



## **Cisco Unified Workforce Optimization**

Quality Management CAD Integration Guide 8.5  
June 2011

### **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.

Cisco and the Cisco Logo are trademarks of Cisco Systems, Inc. and/or its affiliates in the U.S. and other countries. A listing of Cisco's trademarks can be found at <http://www.cisco.com/go/trademarks>. Third party trademarks mentioned 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. (1005R)

*Quality Management CAD Integration Guide*

© 2008, 2009, 2010, 2011 Cisco Systems, Inc. All rights reserved.

© 2008, 2009, 2010, 2011 Calabrio, Inc. All rights reserved.

## **Obtaining Documentation and Submitting a Service Request**

For information on obtaining documentation, submitting a service request, and gathering additional information, see the monthly *What's New in Cisco Product Documentation*, which also lists all new and revised Cisco technical documentation, at:

<http://www.cisco.com/en/US/docs/general/whatsnew/whatsnew.html>

Subscribe to the *What's New in Cisco Product Documentation* as a Really Simple Syndication (RSS) feed and set content to be delivered directly to your desktop using a reader application. The RSS feeds are a free service and Cisco currently supports RSS version 2.0.

## **Documentation Feedback**

You can provide comments about this document by sending email to the following address:

[mailto:ccbu\\_docfeedback@cisco.com](mailto:ccbu_docfeedback@cisco.com)

We appreciate your comments.

---

# Contents

---

## Introduction 5

---

## Understanding Recording Commands 7

- Recording Commands 8
- Quality Management Workflows 12
- Active and Last Call 14
- Audio and Screen Recordings 15
  - Command Precedence 15

---

## Integrating CAD with the Recording API commands 17

- Requirements 17
  - Desktop Recording (Endpoint) Service Requirements 17
  - Recording Server Requirements 17
- Configuring an IPC Send Command to Invoke the Tag Command 18
- Configuring an IPC Send Action to Invoke the Metadata Command to the Desktop Recording Service 20
- Configuring an IPC Send Action to Invoke the Metadata Command to the Recording Server 24



## Introduction

You can integrate Cisco Agent Desktop (CAD) with Cisco Unified Workforce Optimization Quality Management via the Recording API. CAD does this via its interprocess communication (IPC) Send action. IPC Send actions pass information in the form of user datagram protocol (UDP) messages from the agent desktop to a third-party application (in this case, the Recording API) using IPC methods.

Quality Management can record an agent's calls from the agent's desktop or from a server. Quality Management supports the following recording scenarios.

- Desktop Recording service (Endpoint)
- Server Recording (SPAN)
- Network Recording



## Understanding Recording Commands

This section explains the following concepts:

- Function of each recording command
- Active and last calls
- Effect of sending multiple recording commands to a single call recording

## Recording Commands

---

Recording commands allow you to control a recording. For example, you can use recording commands to record a call, pause the recording, and attach metadata to a call.

[Table 1](#) describes how the recording commands interact with each other and the Quality Management components.

**Table 1.** Recording commands

Command	Function
Tag	<p>Record a call and upload the call to the Cisco Quality Management server at the end of the day. If Cisco Quality Management is not currently recording the call based on settings in the workflow, this command starts recording the call. If the user is also configured for screen recording, this command also starts screen recording.</p> <ul style="list-style-type: none"><li>• The Tag command is valid for the active call and the last call.</li><li>• If Quality Management is already recording a call, the Tag command adds the Agent Tagged reason code to the data associated with the call.</li><li>• If Quality Management is currently not recording the active call, issuing the Tag command starts a recording command and adds the Agent Tagged reason code to it.</li><li>• If Quality Management recorded the last call, the Tag command updates the reason code for the last call to the Agent Tagged reason.</li><li>• If Quality Management did not record the last call, nothing happens. There is no recording available whose reason code can be updated.</li><li>• If Quality Management is currently recording two active calls (for example, an inbound ACD call and an outbound consultation call), the Tag command tags the call that triggered recording.</li><li>• If there are two active calls (for example, an inbound ACD call and an outbound consultation call) and Quality Management is not recording either call, the call delivered to the agent first, based on the call start time, is recorded and tagged with the Agent Tagged reason code when you invoke the Tag command.</li></ul>



Command	Function
Pause	<p>Temporarily halts the recording of a contact.</p> <p>Use the Pause commands to control the screen and audio that appears in the final recording. This command adheres to the PCI DSS standards for protecting consumer data. When you cannot record sensitive information (such as social security numbers) for security or liability reasons, use the Pause commands to omit sensitive information from the recording.</p> <p>When you use the Pause command, silence appears in the final recording where an agent discussed sensitive information. When using the Pause command, not the following:</p> <ul style="list-style-type: none"> <li>• The Pause command halts both the screen and audio portions of the contact.</li> <li>• The Pause command is valid for active calls only.</li> <li>• If you send a Pause command for a call currently in the paused state, the pause command has no effect.</li> <li>• If you send a Pause command for a call that is not being recorded, the pause command has no effect.</li> <li>• When you play back a an audio and screen recording that contains a pause, the audio portion is silent and the screen portion displays the following message for the duration of the pause.  Screen recording paused</li> <li>• When you play back an audio recording that contains a pause One, the audio portion is silent and Calabrio One displays the following message:  This is an audio only recording There is no screen recording</li> <li>• The Pause command does not effect live monitoring.</li> <li>• A Pause command does not appear as a mutual silence event or talkover event during post-call processing.</li> </ul> <p><b>NOTE:</b> Cisco Quality Management 8.0(x) or earlier only pauses the audio portion. When you play back the recording, silence appears in the final audio recording where the agent issued the pause command. Cisco Quality Management 8.6(x) or later allows you to pause both audio and screen recording.</p> <p>Issue the Resume command when you want to start recording after a pause.</p>

