



Enterprise Chat and Email Upgrade Guide, Release 12.0(1)

For Unified Contact Center Enterprise

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Preface

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Welcome to the Enterprise Chat and Email (ECE) feature, which provides multichannel interaction software used by businesses all over the world as a core component to the Unified Contact Center Enterprise product line. ECE offers a unified suite of the industry's best applications for chat and email interaction management to enable a blended agent for handling of web chat, email and voice interactions.

About This Guide

Enterprise Chat and Email Upgrade Guide describes the process of upgrading your ECE 11.6 system to ECE 12.0. This guide is intended for installation engineers, system administrators, database administrators, and others who are responsible for installing and maintaining Enterprise Chat and Email (ECE) installations that are integrated with Cisco Unified Contact Center Enterprise (Unified CCE).



Important: Upgrades to ECE 12.0(1) are not supported on Windows Server 2012. If you need to access the archived documentation for the old platform, please contact Cisco Support.

Related Documents

The latest versions of all Cisco documentation can be found online at <https://www.cisco.com>

Subject	Link
Complete documentation for Enterprise Chat and Email, for both Cisco Unified Contact Center Enterprise (UCCE) and Cisco Packaged Contact Center Enterprise (PCCE)	https://www.cisco.com/c/en/us/support/contact-center/enterprise-chat-email-12-0-1/model.html

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Sign in www.cisco.com and then access the tool at <https://www.cisco.com/?cisco/?support/?notifications.html>.

Documentation Feedback

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We appreciate your comments.

Document Conventions

This guide uses the following typographical conventions.

Convention	Indicates
<i>Italic</i>	Emphasis. Or the title of a published document.
Bold	Labels of items on the user interface, such as buttons, boxes, and lists. Or text that must be typed by the user.
Monospace	The name of a file or folder, a database table column or value, or a command.
<i>Variable</i>	User-specific text; varies from one user or installation to another.

Document conventions

1 Planning

- ▶ [Planning the Upgrade](#)
- ▶ [Planning Database Upgrade from SQL 2014 to SQL 2016](#)
- ▶ [Planning Upgrade of Windows 2012 to Windows 2016](#)
- ▶ [Verifying ECE 11.6\(1\) Release Version](#)
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To upgrade to ECE 12.0(1), you need to complete a number of tasks, which include potential infrastructural upgrades, and completing certain pre-upgrade, upgrade, and post-upgrade tasks. This chapter will help you to plan your upgrade.

Upgrade is supported from ECE 11.6(1) or higher to ECE 12.0(1).

Planning the Upgrade

- ▶ Read this guide before upgrading to ECE 12.0(1). The chapter [“Pre-Upgrade Tasks” on page 13](#) contains a set of tasks that must be completed before beginning the upgrade.
- ▶ You *must* run the Pre-Upgrade utilities before running the actual Upgrader. For details, see [“Running Pre-Upgrade Utilities” on page 12](#).
- ▶ While upgrading from ECE 11.6(1) to ECE 12.0(1), you need to run the Upgrader on the ECE 11.6(1) file server, all services servers, all web servers, all application servers, and all messaging servers.

Planning Database Upgrade from SQL 2014 to SQL 2016

- ▶ SQL version changes:
 - When upgrading from ECE 11.6(1) to ECE 12.0(1), you must upgrade your SQL version from **SQL 2014 to SQL 2016 Service Pack 2, Cumulative Update 2 or higher**. You have three options:
 - Install SQL 2016 on the same machine where SQL 2014 is installed. If you plan to use the same VM, ensure that it has enough CPU, Memory and Disk space to accommodate both installations of SQL and an additional copy of the ECE databases.
 - Acquire new VM to install SQL 2016.
 - Upgrade SQL 2014 to SQL 2016. If you plan to do this, you must take a backup of the VM, in case you need to revert the installation to ECE 11.6(1). The VMs must be shutdown before taking backups.
- ▶ SQL Edition changes:
 - While changing the SQL version from SQL 2014 to SQL 2016 you have the option to retain the Edition of SQL you were using for ECE 11.6(1) or change the SQL Server Edition from Standard to Enterprise or vice versa.
 - With SQL 2016, the ECE installations using Standard Edition of SQL will no longer have the archive database. If you need access to the data in the archive database, restore a copy of the archive database on SQL 2016 or SQL 2014 and the Upgrader will give you an option to create a data link to the archive database ([page 24](#)).
 - With SQL 2016, ECE installations using Standard Edition of SQL will have a new reports database.
- ▶ SQL Authentication changes:
 - While upgrading, you can change the **Authentication mode** from **SQL Authentication** to **Windows Authentication** or vice versa.

- ▶ Clustering options:
 - You can use the MSSQL **Always On** clustering feature with ECE 12. Note that this feature is available only for Enterprise Edition of MSSQL. When using **Always On** clustering, you must use the **Windows Authentication** mode.

Planning Upgrade of Windows 2012 to Windows 2016

- ▶ After upgrading the application to ECE 12.0(1), you must update the Operating System on the VMs to Windows 2016 ([page 40](#)). Ensure that you have the copy of the Windows upgrader and check to make sure that the servers have the required resources for the Windows upgrade. Please check the Microsoft documentation for details.

