



Quality Management Suite Installation

Installation Guide

QMS 7.4

This information in this document assists the IT professional responsible for software application deployment.



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About This Document

Audience

This information in this document assists the IT professional responsible for software application deployment. The IT professional must possess a working knowledge and skills to install software on Microsoft client and server operating systems.

New in this release

This document includes the following new information:

- SQL Server 2017 is now the database engine installed by default

Contents

The Enghouse Interactive Quality Management Suite Installation Guide contains the following chapters and information.

- **About This Document** – Information to guide document users, [page 9](#)
- **Chapter 1: Enghouse Interactive Quality Management Suite Components**, [page 11](#)
- **Chapter 2: Pre-Installation Checklist**, [page 15](#)
- **Chapter 3: Install Server Prerequisites**, [page 15](#)
- **Chapter 4: Performing the Installation**, [page 27](#)

Reference materials

The content contained in this document works in combination with the information and procedures in the following documents or Help.

- Enghouse Interactive Quality Management Suite Help
- Enghouse Interactive Packet Forwarding Service Installation Guide
- Enghouse Interactive Screen Recording Installation Guide
- Enghouse Interactive High Availability Deployment Guide
- Enghouse Interactive Integration Guides are also available for specific PBX platforms

Document conventions

This document uses the following text formats and notation conventions.

Text format

Bold text indicates a button, field, link, option name, or similar function requiring an action.

Italicized text indicates new terms, directory paths, or references to external documents.

Notes and cautions

Icons used throughout this document identify additional details or special conditions.



Note

Provides additional information or describes special circumstances.



Caution

Warns of user actions that may cause system failure or irreversible conditions.



Stop

Describes actions that you should only perform under the supervision of Enghouse Customer Support.

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1: Enghouse Interactive Quality Management Suite Components

A Quality Management Suite installation consists of two major components, the Quality Management Client and the Call Recording Server.

Quality Management Client Software

The Quality Management Client software is installed into an internet information services (IIS) website on the same server as the Data Service. A user can run the Quality Management Client by connecting to this website via a supported web browser. There is no additional software that needs to be installed on the user's computer.

The following web browsers are supported:

Operating System	IE 11*	IE 10*	Chrome	Firefox
Windows 10 Professional	✓	✗	✓	✓
Windows Server 2019	✓	✗	✓	✓
Windows Server 2016	✓	✗	✓	✓
Windows 8.1 Professional	✓	✗	✓	✓
Windows 8 Professional	✗	✓	✓	✓
Windows Server 2012 R2	✓	✗	✓	✓
Windows Server 2012	✗	✓	✓	✓
Windows 7 Professional SP1	✓	✓	✓	✓
Windows 7 Professional	✗	✗	✓	✓
Windows Server 2008 R2 SP1	✓	✓	✓	✓

Operating System	IE 11*	IE 10*	Chrome	Firefox
Windows Server 2008 SP2	✗	✗	✓	✓
Windows Vista SP2	✗	✗	✓	✓

* For best results Internet Explorer must not be run in compatibility mode.

* For best results Internet Explorer must not be run in compatibility mode.

Quality Management Server Software

The following components are part of the Quality Management Server:

- The Data Service is a central service that manages SQL database access client connections.
- The QMS Database is maintained by the Data Service and supports Microsoft SQL Server 2008, 2012, 2014, 2016, or 2017. The installer can also install and use Microsoft SQL Express 2017 for use as the database server. The database server can be either local or remote and the connection can use Integrated Windows Authentication or standard SQL Authentication.
- The Call Recording Service can be installed on the same server as the Data Service, and it is typically installed at remote sites that also require call recording.

The following server operating systems are supported if using the default database engine (SQL Server 2017) which only supports 64 bit system

- Windows Server 2019
- Windows Server 2016
- Windows Server 2012 R2
- Windows Server 2012
- Windows 10 x64
- Windows 8.1 Professional x64
- Windows 8 Professional x64

If using an earlier SQL Server database or a remote database, these additional operating systems are also supported for hosting the data service.

- Windows Server 2008 R2 SP1
- Windows 10 x86
- Windows 8.1 Professional x86
- Windows 8 Professional x86
- Windows 7 Professional x86, x64



Note

Windows XP and Server 2003 are no longer supported. Non Server OS are supported (Windows 7, 8 and 10), however are only recommended on a computer running the Data Service for single-server deployments with no more than five connections.

2: Pre-Installation Checklist

Perform the following procedures and environment reviews prior to the installation.

- Verify that the Quality Management Suite Server is dedicated for use by the Quality Management Suite software
- Verify that the server meets the Quality Management Suite Specifications
- Verify that all Windows Updates have been performed
- Verify that the Windows Firewall on the Quality Management server has been turned OFF
- Verify that TCP/IP on the Packet Capture Adapter has been turned OFF
- Create the storage folder to hold recordings only if you are not using a network storage location or using the default storage location. Make sure that the selected disk volume has adequate storage space for your recordings. To calculate storage requirements refer to Quality Management Server & Call Recording Service specifications.
- Create the log folder only if you are not using the default logging location. Make sure the user account that each QMS service runs under has full read/write access to the folder
- Verify that you have the appropriate permissions to install software, such as local administrative privileges.
- Confirm that call recording and/or CTI licenses have been purchased, if required by your PBX vendor.
- If your PBX platform uses extensions, confirm that all phones have at least one unique extension, appearing as the first extension on the phone.
- If a CTI provider, such as TAPI, is required for your specific integration, confirm that it is installed, configured, and working. Please refer to the QMS integration guide for your specific PBX platform, if available.
- Confirm that the User Account Controls are turned OFF.
- Retrieve the Enghouse Interactive Data Service Address (hostname or IP address), the Packet Capture Adapter name, and the Network (Messaging) Adapter name. This information is necessary for installing the Call Recording Service.

3: Install Server Prerequisites

All Servers

Installing .NET Framework

.NET Framework 3.5 and 4.x features are required as a prerequisite on all servers.

To install .NET Framework on Windows Server 2019, complete the following steps:

1. Navigate to Server Manager > Local Server and scroll down to the Roles and Features section.
2. Click the TASKS drop-down and select the Add Roles and Features option. The Add Roles and Features Wizard window displays.
3. Click Features on the left side of the Add Roles and Features Wizard window. The Select features page displays. Ensure the following features are selected (as shown by the screenshot below):
 - .NET Framework 3.5 Features
 - o .NET Framework 3.5
 - o HTTP Activation
 - o Non-HTTP Activation
 - NET Framework 4.7 Features
 - o .NET Framework 4.7
 - o ASP.Net 4.7
 - o WCF Services
 - o HTTP Activation
 - o Message Queuing (MSMQ) Activation
 - o Named Pipe Activation
 - o TCP Activation
 - o TCP Port Sharing
 - IIS Hostable Web Core



Note

When you select the WCF Activation checkbox, a new window may appear requesting that the .NET Extensibility role service be installed. Click Add Required Role Services. The WCF Activation checkbox and the checkboxes below it are selected.

To install .NET Framework on Windows Server 2016, complete the following steps:

1. Navigate to Server Manager > Local Server and scroll down to the Roles and Features section.

2. Click the TASKS drop-down and select the Add Roles and Features option. The Add Roles and Features Wizard window displays.
3. Click Features on the left side of the Add Roles and Features Wizard window. The Select features page displays. Ensure the following features are selected (as shown by the screenshot below):
 - .NET Framework 3.5 Features
 - .NET Framework 3.5
 - HTTP Activation
 - Non-HTTP Activation
 - .NET Framework 4.6 Features
 - .NET Framework 4.6
 - ASP.Net 4.6
 - WCF Services
 - HTTP Activation
 - Message Queuing (MSMQ) Activation
 - Named Pipe Activation
 - TCP Activation
 - TCP Port Sharing
 - IIS Hostable Web Core



Note

When you select the WCF Activation checkbox, a new window may appear requesting that the .NET Extensibility role service be installed. Click Add Required Role Services. The WCF Activation checkbox and the checkboxes below it are selected.

To install .NET Framework on Windows Server 2012, complete the following steps:

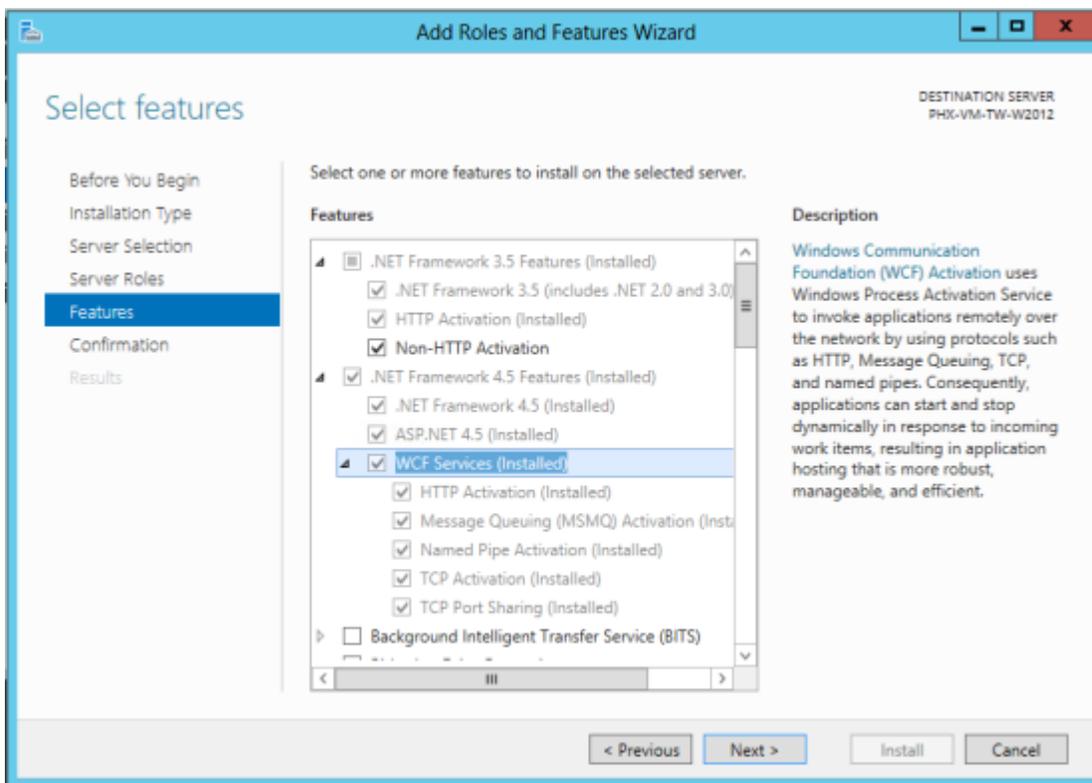
1. Navigate to Server Manager > Local Server and scroll down to the Roles and Features section.
2. Click the TASKS drop-down and select the Add Roles and Features option. The Add Roles and Features Wizard window displays.
3. Click Features on the left side of the Add Roles and Features Wizard window. The Select features page displays. Ensure the following features are selected (as shown by the screenshot below):
 - .NET Framework 3.5 Features
 - .NET Framework 3.5
 - HTTP Activation
 - Non-HTTP Activation
 - NET Framework 4.5 Features

- .NET Framework 4.5
 - ASP.Net 4.5
 - IIS Hostable Web Core
 - WCF Services
 - HTTP Activation
 - Message Queuing (MSMQ) Activation
 - Named Pipe Activation
 - TCP Activation
 - TCP Port Sharing



Note

When you select the WCF Activation checkbox, a new window may appear requesting that the .NET Extensibility role service be installed. Click Add Required Role Services. The WCF Activation checkbox and the checkboxes below it are selected.



