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GENESYS™

Interaction Recorder Extreme Query

Installation and Configuration Guide

Abstract

This guide documents installing and configuring the Interaction Recorder Extreme Query server and Extreme Query client.

For the latest version of this document, see the PureConnect Documentation Library at: http://help.genesys.com/pureconnect.

Table of Contents

Introduction

Interaction Recorder Extreme Query is an ultra-fast solution for running searches and retrieving stored call recordings for playback. The two components for Extreme Query are the Interaction Recorder Extreme Query Server and the Interaction Recorder Extreme Query Client. The Extreme Query Server is software that is installed on a standard Microsoft Windows 64-bit server. Interaction Recorder Extreme Query Client is a component of the Interaction Recorder add-on module for IC Business Manager. Using Extreme Query, you can search and playback recorded calls, view and sort Search Results, view Graph Data of search results, and Export search results to a file.

This document includes:

- An Overview of Interaction Recorder Extreme Query
- A Description of the Extreme Query components
- Extreme Query Server Installation and Configuration information

About this information

The installation and configuration information in this guide is for CIC System administrators, Genesys Business partners, and anyone who is interested in learning how to install and configure an Extreme Query Server.

Additional information

Because Interaction Recorder Extreme Query is integrated with Customer Interaction Center, there are additional technical references and guides that might be of interest to you. Documents are available in the PureConnect Documentation Library on your CIC server.

The latest version of these documents can also be accessed from the PureConnect Documentation Library on the Genesys Web site at: http://help.genesys.com/cic.

The following technical references, Help systems, and links can provide additional information for Extreme Query.

- *PureConnect Installation and Configuration Guide*
- *PureConnect Licensing Technical Reference*
- *Interaction Recorder Client for IC Business Manager Help*
- *Interaction Recorder Extreme Query Help*
- *IC Business Manager Help* (Available only with IC Business Manager installation)
- *Interaction Administrator Help*
- *Interaction Recorder and Interaction Quality Manager Technical Reference*

Overview

Interaction Recorder is capable of handling huge call volumes of up to 500,000 per day. In high volume environments, the database that is used to store information about recordings can grow to contain millions or even tens of millions of entries. In these environments, running queries and reports against the database can take a long time. To shorten the time to run queries and reports, PureConnect created an ultra-fast solution, *Interaction Recorder Extreme Query*.

The Extreme Query Server is software, installed on a standard Microsoft Windows 64-bit server containing a large amount of RAM, which caches a subset of the recording data from the Interaction Recorder database. The Extreme Query components are the Interaction Recorder Extreme Query Engine and the Interaction Recorder Extreme Query Server Subsystem. The Extreme Query Engine checks the Interaction Recorder databases for new recordings every ten minutes, stores any new recordings in a large memory cache, and performs queries against the cached recording data. The Extreme Query Server Subsystem is a 32-bit CIC remote subsystem that is an intermediary between the CIC System and the Extreme Query Engine. Extreme Query client requests are forwarded to the Extreme Query Server Subsystem, which in turn forwards the request to the Extreme Query Engine.

Interaction Recorder Extreme Query client is a component of the Interaction Recorder add-on module for IC Business Manager. The Extreme Query client conducts searches against the Extreme Query Server. These searches, even across millions of records, take only a few seconds. Another benefit is less load on the Interaction Recorder database server, which is important as information about new recordings is continuously being inserted into that database.

Using Extreme Query, you can search and playback recorded calls, view and sort Search Results, view Graph Data of search results, and Export search results to a file. Extreme Query is a great solution for an organization recording large volumes of calls.

Interaction Recorder Extreme Query components

The following is a list and description of the Extreme Query components.
- CIC server components of the Extreme Query system
- Interaction Recorder Extreme Query Server components
- Interaction Recorder Extreme Query client

CIC server components

The CIC server Install contains the CIC server components of the Interaction Recorder Extreme Query system, which are automatically installed during the CIC server Installation. The CIC server components for Extreme Query are:
- A new `I3DBTran` provider
- Updated `I3DBTran` COM DLLs
- An added stored procedure in the CIC database

Interaction Recorder Extreme Query Server

The Interaction Recorder Extreme Query Server install contains the Extreme Query Server components. The Extreme Query install is available to install from the PureConnect Customer Interaction Center (CIC) `.iso` file. The install is located under `\Installs\Off-ServerComponents`.

Extreme Query Server components

There are two components in the Extreme Query Server.

Extreme Query Engine

The Extreme Query Engine is a 64-bit program that caches a subset of the recording data stored in the Interaction Recorder database in memory. The Extreme Query Engine pulls this information directly from the Interaction Recorder database and checks for new recordings every ten minutes. The Extreme Query Engine also performs the queries against the cached recording data.

Extreme Query Server Subsystem

The Extreme Query Server Subsystem is a 32-bit CIC remote subsystem that is an intermediary between the CIC System and the Query Engine. Extreme Query requests are forwarded to the subsystem, which in turn forwards the request to the Extreme Query Engine.

Interaction Recorder Extreme Query client

The Extreme Query client is a component of the Interaction Recorder Client add-on module for IC Business Manager. Extreme Query Client is installed on client workstations using the **IC Business Manager Applications** workstation install from the PureConnect Customer Interaction Center (CIC) `.iso` file, located under **Workstation**. The install creates an IC Business Manager shortcut in the `PureConnect` folder of the **Start** menu and also creates a shortcut on the Windows desktop.

Installation and Configuration

This section includes information you'll need for planning your installation and information on installing and configuring your installation.

Migrating from a previous release

A migration package containing tools and documentation is available for CIC 2.4/3.0 systems to migrate to CIC 2015 R1 or later. For more information, see *CIC Migration Guide* in the PureConnect Documentation Library.

Installation Requirements

The following are the Interaction Recorder Extreme Query Server system requirements.

- The Extreme Query Server must be installed on a 64-bit Windows Server-class operating system.

- Windows Server 2012 Standard Edition (64-bit) is the minimum acceptable operating system.
- If Extreme Query will be used at its rated maximum of 90,000,000 recordings cached, it is highly recommended that the 64-bit Windows Server 2012 Enterprise Edition.
- If Extreme Query will be used at its rated maximum of 90,000,000 recordings cached with Windows Server 2016, it is highly recommended that the 64-bit Windows Server 2016 Enterprise Edition, or Windows Server 2016 Datacenter Edition be used.