Command	Function
Resume	<p>Resumes recording the contact after you issued a Pause command to stop the recording.</p> <ul style="list-style-type: none"> <li>• If the call is not currently paused, the Resume command has no effect.</li> <li>• The Resume command effects both voice and screen recording.</li> <li>• The Resume command is valid for active calls only.</li> <li>• If you do not use the Resume command, after issuing the Pause command, the point at which you paused the recording is the end of the audio recording.</li> <li>• A Resume command does not appear as a mutual silence event or talkover event during post-call processing.</li> </ul>
Restart	<p>Restarts or starts the recording of a call.</p> <ul style="list-style-type: none"> <li>• If Quality Management is currently recording an active call, the Restart command stops the audio and screen recording, deletes that recording, and restarts recording the call from the point when you issued the Restart command.</li> <li>• If Quality Management is not currently recording an active call, the Restart command starts audio and screen recording.</li> <li>• The Restart command is valid for active calls only.</li> <li>• Quality Management assigns an Agent Tagged reason code to calls recorded using the Restart command. Quality Management saves the agent tagged calls even if archiving is not enabled and the call does not meet workflow criteria.</li> </ul> <p>For example, use this command you call someone and you are immediately placed on hold for a long time. Instead of recording 20 minutes of on-hold music, you can issue the Restart command you leaves the hold queue and begin speaking to a person.</p>
Delete	<p>Marks a recording for deletion, even if archiving is enabled, the call meets workflow criteria, the extension is in the inclusion list, or it is tagged for retention. The Delete command deletes the recorded files and any metadata, and uploads the basic contact data to Quality Management to maintain accurate call counts.</p> <ul style="list-style-type: none"> <li>• The Delete command is valid for the active call only.</li> <li>• The Delete command has precedence over all other commands.</li> <li>• Once you delete a call you cannot record it by issuing the Tag command.</li> <li>• Deleted calls are not available for archive purposes or quality management purposes.</li> <li>• You cannot view deleted calls in Workforce Optimization.</li> </ul>

Command	Function
Login	<p>Sends a login request to the Recording server with an extension.</p> <ul style="list-style-type: none"> <li>• The Recording Controls IP Phone Service does not have login/logout capabilities. Use Cisco's Extension Mobility IP Phone application to log in by phone.</li> <li>• When configuring hot desking for Quality Management license or Call Recording license, you must ensure that the Login and Logout commands for the Recording API go directly to the Recording server. The Desktop Recording service does not accept Login and Logout commands from the Recording API with these license types.</li> </ul>
Logout	<p>Sends a logout request to the Recording server with an extension.</p>
Metadata	<p>Allows you to attach metadata to a call. The Metadata command is valid for the active call and the last call. If Quality Management uploads a call because archiving is enabled or it matches workflow criteria, then Quality Management uploads the metadata as well. If Quality Management does not upload the call, the metadata is discarded.</p> <ul style="list-style-type: none"> <li>• You can associate a maximum of 10 metadata items with a call. You can accomplish this by issuing 10 Metadata commands containing one key/value pair each (values might be null or empty). Refer to the <i>Administrator User Guide</i> for more information on defining metadata.</li> <li>• The Metadata command interacts with the active call, including the time up until the next call starts. If you issue the Metadata command during the call, Quality Management uploads the metadata to the database at the same time as the rest of the call data. If you issue the Metadata command after the call but before the next call, Quality Management uploads the metadata separately at the time you issued the Metadata command, and stores the metadata with the last known call.</li> </ul> <p><b>NOTE:</b> Quality Management resets the last known call when a user logs in, so Quality Management cannot attach metadata to the last known call before a user logs out and logs in again. Quality Management attaches metadata to calls that span the configured end of day/upload time.</p>

Command	Function
Metadata (cont'd)	<ul style="list-style-type: none"><li>• Successive calls to the Metadata command using the same key name update the existing metadata for that call.</li><li>• Specifying an empty value for a key removes that metadata field association for the call.</li><li>• Valid formats for metadata are as follows.<ul style="list-style-type: none"><li>- Dates – Dates must be in yyyy-mm-dd format (for example 2009-09-24).</li><li>- Numbers – Numbers can start with and contain a decimal point (for example, valid numbers are .30 10.7 2500). Numbers cannot end with a decimal point or contain a comma (for example, invalid numbers are 30 2,500).</li><li>- Text key values cannot contain the following reserved characters (for example, &amp; =).</li></ul></li></ul> <p>All other alphanumeric characters are valid.</p> <p>You can find the decimal point in the * key menu and the dash in the zero key menu on your phone.</p>

## Quality Management Workflows

---

Quality Management records and retains users' calls. Quality Management can record both screen and audio for the call.

Quality management workflows drive the activity of Quality Management. Quality management workflows contain business logic that tells Quality Management what calls to record and retain for each user.

Because workflows can use decision points like "Longest call of the day," "Random call," or "Last call of the day", Quality Management does not know at the time of the call whether or not to retain the call. It cannot evaluate the logic until the end of the user's day. This means that Quality Management must record all calls received by the user and only deletes recorded calls at the end of the day after the calls marked for retention are uploaded. There are a few caveats to this.