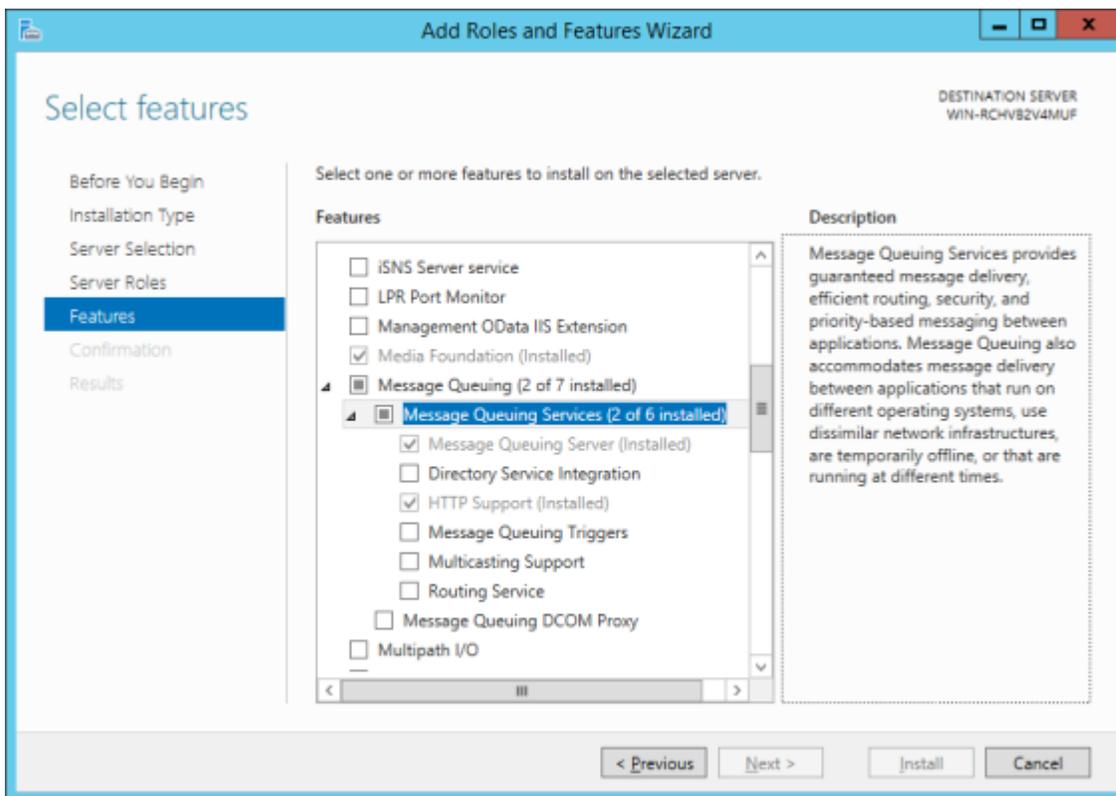
4. Click Next. The Confirmation tab displays.
5. Click Install. The installation begins.

Installing Microsoft Message Queuing (MSMQ)

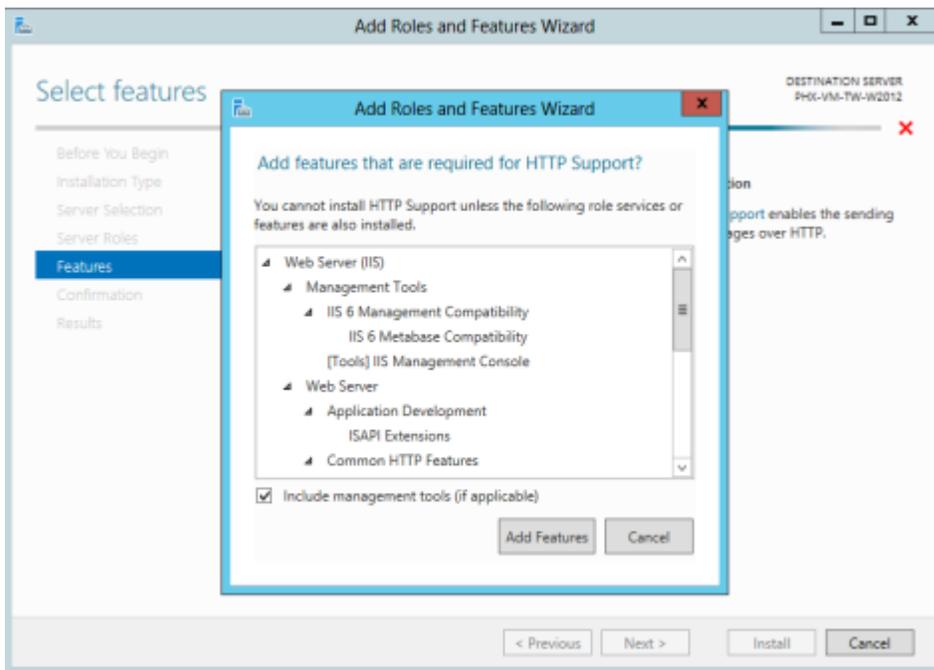
Before installing the Quality Management 7 services, you must install Microsoft Message Queuing (MSMQ) on all servers (including those that will host the Data Service and the Call Recording Service). The Enghouse QMS Installer will check to ensure that the MSMQ server role exists for both the Data Service and Call Recording installations. If it is not present, the prerequisite checker will not allow the install to proceed.

To install MSMQ on Windows Server 2012 or above, complete the following steps:

1. Ensure that the Enhanced Security is turned off for the installer to access the web to download the necessary components. Navigate to Server Manager > Local Server > Properties and locate IE Enhanced Security Configuration. If it says that it is on, then click it to turn it off for the user doing the installation.
2. Navigate to Server Manager > Local Server and scroll down to the Roles and Features section.
3. Click the TASKS drop-down and select the Add Roles and Features option. The Add Roles and Features Wizard window displays.
4. Click Features on the left side of the Add Roles and Features Wizard window. The Select features page displays. Ensure the following features are selected (as shown by the screenshot below):
 - Message Queuing Services
 - o Message Queuing Server
 - o HTTP Support



- When selecting the HTTP Support checkbox. A new Add Roles and Features Wizard window displays.



6. Click Add Features. The features are installed. The Message Queuing, Message Queuing Services, Message Queuing Server, and HTTP Support checkboxes should all be selected and listed as installed.
7. Click Next. The Confirmation tab displays.
8. Click Install. The installation begins.

To install MSMQ Windows Server 2008, complete the following steps:

1. Ensure that the Enhanced Security is turned off for the installer to access the web to download the necessary components. In the Server Manager, select Server Manager (PCName). Then in the Security section, on the right side, click on Configure IE ESC and TURN OFF for the User installing Quality Management Suite (Administrator).
2. Open the Control Panel folder and select Programs and Features.
3. Open the Windows Features dialog on Windows 7 or 8, or start the Server Manager on the server operating systems.
4. In the Server Manager window, click on Features on the top-left of the screen. The Installed Features list displays.
5. Click on Add Features.
6. Locate and select the Message Queuing checkbox and expand all sub-elements.
7. Verify that the HTTP Support checkbox is selected.

Installing Desktop Experience

For Windows Server deployments, the Desktop Experience feature will need to be added. The prerequisite checker will not allow the install to proceed if this is not turned on.