  The Extreme Query Server has been tested and validated to work with Windows Server 2016 64-bit.

- The Extreme Query Server has been tested and validated to work with Windows Server 2019 64-bit.
- The Extreme Query Server must have at least 32 GB of physical RAM installed. It is recommended that at least 48-64 GB of physical RAM be installed.
- Because the Extreme Query Server must be installed on a 64-bit version of a Windows operating system, the Extreme Query Server components cannot be installed on the CIC server.

Planning for Installation

The Interaction Recorder Extreme Query Server install contains the Extreme Query Server components. The Extreme Query install is available to install from the PureConnect Customer Interaction Center (CIC) `.iso` file. The install is located under `\Installs\Off-ServerComponents`.

The Extreme Query client is a component of the Interaction Recorder Client add-on module for IC Business Manager. Extreme Query Client is installed on client workstations using the **IC Business Manager Applications** workstation install from the PureConnect Customer Interaction Center (CIC) `.iso` file, located under **Workstation**.

Licenses are required for the Extreme Query Server and the Interaction Recorder Extreme Query client. The licenses are:

- `I3_FEATURE_RECORDER_EXTREMEQUERY_SERVER`
- `I3_ACCESS_RECORDER_EXTREMEQUERY_CLIENT`

Planning for Extreme Query Server

Careful consideration is required in deciding how much physical memory to use for the system. At the rated maximum, the Extreme Query Engine consumes approximately 28 GB of memory. Future requirements and enhancements to the Extreme Query Engine could increase that memory consumption. If the memory consumption rises above 32 GB for the rated maximum of 90,000,000 recordings, it is necessary to configure the Extreme Query Server to cache less than the maximum rated number of recordings.

The recommended versions of Windows Server support processes with up to 2 TB of memory and would not require a change to the cached recordings configuration assuming a sufficient amount of physical memory is installed in the system.

Pre-requisites for installation

Before the Extreme Query Server install is run, the following steps must be performed.

1. Configure the CIC server database using Setup Assistant.
2. Run the **CIC server Installation** on the CIC server first, to ensure the Extreme Query CIC server components are installed on the CIC server. See *PureConnect Installation and Configuration Guide* for information on the CIC server installation.

> **Note:**
> By default, the PureConnect QoS driver will be silently installed and the certificate will be added to the Trusted Publishers list. If your site has reasons to modify this default behavior, see Knowledge Base (KB) article at:

> https://genesyspartner.force.com/customercare/pkb_Home?id=kA50B0000008R5H

> Follow the instructions provided to modify the QoS properties and run the install using Group Policy or other methods.

The two Extreme Query Server components, Extreme Query Engine and Extreme Query Server Subsystem, will be configured to run as Windows services. The installation process will configure these services to run as the User that runs the Extreme Query Server install. Decide who the User will be for the Extreme Query Server install and the Extreme Query Server services. There are two important points to consider about the User that runs the Extreme Query Server install:

- The User *must* have administrative rights on the computer the Extreme Query Server install is run on. The User must either be a member of the computer's **Administrators** local group, or a member of a group that belongs to the **Administrators** local group.
- It is highly recommended that the User that runs the Extreme Query Server install be configured on the CIC server as a valid IC user. While this is *not* a requirement, it makes installation slightly easier. If the User is *not* configured as a valid IC user, then an extra manual step is required after the Extreme Query Server install is complete.

Licenses

Interaction Recorder Extreme Query server feature is licensed separately from the CIC server. An access license is required for Interaction Recorder Extreme Query for IC Business Manager, in addition to an Interaction Recorder access license.

Be sure to purchase your Interaction Recorder Extreme Query licenses ahead of the time you are planning to install Extreme Query. The following licenses are required:

License	Description
`I3_FEATURE_RECORDER_EXTREMEQUERY_SERVER`	The Interaction Recorder Extreme Query Server license
`I3_ACCESS_RECORDER_EXTREMEQUERY_CLIENT`	Interaction Recorder Extreme Query for IC Business Manager license

You can view the licenses on your system in Interaction Administrator by clicking the **File** menu, and then click **License Management**. Confirm that you have the necessary Interaction Recorder Extreme Query licenses on the **Licenses** page and the **Features** page.

Installing Extreme Query Server

Review and fulfill the pre-requisites for installation, including the appropriate licensing, as described in Planning for Installation, earlier in this document.

## Extreme Query Server install

The Interaction Recorder Extreme Query Server install contains the Extreme Query Server components. The Extreme Query install is available to install from the PureConnect Customer Interaction Center (CIC) `.iso` file. The install is located under `\Installs\Off-ServerComponents`.

First, using the User with Administrative rights, run the Extreme Query Server install, following these steps.

1. If you have not done so already:
   a. Download the CIC 2015 R1 or later `.iso` file from the Product Downloads page at https://help.genesys.com/pureconnect/secure/Downloads.aspx .
   b. Copy the `.iso` file to a file server (non-IC server) with a high bandwidth connection to the server(s) on which you will be running the CIC 2015 R1 or later installs.

   c. Mount the `.iso` file and share the contents to make them accessible to the server(s) on which you will be running the CIC 2016 R1 or later installs.

2. Navigate to the `\Installs\Off-ServerComponents` directory on the file server.

3. Copy the `IRExtremeQueryServer_2018_R1.msi` file to the 64-bit Windows Server server operating system machine on which you plan to run this install and double-click to launch it.