- Quality management workflows can contain logic eliminating a call from retention, so Quality Management does not record the call at all. This logic includes the idea of exclusion lists and call direction settings. Exclusion lists consist of phone numbers, or part of a phone number with wildcard characters, used at the time of the call to determine whether or not to record the call. If the called or calling number matches a phone number pattern in the exclusion list, there is no need to record the call because Quality Management does not upload the call at the end of the day.

- Call direction settings might indicate that Quality Management should only include inbound calls when it determines what calls to retain at the end of the day. In this case, Quality Management does not record outbound calls.

This information effects the result of any recording commands issued using the Recording API. If Quality Management does not eliminate an agent's call by using the exclusion lists or call direction, then it automatically records the call. Whether it retains the call is determined at the end of the day when Quality Management evaluates the workflow for other rules. If you issue a Tag command from the Recording API while on the call, it has no effect on the call recording because the call is already being recorded. Recording API marks the call for retention at the end of the day, regardless of what the workflow says. However, if the quality management workflow excluded the call, and Quality Management is not recording the call, then the Tag command starts recording the call when you issue the command. Quality Management records and retains the call, but the recording will be missing the portion of the call that occurred prior to when you issued the Tag command.

Understanding this behavior of the Quality Management system will help you understand the results of recordings manipulated using the Recording API.

[Table 2](#) indicates the effect of issuing a recording command when the call is currently being recorded, and when the call is not being recorded.

**Table 2.** Effect of issuing recording control commands on calls

Command	Currently Recording	Not Currently Recording
Tag	None	Call recording starts
Pause	Recording paused	None
Resume	Recording resumes (if previously paused)	None
Restart	Recording restarts	Recording starts
Delete	Call deleted	None
Login	If you are currently logged in and you get a login message from a different user for the extension you are currently recording, recording stops. If you get a login message from the same user and extension, recording continues.	None
Logout	Recording stops.	None.
Metadata	Data added to call information	None

## Active and Last Call

---

You must understand the difference between the terms *active call* and *last call*. Some commands can apply to either one of these call types. Some commands can apply to a single call type.

An active call occurs when the Quality Management user is on a call with one or more parties. A call on hold is still an active call. The active call starts when the Quality Management user receives the call (phone is ringing) or makes a new call. The active call ends when the agent hangs up the phone.

The last call is the previously recorded call. Any valid recording commands sent after a call ends, and until another call is received or made by the user, apply to the last call.

[Table 3](#) indicates whether the recording command applies to the active call, the last call, or both.

**Table 3.** Recording commands that support Active Calls or Last Calls

Command	Active Call	Last Call
Tag	Yes	No
Pause	Yes	No
Resume	Yes	No
Restart	Yes	No
Delete	Yes	No
Login	No—The recording command applies to the next active call.	No
Logout	Yes—An active call stop recording.	No
Metadata	Yes	Yes

## Audio and Screen Recordings

Quality Management can record both the audio from a call and the screen from the user's PC during a call. A call recording always contains the audio from the call. The recording might or might not include the screen recording as well. The recording depends on the settings in the quality management workflow for that user.

In some cases, the recording commands issued through the Recording API effect screen recordings as well as the audio recordings. These are side effects of the commands. In no case can a recording command cause screen recording to start or be enabled if the quality management workflow does not dictate that screens will be recorded.

Table 4 indicates the effect a recording command has on a screen recording when screens are being recorded with the audio of a call.

**Table 4.** Effect of issuing record controls commands on different call types

Command	Effect on Screen Recording
Tag	If the audio is not being recorded, both audio and screen recording start. Otherwise, there is no effect.
Pause	Pauses both audio and screen recording.
Resume	None.
Restart	Both audio and screen recording restarts (or starts if the call is not currently being recorded).
Delete	Deletes both audio recording and screen recording.
Login	If you are currently logged in and you get a login message from a different user, recording stops. If you get a login message from the same user as yourself, recording continues.
Logout	Recording stops.
Metadata	None.

### Command Precedence

While you are free to issue Recording API commands, it can cause unexpected behavior. What would happen if you issue the following commands during a call?

Restart, Resume, Metadata, Delete, Tag, Delete, Restart.

Table 5 lists each command and what effect other recording commands issued for the same call have on it, and show what would happen if you issued the following commands during a call.

**Table 5.** Effect of issuing record multiple controls commands during a call

Command	Effect on Recording
Tag	If you previously issued the Delete command, the Tag command does nothing. If you already issued a Tag command to tag the call, subsequent Tag commands do nothing.
Pause	If you already paused the call, subsequent Pause commands do nothing. If you previously issued a Delete command, the Pause command does nothing.
Resume	If you did not pause the call, the Resume command does nothing. If you previously issued a Delete command, the Resume command does nothing.
Restart	If you previously issued a Delete command, the Restart command does nothing. Each Restart command you send starts the audio recording (and screen recording, if screen recording is enabled).
Delete	If you previously issued the Delete command, subsequent Delete commands do nothing.
Login	If you are currently logged in and you get a login message from a different user, recording stops. If you get a login message from the same user as yourself, recording continues.
Logout	If you are currently recording a call and issue the Logout command, recording stops.
Metadata	If you previously issued a Delete command, the Metadata command does nothing. When you issue more than one metadata command, the metadata field retains the value for the last command issued.