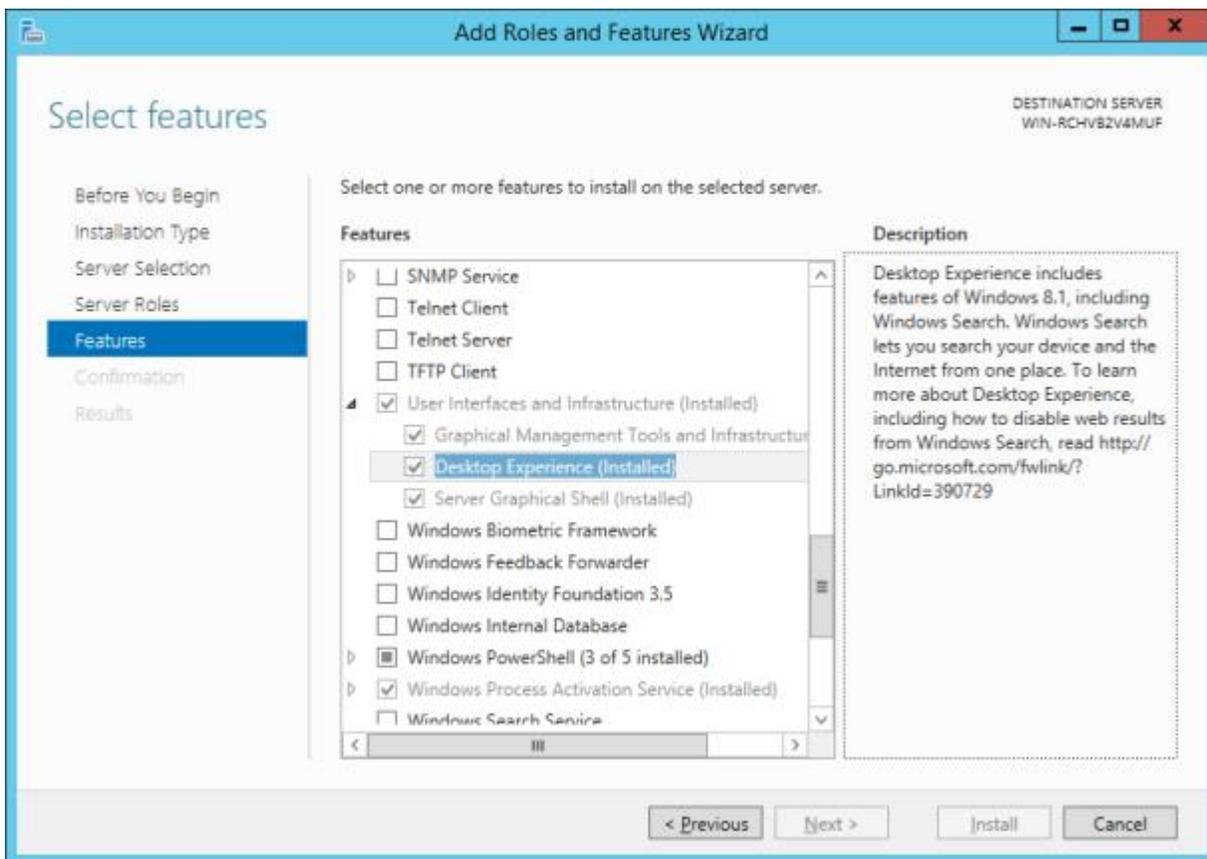


Note

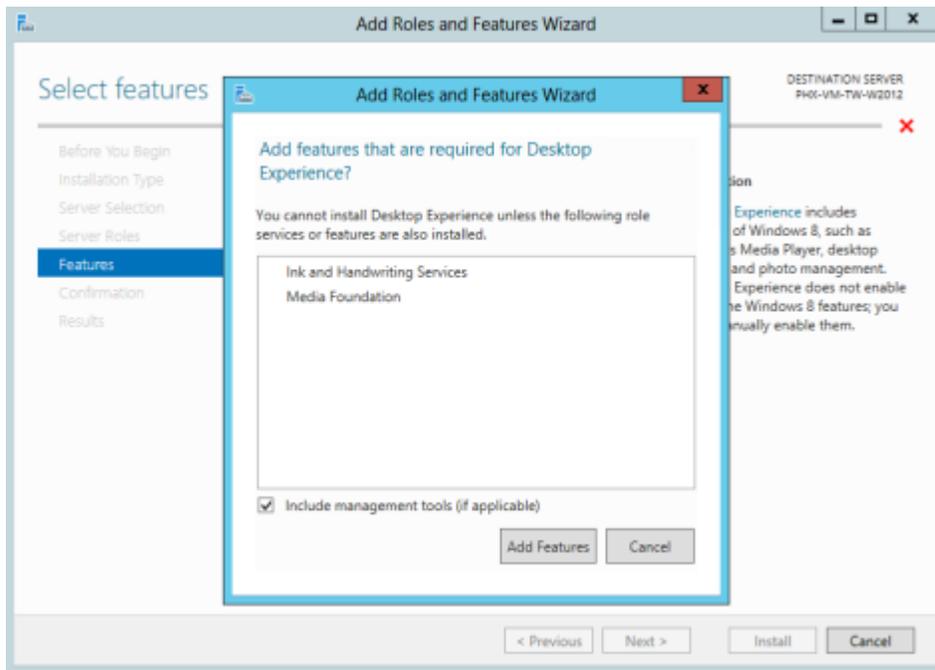
After the Desktop Experience is installed, a reboot of the server is required.

For Windows Server 2012 or above, complete the following steps:

1. Navigate to Server Manager and open Features from the pane on the left. The Features page displays.
2. Scroll down to and expand the User Interfaces and Infrastructure drop-down list.



3. From the drop-down list select the Desktop Experience checkbox.
4. If a window appears and requests to add features that are required for Desktop Experience click Add Features.



5. The installation begins. It will take approximately twenty minutes to install and it requires a reboot.

For Windows Server 2008, complete the following steps:

1. Navigate to Server Manager and open Features from the pane on the left. The Features display.
2. Click Add Features. The Add Features Wizard page displays.
3. From the Features list select the Desktop Experience checkbox and click Install. The installation begins.

Server running the Data Service

Installing Internet Information Service (IIS)

On the server hosting the Data Service you must also install the Internet Information Service (IIS). This is required to host the Quality Management Client application's website. The Enghouse QMS Installer will check to ensure that this server role exists and that all of the IIS features listed below are present when installing the Data Service. If any are not present, the prerequisite checker will not allow the install to proceed and will identify what features are missing.

To install IIS on Windows Server 2012 or above, complete the following steps:

1. Navigate to Server Manager > Local Server and scroll down to the Roles and Features section.
2. Click the TASKS drop-down and select the Add Roles and Features option. The Add Roles and Features Wizard window displays.
3. Select the Role-based or feature-based installation radio button, select the destination server. The Server Roles page displays.

4. Scroll down to Web Server (IIS) and expand the drop-down list. Ensure that the following check boxes are selected.
 - Web Server
 - Common HTTP Features
 - Default Document
 - Directory Browsing
 - HTTP Errors
 - Static Content
 - HTTP Redirection
 - Health and Diagnostics
 - HTTP Logging
 - Logging Tools
 - Request Monitor
 - Tracing
 - Performance
 - Static Content Compression
 - Security
 - Request Filtering
 - Windows Authentication
 - Application Development
 - .NET Extensibility 3.5
 - .NET Extensibility 4.5
 - ASP.NET 3.5
 - ASP.NET 4.5



Note

When you select ASP.NET 4.5 you may receive a message stating that the Security > Request Filtering, the Application Development> ISAPI Filters, and Application Development > .NET Extensibility 4.5 features need to be installed. Click Add Features and the ASP.NET 4.5 checkbox is selected.

- ISAPI Extensions
- ISAPI Filters
- WebSocket Protocol
- Management Tools
 - IIS Management Console
 - IIS 6 Management Compatibility

- o IIS 6 Metabase Compatibility
- o IIS 6 Management Console
- o IIS Management Scripts and Tools
- o Management Service

**Note**

When you select the Management Service check box, you may receive a message stating that ASP.NET 4.5 needs to be installed. Click Add Features in the window. The Management Service check box is selected.

5. Click Next. The Features tab displays. If you have already installed the .Net Framework and MSMQ (required for all servers) then continue to the Confirmation tab and install. Reboot the server if required.

To install IIS on Windows Server 2008, complete the following steps:

1. From the Server Manager > Features Summary, click Add Features. The Add Features Wizard window displays.
2. Click Next. The Web Server (IIS) page displays.
3. Click Next. The Select Role Services page displays.
4. Verify that the following items are selected
 - Web Server
 - o Common HTTP Features
 - o Static Content
 - o Default Document
 - o Directory Browsing HTTP Errors
 - o HTTP Redirection
 - o Application Development
 - o ASP.NET
 - o ISAPI Extensions
 - o ISAPI Filters
 - Health and Diagnostics
 - o HTTP Logging
 - o Logging Tools
 - o Request Monitor
 - o Tracing
 - Security
 - o Windows Authentication
 - o Request Filtering

- Performance
 - o Static Content Compression
- Management Tools
 - o IIS Management Console
 - o IIS Scripts and Tools
 - o Management Service
 - o IIS 6 Management Compatibility
 - o IIS 6 Metabase Compatibility
 - o IIS 6 WMI Compatibility
 - o IIS 6 Scripting Tools
 - o IIS 6 Management Console
- IIS Hostable Web Core

**Note**

The settings available under the Internet Information Service\World Wide Web Services\Application Development \ role above can vary from one supported operating system to another. Settings associated with .NET (3.5, 4.0, and 4.5), ASP, ASP.NET (3.5, 4.0, and 4.5), CGI, and ISAPI, should be enabled.

5. Click Next. The Confirm Installation Selections page displays.
6. Click Install. When the installation is complete the Results page displays.
7. Verify that all of the necessary components have been installed.

**Note**

A warning about automatic updating may display. To activate automatic Windows updates turn on Windows Update in Control Panel.

8. Click Close and reboot the server.

Other Requirements

Also, prior to installing on the server hosting the Call Recording Service, you must ensure that port mirroring has been configured properly on the network switch and that the required network packets are being delivered to the Recording Server. You can check this by installing and running Wireshark (<http://www.wireshark.org>) and confirming the presence of RTP packets.

You must also ensure that any required Computer Telephony Interface (CTI) components have been installed and configured before installing the Call Recording Service. CTI components are PBX specific:

- For ShoreTel integrations, ShoreTel TAPI is required.
You can confirm that TAPI is working by running Microsoft Dialer (available in all Windows installations) and confirming that the extensions to be recorded show up in the device list.

- For Mitel integrations, the Mitel MiTAI interface is required. You can confirm that MiTAI is working by running the MiTAI Extension Test Tool.
- For Avaya Communications Manager, TSAPI or DMCC is required and must be set up.
- For Avaya IP Office, TAPI is required and must be set up and configured.
- For Cisco, TAPI is required when forked audio is being used.
- For Microsoft Lync, additional components and configurations are required. Refer to the supplementary documents for more information.
- For all other PBX integrations, CTI events are captured using the port mirror on the network switch.

For more information on PBX integrations, refer to the Quality Management Suite Help.

4: Performing the Installation

The Enghouse QM Suite Installer is an all-in-one install. This single installer includes all the components required for a standard QMS deployment, including prerequisites. There are two versions of the installer, one that bundles all the needed prerequisites and one that requires an internet connection to first download missing prerequisites before they can be installed.

The bundled version includes all possible prerequisite installers, such as .NET and MS SQL Express 2017. These prerequisite installers can be large and since there are so many variations that have to be included, this bundled version of the installer is quite large, 600 MB. But the advantage is that this installer can be burned to DVD and installed on internal systems that do not have internet access.