   The Interaction Recorder Extreme Query Server Setup Wizard starts.
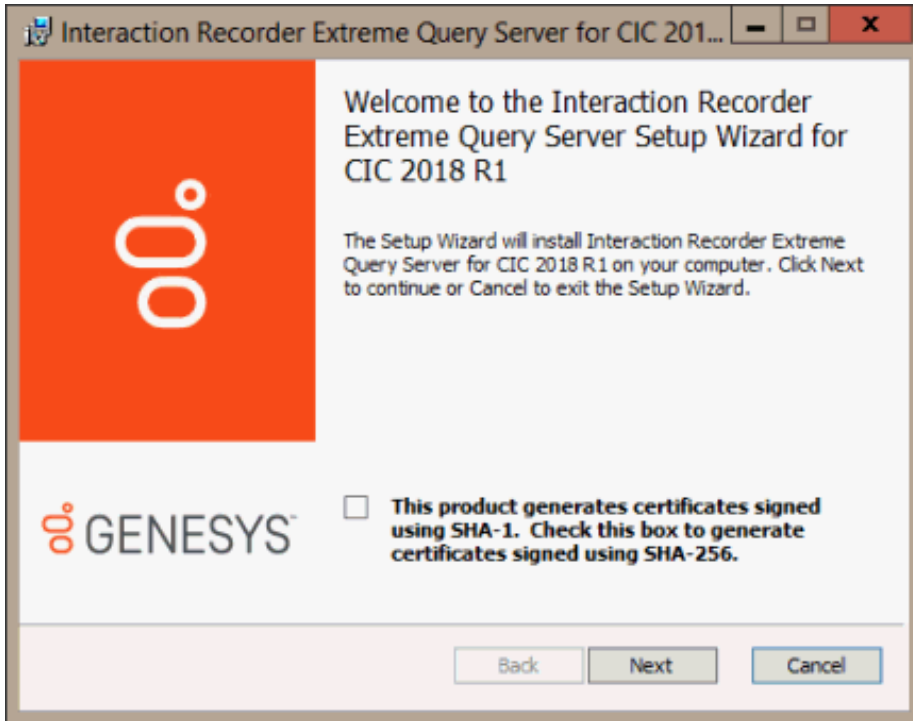
Click **Next** to continue. The **Custom Setup** page is displayed.

4. It is *strongly* recommended that you retain the default installation **Location** of `C:\Program Files\Interactive Intelligence`.
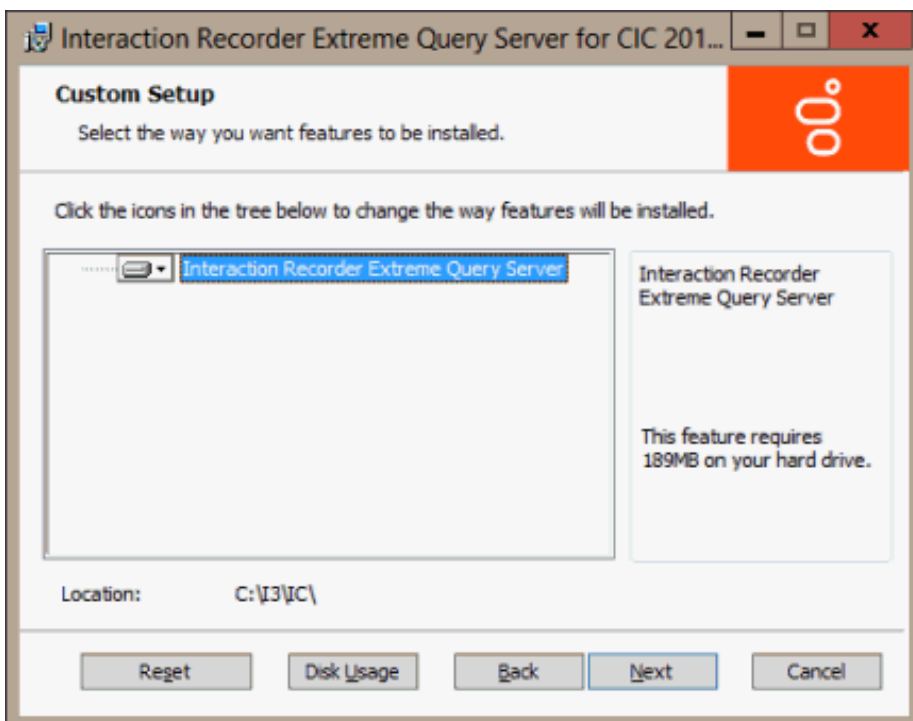
Click **Next** to continue. The **Domain User Validation** page is displayed.

5. The **Domain User Validation** page requires you to enter the password for the user for which the install is running. The **User** name and the **Domain** name are automatically set to reflect the user that is running the install.

Enter the **Password,** and click **Next**. The **IC Server Name** page is displayed.