Upgrading Windows Server 2012 to Windows Server 2016 for Existing 12.0(1) Deployments

If your application is already upgraded to ECE 12.0(1), follow the steps in this section to upgrade the Operating System from Windows Server 2012 to Windows Server 2016.

To upgrade Windows Server 2012 to Windows Server 2016 for existing 12.0(1) deployments:

1. Plan for the downtime required to do this task. Take into account the time required to take VM backups and the time required to upgrade the operating system on all servers.
2. Stop the ECE application. ([page 15](#))
3. Take a back up of the VMs and upgrade windows Server 2012 to Windows Server 2016. ([page 40](#))
4. Start the ECE application. ([page 41](#))

Verifying ECE 11.6(1) Release Version

The ECE installation should be on ECE 11.6(1) or higher to be able to upgrade to ECE 12.0(1).

To verify the release version:

1. Open the ECE Login window and click the **About** button.
2. Click the History tab and verify that the current version is ECE 11.6(1) or higher.

Running Pre-Upgrade Utilities

The Upgrader comes with two utilities, DB PreCheck Utility and DBUpdate Utility, that can be run before doing the actual upgrade. DB PreCheck utility can be run on the ECE 11.6(1) production databases. The DBUpdate Utility must always be run on copies of databases, and *not* on the actual ECE 11.6(1) databases.



Important: It is highly recommended that you run these utilities before running the actual Upgrader on your installation.

- ▶ The DB PreCheck Utility checks if there is any data in the databases that can cause the upgrade to fail. If any such issues are found, it logs them in a file. All these issues must be fixed before running the actual upgrader. This is a read only utility and does not make any modifications on the databases.
- ▶ The DBUpdate Utility actually upgrades the standalone copies of the databases and reports if the upgrade can fail because of any database issues. The utility can also help you estimate the disk space required on the database servers.

For details about running these utilities, see [“Appendix A: Pre-Upgrade Utilities” on page 45](#).

Planning Downtime

The time required to upgrade your installation will depend on a number of factors. This section lists all those factors and helps you determine the downtime required for your installation.

- ▶ **Time to back-up** ([page 16](#)) **ECE 11.6(1) installation** folder.
- ▶ **Time to back-up** ([page 16](#)) **and restore** ([page 17](#)) **ECE 11.6(1) databases:** This time will vary based on the size of your databases. You can do a standalone back-up and restore of your databases to estimate the required time.
- ▶ **Four** hours to do other upgrade tasks.
- ▶ **Time to back-up VMs** ([page 40](#)) **and upgrade the OS from Windows 2012 to Windows 2016** ([page 40](#)).

Add all these times to determine the total downtime required for the upgrade.

Getting Started

The upgrade process involves completing the following activities, in sequence:

- ▶ **Pre-upgrade tasks:** To be performed before you begin the upgrade. For detailed instructions, refer to [“Pre-Upgrade Tasks” on page 13](#).
- ▶ **Upgrade tasks:** Run the Upgrader on the file server, all services servers, all messaging servers, all application servers, and all web servers in the deployment. Details are in [“Upgrade Process” on page 19](#).
- ▶ **Post-upgrade tasks:** To be performed after completing the upgrade. For details, refer to [“Post-Upgrade Tasks” on page 34](#).

Pre-Upgrade Tasks

- ▶ [Preparing Database Servers](#)
- ▶ [Acquiring VM for Additional Services Server](#)
- ▶ [Installing Application Request Routing Module on the Web Servers](#)
- ▶ [Verifying Available Disk Space](#)
- ▶ [Stopping the Application](#)
- ▶ [Stopping IIS](#)
- ▶ [Stopping the Reports Jobs](#)
- ▶ [Backing up ECE 11.6\(1\) Installation](#)
- ▶ [Backing up ECE 11.6\(1\) Databases](#)
- ▶ [Restoring Backup Copies of Databases on SQL 2016](#)
- ▶ [Opening Ports Between Servers](#)

This chapter describes the pre-upgrade procedures that need to be completed before beginning the upgrade process.

Preparing Database Servers

- ▶ First, plan for your databases upgrade. See [“Planning Database Upgrade from SQL 2014 to SQL 2016” on page 10](#).
- ▶ If you plan to use new machines for installing SQL 2016, Download the new OVAs for ECE 12.0(1). Make sure it meets the software requirements for ECE 12.0(1).
- ▶ Installations using SQL Standard edition for ECE 11.6(1), will have a new reports database. You can install this database along with master and active databases, or on a new machine. If you plan to install on the same server, you will need additional hard disk space: size of the active database + 16 GB.
- ▶ Prepare the database server machine where you are installing SQL 2016 for ECE 12.0(1). Follow all the steps applicable to database servers in the “Pre-Installation Tasks” chapter of the *Enterprise Chat and Email Installation Guide* for ECE 12.0(1). If you plan to use **Always On Availability Group** clustering, make sure to complete all the pre-installation tasks for that as well. Note that the Always On Availability Group feature is available only for Enterprise Edition of MSSQL. When using Always On Availability Group clustering, you must use the **Windows Authentication** mode.