## Integrating CAD with the Recording API commands

This section provides the information you need to integrate CAD with the Recording API commands. The information provided in this section includes:

- Requirements for the Desktop Recording service on the agent desktop and the Recording server
- Task for configuring an IPC Send Action to invoke the Tag command
- Tasks for configuring an IPC Send Action to invoke the Metadata command to the Desktop Recording service and the Recording Server

### Requirements

---

Before sending a command to the Quality Management system, you need to know where to send that command. You need an IP address and a port number. The destination of these commands depends on how the Quality Management agent is configured for recording.

#### Desktop Recording (Endpoint) Service Requirements

If you configured agents so their calls are recorded on their desktops, you need the following information when sending a recording command.

- Loopback IP address for the agent's PC—The loopback IP address is 127.0.0.1. The loopback address routes a command back to the machine that sent the command.
- Port number for the agent's PC—The Desktop Recording service running on the agent's desktop listens on port 65001 for incoming recording commands.

#### Recording Server Requirements

If you are using a Recording Server to record the Quality Management agent, you need the following information when sending a recording command.

- IP address of the Recording Server—Quality Management supports multiple Recording Servers, but an agent and their device can only be assigned to one Recording Server at any time. Use Quality Management Administrator to assign users and devices to Recording Servers. Frequently, the Recording Servers are referred to by their host name rather than by their IP address. You need to convert the host names of the Recording Servers to IP addresses before you can set up an IPC Send action. Ask your system administrator to provide this information.
- Port number for the Recording Server—The Recording Server listens on port 65002 for recording commands.

- **sender\_id**—When sending recording commands to a Recording Server, you need to identify the Quality Management user associated with the command. You need to pass an additional parameter called “sender\_id” and give it the value of the user's ID as known to the Quality Management Administrator. Fortunately, there is a variable available in the CAD system that you can use for this purpose. This will be shown below.

If sender\_id does not contain the peripheral\_id you need to send that also. This is not available as a environment variable

- **CAD workflow**—CAD workflows are usually assigned to more than one CAD agent. This becomes important when you send recording commands to a Recording Server. Because you create workflows with actions that target specific Recording Servers (via the IP address), only CAD agents that are configured to use the same Recording Servers can successfully run the workflow that uses that IP address. For CAD agents who are configured for a different Recording Server, you will need to create a workflow that uses the other Recording Server IP address and assign it to those agents. If you change a Quality Management user's configuration so they now use a different Recording Servers, you need to change which workflow that CAD agent uses or the IPC Send action will fail.

This issue does not effect workflows where the Recording commands are sent by the user's Desktop Recording service.

## **Configuring an IPC Send Command to Invoke the Tag Command**

---

Use the following task to configure an IPC Send command to invoke a tag command to send to the user's desktop.

**NOTE:** You can use this same task to invoke the other Recording API commands (for example, Pause, Resume, Restart, and Delete commands with the exception of the metadata command). Simply replace the Tag command in the Action Name field ([Figure 1](#)) with the command you want to send.

For more information on creating and configuring actions, see the “Creating IPC Actions” section in the *Cisco Desktop Administrator User Guide*

---

TASK

1. In Cisco Desktop Administrator, create a new IPC Send command. In the IPC Action Setup dialog box (Figure 1), complete the fields as follows:
  - Action Name: Tag
  - Protocol: UDP
  - IP Address: 127.0.0.1 (the “localhost” IP address)
  - Port: 65001

**Figure 1.** IPC Action Setup dialog box

The screenshot shows the 'IPC Action Setup' dialog box. The fields are filled as follows:

- Action Name: Tag
- Protocol: UDP
- IP Address: 127 . 0 . 0 . 1
- Port: 65001

The 'Data' section contains an empty table with the following structure:

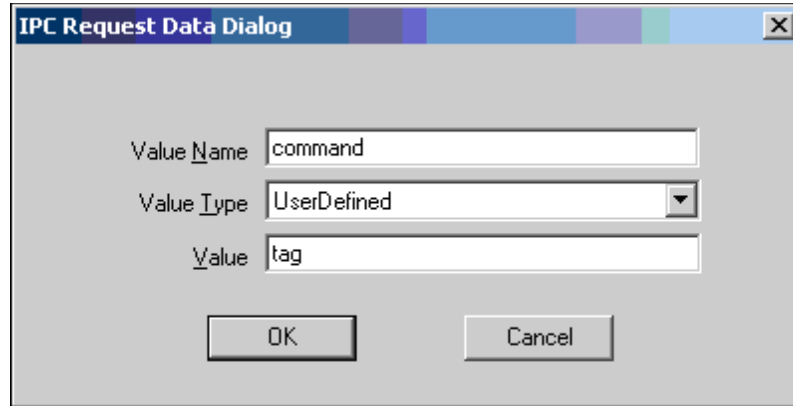
Name	Value	Value Type
------	-------	------------

Buttons at the bottom include 'Add...', 'Edit...', 'Del...', 'OK', and 'Cancel'.

2. In the Data section, click Add.

*STEP RESULT:* The IPC Request Data Dialog box appears (Figure 2).

**Figure 2.** IPC Request Data Dialog box



3. Complete the fields as follows and then click OK to close the dialog box.
    - Value Name: command
    - Value Type: UserDefined
    - Value: tag
  4. Click OK on the IPC Action Setup dialog box to save the IPC Send command.
- 

## Configuring an IPC Send Action to Invoke the Metadata Command to the Desktop Recording Service

---

Use the following task to configure an IPC Send command to invoke a Metadata command if you are using the Desktop Recording service. The IPC Send command sends the Metadata command to the Desktop Recording service on the agent's desktop. The following task assumes that you configured the agent for the Desktop Recording service.