6. The CIC server that the Extreme Query Server Subsystem will be connecting to must be entered in the **IC Server Name** box.
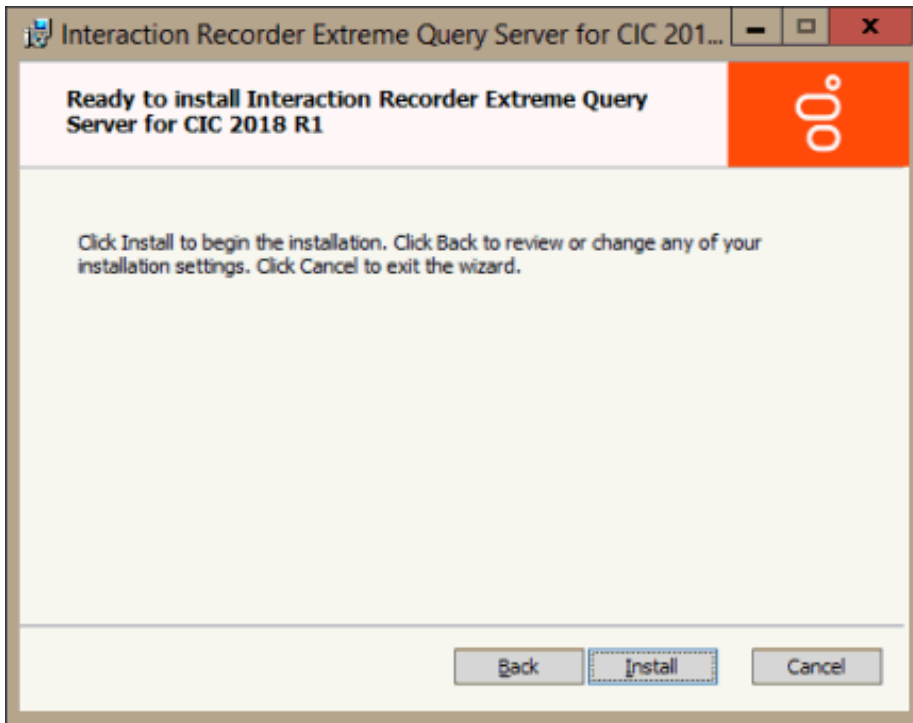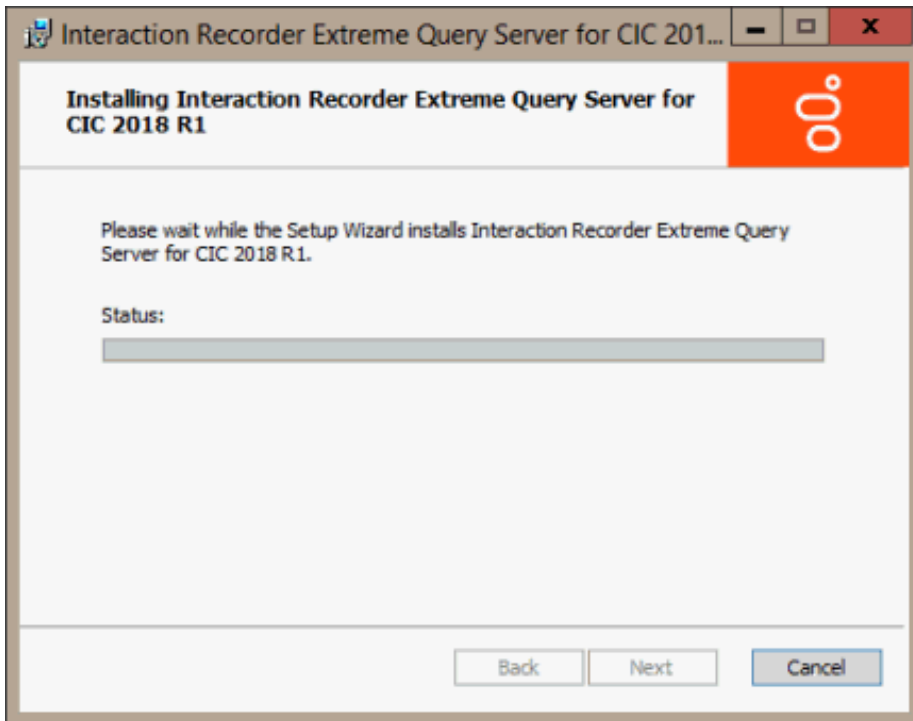

Type the **IC Server Name**, and click **Next**.

7. The **Ready to install Interaction Recorder Extreme Query Server** page is displayed.

To begin the installation, click **Install**.
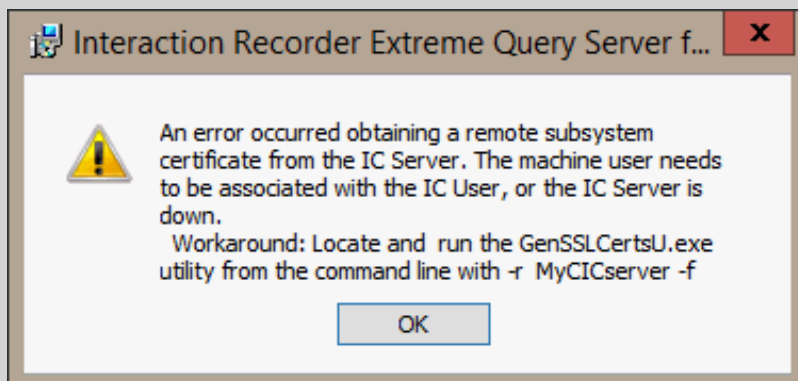
8. When the installation is complete, the **Completed the Interaction Recorder Extreme Query Server Setup Wizard** page is displayed.
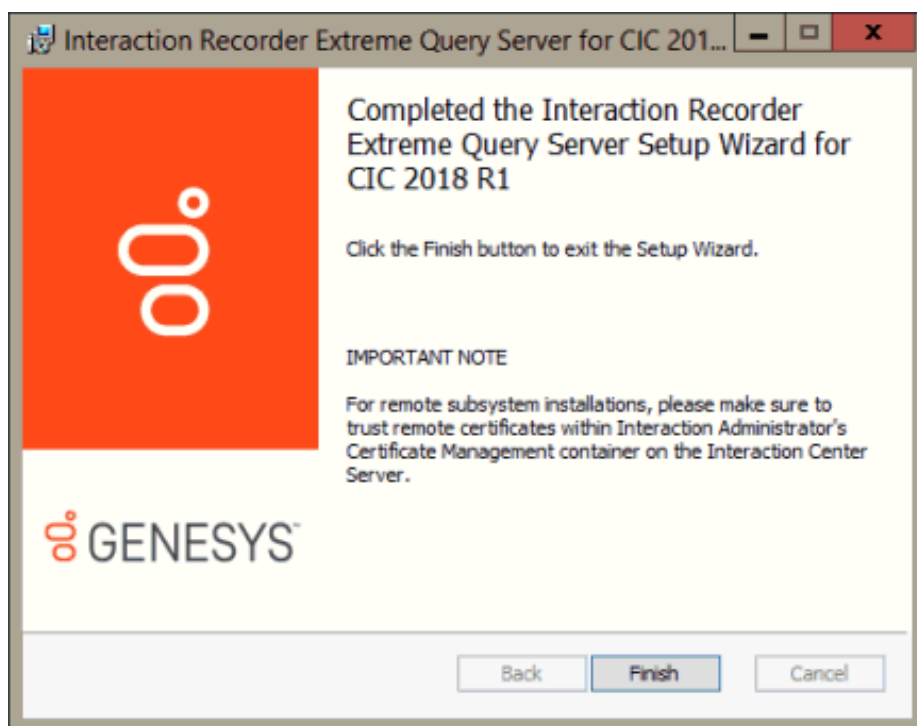
To exit the Setup Wizard, click **Finish**.

When the Extreme Query Server install is complete, all executable files will have been installed and the following two services will have been created:

- **Interaction Recorder Extreme Query Engine**, for the Extreme Query Engine component
- **Interaction Recorder Extreme Query Server**, for the Extreme Query Server Subsystem component

These two services are configured for automatic start, but they require manual configuration steps by the installing user before they can be started and run properly, which is detailed in the next section.

