Enghouse Interactive

QMS Gateway

Installation Manual

The QMS Gateway provides integration between the QMS Recording Service and Enghouse Interactive Communications Center.

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About this Manual

This is the Installation guide for the Communications Center QMS Gateway module. Its audience is technical users familiar with the technology and terminology of computer telephony systems.

Important Note:

QMS was previously known as CallRex. Services, processes and executables included in the QMS installation may retain the CallRex nomenclature.

Notes:

Cisco:

- QMS Integration is supported on systems with port mirroring configured on the network switch.
- QMS Integration with CC is **NOT** supported on systems using Cisco Built-in-Bridge (Forked Audio).
- For the specific versions of Unified Communications Manager supported, see the QMS support documentation.

Microsoft Lync:

- QMS Integration is supported either on systems with port mirroring on the network switch, or via installation of a script on the Microsoft Lync front-end server and the QMS RTP Data Collector on individual user endpoints (client machines).
- QMS Integration with CC is not supported on systems using UCMA for integration of QMS with Microsoft Lync.

NEC

- QMS Integration is supported on the SV8100 and NEC OAI PBXs.
- In an NEC OAI environment, an issue in QMS results in multiple recordings for an internal call to a queue if the caller receives announcements prior to their call being answered. Separate recordings will made for the connected call and for each announcement played to the caller; that is, a call that receives 3 announcements prior to being connected to an Agent will have 4 recording entries in QMS. Only the recording entry for the connected call will include CC call information Flags.

The QMS Gateway mediates integration between Communications Center and the QMS Recording Service, allowing CC call data to be stored against voice recordings of calls in the QMS database as what QMS terms "Flags". This provides consistent labeling of the calls in CC and the QMS database, so identifying information used in CC can be used to search for, locate and retrieve recordings via the QMS web interface. All administration of recordings is done within the QMS web interface; recordings cannot be accessed from CC.

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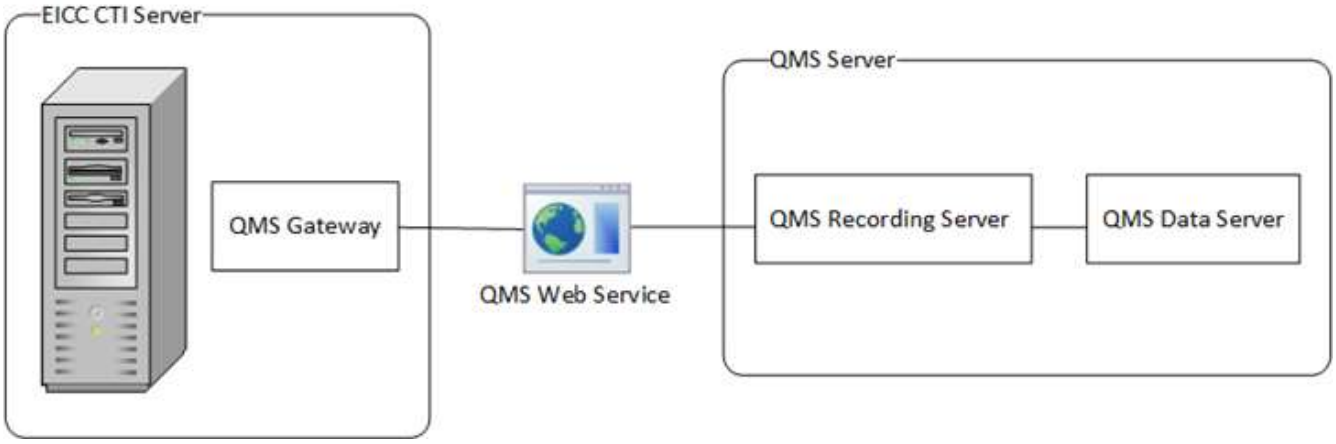
Communications Center Integration with QMS



Integration of CC with the QMS Recording Service and Recording Server is provided via two components. The first is the standalone QMS Gateway Configuration application. This is an Enghouse Systems application that is run on the QMS Data Server during initial setup to configure the CC data types to be saved as Flags with recordings.