Acquiring VM for Messaging Server Cluster

- ▶ ECE 12.0(1) can be installed with a cluster of messaging servers to achieve high availability. If you plan to use this feature in ECE 12.0(1), acquire a new VM to install the additional messaging server. See the *Enterprise Chat and Email Installation Guide* for details to plan for a cluster of messaging servers.

Acquiring VM for Additional Services Server

- ▶ ECE 12.0(1) can have two services servers to achieve high availability. If you plan to use this feature in ECE 12.0(1), acquire a new VM to install the additional services server. See the *Enterprise Chat and Email Installation Guide* for details to plan for multiple services servers.

Installing Application Request Routing Module on the Web Servers

This task is performed automatically by the Upgrader program. You can choose to do it manually before running the Upgrader.

- ▶ The **Application Request Routing** module is required to be installed on all web servers. Download and install the module from the Microsoft website. The installation program is also available in the **Environment\Web Server\Application Request Routing** folder of the ECE 12.0(1) upgrade package. After installing the module, restart IIS.

Verifying Available Disk Space

- ▶ On all servers, ensure that there is ample disk space available so that the Upgrader can create a back-up of the installation folder. The available space should be at least 10 GB more than the size of the `ECE_Home\Service` folder.

Stopping the Application

Make sure that the application is stopped on the ECE 11.6(1) machines.

To stop the application:

- ▶ In single-server installations:
 - In the Windows Services panel, stop the Cisco Service to stop all Cisco services.
- ▶ In a distributed-server installation:
 - a. Stop Cisco Service on the messaging server by stopping the Cisco Service from the Windows Services panel. From the Windows Task Manager verify that none of the `java` processes are running.
 - b. On the services server, stop the application by stopping the Cisco Service from the Windows Services panel. From the Windows Task Manager verify that none of the `java` processes (the services) are running.
 - c. On each application server, stop the application by stopping the Cisco Service from the Windows Services panel. From the Windows Task Manager verify that none of the `java` processes are running.

Stopping IIS

- ▶ Stop IIS (World Wide Web Publishing Service) on all web servers in the installation.

Stopping the Reports Jobs

Perform this task on the ECE 11.6(1) database server machines.

For installations using SQL Standard version, perform this task on the active database. For installations using SQL Enterprise version, perform this task on the reports database.

To stop the job:

1. Ensure that the Reports job is not running. The name of the job will be like `populatesmy_Reports_Database_Name`.
2. Disable the reports job before running the upgrader.

Backing up ECE 11.6(1) Installation

Take a back-up of the ECE 11.6(1) installation home directories on the following servers:

- ▶ File server
- ▶ Services servers
- ▶ Application servers
- ▶ Web servers
- ▶ Messaging Servers

Backing up ECE 11.6(1) Databases

You should back up the master, active, archive (SQL Standard Edition installations), and reports (SQL Enterprise Edition installations) databases. These backup copies will enable you to restore the system if you encounter any problems while upgrading.

1. Back up the master database.
2. Back up the active database.
3. Back up the archive database. (SQL Standard Edition installations)
4. Back up the reports database. (SQL Enterprise Edition installations)



Important: If you are doing an in-place upgrade of SQL 2014 to SQL 2016, you must take backup of the VMs where the databases are installed. The VM must be shutdown before taking a backup.

Restoring Backup Copies of Databases on SQL 2016

If you are using Always On Availability Group clustering, restore the databases only on the primary node. These databases must not be added to the availability group before running the upgrader.



Important: Always ensure that you restore the latest backup copies of databases. These copies should be pristine and *should not* have been used to run the DB Update utility (page 48).

- ▶ Restore the backed up copies of the ECE 11.6(1) active, master, and reports databases on the machine where SQL 2016 for ECE 12.0(1) is installed.
- ▶ For ECE 11.6(1) installation using standard version of MSSQL:
 - Restore a second copy of the active database on the server where you want the reports database for ECE 12.0(1) to exist. Make sure you give it a different name than the active database, for example, `reportsdb`. The upgrader will convert this copy of the active database to reports database.
 - Restore a copy of the archive database on the same machine where ECE 11.6(1) archive database is installed or on a SQL 2016 machine. This task needs to be performed only if you are going to create data links to the archived data (page 10).

Opening Ports Between Servers

This section only lists the new ports that need to be opened for version 12.0. If you want to review the complete list of ports, see the *Enterprise Chat and Email Installation and Configuration Guide*.

With support for Jetty, port 9001 is required to be open between the following servers.

From Server	To Server	Default Destination Ports and Protocols
Web Server	Application Server	9001 [Protocol: TCP]

With support for ActiveMQ, port 15097 is required to be open between the following servers. If you do not want to use the default port, you can use other available ports. You will be asked to provide the port numbers while running the upgrader on the messaging server (page 27).