Configuring the Extreme Query Server

Be sure you have completed the Extreme Query Server installation in the previous section. Next, you will be manually configuring the Extreme Query Server so the services can be started and run properly.

Extreme Query Server configuration

It is very important that the User who ran the Extreme Query Server install be the *same* User that performs the following configuration steps.

Manually configuring the Extreme Query Server

Follow these steps to configure the services for the Extreme Query Server to start and run properly.

1. Open a command window on the Extreme Query Server computer. If the Interaction Recorder Extreme Query Server system is running Windows Server 2012, or later, then the command window must be run as administrator. Locate a Command Prompt shortcut, right-click on the Command Prompt shortcut, and on the shortcut menu, select **Run as administrator**. Or, open a Command Prompt window from the **Start** menu and point to **All Programs**, then point to **Accessories**, and on the submenu right-click on **Command Prompt**, and select **Run as administrator**.

   > **Note:**
   > This must be done by the same User who ran the Extreme Query Server install.

2. Change the directory to the 32-bit installation directory. If the default installation directory was chosen during installation, the command will be:

   ```
   cd "C:\Program Files (x86)\Interactive Intelligence\IRExtremeQueryServer"
   ```

3. Press `Enter`. Leave this command window open.

SSL Certificate generation error

If the certificate generation error message appeared during the Extreme Query Server installation, the SSL certificates must be generated now in order for the Extreme Query Server Subsystem to connect to the CIC server. To generate these certificates, run the following command in the Extreme Query Server command window that was previously opened.

Enter:

```
GenSSLCertsU.exe -r ICServer ICUser ICPassword
```

where *ICServer* is the name of the CIC server that the remote subsystem will be connecting to, *ICUser* is a valid IC user name on the CIC server, and *ICPassword* is that user's password.

Establishing the connection to the CIC server

Next, establish the connection from the Extreme Query Server to the CIC server. This process *must* be performed on the CIC server. Follow these steps.

1. On the CIC server, open **Interaction Administrator**.
2. Select the **System Configuration** node.
3. In the right pane, double-click **Configuration**.
   The **System Configuration** dialog is displayed.
4. Click the **Certificate Management** tab.

System Configuration

Certificate Management tab

Here you can configure which certificates are used on the server.

Subsystem Certificates Configuration

Subsystems certificates are used to allow or deny subsystems from connecting to the server.

Email Certificates Configuration

Email certificates are used to securely send and receive emails and make secure connections to mail providers.

SIP/TLS Line Certificates Configuration

SIP/TLS line certificates are used to authenticate SIP/TLS connections to and from the server.

OK   Cancel   Apply

5. Under **Subsystem Certificates Configuration**, click **Modify**.

   The **Subsystem Certificates** dialog is displayed.

   On the **Subsystem Certificates** dialog, there should be a new certificate with the Extreme Query Server name followed by – **IC Certificates API Library**.

Subsystem Certificates

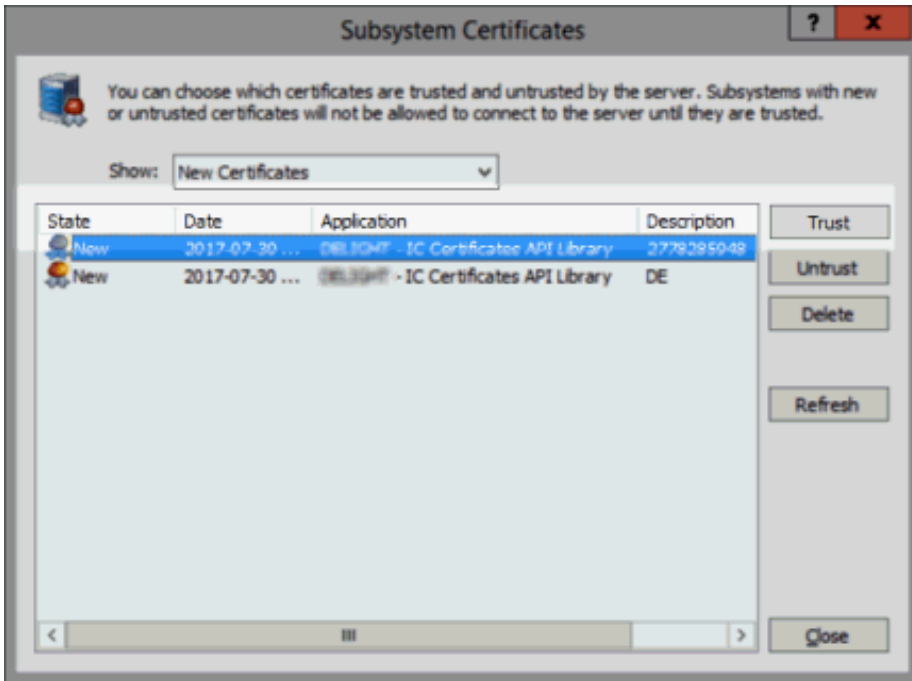You can choose which certificates are trusted and untrusted by the server. Subsystems with new or untrusted certificates will not be allowed to connect to the server until they are trusted.

Show: New Certificates

State	Date	Application	Description
New	2017-07-30 ...	DELIGHT - IC Certificates API Library	2779295048
New	2017-07-30 ...	DELIGHT - IC Certificates API Library	DE

Trust   Untrust   Delete   Refresh   Close

6. Click **Trust**, and then click **Close**.

   The **Subsystem Certificates** dialog closes and the **System Configuration** dialog is displayed.

7. On the **System Configuration** dialog, click **OK**.

   The SSL certificate for Extreme Query Server Subsystem is now *trusted*. The Extreme Query Server Subsystem is now able to connect to the CIC server.

Keep Interaction Administrator open for the next step, where you will obtain the ODBC connection string in order for the Extreme Query Engine to connect to the Interaction Recorder database.

Obtaining the ODBC connection string

The Extreme Query Engine pulls information from the Interaction Recorder database. In order to configure the Extreme Query Server to connect to the Interaction Recorder database, you must obtain the ODBC connection string. This step is performed on the CIC server.