The Flags created in the QMS database by the QMS Gateway Configuration application are:

- **AgentId** - the unique id of the agent obtained from the CC agent list.
- **AgentName** - the name of the Agent, as determined by their CC login.
- **CallerName** - the Caller Name recorded in CC. This information may be obtained from the global CC Phonebook, from an external phonebook or from ISDN information provided by the public telephone company, if available. Callers entered into a Personal CC Phonebook or Personal Outlook Contacts will not be recorded.
- **CTICallRef** - the CC PBX call reference, obtained from the CC PBX module.
- **InteractionGuid** - the globally unique ID that ties together multiple related interactions (calls).
- **QueueName** - the name of the CC Queue to which the call was delivered, if applicable.
- **CTIWrapup** (optional) – is the result of the queue call and includes the template and the result.
- **CTI QueryData** (optional) – is the additional information pertaining to the call.

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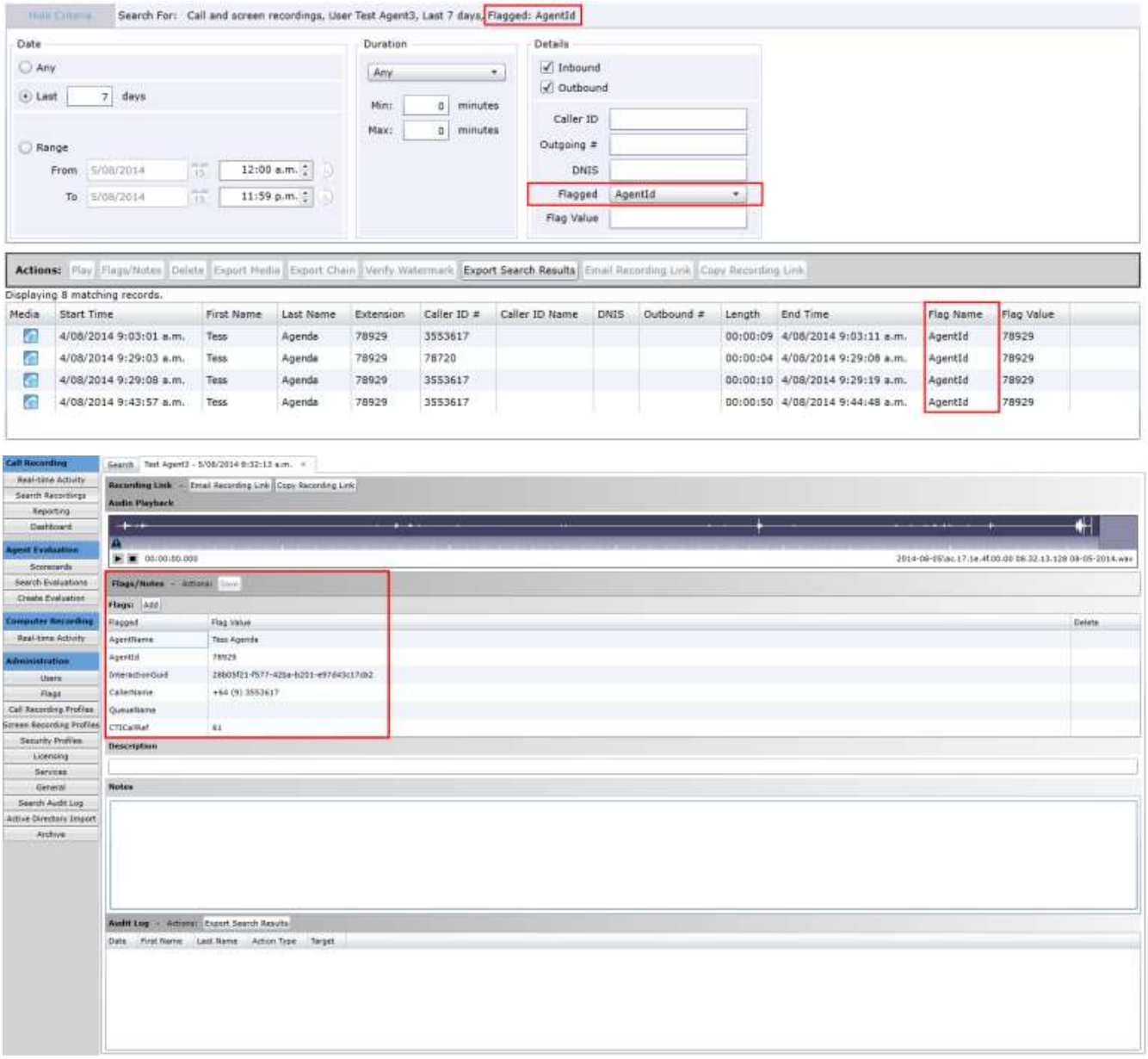

The second component is the QMS Gateway that resides on the CC CTI Server. As CC and QMS maintain separate lists of users and an individual agent must be present on both lists, the QMS Gateway sources information from both CC and the QMS database. The QMS Gateway uses this information to perform two functions:

- To match CC agents with the corresponding QMS users allocated to a particular QMS Recording Server.
- To identify QMS call recordings that should be flagged with CC call information, and populate the flags in the QMS Database with the relevant CC call information.