*PREREQUISITE:* Before configuring an IPC Send command in CAD, configure the user-defined metadata in Quality Management Administrator. See the *Administrator User Guide* for more information. This example uses the following metadata:

- Balance
- CustomerID

TASK

1. In Cisco Desktop Administrator, create a new IPC Send command. In the IPC Action Setup dialog box (Figure 3), complete the fields as follows:
  - Action Name: Metadata
  - Protocol: UDP
  - IP Address: 127.0.0.1 (the "localhost" IP address)
  - Port: 65001

**Figure 3.** IPC Action Setup dialog box

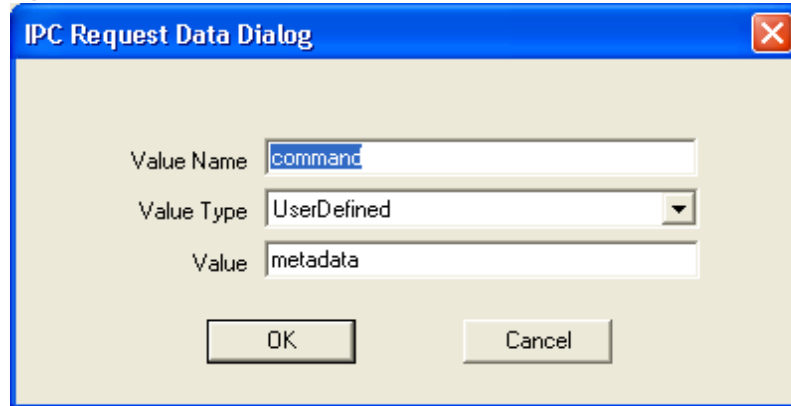
Name	Value	Value Type
command	metadata	UserDefined
custID	[ENTERPRISE FIELD:Account Number]	DataField
balance	[ENTERPRISE FIELD:Collected Digits]	DataField

2. In the Data section, click Add.

*STEP RESULT:* The IPC Request Data Dialog box appears.

3. Complete the fields as follows (Figure 4) and then click OK to close the IPC Request Data Dialog box.
  - Value Name: command
  - Value Type: UserDefined
  - Value: metadata

**Figure 4.** IPC Request Data Dialog box

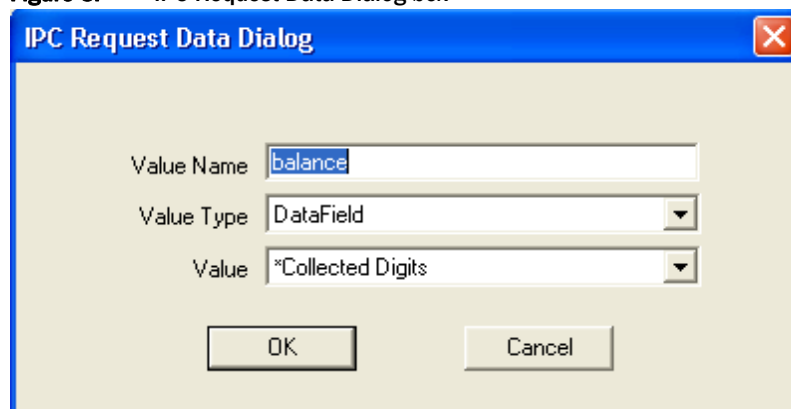


4. In the Data section of the IPC Action Setup dialog box, click Add again.  
*STEP RESULT:* The IPC Request Data Dialog box appears.

5. In the IPC Request Data Dialog box, configure the information you want to pass to the Recording API and then click OK to close the IPC Request Data Dialog box. You need to provide the following information.
  - Value Name: Enter the Key Name configured in Quality Management Administrator
  - Value Type: Choose an option from the drop-down list
  - Value: Choose the CAD enterprise data from the drop-down list

*STEP RESULT:* [Figure 5](#) shows an example of a completed dialog box for the “balance” metadata field.

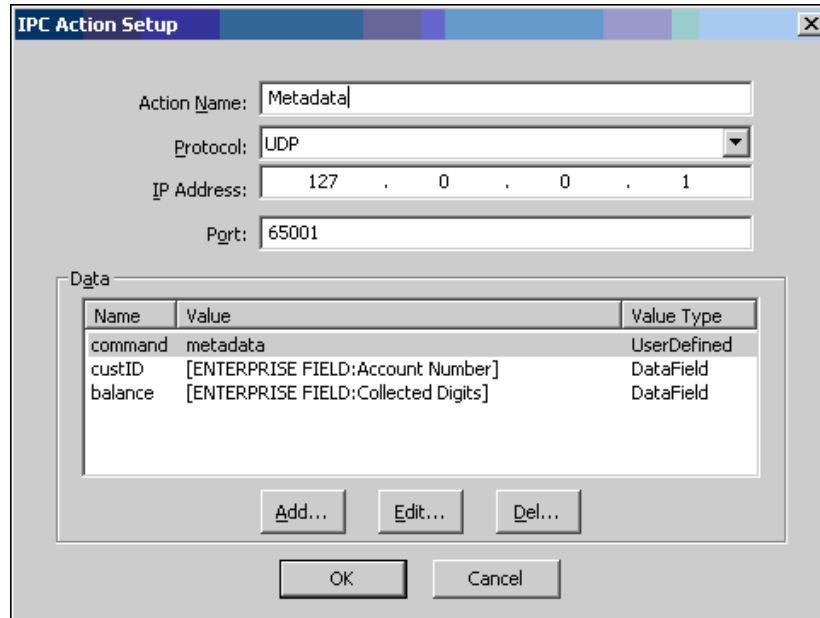
**Figure 5.** IPC Request Data Dialog box



- Repeat adding more pieces of data to pass from CAD to Quality Management as desired, up to a total of 10 fields.