1. On the CIC server, in Interaction Administrator, under the **System Configuration** node, select the **IC Data Sources** sub-node, and in the right pane double-click **IC Tracker**.
   The **IC Data Source Configuration – IC Tracker** dialog is displayed.
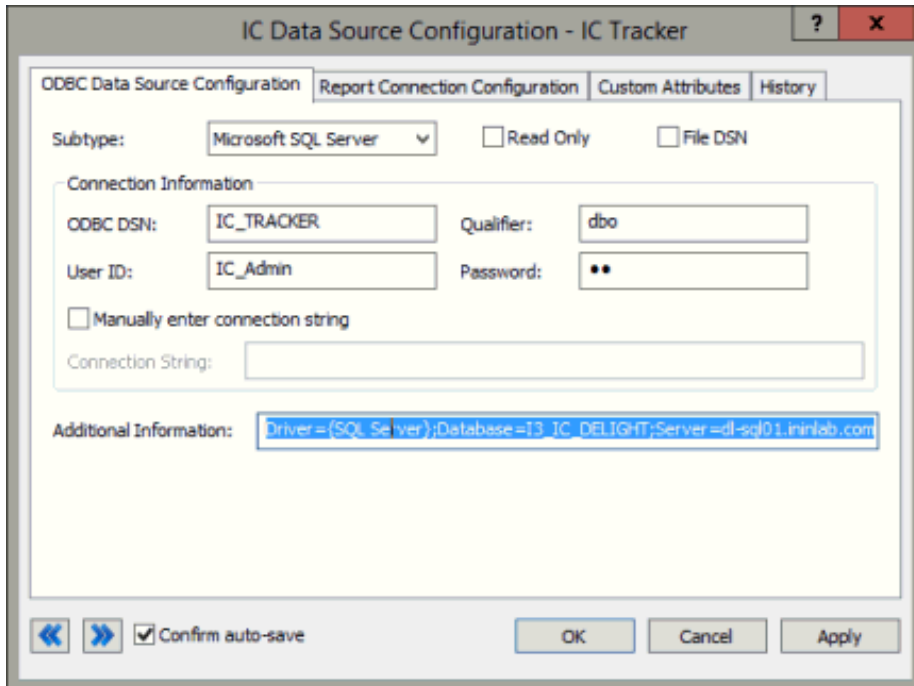
2. On the **ODBC Data Source Configuration** page, select the entire contents of the **Additional Information** box. Using `Ctrl+C`, copy the selection to the clipboard.
3. Open **Notepad** and paste the contents of the clipboard into Notepad.
4. Save the Notepad document to a file.
5. In order to complete the configuration process, transfer the file to any directory on the Extreme Query Server.
6. On the **IC Data Source Configuration** dialog, click **Cancel** and close Interaction Administrator.

The remaining configuration steps are performed on the Extreme Query Server.

Completing the Extreme Query Server configuration

Complete the following steps on the Extreme Query Server. These must be done by the same User who ran the Extreme Query Server install.

The steps you will be completing are:

- Locate the 32-bit installation directory
- Run the configuration utility
- Start the Extreme Query Server Services

Here's how to perform these steps.

Locating the 32-bit installation directory

If the command window is not open from a previous step, open a command window and change the directory to the 32-bit installation directory, as before:

```
cd "C:\Program Files (x86)\Interactive Intelligence\IRExtremeQueryServer"
```

Running the Extreme Query Server configuration utility

Run the Extreme Query Server configuration utility to create the configuration file which is used by the Extreme Query Server Subsystem and the Extreme Query Engine.

To create the configuration file, `fig_config.xml`, from the command line, start the utility by running the following command:

`FastIRQuerySvrCfgU.exe all`

Next, the utility will prompt you for individual configuration items. The following are the configuration item prompts and tips for your responses.

- **Please enter IC server name[*default*]:**

  Type the CIC server name and press `Enter`.

- **Please enter ODBC connection string[*default*]:**

  Paste, or type, the ODBC connection string that you copied from Interaction Administrator, saved in a Notepad document, and copied to the Extreme Query Server. Press `Enter`.

- **Please enter database user name[*default*]:**

  Type the database administrator user name that was used in Setup Assistant when creating the CIC database, typically, this is `IC_Admin`, and press `Enter`.

- **Please enter database password[*default*]:**

  Type the database administrator user's password, and press `Enter`. The password is not echoed to the screen.

- **Please confirm database password[*default*]:**

  Re-enter the database administrator user's password.

- **Please enter custom attribute 1 name[*default*]:**

  The Extreme Query Engine can index up to 5 custom attributes that are associated with recordings in the CIC database. If the recordings have no custom attributes, or you do not want to track custom attributes, just type an underscore _ and press `Enter`. If you do want to track a custom attribute, type the custom attribute name, and press `Enter`.

- **Please enter custom attribute 2 name[*default*]:**

  Type the Custom Attribute name, and press `Enter`. Or, if you do not want to add an additional custom attribute, type an underscore _ and press `Enter`.

- **Please enter custom attribute 3 name[*default*]:**

  Type the Custom Attribute name, and press `Enter`. Or, if you do not want to add an additional custom attribute, type an underscore _ and press `Enter`.

- **Please enter custom attribute 4 name[*default*]:**

  Type the Custom Attribute name, and press `Enter`. Or, if you do not want to add an additional custom attribute, type an underscore _ and press `Enter`.

- **Please enter custom attribute 5 name[*default*]:**

  Type the Custom Attribute name, and press `Enter`. Or, if you do not want to add an additional custom attribute, type an underscore _ and press `Enter`.

- **Please enter query engine port[15432]:**

  This is the TCP/IP port that the Extreme Query Engine uses to receive requests. The default is 15432. If there no port conflict, just press `Enter`.

- **Please enter query engine maximum recordings[90000000]:**

  This is the maximum number of recordings that can be stored in the Extreme Query Engine cache before old recordings are deleted to make room for new recordings. If you do not want to reduce the memory footprint of the Extreme Query Engine, press `Enter` to accept the default of 90 million.