The QMS Gateway uses CC agent status information and QMS user information to match CC agents with QMS users. The QMS Gateway is notified of agent status information (that is, whether an agent is logged in or out)

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by agent status messages broadcast by the CC CTI server. QMS user information is obtained from QMS Recording Service user databases via a QMS web services API and is loaded at startup and updated on a daily basis. As CC does not receive notification when new users are added to the QMS database, an update of QMS user information can also be requested manually via Application Manager.

The QMS Gateway detects extensions that should be recorded by the QMS Recording Service by monitoring call status messages broadcast by the CC PBX module. The QMS Gateway tracks call status to determine when a call enters a Connected State and from that infers that the call is being recorded, at which point the QMS Gateway uses the QMS API to retrieve the QMS Recording GUID for the call from the QMS Database. Other CC call information (the Queue Name, Caller Name and the CTI Call reference) is collected and cached during the call, then written to the QMS database when the extension disconnects from the call; if the call is transferred, the current recording terminates, the call information to that point is written to the QMS database and the QMS Recording Service initiates a new recording at the destination extension. The QMS GUID can only be obtained for a short period of time after a call attains Connected status; therefore, if a call is already being recorded when the QMS Gateway first detects it, the QMS Gateway will not be able to write information about that call to the QMS database.

CC call information cannot be rewritten once it is written to the QMS database. Thus if an Agent Name, AgentId or Queue Name is changed in CC, recordings flagged before the change will not be able to be located using the updated Agent or Queue Name. Recordings made after the change has been made in CC will be flagged with up-to-date Agent or Queue Name information.

Notes:

- Only QMS Call Recordings will be flagged with CC call information. QMS Computer Recordings will not be flagged.
- Only scheduled recordings can be flagged with CC call information; difficulties in obtaining correct QMS GUID information during on-demand recording prevent flagging of these recordings with CC call information.
- Call recordings with a duration of less than 1s will not be flagged with CC call data, as the QMS GUID cannot be obtained within this time.
- QMS incorrectly classifies Callbacks as outbound calls. Depending on the PBX platform, the Caller Name written to the QMS database for Callbacks may not match that recorded in CC.
- Supervised transfer scenarios (queue calls), DOES NOT support chaining of calls.

Multiple Instances of the QMS Gateway

A single CC CTI server can house multiple instances of the QMS Gateway, with each instance of the QMS Gateway providing integration with a separate QMS Recording Service. A separate instance of the QMS Gateway is required for each QMS Recording Server to which users are allocated. Multiple QMS Recording Servers can write to a single QMS Data Server. Organizations may choose to have multiple QMS Recording Servers for many reasons, including segregation of recordings from multiple sites or accommodation of load.