From Server	To Server	Default Destination Ports and Protocols
Application Server	Messaging Server	15097 [Protocol: TCP]
Messaging Server	Messaging Server	15097 [Protocol - TCP]
Services Server	Messaging Server	15097 [Protocol: TCP]

The following ports need to be opened for the high availability support added for application and services servers in ECE 12.0(1). You must open these ports before starting the application.

From Server	To Server	Default Destination Ports and Protocols
Application Server	Application server	6701 [protocol: TCP]
Services Server	Services server	47500 [protocol: TCP]

3 Upgrade Process

- ▶ [Upgrade Overview](#)
- ▶ [Upgrading the File Server](#)
- ▶ [Upgrading the Services Server](#)
- ▶ [Upgrading the Messaging Server](#)
- ▶ [Upgrading the Application Servers](#)
- ▶ [Upgrading the Web Servers](#)

This chapter describes the process of upgrading from ECE 11.6(1) to ECE 12.0(1). Before beginning the upgrade, ensure that you have complied with all the prerequisites listed in “[Pre-Upgrade Tasks](#)” on page 13.

Upgrade Overview

In single-server installations, run the Upgrader on the file server. In distributed server installations, run the Upgrader on the file server, all services servers, all web servers, all messaging servers, and all application servers in the deployment.



Important: Always run the Upgrader on the file server first. If the file server is installed on a NAS device, run the Upgrader on any of the components and the file server will be upgraded along with that component. The database is upgraded along with the file server. The upgrader can be run on all other servers in any order.

Upgrading the File Server

Run the Upgrader on the ECE 11.6(1) file server. The database is upgraded along with the file server.

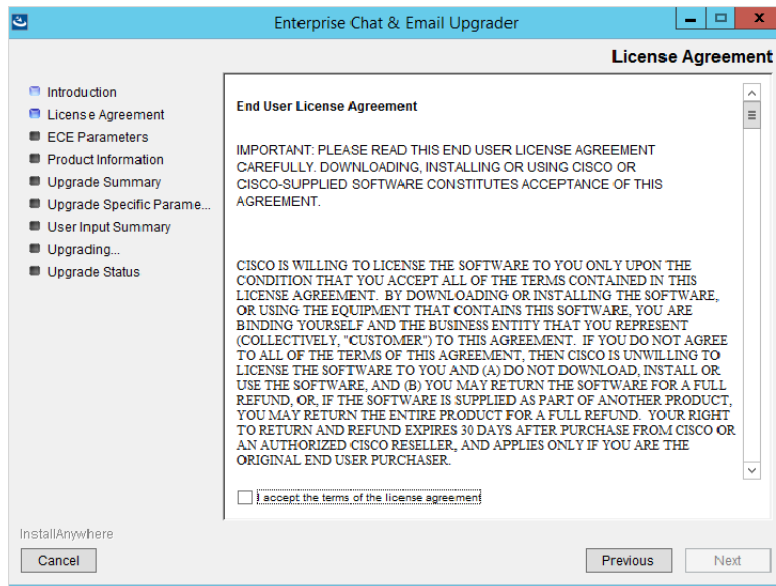


Important: When running the upgrade you must be logged on to the server using the same domain account that was used for installing ECE 11.6(1).

To upgrade the file server:

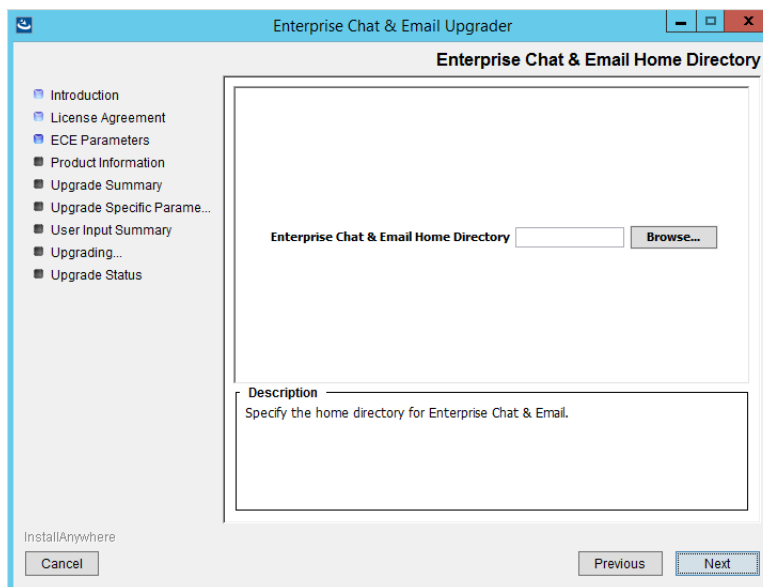
1. Check to see that you have closed all the application files before you begin the upgrade. For example, `eService.ear` or any other files opened from any other application folders should be closed.
2. Create a temporary folder, *Temporary_Folder* and from the upgrade package, copy the upgrade files into *Temporary_Folder*.
3. Double-click `setup_windows.exe` to launch the ECE 12.0(1) Upgrader.
4. When the Introduction window appears, read the installation instructions. Click **Next**.

5. In the License Agreement window, review the licensing terms and select the **I accept the terms of the License Agreement** option. Click **Next**.