*STEP RESULT:* When finished, the IPC Action Setup dialog box resembles [Figure 6](#).

**Figure 6.** Example of IPC Send command used to pass metadata from CAD to the Recording API



- Click OK to save the IPC Action Setup.
- 

## Configuring an IPC Send Action to Invoke the Metadata Command to the Recording Server

---

Use the following task to configure an IPC Send command to invoke a Metadata command if you are using a Recording Server. The IPC Send command sends the Metadata command to the recording server assigned to the agent. The following task assumes the agent is configured for a Recording Server.

*PREREQUISITE:* Before configuring an IPC Send command in CAD, perform the following tasks:

- Associate a Quality Management user with a Recording Server. See “VoIP Devices” in the *Administrator User Guide* for more information.

**NOTE:** If you change a Recording Server assigned to a specific CAD/Quality Management agent, you must change the CAD workflow



assigned to the agent to specify the correct Recording Server. This ensures that the API calls are sent to the correct Recording Server.

- If you are using multiple recording servers, you must create a separate CAD workflow for each Recording Server, and then assign users to each CAD workflow, or send the command to all record servers. Record servers that do not have the agent configured will ignore the request. The users assigned to a CAD workflow are assigned to the Recording Server associated with that CAD workflow.
- Create a QM workflow for each group of CAD/Quality Management agents assigned to a specific Recording Server and assign a team to each workflow. See “Group Administration” in the *Administrator User Guide* for more information.

**NOTE:** Assign all CAD/Quality Management agents in the group to the same recording server. The Recording API requires this because the IP address of the Recording Server is hard-coded as part of the IPC Send command.

- Configure the user-defined metadata in Quality Management Administrator. See “Metadata Fields” in the *Administrator User Guide* for more information. This example uses the following metadata:
  - Balance
  - CustomerID

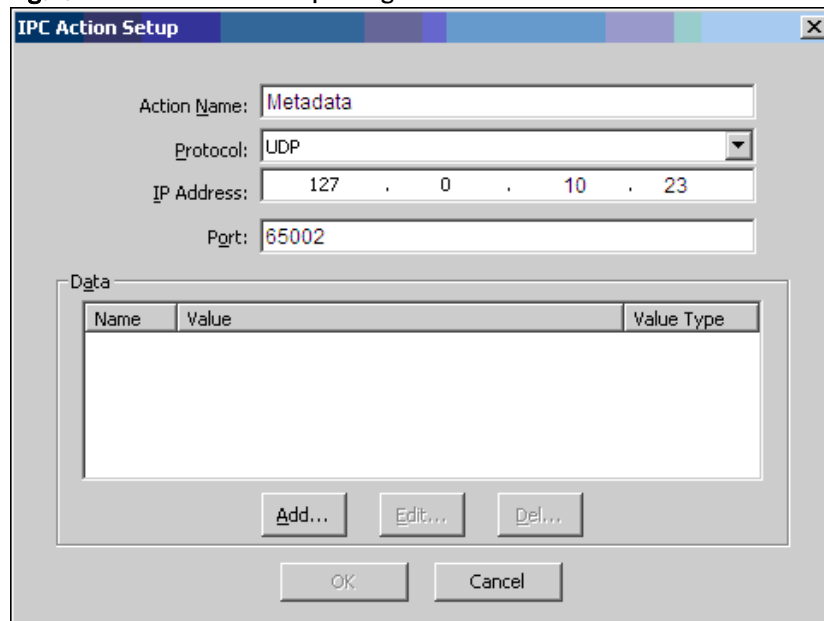
**NOTE:** You can use this same task to invoke the other Recording API commands (for example, Pause, Resume, Restart, and Delete commands). Simply replace the Tag command in the Action Name field with the command you want to send.

For more information on creating and configuring actions, see the “Creating IPC Actions” section in the *Cisco Desktop Administrator User Guide*

TASK

1. In Cisco Desktop Administrator, create a new IPC Send command. In the IPC Action Setup dialog box (Figure 7), complete the fields as follows:
  - Action Name: Metadata
  - Protocol: UDP
  - IP Address: Specify the IP address of the recording server that records calls for this agent. You can find this information on the VoIP Devices window in Quality Management Administrator. See the *Administrator User Guide* for more information.
  - Port: 65002

**Figure 7.** IPC Action Setup dialog box

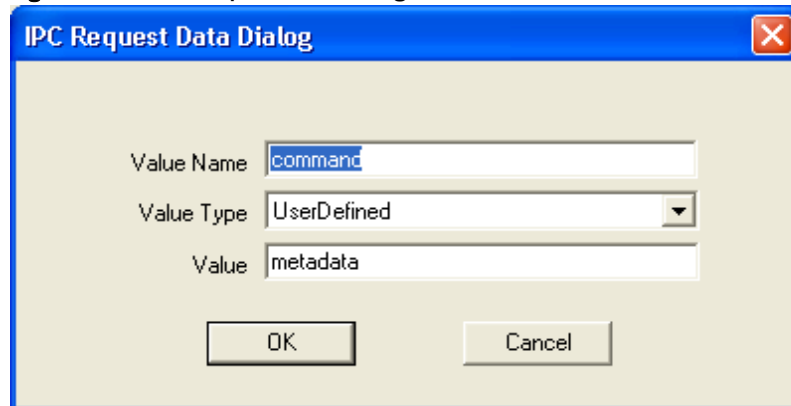


2. In the Data section, click Add.

*STEP RESULT:* The IPC Request Data Dialog box appears.