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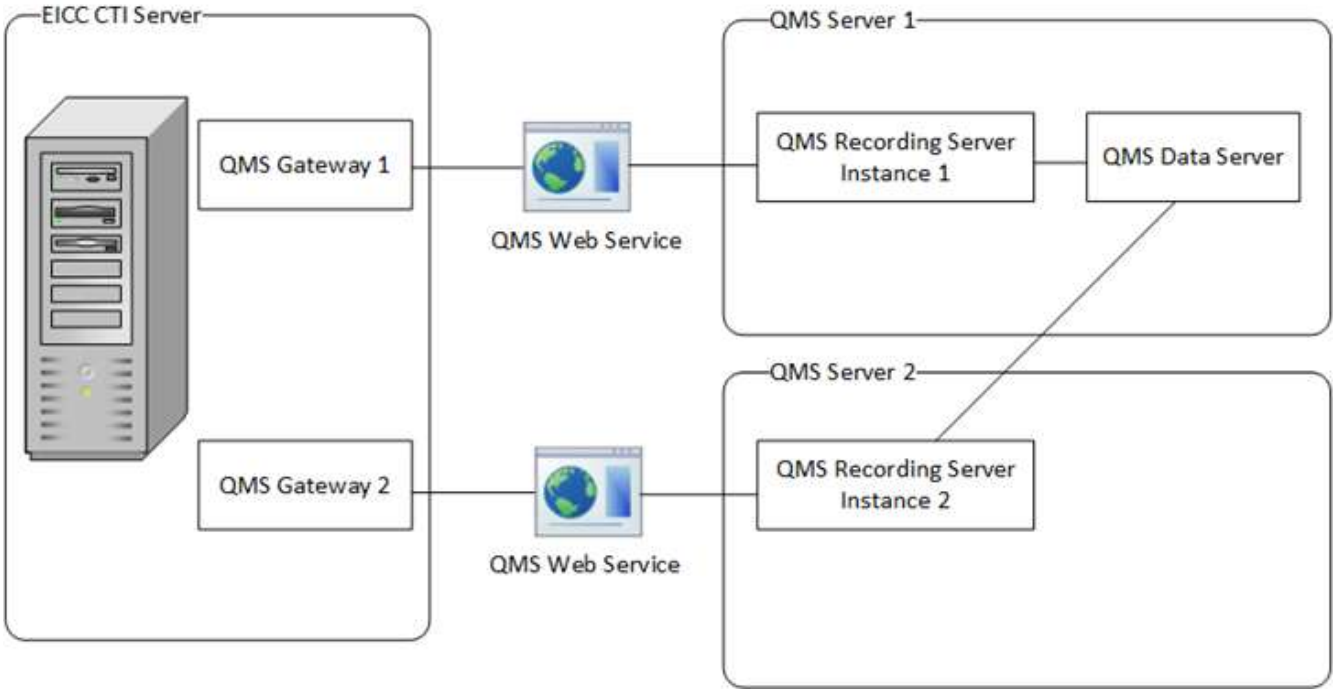

Benefits of QMS Integration

QMS provides tools to silently monitor and evaluate agent conversations and desktop activities in a contact center environment, with reliable PCI compliance and encryption. This information can be used for many business reasons, including improving customer service, security, conflict resolution, and legal compliance. The web-based interface provides live monitoring and a real-time view of user status, as well as the ability to either record all calls, schedule recording of samples of calls or make on-demand recordings. The web interface also allows centralized management of multi-site installations from any location and the ability to store and retrieve recordings anywhere in the network.

QMS is a software-only recording solution that does not interfere with the IP PBX and or require any proprietary hardware.

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Prerequisites

Important Notes:

- The instructions in this manual assume that Communications Center and QMS are already installed and correctly configured. Installation of the QMS Gateway provides integration between these two independent systems.
- QMS was previously known as CallRex. Services, processes and executables included in the QMS installation may retain the CallRex nomenclature.

CTI server

The QMS Gateway has no additional CTI server software or hardware requirements above that of the base Communications Center CTI server specifications. These server specifications are outlined in the Product Suite Specifications document.

The CTI server must be setup to monitor the extensions of QMS users.

Additional servers

Operation of the QMS Gateway requires the configuration of a server to house the QMS Recording Server and QMS Data Server.

The minimum QMS version supported for use with the QMS Gateway is:

- **Cisco and Skype for Business** - 4.3.4
- **NEC SV8100, Avaya Communication Manager and IP Office** - 5.1
- **NEC OAI** - 5.2

An instance of the QMS Gateway needs to be configured for each QMS Recording Server. A single data server can receive data from multiple recording servers. For QMS server specifications, consult the Support section of the QMS Call Recording website, or contact QMS Support.

Ensure that you are able to make recordings via the QMS Recording Service before proceeding with installation of the QMS Gateway.

Firewall

By default, the QMS Gateway communicates with the QMS Recording Service via port 8010. This port can be configured. Site firewall settings need to allow traffic at the port used for the QMS Gateway.

Licenses

CC licensing: An CC QMS Gateway site license is required to run the QMS Gateway.

QMS licensing: A QMS license is required for each active user. An active user is a user who has either been scheduled for recording, or is the subject of a current on-demand recording.

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Creating Flags in the QMS Database

In order to flag recordings stored in the QMS Database with CC call information, flags for this data must be created in the QMS database.