Read and accept the terms of the License Agreement

6. In the Enterprise Chat & Email Home Directory window, type the path or browse to the folder where ECE 11.6(1) is installed. Click **Next**.



Provide the location of the ECE 11.6(1) home directory

7. In the Restored SQL Server Database Authentication window, select the authentication type to be used while connecting to the databases. Set the value as **SQL Server Authentication mode** or **Windows Authentication mode**. If you are using MSSQL Server **Always On Availability Group** Clustering, select the authentication type as **Windows Authentication**. Click **Next**.
8. In the Restored ECE Master Database Parameters window provide the following details.

- **Database Server Name:** Name of the MSSQL 2016 database server where the master database is restored. If you are using MSSQL Server **Always On Availability Group** clustering, specify the Listener name.
- **Master Database Name:** Provide the name of the restored master database.
- **Database Server Instance Name:** Provide the name of the MSSQL server instance used to connect to the restored active and master databases. Set the value only if you used a named instance, and not the default instance. If you are using MSSQL Server **Always On Availability Group** clustering, provide the name of the Listener instance name.
- **Database Server Listen Port:** Provide the port to connect to the restored active and master databases. If you are using the named instance, then you do not need to set the port number.

The following fields appear only if you are using the SQL Server Authentication mode.

- **Database Administrator Username:** User name of the database administrator for MSSQL Server. If you have created a separate user for installing ECE databases, provide the name of that user.
- **Database Administrator Password:** Provide password of the database administrator.
- **Master Database Username:** Provide username for the restored database.
- **Master Database Password:** Provide password of the user.
- **Database Verify Password:** Verify the password.

9. In the Restored ECE Active Database Parameters window provide the following details.

- **Database Server Name:** This field is pre-filled and value cannot be changed.
- **Active Database Name:** Provide the name of the restored active database.
- **Database server Instance Name:** This field is pre-filled and value cannot be changed.
- **Database Server Listen Port:** This field is pre-filled and value cannot be changed.

The following fields appear only if you are using the SQL Server Authentication mode.

- **Database Administrator Username:** This field is pre-filled and value cannot be changed.
- **Database Administrator Password:** This field is pre-filled and value cannot be changed.
- **Active Database Username:** Provide username for the restored database.
- **Active Database Password:** Provide password of the user.
- **Database Verify Password:** Verify the password.

10. The Restored Active Database Filegroup Parameters window appears only while upgrading from SQL Server Standard version of ECE 11.6(1). Provide the following details:

- **Filegroup Datafile 1 Name:** Provide the name of the first file group to be created for the active database.
- **Filegroup Datafile 1 Path:** Provide the location for the first filegroup. If you created a separate drive for the file groups, then provide the path to that drive. For details about creating a separate drive, see the “Pre-Installation Tasks” chapter of the *Enterprise Chat and Email Installation Guide* for ECE 12.0(1).
- **Filegroup Datafile 2 Name:** Provide the name of the second file group to be created for the active database.
- **Filegroup Datafile 2 Path:** Provide the location for the second filegroup. If you created a separate drive for the file groups, then provide the path to that drive. For details about creating a separate drive, see the “Pre-Installation Tasks” chapter of the *Enterprise Chat and Email Installation Guide* for ECE 12.0(1).

- **Filegroup Datafile 3 Name:** Provide the name of the third file group to be created for the active database.
 - **Filegroup Datafile 3 Path:** Provide the location for the third filegroup. If you created a separate drive for the file groups, then provide the path to that drive. For details about creating a separate drive, see the “Pre-Installation Tasks” chapter of the *Enterprise Chat and Email Installation Guide* for ECE 12.0(1).
 - **Filegroup Datafile 4 Name:** Provide the name of the fourth file group to be created for the active database.
 - **Filegroup Datafile 4 Path:** Provide the location for the fourth filegroup. If you created a separate drive for the file groups, then provide the path to that drive. For details about creating a separate drive, see the “Pre-Installation Tasks” chapter of the *Enterprise Chat and Email Installation Guide* for ECE 12.0(1).
11. In the Restored ECE Reports Database Parameters window provide the following details.
- **Database Server Name:** Name of the MSSQL 2016 database server where the reports database is restored. If you are upgrading from SQL Server Standard version of ECE 11.6(1), this will be server where you have restored the additional copy of the active database. (page 17). If you are using MSSQL Server **Always On Availability Group** clustering, specify the Listener name.
 - **Reports Database Name:** Provide the name of the restored reports database. If you are upgrading from SQL Server Standard version of ECE 11.6(1), this will be the additional copy of the active database. (page 17) The Upgrader will convert this copy of the active database to reports database.
 - **Database server Instance Name:** Provide the name of the MSSQL server instance used to connect to the restored reports database. Set the value only if you used a named instance, and not the default instance. If you are using MSSQL Server **Always On Availability Group** clustering, provide the name of the Listener instance name.
 - **Database Server Listen Port:** Provide the port to connect to the restored reports database. If you are using the named instance, then you do not need to set the port number.

The following fields appear only if you are using the SQL Server Authentication mode.