- **Please enter query engine maximum segments[180000000]:**

  This is the maximum number of recording segments that can be stored in the Extreme Query Engine cache before old recordings are deleted to make room for new recordings. A recording can have multiple segments, and usually each segment has at least one different participant. For external calls, typically the agent changes. Generally, recordings will have no more than two segments per call. The maximum number of segments is actually what sets the amount of memory used by the Extreme Query Engine, as the cached data is stored in an array where each element describes a segment. Change this value to make the Extreme Query Engine consume less, or more, memory. This number cannot be smaller than the maximum number of recordings. Generally, you can press `Enter` to accept the default of 180 million.

- **Please enter query engine initial agent count[100000]:**

  The Extreme Query Engine stores agent names, Recorder Categories, external party organization names, and custom attribute values in separate memory storage areas. This and the next three parameters govern how those memory storage areas are configured. The initial agent count makes sure that there is enough memory allocated to store at least this number of agent names. Please press `Enter` to accept the default of 100,000.

- **Please enter query engine incremental agent growth count[10000]:**

  This parameter governs how many agents to add to the storage area if the storage area runs out of room. Please press `Enter` to accept the default of 10,000.

- **Please enter query engine maximum agent count[500000]:**

  This parameter caps the maximum number of agents that can be stored in the storage area. If the Extreme Query Engine needs

to exceed this count, it will scan through the entire set of cached recordings and make note of the agent names that are actually used. Any agent names not used are removed from the storage area to create space. This number should always be set to at least the maximum number of different agents that the customer anticipates that they will have in the Recorder database over the time span that is cached in the Extreme Query Engine. For all but the biggest customers, the default value of 500,000 should be more than sufficient.

- **Please enter query engine number of characters per agent[32]:**

  This parameter sets the average length of an agent name. The actual memory storage used initially can be calculated by multiplying this number by the initial agent count (see previous configuration item) multiplied by 2 (for each character being a UTF-16 character). The default of 32 should be sufficient for agent names. To accept the default, press `Enter`.

- **Please enter query engine initial queue count[50000]:**

  This is the same as the Extreme Query Engine initial agent count, except it applies to the workgroup queue name. Please press `Enter` to accept the default of 50,000.

- **Please enter query engine incremental queue growth count[10000]:**

  This is the same as the Extreme Query Engine incremental agent growth count, except it applies to the workgroup queue name. Please press `Enter` to accept the default of 10,000.

- **Please enter query engine maximum queue count[100000]:**

  This is the same as the Extreme Query Engine maximum agent count, except it applies to the workgroup queue name. Please press `Enter` to accept the default of 100,000.

- **Please enter query engine number of characters per queue[24]:**

  This is the same as the Extreme Query Engine number of characters per agent, except it applies to the workgroup queue name. Please press `Enter` to accept the default of 24.

- **Please enter query engine initial organization count[1000000]:**

  This is the same as the Extreme Query Engine initial agent count, except it applies to the external user organization name. Please press `Enter` to accept the default of 1,000,000.

- **Please enter query engine incremental organization growth count[20000]:**

  This is the same as the Extreme Query Engine incremental agent growth count, except it applies to the external user organization name. Please press `Enter` to accept the default of 20,000.

- **Please enter query engine maximum organization count[90000000]:**

  This is the same as the Extreme Query Engine maximum agent count, except it applies to the external user organization name. Please press `Enter` to accept the default of 90,000,000.

- **Please enter query engine number of characters per organization[50]:**

  This is the same as the Extreme Query Engine number of characters per agent, except it applies to the external user organization name. Please press `Enter` to accept the default of 50.

- **Please enter query engine initial category count[10000]:**

  This is the same as the Extreme Query Engine initial agent count, except it applies to the Interaction Recorder Category name. Please press `Enter` to accept the default of 10,000.

- **Please enter query engine incremental category growth count[10000]:**

  This is the same as the Extreme Query Engine incremental agent growth count, except it applies to the Interaction Recorder Category name. Please press `Enter` to accept the default of 10,000.

- **Please enter query engine maximum category count[100000]:**

  This is the same as the Extreme Query Engine maximum agent count, except it applies to the Interaction Recorder Category name. Please press `Enter` to accept the default of 100,000.

- **Please enter query engine number of characters per category[24]:**

  This is the same as the Extreme Query Engine number of characters per agent, except it applies to the Interaction Recorder Category name. Please press `Enter` to accept the default of 24.

- **Please enter query engine initial custom attribute count[100000]:**

  This is the same as the Extreme Query Engine initial agent count, except it applies to the custom attribute values. Please press `Enter` to accept the default of 100,000.

- **Please enter query engine incremental custom attribute growth count[50000]:**

  This is the same as the Extreme Query Engine incremental agent growth count, except it applies to the custom attribute values. Please press `Enter` to accept the default of 50,000.

- **Please enter query engine maximum custom attribute count[90000000]:**

  This is the same as the Extreme Query Engine maximum agent count, except it applies to the custom attribute values. Please press `Enter` to accept the default of 90,000,000.

- **Please enter query engine number of characters per custom attribute[32]:**

  This is the same as the Extreme Query Engine number of characters per agent, except it applies to the custom attribute values. Please press `Enter` to accept the default of 32.

- **Please enter database load timeout (seconds)[86400]:**

  This is the number of seconds allowed for the Extreme Query Engine to try and reload all the custom attribute information from the database before the request times out. This value must be 86400. Depending on when the install was built, this value might

not be set up properly. Be sure that this is set to 86400.

- **Please enter file load timeout (seconds)[28800]:**

  This is the number of seconds allowed to load data from a file in test mode before the request times out. Accept the default of 28800 (8 hours).

- **Please enter custom attribute update timeout (seconds)[86400]:**

  This is the number of seconds allowed for the Extreme Query Engine to try and reload all the custom attribute information from the database before the request times out. This value must be 86400 (24 hours). Depending on when the install was built, this value might not be set up properly. Be sure that this is set to 86400.

- **Please enter block insert timeout (seconds)[3600]:**

  This is the number of seconds allowed to process block insert data. Accept the default of 1 hour (3,600 seconds).

- **Please enter query timeout (seconds)[60]:**

  This is the number of seconds for a recording query timeout. Accept the default of 1 minute (60 seconds).