The non-bundled version is much smaller, approximately 40 MB, and if a prerequisite is missing, it will automatically download the installer file and execute it. Since only missing prerequisites are downloaded and only the version needed for that system, it won't take a lot of bandwidth to get the required files. This installer can also be used in an environment that does not have internet access, assuming prerequisites are already installed. The installer will still check and verify that they are included.

To use the QMS installer, you must either be logged in as system administrator or elevate the installer file by right clicking the .exe and selecting "Run as Administrator". You will need to enter proper administrator credentials to do this.

This section will walk you through each step of the installer and provide information on all options you can select.

Welcome Screen

This is the first screen of the installer. You will note the version and build number is displayed at the upper right of the screen. There are two variations of this screen. If there are no QMS components already installed, then the installer knows that you are installing and you will see a 'Continue' and 'Exit' button. Also, if the Data Service, Call Recording Service and Media Processing Service are already installed, then the installer knows that you are uninstalling and you will see the 'Continue' and 'Exit' Button.

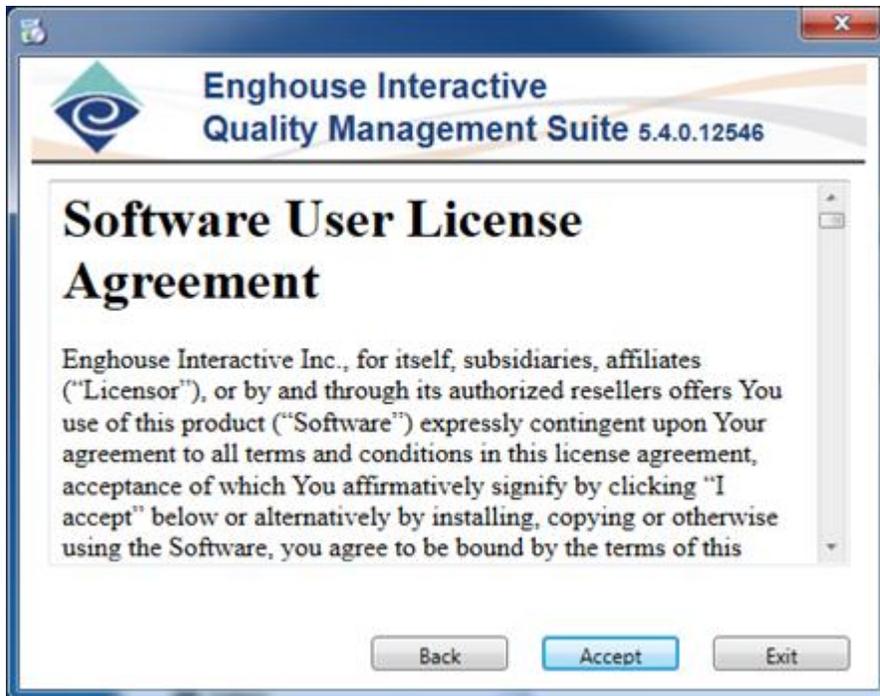


But if you have not installed all components, then you will need to tell the installer whether you are installing a new component or uninstalling the component that is already there. In this case, you will see an 'Install', 'Uninstall', and 'Exit' Button.



License Screen

Next is the Software User License Agreement. Please read through the agreement and select 'Accept' if you agree or 'Exit' if not.



Selection Screen

This screen allows you to select what QMS component(s) you want installed. By default, the Data Service, Call Recording Service and Media Processing Service will be checked. In addition, you may choose to provide a Windows service account for each service instead of using the default Local System account. Also, the Data Service install can either Install Local SQL Express Database Server or you can connect to an existing database server.

Installing Microsoft SQL Server Express

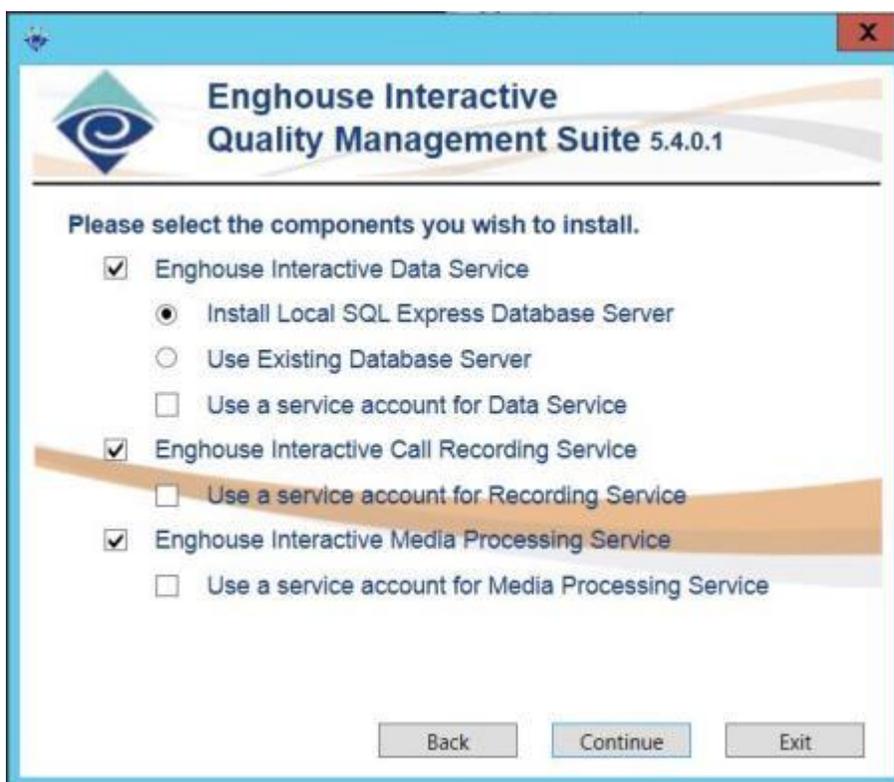
If you do not already have SQL Server, the Data Service Installer will detect its absence and install SQL Server Express 2017 . If you prefer a different version of SQL Server, you must manually install it before the Data Service.

An existing server can be either a local or remote SQL Express Database or a full SQL Server deployment. If the Use Existing Database is selected, an optional database step will allow you to enter the database connection information.

The final option on this screen is the Create QMS Database option. This option is assumed when installing a local SQL Express Server, but with an existing database, you may or may not want to install the QMS database depending on if it already exists on that server. If this option is checked and the QMS database already exists, the install will fail.

**Note**

Be careful with using an existing QMS database. If using a database from a previous QMS version, the data schema may have changed in the new version and using the older schema will result in a failure. In this case, the upgrader or a manual update of the data schema will need to be used.

**Database Connection Screen**

This screen will only appear when the Use Existing Database Server option is selected from the Selection Screen. This screen will gather all information needed to connect to the existing database.

The Server Name field can either be filled in manually or use the 'Find Servers' button to search the network for valid SQL Servers. A server search may take a while. If entered manually, you can use the server name with or without domain or IP address. Localhost is also a valid server name entry. If using a SQL Express server, you will need to include SQLExpress as the instance name, for example, "localhost\SQLExpress".

Two types of Authentication are supported, Integrated Windows Authentication or standard SQL Server Authentication. When using Windows Authentication, the administrator account that is used to install QMS must have the required permissions to create and modify a database and tables on the SQL Server.

**Note**

If you want to use a service account that is different from the current logged in user account for SQL Server Windows Authentication, you will need to run the QMS installer as a different user. To do this, you will need to:

1. Hold down Shift key and then right click on the QMS installer
2. Click "Run as different user"
3. Enter the credential of the service account
4. Perform the installation

If SQL Server Authentication is used, you will need to enter a User Name and Password credentials. The database credentials used must have permissions to create and modify the database and tables. The SQL Server must be configured to allow for SQL Server Authentication. If the SQL Server and Data Service are located on the same box, it is recommended that you enable and use named pipes for performance reasons. For additional information see:

<http://technet.microsoft.com/en-us/library/aa178138%28v=sql.80%29.aspx>

Once all the information is entered, you can use the 'Test Connection' button to verify that the Database server connection is accessible and the proper credentials are provided. This test does not create a database or tables, so it is not verifying that the provided credentials have the appropriate permissions or that the database or database files do not already exist.

**Progress Screen**

This screen shows progress as the various components are installed. A green indication means that the item has been or is already installed. Red indicates that it has not yet been installed. Which

indicators appear depends on the items selected on the selection screen. For example, if only DataService is installed, the Call Recording Service and Media Processing Service indicators will not appear. Once the Install button is clicked, the install process will begin.

Note: For uninstalls, indicators will appear only for Data Service and Call Recording Service based on the user selection. Once the 'Uninstall' button is clicked, the selected items are uninstalled.



As components are being installed, a green progress bar will appear indicating the installer's progress. The Data Service and Call Recording Service installers will pop up additional windows that you will need to provide information to in order to progress through the install. This is discussed in more detail below.



Once the entire installation (or uninstall) is completed the progress screen will show all green indicators and a congratulations message will appear.



Prerequisite Checker

This screen does several things involving prerequisites for the software. This is designed to verify that all software prerequisites are installed and automatically install missing prerequisites when possible.