- **Database Administrator Username:** User name of the database administrator for MSSQL Server. If you have created a separate user for installing ECE databases, provide the name of that user.
 - **Database Administrator Password:** Provide password of the database administrator.
 - **Reports Database Username:** Provide username for the restored database.
 - **Reports Database Password:** Provide password of the user.
 - **Database Verify Password:** Verify the password.
12. The Restored Reports Database Filegroup Parameters window appears only while upgrading from SQL Server Standard version of ECE 11.6(1). Provide the following details:
- **Filegroup Datafile 1 Name:** Provide the name of the first filegroup to be created for the reports database.
 - **Filegroup Datafile 1 Path:** Provide the location for the first filegroup. If you created a separate drive for the file groups, then provide the path to that drive. For details about creating a separate drive, see the “Pre-Installation Tasks” chapter of the *Enterprise Chat and Email Installation Guide* for ECE 12.0(1).
 - **Filegroup Datafile 2 Name:** Provide the name of the second file group to be created for the reports database.
 - **Filegroup Datafile 2 Path:** Provide the location for the second filegroup. If you created a separate drive for the file groups, then provide the path to that drive. For details about creating a separate drive, see the “Pre-Installation Tasks” chapter of the *Enterprise Chat and Email Installation Guide* for ECE 12.0(1).

- **Filegroup Datafile 3 Name:** Provide the name of the third file group to be created for the reports database.
 - **Filegroup Datafile 3 Path:** Provide the location for the third filegroup. If you created a separate drive for the file groups, then provide the path to that drive. For details about creating a separate drive, see the “Pre-Installation Tasks” chapter of the *Enterprise Chat and Email Installation Guide* for ECE 12.0(1).
 - **Filegroup Datafile 4 Name:** Provide the name of the fourth file group to be created for the reports database.
 - **Filegroup Datafile 4 Path:** Provide the location for the fourth filegroup. If you created a separate drive for the file groups, then provide the path to that drive. For details about creating a separate drive, see the “Pre-Installation Tasks” chapter of the *Enterprise Chat and Email Installation Guide* for ECE 12.0(1).
13. In the Confirmation Required for Archive Database window, select **Yes** if you want to create a link to the restored archive database. Click **Next**.
14. In the Restored ECE Archive Database Parameters window, provide the following details:
- **Database Server Name:** Name of the MSSQL database server where the archive database is restored. If you are using MSSQL Server **Always On Availability Group** clustering, specify the Listener name.
 - **Archive Database Name:** Provide the name of restored archive database.
 - **Database server Instance Name:** Provide the name of the MSSQL server instance used to connect to restored archive database. Set the value only if you used a named instance, and not the default instance. If you are using MSSQL Server **Always On Availability Group** clustering, provide the name of the Listener instance name.
 - **Database Server Listen Port:** Provide the port to connect to the restored archive database. If you are using the named instance, then you do not need to set the port number.

The following fields appear only if you are using the SQL Server Authentication mode.

- **Database Administrator Username:** User name of the database administrator for MSSQL Server. If you have created a separate user for installing ECE databases, provide the name of that user.
 - **Database Administrator Password:** Provide password of the database administrator.
 - **Archive Database Username:** Provide username for the restored database.
 - **Archive Database Password:** Provide password of the user.
 - **Database Verify Password:** Verify the password.
15. In the Product Information window, check the current version of ECE 11.6(1) installed. The current version should be 11.6(1) or higher. Click **Next**.
16. In the Upgrade Summary window, verify the version being installed. It should be ECE 12.0(1). The screen also notifies if you need to run the Upgrader on additional servers. This information only appears while running the Upgrader on the file server. If using NAS, this information is displayed on the first component where you run the Upgrader. Click **Next**.
17. The application uses the functionality provided by the SQL Server Integration Services (SSIS) to allow custom data to be available for inclusion in data extracts. For SSIS, make sure you have completed the tasks in the “Pre-Installation Tasks” chapter (“Configuring SQL Server Integration Service on the Reports Database” section) of the *Enterprise Chat and Email Installation Guide* for ECE 12.0(1). In the Reports database SSIS Parameters window, provide the following details and click **Next**.
- **SSIS Datafile path:** Provide the path of the SSIS Directory created on the reports database server.
 - **Domain User Name:** User name of the domain user account created on the reports database server for SSIS configuration. This account should have administrative privileges on the reports database server.

- **Domain User Password:** Password of the domain user account.
18. In the Reports Database SSIS Catalog Parameters window, provide the following details. This window does not appear if the SSIS catalog already exists on the report database. Click **Next**.
 - **SSIS Catalog Encryption Password:** Provide a password to encrypt the SSIS catalog.
 - **Verify SSIS Catalog Password:** Verify the SSIS catalog encryption password.
 19. In the Domain User Account Parameters window, provide the domain user name and password. Click **Next**.
 20. The supervisors screen provides a list of users who have supervisor role in the ECE application and are not marked supervisors in Unified CCE. The list is also available for reference at: *ECE_Home\eService\installation\logs\supervisors.txt*. If you want these users to continue to be supervisors, you must mark them supervisors in Unified CCE. Click **Next**.
 21. In the User Input Summary window, verify the information provided by you during the upgrade process. Click **Install**.