1. On the QMS Data Server, locate the CC release image and navigate to **Server > Tools > QMS Configuration**.
2. Run the **QMS Configuration** application. The **QMS Gateway Configuration** wizard opens.
3. Click **Next**.

4. In the **QMS Database Connection** screen, from the **Server** dropdown, select the SQL server to which you want to connect.
5. Click **Test Connection**
   - If connection is successful you will receive the message "**Test connection succeeded**". Click **OK**.
   - If connection is not successful, then a message will appear providing information about the failure to connect. Click **OK**, and check you have the rights required to connect to that SQL server.
6. Click **Finish**.

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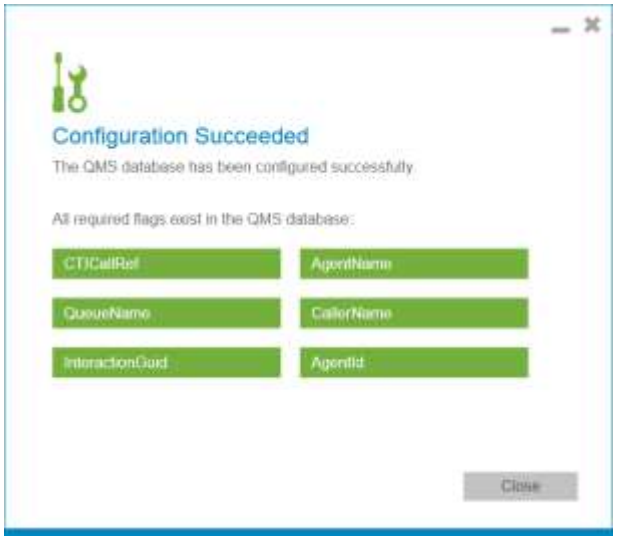
7. The **Configuration Succeeded** screen appears, showing the Flags that have been created in the QMS database.
8. Click **Close**.



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QMS Gateway Installation

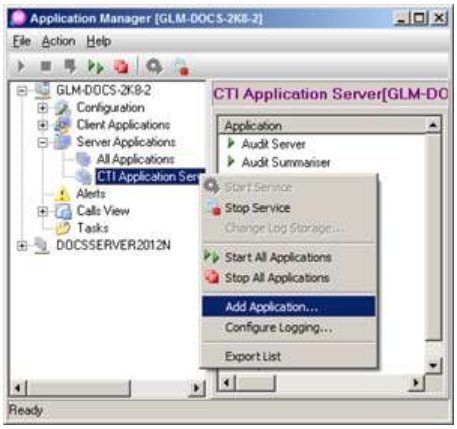
The QMS Gateway is added as a service in Application Manager and configured to point to the server hosting the QMS Recording Service.

Note:

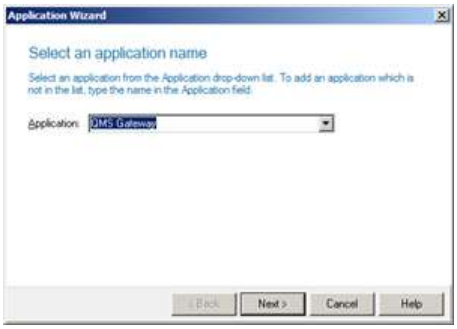
You will need to install and configure a QMS Gateway for each QMS Call Recording Service and QMS Recording Server you use.

To install and configure the QMS Gateway:

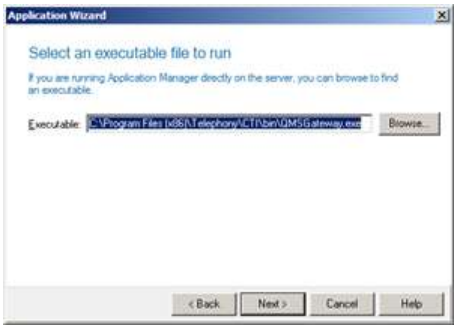
1. In **Application Manager**, right-click on **CTI Application Server**, then click **Add Application**.



2. The **Application Wizard** opens. In the **Select an application name screen**, select **QMS Gateway** from the dropdown list, then click **Next**.



3. The **Select an executable file to run** screen opens. This will usually be populated with the path for the QMS Gateway executable. If not, click **Browse** and navigate to the QMS Gateway executable, then click **Next**.