The first check made involves Windows Server Roles and Features. The following table breaks down what Roles or Features are required:

Data Service

- IIS Installed with all the features listed in Section 2 above.
- MSMQ

- .NET Framework with non-HTTP Activation
- If Windows Server OS, Desktop Experience

Call Recording Service

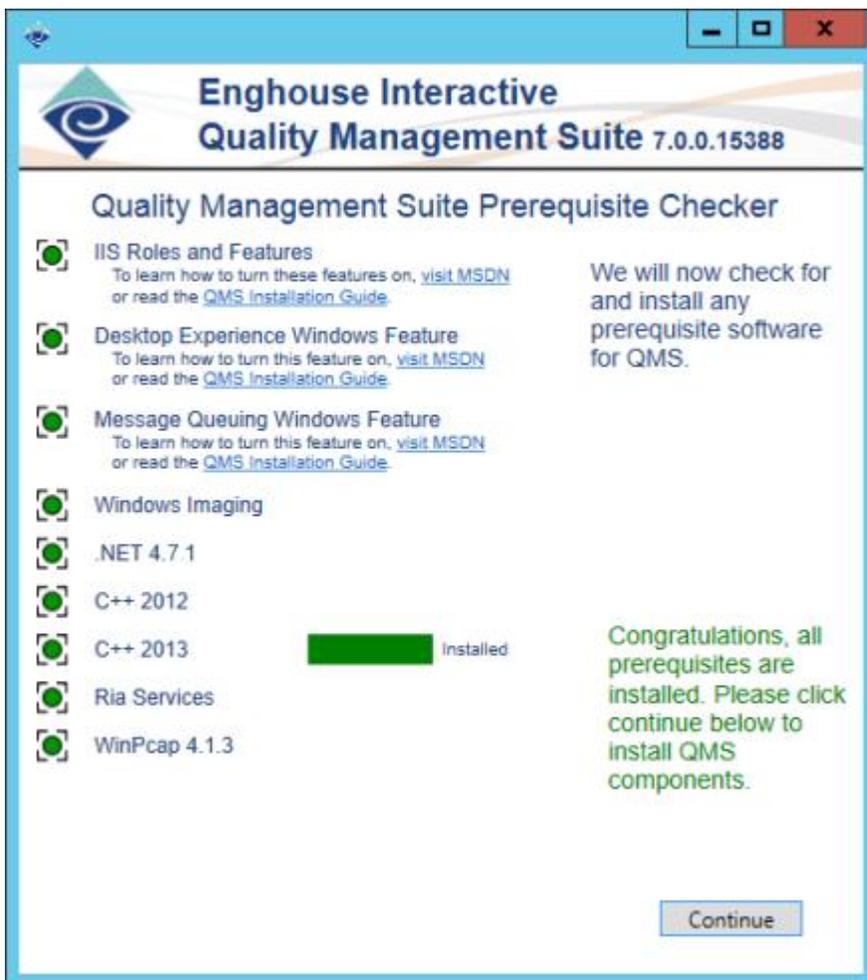
- MSMQ
- If Windows Server OS, Desktop Experience

Media Processing Service

- MSMQ
- If Windows Server OS, Desktop Experience

Windows Roles and Features must be installed through the Server Manager and cannot be automatically installed, but the installer does check to verify that they have been properly installed and will stop installation with a message of what items need installed before the installer can proceed. For more information on how to install these features, see Section 2 or click the links provided in the installer.

The Prerequisite Checker will also verify that all required software is installed and will attempt to download and install any missing components. For a list of required prerequisites see the table below:



Data Service

- Microsoft .NET 4.7.1
- Windows Imaging
- Microsoft Visual C++ 2012 Redistributable
- Microsoft Visual C++ 2013 Redistributable
- Ria Services
- Optional: SQL Express

Call Recording Service

- Microsoft Visual C++ 2012 Redistributable
- WinPcap 4.1.3 or Npcap

Media Processing Service

- Microsoft Visual C++ 2012 Redistributable

Red and green indicators will show if the prerequisite is installed. If the prerequisite is not already installed and the non-bundled version of the installer is being used, a yellow progress indicator will show the downloading progress of all the prerequisite installers.

Once the prerequisites are downloaded or if using the bundled version, the installer will automatically install each of the prerequisites. Most of these installs will be silent, meaning user interaction is not required, but you will see progress indication with a green progress bar as the prerequisite is being installed.

Note: SQL Express install does not require any interaction, but can take several minutes to complete. Please be patient with the installer.

The WinPcap 4.1.3 install does require interaction so refer to the section below for information on completing that install. Once all prerequisites are installed, all indicators should be green and you will see a congratulations message in the window. Click the 'Continue' button to continue with the component installation.

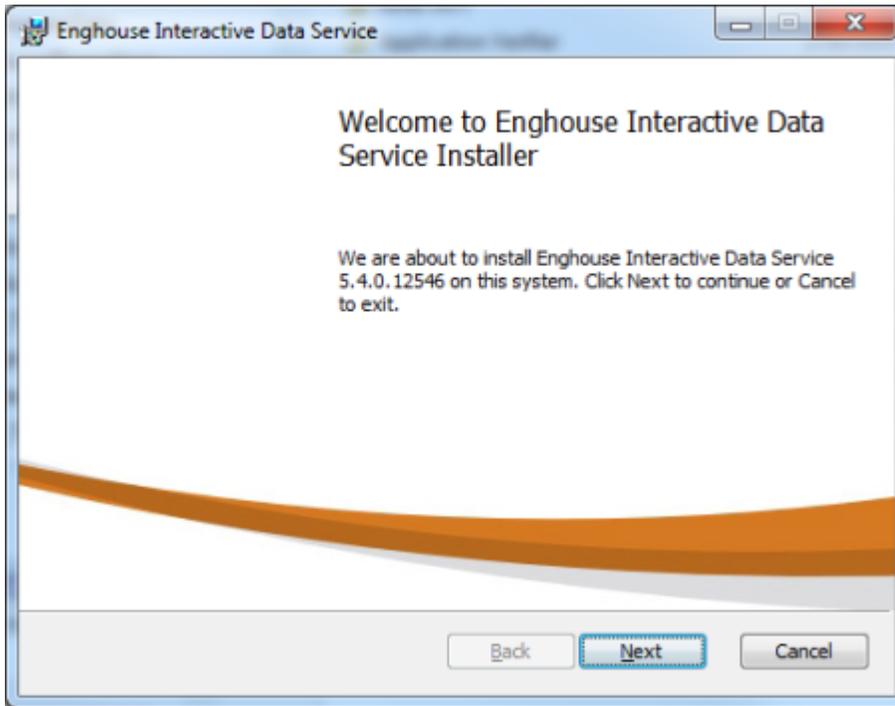
QMS also supports Npcap deployments that are licensed by the QMS customer. Npcap can be installed in WinPcap-compatible mode or in native mode with or without the WinPcap installation.

Data Service Installer

If the Data Service is selected, the installer will run through a series of screens to install the Data Service. The account that runs the Data Service requires the following:

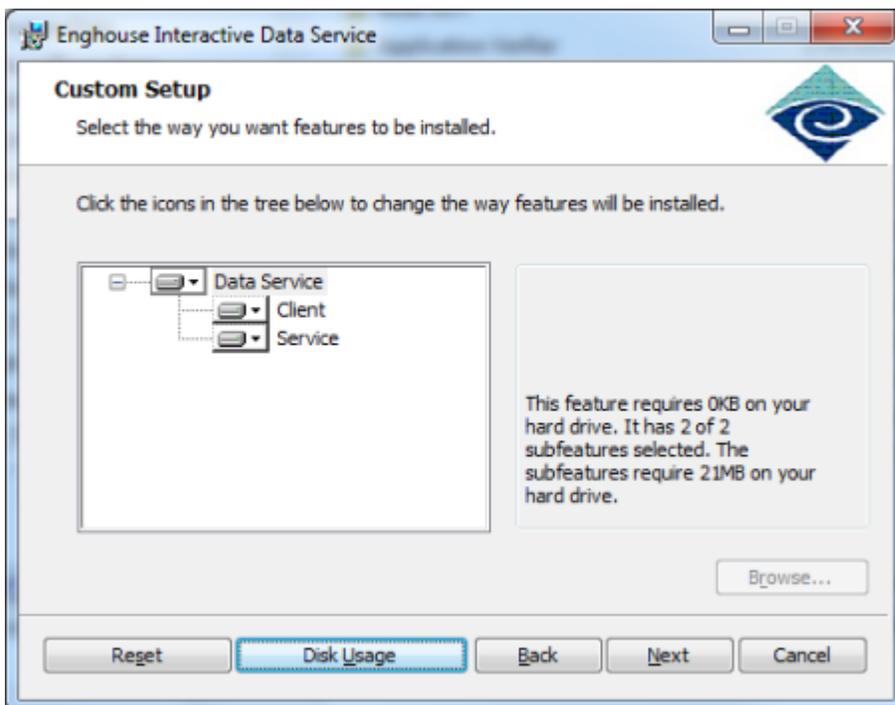
- A logon account created in the SQL Server instance, assigned as db_owner for the telrex35 database
- Full access to the QMS installation directory (e.g. C:\Program Files (x86)\Enghouse Quality Management Suite
- Full access to the storage location that will house the recordings (e.g. C:\ProgramData\Callrex

The Data Service install will first display a Welcome screen, just click the 'Next' button to continue the installation.

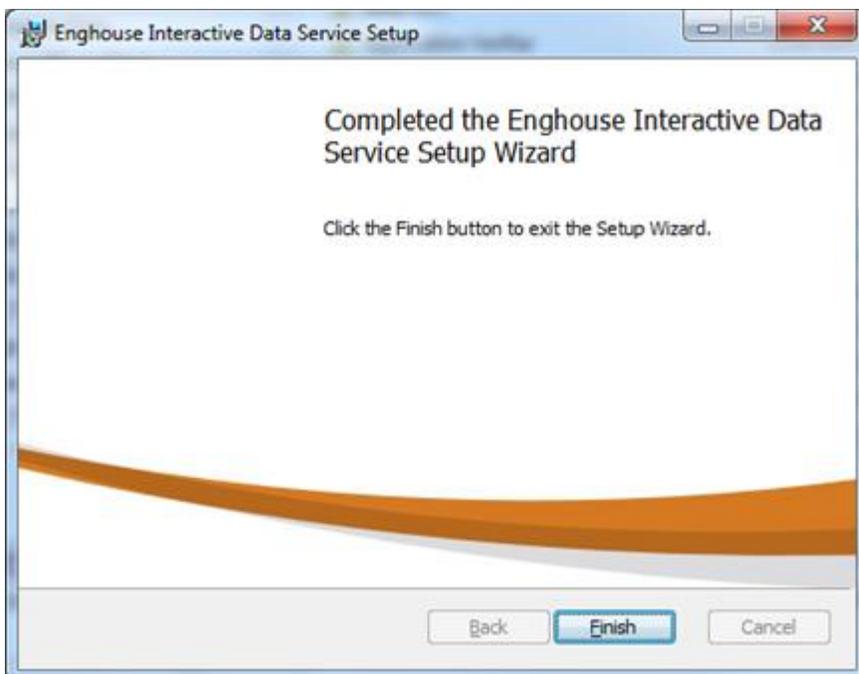


Next, the Custom Setup Page indicates what Data Service features are to be installed. Typically both the Client and Service features should be installed. There are multiple buttons on this screen described below:

- Click the 'Reset' button if you want to revert to default settings.
- Click the 'Disk Usage' button to view the amount of disk space required and available for the installation of selected features.
- Click the 'Back' button to return to the previous page.
- Click the 'Next' button to proceed with the installation.
- Click the 'Cancel' button to discontinue the Data Service installation.