The Upgrader creates a backup of the file system at *ECE_Home\Patches\Backup\Pre_Upgrade_Version\FileServer* and starts upgrading the application.
 22. If the Upgrader finds that any of the out-of-the-box product libraries have been modified and if there are any unsupported customizations made to the master and active databases, it displays the Unsupported Customization Detected window and you cannot proceed with the upgrade process. In the Unsupported Customization Detected window, you will find the location of the log file (for example, *ECE_Home\eService\installation\logs\unsupported_customizations_ServerName.txt*) which lists all customizations related issues you need to fix before running the Upgrader. Click **Cancel** to exit the Upgrader and contact Cisco TAC for assistance.
 23. In the Installation Status window, click the **Close** button to complete the upgrade process.

Upgrading the Services Server

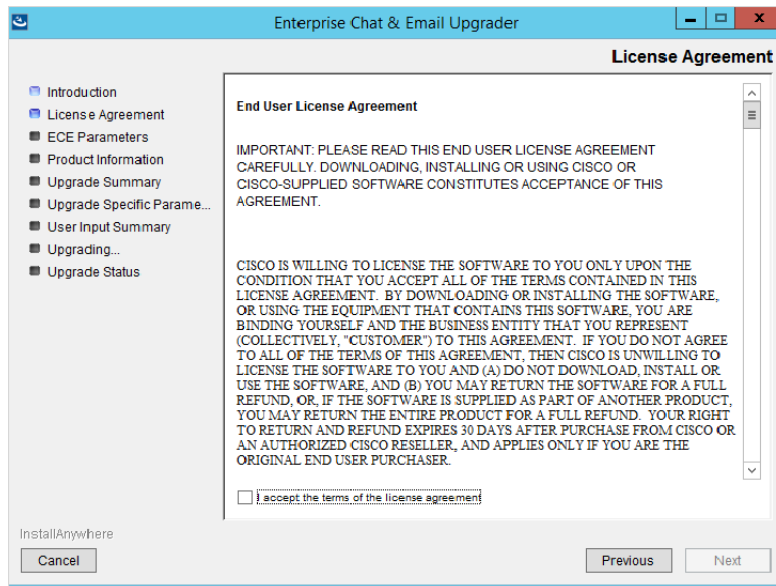


Important: When running the upgrade, you must be logged on to the server using the same domain account that was used for installing ECE 11.6(1).

To upgrade the services server:

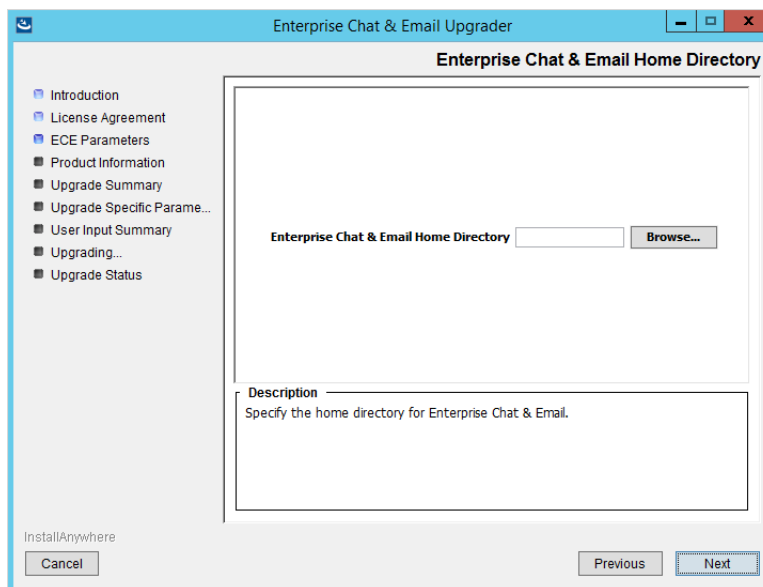
1. Check to see that you have closed all the application files before you begin the upgrade. For example, *eService.ear* or any other files opened from any other application folders must be closed.
2. Create a temporary folder, *Temporary_Folder* and from the upgrade package, copy the upgrade files into *Temporary_Folder*.
3. Double-click *setup_windows.exe* to launch the ECE 12.0(1) Upgrader.
4. When the Introduction window appears, read the installation instructions. Click **Next**.

5. In the License Agreement window, review the licensing terms and select the **I accept the terms of the License Agreement** option. Click **Next**.



Read and accept the terms of the License Agreement

6. In the Enterprise Chat & Email Home Directory window, type the path or browse to the folder where ECE 11.6(1) is installed. Click **Next**.



Provide the location of the ECE 11.6(1) home directory

7. In the File Server Parameters window, type the name of the ECE 11.6(1) file server or the UNC path to NAS. Click **Next**.
8. In the Product Information window, verify the ECE 11.6(1) components installed on the machine. Click **Next**.

