s) and is limited to a maximum of 64 characters.
Send responses using E-Mail address	The e-mail address from which both agent and automated responses are sent.
BCC all responses to E-Mail address	The blind carbon copy (BCC) e-mail address to which all agent responses to customer e-mail is sent. NOTE: CAD will not route e-mail based on an address in the BCC field. The CSQ e-mail address must be in the TO field in order for e-mail to be routed correctly.
E-Mail addresses that map to this CSQ	
	The one or more e-mail addresses that map to the contact service queue. E-mail addresses are case sensitive. Any e-mail sent to these addresses is routed to agents assigned to the CSQ. These e-mail addresses are the addresses of distribution groups set up in Active Directory, each of which contains only one member, the e-mail address set up as the Agent E-Mail user in Active Directory. See the <i>Cisco CAD Installation Guide</i> for information on setting up the user and distribution groups.

3. Click Save to save your changes.

Configuring Templates

Templates are text files that agents can insert into their responses to customer e-mails. They enable agents to answer common e-mail questions and problems with consistent and accurate answers. You can add up to 50 templates for agents to use.

Use the Templates page on the Agent E-Mail Settings node to complete the following tasks.

- [Adding a Template \(page 150\)](#)
-
- [Choose Agent E-Mail Settings > Templates. The Template List page appears \(Figure 70\). \(page 152\)](#)

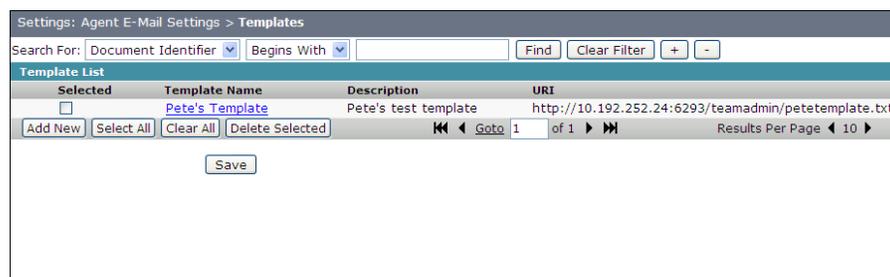
NOTE: You must have access to the Unified CCX server in order to create a template URI.

Adding a Template

To add a template:

1. Choose Agent E-Mail Settings > Templates. The Template List page appears ([Figure 70](#)).

Figure 70. Template List page



2. Click Add New. The Add New page appears (Figure 71).

Figure 71. Add New page

3. Complete the fields as described below.

Field	Description
Template Name	The name that identifies the template. Maximum length = 64 characters.
Description	A description of the template. Maximum length = 64 characters.
URI	<p>The Uniform Resource Indicator of the template. Maximum length = 64 characters. The URI must be accessible from all agent desktops that use the Agent E-Mail feature. The URI can follow these formats:</p> <ul style="list-style-type: none"> • http://www.myserver.com/mytemplate.txt This protocol is used for webserver files. • file:///x:/templates/mytemplates.txt This protocol is used only when the network share is mapped to the same drive letter on all agent desktops. • file:///fileServer/share/templates/mytemplate.txt This protocol is used when the network share is not mapped to the same drive letter on all agent desktops. <p>Note: URIs using the file:/// or file:/// protocols are not validated. You must ensure that the correct path is entered. URI validation for the http:// protocol is performed.</p>

4. Click Save to save your changes. The template is added to the Template List.

Copying a Template

You can copy the information of an existing template and then customize that information for a new template. You might want to do this if the name, description, and/or URI of a new template is very similar to the name, description, and/or URI of an existing template.

To copy a template:

1. Choose Agent E-Mail Settings > Templates. The Template List page appears ([Figure 70](#)).
2. If necessary, search for the template you want to copy. For instructions, see "[Using the Search Function](#)" on page 121.
3. Select the template you want to copy. The Template Information page appears.
4. Click Copy. The Template Information page now shows the template name as "Copy of <original template name>" and the description as "Copy of <original template description>". The original template's URI is also displayed.
5. Customize the template information fields to be appropriate for the new template, and then click Save. The new template is now listed in the Template List page.