The next screen includes an 'Install' button. Click that when ready to complete the Data Service installation. Once the install completes, a screen will indicate that the installation successfully completed.

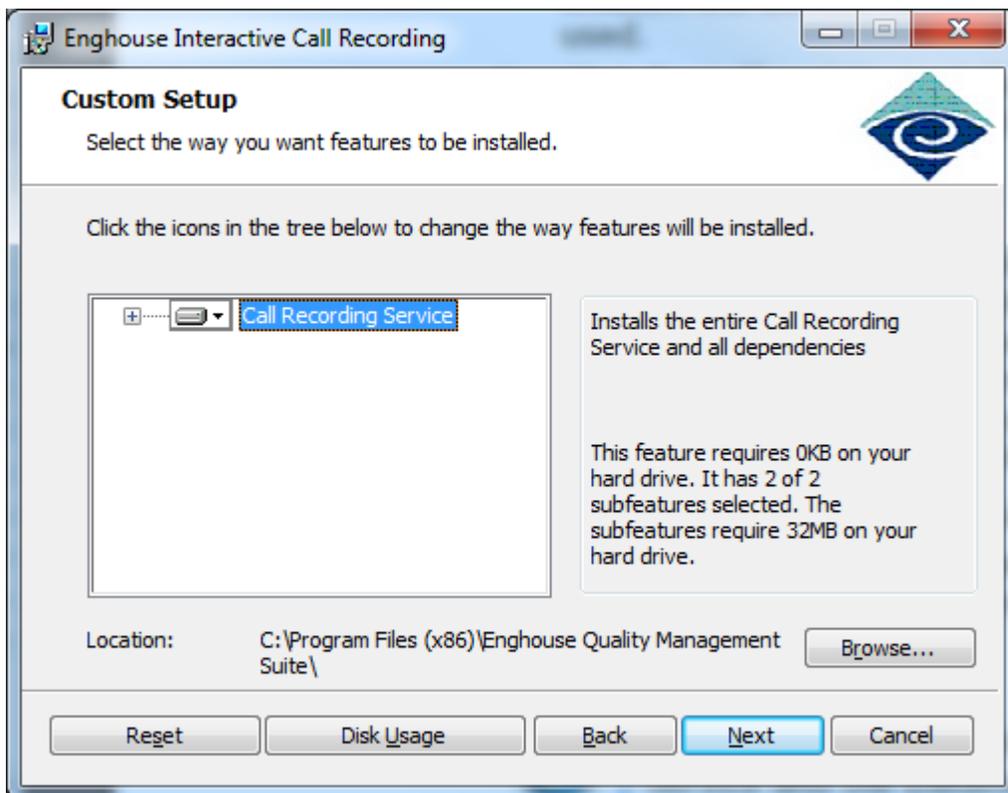


Call Recording Service Installer

If the Call Recording Service is selected, the installer runs through a series of screens to install the Call Recording Service. The first screen you will see is a Welcome screen. Simply click the 'Next' button to proceed.

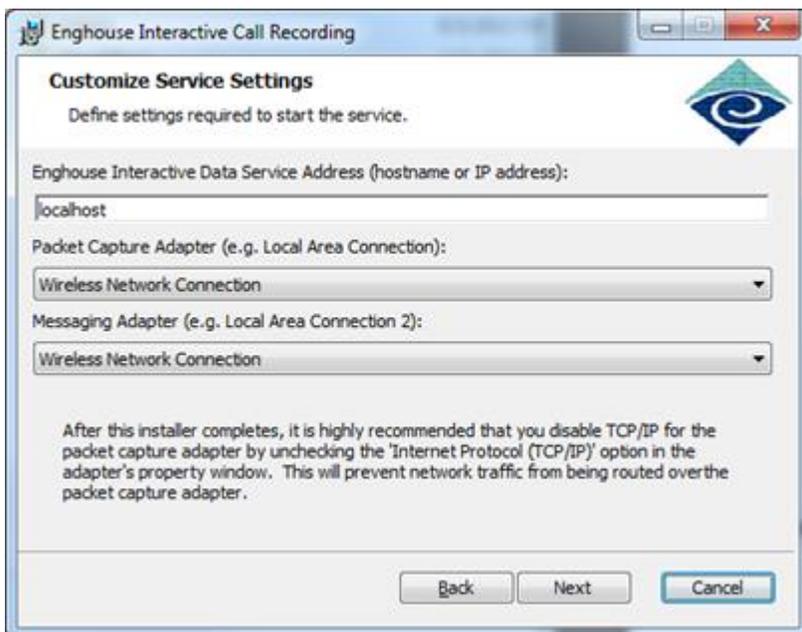
The Custom Setup screen is very similar to the one described in the Data Service. There are multiple buttons on this screen described below:

- Click the 'Reset' button if you want to revert to default settings.
- Click the 'Disk Usage' button to view the amount of disk space required and available for the installation of selected features.
- Click the 'Back' button to return to the previous page.
- Click the 'Next' button to proceed with the installation.
- Click the 'Cancel' button to discontinue the Data Service installation.



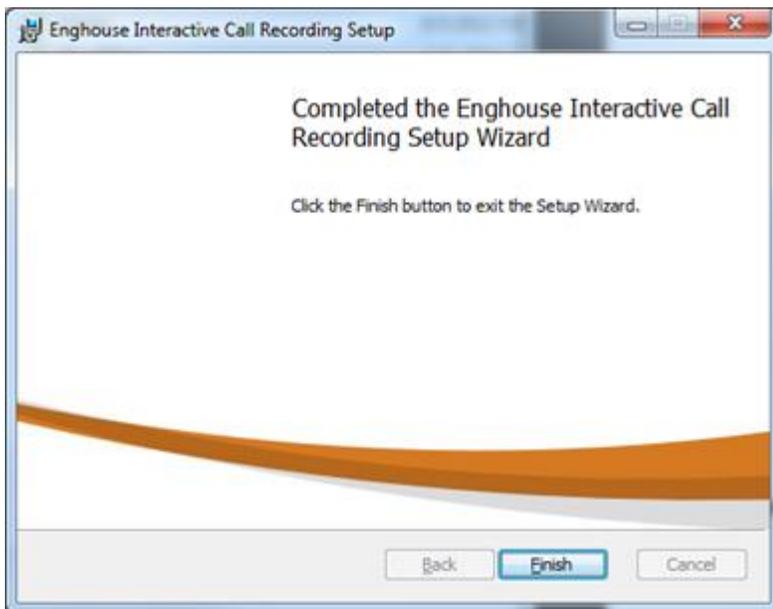
The Customize Service Settings screen fills in information to properly configure the Call Recording Service. In the Enhouse Interactive Data Service Address field, enter the appropriate hostname or IP address where the Data Service is installed. If both components are installed on the same server, 'localhost' can be used.

The Packet Capture Adapter and Messaging Adapter drop-down menus will include an alphabetically sorted list of adapters. Choose the appropriate adapter for both. Once the items are completed, click the 'Next' button to continue.



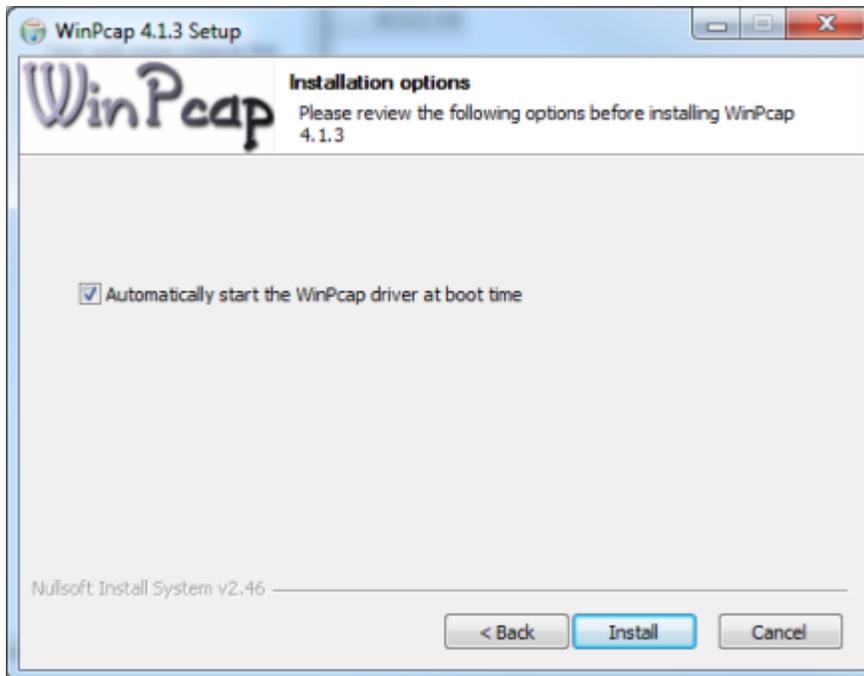
Note: On Call Recording servers that have a second network adapter installed as a dedicated packet capture device, it is highly recommended that you disable TCP/IP for that adapter. This will prevent network traffic from being routed over the packet capture adapter. To do this, uncheck the Internet Protocol (TCP/IP) option(s) in the adapters properties dialog (available via Windows Network Connections configuration).

The next screen includes an 'Install' button. Click that when ready to complete the Call Recording Service installation. Once the install completes, a screen will indicate that the installation successfully completed.



WinPcap 4.1.3 or Npcap Installation

WinPcap or Npcap is a prerequisite for the Call Recording Service. This section discusses the installation of WinPcap, which is the default deployment. Npcap must be licensed independently from QMS and the installation instructions should be found in the licensed software. The WinPcap software is redistributable, but the license requires that the install is not silent. The install is very simple and only requires clicking through the windows and using the default settings. Make sure to leave the Automatically start the WinPcap driver at boot time checkbox checked.



When Quality Management Suite is installed its services (Call Recording Service and Data Service) are configured to run using the Local System account, which has full permissions. However, for better security the services should run from their own service account, which has only the permissions they require. Your organization's security requirements will dictate which account runs the Quality Management Services.