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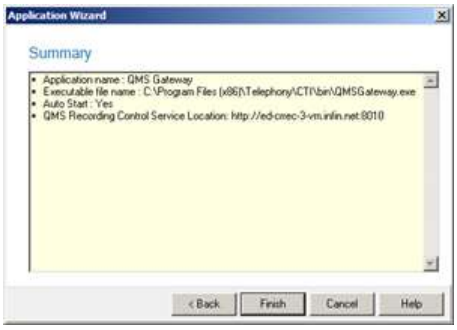
4. The **Configure the following settings** screen appears. **Check Application starts automatically**, then click **Next**.

5. The **Configure QMS Gateway** screen appears. Enter the following information:
    - **http://** - enter the URL for the server hosting the QMS Recording Service.
    - **Port** - by default, the QMS Recording Service communicates with the QMS Gateway via port **8010**. Changing this port is not recommended.
6. Click **Test Connection**.
    - If you have entered an invalid URL, a dialog box will appear with the following text: **Server address is not reachable. Please check configuration**. If this appears, click **OK** then check you have entered a valid and correct URL for the QMS Recording Service host server.
    - If you have entered a valid URL, a dialog box will appear with the following text: **Test Connection successful**. Click **OK**.
7. Click **Next**.

8. The **Summary** screen appears. Click **Finish**.



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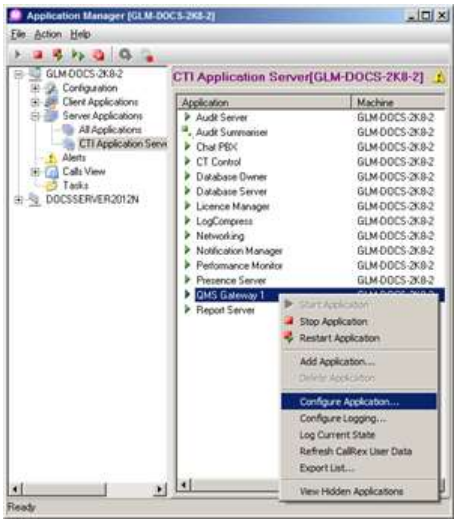
Configuring the QMS Gateway

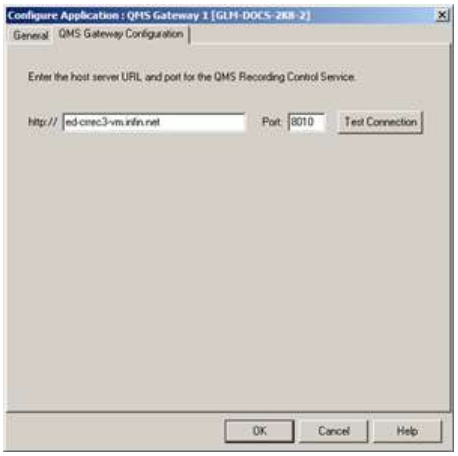
If you change the host server for the QMS Recording Service associated with an instance of the QMS Gateway, then you will need to reconfigure that instance of the QMS Gateway.

To configure the QMS Gateway:

1. In **Application Manager**, click on **Server Applications** then **All Applications**.
2. Right click on the **QMS Gateway**, then select **Configure Application**



3. The **Configure Application: QMS Gateway** screen appears. Select the **QMS Gateway Configuration** tab.
4. Edit the URL for the server hosting the QMS Recording Service.
5. Click **Test Connection**.
    - If you have entered an invalid URL, a dialog box will appear with the following text: **Server address is not reachable. Please check configuration**. If this appears, click **OK** then check you have entered a valid and correct URL for the QMS Recording Service host server.
    - If you have entered a valid URL, a dialog box will appear with the following text: **Test Connection successful**. Click **OK**.



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Testing the Installation

To ensure the QMS Server is correctly configured and the QMS Gateway is correctly installed:

1. In the QMS client, either:
    - Locate a CC user with a Call Recording Profile that records 100% of calls.
    - Set up a CC user to have a Call Recording Profile that records 100% of calls.
2. Place a call to this user.
3. Answer this call using a CC client application. In the QMS client, you will see the call being recorded.
4. Terminate the call.
5. In the QMS client, navigate to **Call Recordings** > **Search Recordings**.
6. Select the user you just recorded, then click **Search**. A list of calls recorded for this user appears.
7. Double-click on the call you just recorded. If the QMS Gateway has been correctly installed, you should see CC call information (**AgentId**, **AgentName**, **InteractionId**, **CallerName**, **QueueName**, **CTICallRef**) in the **Flagged** and **Flag Value** columns of the **Flags/Notes** pane, .
8. Click **Search** again. Search criteria appear.
9. Highlight the user that you recorded.
10. From the **Flagged** field of the search criteria, select one of the CC parameters.
11. In the **Flag Value** field, enter the call data for the parameter you have selected. For example, if the Flag you have selected is QueueName, enter the name of the queue to which your recorded call was made.
12. Click **Search**. If the QMS Gateway is correctly installed, the search results should include your call.