Deleting a Template

To delete a template:

1. Choose Agent E-Mail Settings > Templates. The Template List page appears. ([Figure 70](#))
2. If necessary, search for the template you want to delete. For instructions, see "[Using the Search Function](#)" on page 121.
3. Select the check box corresponding to one or more templates, then click Delete Selected. The selected templates are no longer displayed in the Template list. However, the actual deletion is not performed until you click Save.

Index

A

- Actions 78
 - adding a new action 80
 - availability 79
 - deleting 81
 - editing 81
 - importing and exporting 81
 - types
 - agent notification 85
 - agent state 87
 - delay 89
 - HTTP 89
 - IPC 97
 - launch external application 99
 - run macro 101
 - set enterprise data 112
 - timer 114
 - utility 115
- Agent E-Mail
 - global settings 145
 - introduction 143
- Agent management work flows
 - general procedure 74
 - overview 73
 - setting up CAD activity and agent state work flows 75
 - setting up time of day work flows 75
- Agents
 - changing work flow group assignment 142
 - configuring 142
- Assigning phones to a VoIP monitor service 136
- Automated updates 13
- Automatic state changes
 - enabling/disabling 42

B

- Browser Setup 58

C

- CAD Configuration Setup utility 20
 - CAD-BE Servers step 23
 - Services Configuration step 25
 - SNMP Configuration step 27
 - Terminal Services step 26
 - VoIP Monitor Service step 24
- CAD-BE Servers step window 23
- Contact Service Queues 148
 - configuring 148
 - finding 148

D

- Data fields
 - configuring 55
 - renaming 56
- Desktop Administrator
 - accessing the web application 120
 - automated updates 13
 - feature levels 10
 - introduction 9
 - logging in 120
 - related documentation 10
 - what's new 10
- Desktop and Server Monitoring and Recording 134
 - enabling 134
- Desktop monitoring
 - enabling 134
- Desktop Work Flow Administrator
 - interface 14
 - starting 12
 - toolbar 14

E

- Enterprise Data

- configuring 126
- F**
- Fields 127
 - creating custom field 127
 - deleting 129
 - editing 129
- H**
- High priority chat messages 115
- I**
- IPC receive events
 - IPC Agent Notification action 63
 - IPC High Priority Chat action 62
 - IPC Make Call action 62
 - IPC Record action 63
 - IPC Set Variable action 64
- L**
- Layouts 131
 - copying 132
 - creating a custom layout 131
 - deleting 133
 - editing 133
- M**
- Macro actions 101
 - allowed keystrokes 104
 - inserting data fields 108, 109
 - recording a macro 105
 - recording tips 102
- Monitor service
 - assigning phones to 136
 - configuring default 135
 - removing 136
- P**
- Passwords 17
 - client applications 19
 - Desktop Administrator 122
 - Desktop Work Flow Administrator 17
- R**
- Reason codes 33
- Record/Monitor notification 43
- Remote Access 60
- Removing VoIP Monitor/Recording & Playback services 136
- S**
- Searching Desktop Administrator 121
- Services Configuration step window 25
- Show Data Fields 55
- Show duration 56
- SNMP Configuration step window 27
- Starting Desktop Work Flow Administrator 12
- Synchronizing Directory Services 29
- T**
- Templates 150
 - adding 150
 - deleting 152
- Terminal Services step window 26
- Toolbar 51
 - associating actions with task buttons 52
 - changing button hints 53
 - customizing buttons 53
 - Desktop Work Flow Administrator 14
- U**
- User Interface window 51
 - Browser Setup tab 58
 - Miscellaneous tab 57
 - Remote Access tab 60
 - Show Data Fields tab 55
 - Toolbar tab 51
- User privileges in Windows XP and Vista 16
- V**
- Voice contact work flows 65
 - data field conditions 69
 - deleting 72
 - modifying 71
 - overview 66
 - setting up a new work flow 68
 - voice contact classification 66
 - wild card searches 71
- VoIP Monitor Service step window 24

W

Wild card searches 71

Wrap-up data 38

- assigning global 41

- assigning work flow 41

- creating descriptions 39

- deleting descriptions 41

- editing descriptions 40

- enabling/disabling 41