You must configure custom service accounts for Call Recording Service and Data Service before you enable recording encryption. To change the service accounts, complete the following steps:

For Call Recording Service:

1. From Windows Start, select **Administrative Tools**.
2. Double-click **Services**. The Services window displays.
3. In the **Services** window, double-click a Call Recording Service to display its properties.
4. On the **Log On** tab, select **This account**.
5. Enter the name and password of the account the service should run as.
6. Click **OK**.

For Data Service:

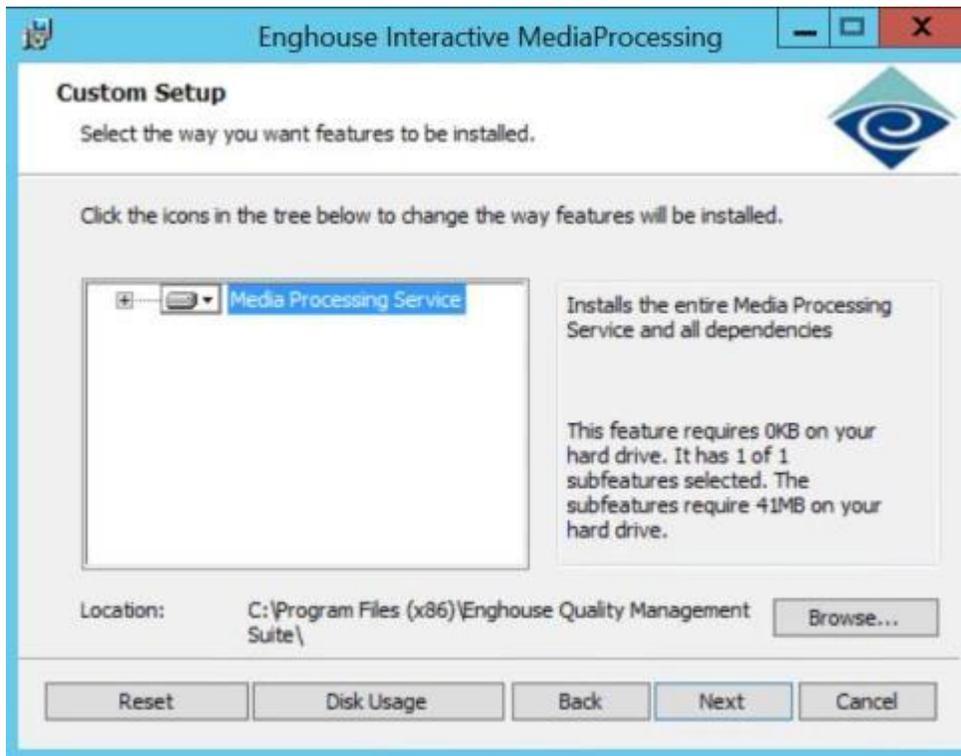
1. From Windows Start, select **Administrative Tools**.
2. Double-click **Services**. The Services window displays.
3. In the **Services** window, double-click a Data Service to display its properties.
4. On the **Log On** tab, select **This account**.
5. Enter the name and password of the account the service should run as.
6. Click **OK**.

Media Processing Service Installer

If the Media Processing Service is selected, the installer runs through a series of screens to install the Media Processing Service. The first screen you will see is a Welcome screen. Simply click the 'Next' button to proceed.

The Custom Setup screen is very similar to the one described in the Data Service. There are multiple buttons on this screen described below:

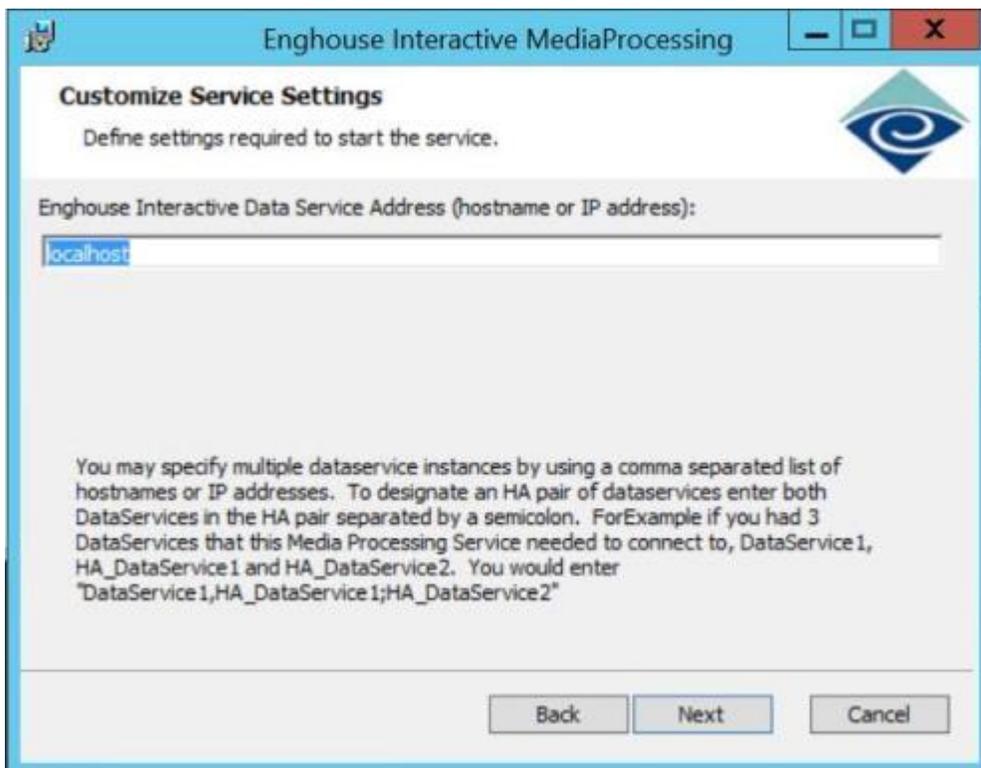
- Click the 'Browse' button if you want to change the installation location.
- Click the 'Reset' button if you want to revert to default settings.
- Click the 'Disk Usage' button to view the amount of disk space required and available for the installation of selected features.
- Click the 'Back' button to return to the previous page.
- Click the 'Next' button to proceed with the installation.
- Click the 'Cancel' button to discontinue the Media Processing Service installation.



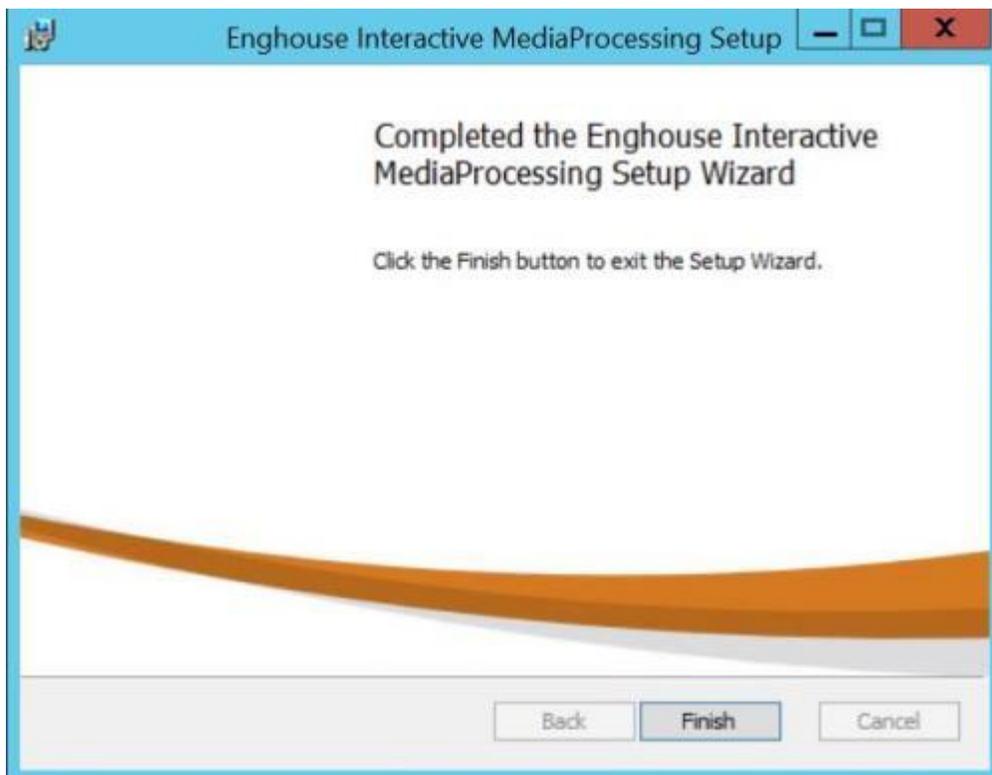
The Customize Service Settings screen fills in information to properly configure the Media Processing Service. In the Enhouse Interactive Data Service Address field, enter the appropriate hostname or IP address where the Data Service is installed. If both components are installed on the same server, 'localhost' can be used.

You may specify multiple dataservice instances by using a comma separated list of hostnames or IP addresses. To designate an HA pair of dataservices enter both DataServices in the HA pair separated by a semicolon. For example if you had 3 DataServices that this Media Processing Service needed to connect to, DataService1, HA_DataService1 and HA_DataService2. You would enter "DataService1,HA_DataService1;HA_DataService2"

Once the items are completed, click the 'Next' button to continue.



The next screen includes an 'Install' button. Click that when ready to complete the Media Processing Service installation. Once the install completes, a screen will indicate that the installation successfully completed.