- **Please enter fetch timeout (seconds)[60]:**

  This is the number of seconds for a fetch request timeout. Accept the default of 1 minute (60 seconds).

- **Please enter network timeout (seconds)[5]:**

  This is the number of seconds allowed to cover network communication time. Accept the default of 5 seconds.

Starting the Server Services

After all of these questions have been answered, the configuration file is written and the services can be started. Start both the Interaction Recorder Extreme Query Engine and the Interaction Recorder Extreme Query Server services. Within one minute, the Extreme Query Engine will begin loading Interaction Recorder recording information into its cache.

After the data is loaded, queries can be run from the Extreme Query IC Business Manager application. The amount of time required to load the recording data depends on how much data needs to be loaded and the hardware configuration of the Extreme Query Server and the database server. The time can be significant for tens of millions of recordings.

> **Note:**
> If the Interaction Recorder Extreme Query server configuration requires more memory than is available, the Interaction Recorder Extreme Query Engine terminates when its service is started. An error message is logged in the Extreme Query trace log file detailing why the engine was unable to start.

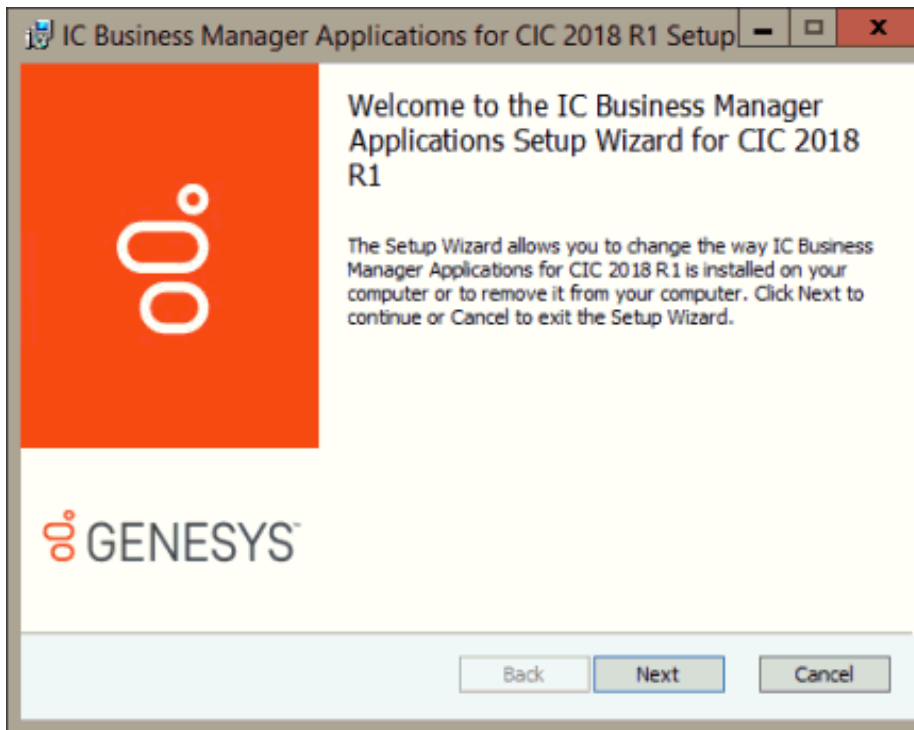# Installing Interaction Recorder Extreme Query Client

Interaction Recorder Extreme Query client is a component of the Interaction Recorder add-on module for IC Business Manager. Using the Extreme Query client, you can search and playback recorded calls, view and sort Search Results, view Graph Data of search results, and Export search results to a file.

The Extreme Query client access license must be available to view the Extreme Query client.

The Extreme Query client is a component of the Interaction Recorder Client add-on module for IC Business Manager. Extreme Query Client is installed on client workstations using the **IC Business Manager Applications** workstation install from the PureConnect Customer Interaction Center (CIC) `.iso` file, located under **Workstation**. The install creates IC Business Manager shortcuts in the `PureConnect` folder of the **Start** menu and on the Windows desktop.

To run the Extreme Query client install on a workstation, follow these steps.

1. If you have not done so already:
   a. Download the CIC 2015 R1 or later `.iso` file from the Product Downloads page at
      https://help.genesys.com/pureconnect/secure/Downloads.aspx   .
   b. Copy the `.iso` file to a file server (non-IC server) with a high bandwidth connection to the workstation(s) on which you will be running the CIC 2015 R1 or later installs
   c. Mount the `.iso` file and share the contents to make them accessible to the workstation(s) on which you will be running the CIC 2015 R1 or later installs.
2. Navigate to the `\Installs\ServerComponents` directory on the file server
3. Copy the IC Business Manager Applications `.msi` file, for example, `ICBusinessManagerApps_2018_R1.msi,` to the workstation on which you plan to run this install and double-click to launch it.
   The IC Business Manager Application Setup wizard starts
4. On the **Welcome** screen, click **Next**.

The Setup wizard guides you through the installation.

Change Log

The following table summarizes the updates made to the *Interaction Recorder Extreme Query Installation and Configuration Guide*, since 4.0 product availability.

Date	Changes
25-February-2013	Updated Copyright and Trademarks for 2013
26-August-2014	Updated Copyright and Trademarks for 2015 R1
05-September-2014	Updated documentation to reflect changes required in the transition from version 4.0 SU# to CIC 2015 R1, such as updates to product version numbers, system requirements, installation procedures, references to Interactive Intelligence Product Information site URLs, and copyright and trademark information.
11-June-2015	- Updated reference to *Interaction Recorder and Interaction Quality Manager Technical Reference* - Updated title page for new rebranding
13-July-2015	Update to title page
04-October-2015	Updated screen captures for Extreme Query Server install for rebranding
01-June-2016	- Updated installation dialog for new SHA-2 certificates - Updated copyright and trademarks for 2016
12-September-2017	- Updated document for Genesys rebranding - Installation and configuration screen captures updated for CIC 2018 R1.
01-February-2018	Converted project to HTML5 source
24-April-2018	Updated Windows server requirements
12-October-2018	Updated hyperlink to KB article for QoS driver
16-March-2020	Updated requirements to include Windows Server 2019.
30-April-2020	Updated links from my.inin.com to new locations.