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QMS Troubleshooting

Issue	Troubleshooting Information
Call recordings can be made, but cannot be located by searching with the CC Agent Name, Queue name or Call Reference.	The URL entered for the server hosting the QMS Recording Server may be incorrect. 1. In **Application Manager** navigate to **Server Applications** > **All Applications**. 2. Right-click on the **QMS Gateway** and select **Configure Application**. 3. In the Configure Application screen, check the URL for the QMS Recording Service host server and correct any errors. 4. Click **OK**. 5. Right-click on the **QMS Gateway** and select **Restart**.
Alert 3801: QMS Gateway Connection Failed appears in Application Manager; you cannot connect to the QMS Gateway.	• Using the instructions above, check that the host server URL and the port that the QMS Gateway uses to connect to the QMS Recording Service are correct. • Check the QMS Recording Service and Data Service are set up and running.
Alert 3802: QMS Gateway Missing System Flags appears in Application Manager.	Run the QMS Configuration application on the QMS Data Server to ensure all Flags are created in the QMS database.
Alert 3803: QMS Gateway QMS Gateway License Not Found appears in Application Manager; the QMS Gateway is not writing data to the QMS database.	Obtain a site license for the QMS Gateway.
When you click **Test Connection** in the **QMS Database Connection** screen of the QMS Configuration application, you receive the message **Test database connection failed. Login failed for user <*user*>**.	To connect to the SQL database, you need to login with administrator rights for that database. Check you have the required permissions.

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Issue	Troubleshooting Information
Recordings with a duration of less than 1s have not been flagged with CC call data.	Calls with a duration of less than 1s cannot be flagged with CC call data as the QMS GUID cannot be obtained within that time.
Instances of the SQL server do not appear in the dropdown list of SQL servers when you run the QMS Configuration application on the machine housing the SQL Server.	Check the SQL Server Browser Service is running. If not, start the SQL Server Browser Service and rerun the QMS Configuration application.
When running the QMS Configuration application, you try to locate a SQL Server on another machine but no servers are listed.	Ensure you have domain access and rerun the QMS Configuration application.
Information about Caller Name does not appear in QMS.	Desktop is able to look up details added to the personal CC phonebook or Outlook contacts of a user. For Security and Privacy reasons, the Caller Name used in the QMS Gateway is obtained from the Global CC Phonebook. To ensure the QMS Gateway is functioning correctly please compare the Caller Name that appears in the Queue or Agent Performance Report with the Name that appears in QMS; these should be as the same as they are both generated from the same information source.

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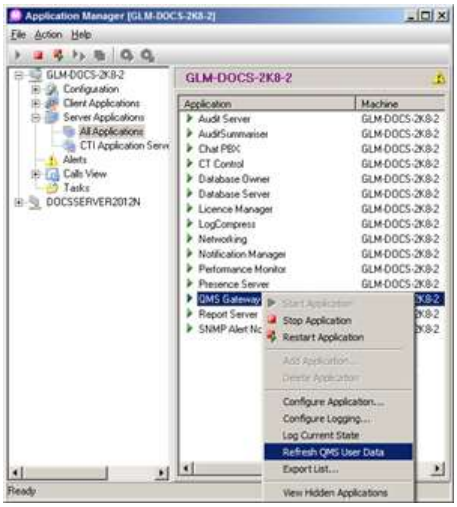
Refreshing QMS User Data

Refresh QMS User Data allows you to manually initiate an update of user information from the QMS database to the QMS Gateway. This is required if you have added a new user to the QMS server, or if you have multiple QMS servers and have moved users between them.

Note:

If you have made changes to users on multiple QMS servers, you will need to refresh the QMS User Data on each of the corresponding QMS Gateway services.

1. In Application Manager under **Server Applications** > **All Applications**, right-click on the **QMS Gateway**.
2. Click **Refresh QMS User Data**.



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