Configure QMS components to run under SSL secure transport (Optional)

The Quality Management Suite can be configured to run under a secure transport layer (SSL) for all communication with the following components:

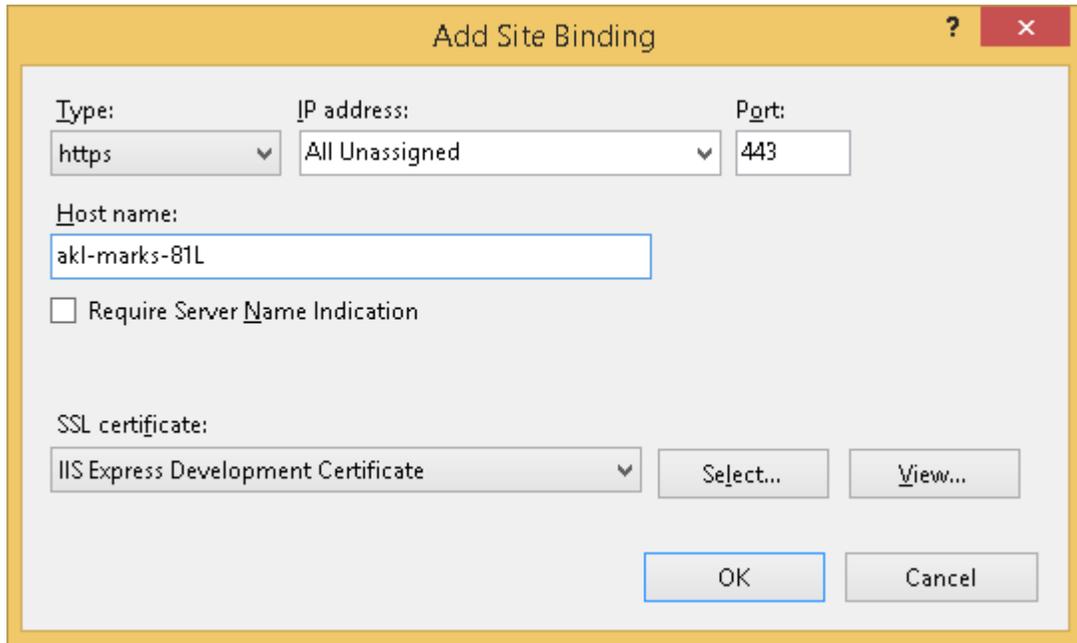
- The QMS client website
- The QMS data service
- The QMS call recording service

The security configuration tool (SecurityConfigurationTool.exe) to enable SSL for any of these components can be found in the install directory of the relevant QMS server. Additional steps are required before using the tool as detailed below.

Configuring SSL on the QMS Client Website

Before configuring SSL on the client website, a valid certificate must be installed on the data server. This certificate must be able to be trusted by all client machines that access the QMS client website.

1. Configure IIS for SSL
 - a. Open IIS Manager and navigate to Sites > Default Web Site > Bindings. Remove the http binding on port 80 and add the https binding on port 443. Select the installed SSL certificate when adding the https binding

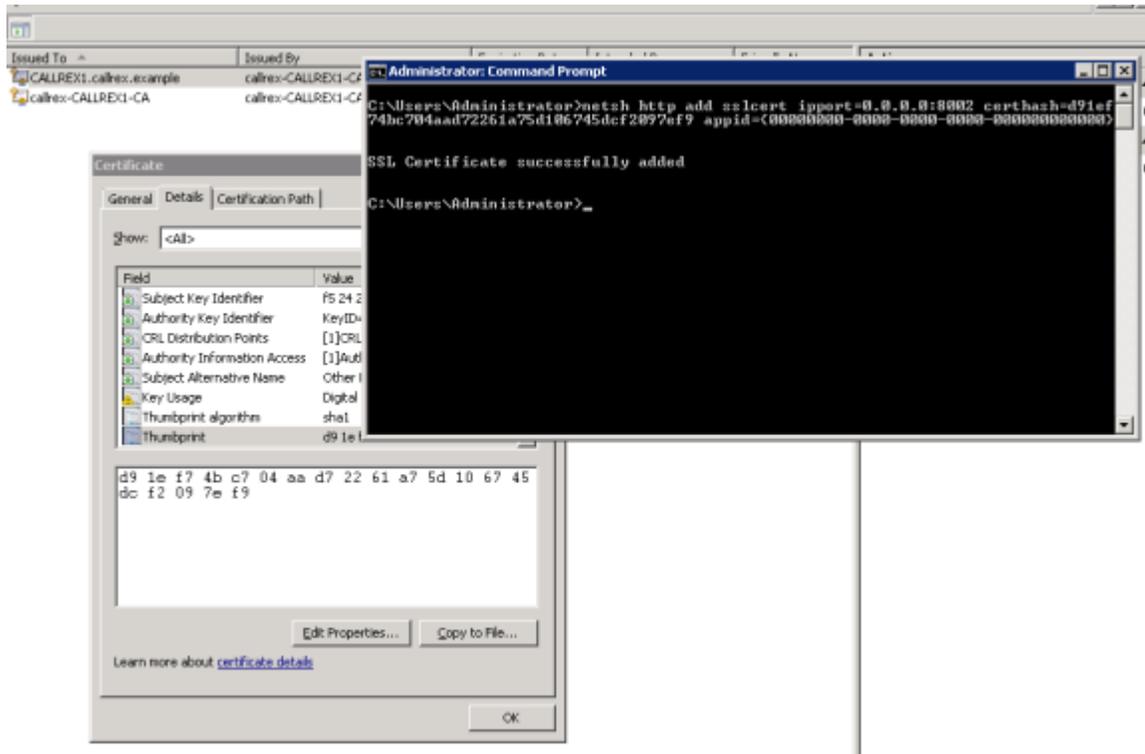


The screenshot shows the "Add Site Binding" dialog box. The "Type" dropdown is set to "https", the "IP address" dropdown is set to "All Unassigned", and the "Port" text box contains "443". The "Host name" text box contains "akl-marks-81L". The "Require Server Name Indication" checkbox is unchecked. The "SSL certificate" dropdown is set to "IIS Express Development Certificate", with "Select..." and "View..." buttons to its right. "OK" and "Cancel" buttons are at the bottom.

- b. Navigate to Sites > Default Web Site > SSL Settings and ensure "Require SSL" is checked and Client Certificates is set to "Accept".
2. Configure Client Service port for SSL

The client service port (8002) and the reporting service port (8031) will also need to be secured under SSL. To do so you need to open a Command Window prompt. Note that you can check the SSL certificates currently installed on the ports with the following command: netsh http show sslcert

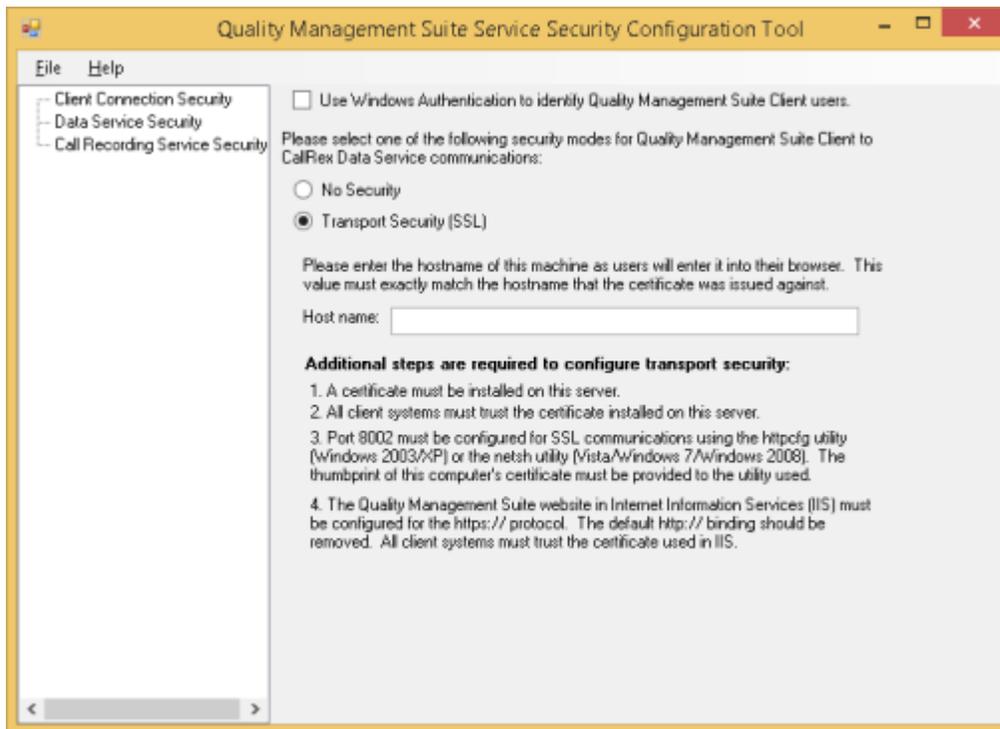
 - a. Discover the thumbnail of the certificate used to secure IIS. This can be done via the Certificates snap in mmc.exe. Locate the certificate and copy the thumbprint information from the Details tab.
 - b. To add SSL to the ClientService port (8002) run the following command: netsh http add sslcert ipport=0.0.0.0:8002 certhash=[thumbnail of your certificate] appid={[can be any GUID]}



- c. To add SSL to the Reporting Service port (8031) run the following command: `netsh http add sslcert ipport=0.0.0.0:8031 certhash=[thumbnail of your certificate] appid={{[can be any GUID]}}`

3. Run QMS Security Configuration Tool

Set the “Client Connection Security” to “Transport Security (SSL)” and enter the hostname of the server which must match the hostname the certificate was issued against. Note that this tool updates the Data Service configuration file to change the address and bindings of the Client Service endpoint to use SSL.



Configuring SSL on the QMS Call Recording Service

Configuring SSL on the QMS Data Service will secure the transport of communication between the data server and recording servers. Before configuring SSL on the Data Service, a valid certificate must be installed on the data server. This certificate must be able to be trusted by all recording servers that access the data service. The certificate must have been created with the intended purpose (Enhanced Key Usage) of Client Authentication.

1. Configure Data Service port for SSL

The data service port (8004) will need to be secured under SSL. To do so you need to open a Command Window prompt. Note that you can check the SSL certificates currently installed on the ports with the following command: `netsh http show sslcert`

- a. Discover the thumbnail of the certificate you want to use to secure the port. This can be done via the Certificates snap in `mmc.exe`. Locate the certificate and copy the thumbprint information from the Details tab.
- b. To add SSL to the DataService port (8004) run the following command: `netsh http add sslcert ipport=0.0.0.0:8004 certhash=[thumbnail of your certificate] appId={[can be any GUID]}`

2. Run QMS Security Configuration Tool

Set the "Data Service Security" to "Transport Security (SSL)" and enter the hostname and thumbprint of the certificate. Note that this tool updates the Data Service configuration file to change the address and bindings of the Data Service endpoint to use SSL.

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