3. Complete the fields as follows (Figure 8) and then click OK to close the IPC Request Data Dialog box.
  - Value Name: command
  - Value Type: UserDefined
  - Value: metadata

**Figure 8.** IPC Request Data Dialog box



The screenshot shows a dialog box titled "IPC Request Data Dialog". It contains three input fields: "Value Name" with the text "command", "Value Type" with a dropdown menu showing "UserDefined", and "Value" with the text "metadata". At the bottom are "OK" and "Cancel" buttons.

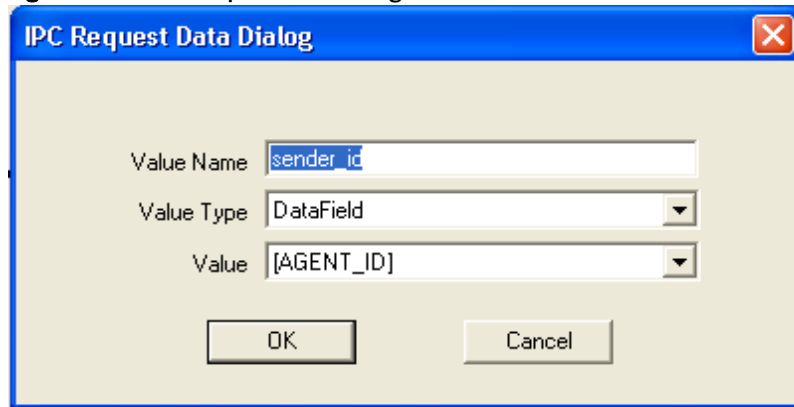
4. In the Data section of the IPC Action Setup dialog box, click Add again.

*STEP RESULT:* The IPC Request Data Dialog box appears.
5. In the IPC Request Data Dialog box, configure the information you want to pass to the Recording Server and then click OK to close the IPC Request Data Dialog box. You need to provide the following information.
  - Value Name: sender\_id
  - Value Type: Choose DataField from the drop-down list
  - Value: Choose AGENT\_ID from the drop-down list

**NOTE:** You must be running QM 2.7(2) or later to use the AGENT\_ID variable to send API calls to a Recording Server.

*STEP RESULT:* Figure 9 shows an example of a completed dialog box for the “sender\_id” metadata field.

**Figure 9.** IPC Request Data dialog box



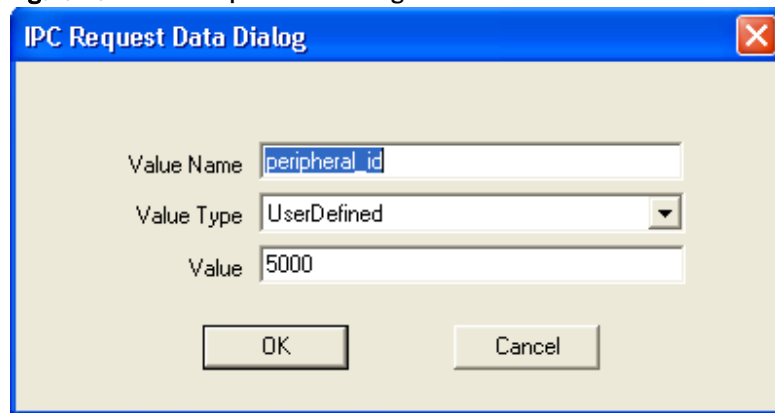
6. In the Data section of the IPC Action Setup dialog box, click Add again.

*STEP RESULT:* The IPC Request Data Dialog box appears.

7. In the IPC Request Data Dialog box, configure the information you want to pass to the Recording Server and then click OK to close the IPC Request Data Dialog box. You need to provide the following information.
  - Value Name: peripheral\_id
  - Value Type: Choose UserDefined from the drop-down list
  - Value: 5000

*STEP RESULT:* Figure 10 shows an example of a completed dialog box for the “peripheral\_id” metadata field.

**Figure 10.** IPC Request Data dialog box



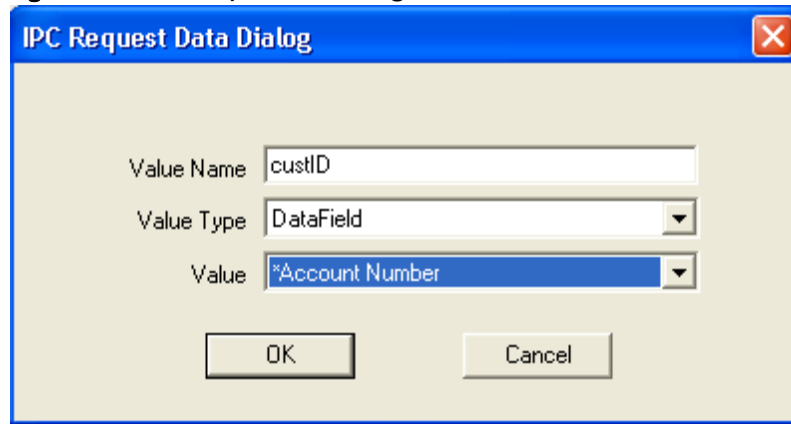
8. In the Data section of the IPC Action Setup dialog box, click Add again.

*STEP RESULT:* The IPC Request Data Dialog box appears.

9. In the IPC Request Data Dialog box, configure the information you want to pass to the Recording Server and then click OK to close the IPC Request Data Dialog box. You need to provide the following information.
  - Value Name: custID
  - Value Type: Choose DataField from the drop-down list
  - Value: Choose Account Number from the drop-down list

*STEP RESULT:* Figure 11 shows an example of a completed dialog box for the “custID” metadata field.

**Figure 11.** IPC Request Data dialog box



10. In the Data section of the IPC Action Setup dialog box, click Add again.

*STEP RESULT:* The IPC Request Data Dialog box appears.

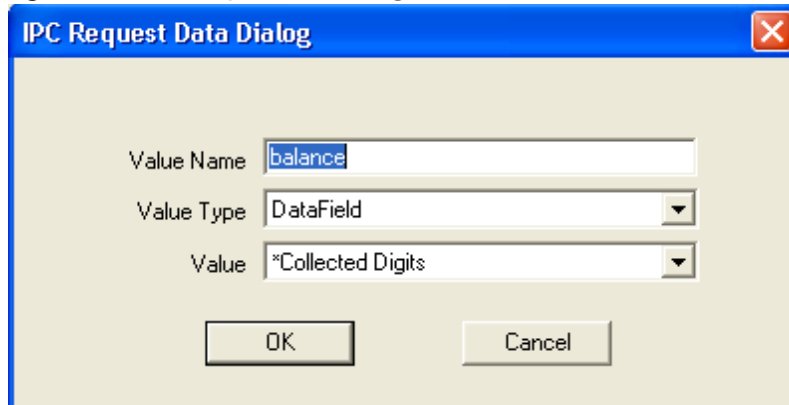
11. In the IPC Request Data Dialog box, configure the information you want to pass to the Recording API and then click OK to close the IPC Request Data Dialog box. You need to provide the following information.
  - Value Name: Enter the Key Name configured in Quality Management Administrator

**NOTE:** You must use the Key Name, not the Display Name.

  - Value Type: Choose an option from the drop-down list
  - Value: Choose the CAD enterprise data from the drop-down list

*STEP RESULT:* Figure 12 shows an example of a completed dialog box for the “balance” metadata field.

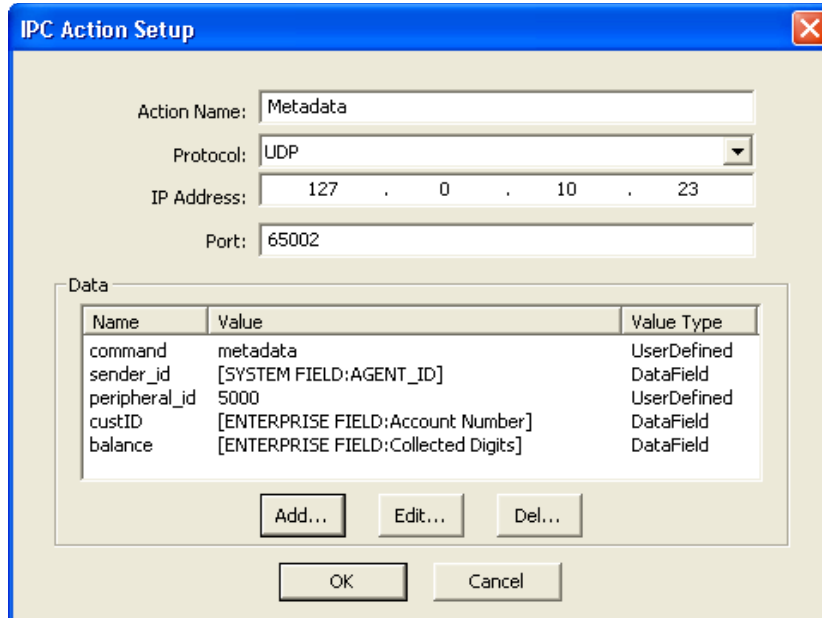
**Figure 12.** IPC Request Data Dialog box



12. Repeat adding more pieces of data to pass from CAD to Quality Management as desired, up to a total of 10 fields.

*STEP RESULT:* When finished, the IPC Action Setup dialog box resembles [Figure 13](#).

**Figure 13.** Example of IPC set up to pass metadata from CAD to the Recording API



13. Click OK to save the IPC Action Setup.





---

# Index

---

	<b>A</b>	agent's PC 17	
Active call 14			<b>Q</b>
audio recordings 15			
	<b>C</b>	QM workflows 12	
command precedence 15			<b>R</b>
configuring IPC action 19			
	<b>D</b>	Record command 8	
		recording commands about 7	
Delete command 10		requirements 17	
	<b>I</b>	Restart command 10	
		Resume command 9, 10	
invoking Metadata command 20, 24			<b>S</b>
IPC Action Setup dialog box 19, 21, 24, 26, 31			
IPC Request Data Dialog box 20, 21, 22, 23, 26, 27, 28, 29, 30		screen recordings 15	
IPC Send command 18			<b>U</b>
tag command 20, 24			
	<b>L</b>	user-defined metadata 20, 24	
Last call 14			
loopback IP address 17			
	<b>M</b>		
Metadata command 11, 20, 24			
	<b>P</b>		
Pause command 9			
port number			