9. In the Upgrade Summary window, verify the version being installed. It should be ECE 12.0(1). The screen also notifies if you need to run the Upgrader on additional servers. Click **Next**.
10. In the User Input Summary window, verify the information entered by you during the upgrade process. Click **Install**.

The upgrader creates a backup of the Enterprise Chat & Email home directory at *ECE_Home\Patches\Backup\Pre_Upgrade_Version\FileServer* and starts upgrading the installation.
11. If the Upgrader finds that any of the out-of-the-box product libraries have been modified, it displays the Unsupported Customization Detected window and you cannot proceed with the upgrade process. In the Unsupported Customization Detected window, you will find the location of the log file (for example, *ECE_Home\eService\installation\logs\unsupported_customizations_ServerName.txt*) which lists all customizations related issues you need to fix before running the Upgrader. Click **Close** to exit the Upgrader and contact Cisco TAC for assistance.
12. In the Installation Status window, click the **Close** button to complete the upgrade process.

Upgrading the Messaging Server

The upgrader automatically installs and configures ActiveMQ as part of the upgrade. The software is installed in the ECE Home directory. For example, *C:\Cisco\ActiveMQ*.

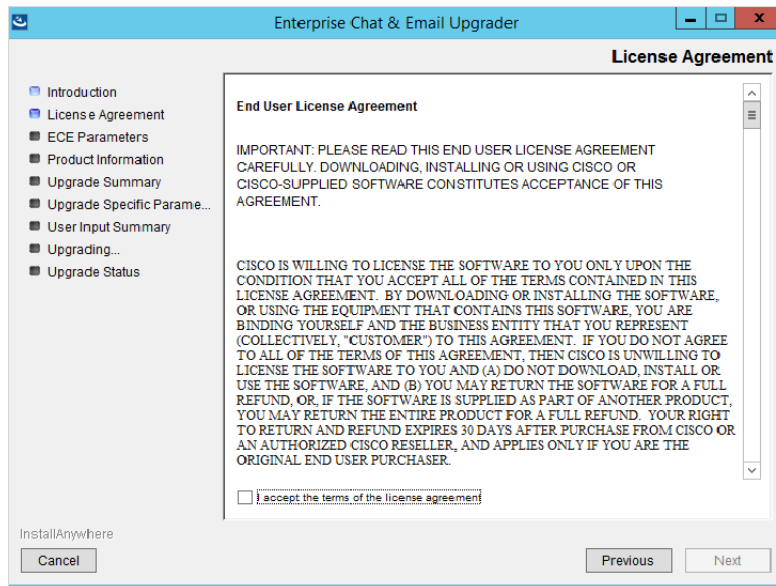


Important: When running the upgrade you must be logged on to the server using the same domain account that was used for installing ECE 11.6(1).

To upgrade the messaging server:

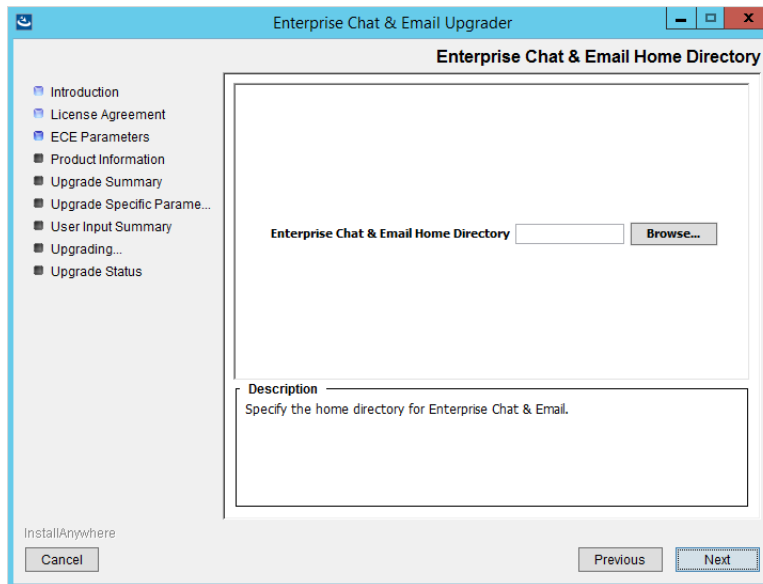
1. Check to see that you have closed all the application files before you begin the upgrade. For example, *eService.ear* or any other files opened from any other application folders must be closed.
2. Create a temporary folder, *Temporary_Folder* and from the upgrade package, copy the upgrade files into *Temporary_Folder*.
3. Double-click *setup_windows.exe* to launch the ECE 12.0(1) Upgrader.
4. When the Introduction window appears, read the installation instructions. Click **Next**.

5. In the License Agreement window, review the licensing terms and select the **I accept the terms of the License Agreement** option. Click **Next**.



Read and accept the terms of the License Agreement

6. In the Enterprise Chat & Email Home Directory window, type the path or browse to the folder where ECE 11.6(1) is installed. Click **Next**.



Provide the location of the home directory

7. In the File Server Parameters window, type the name of the ECE 11.6(1) file server or the UNC path to NAS. Click **Next**.
8. In the Product Information window, verify the ECE 11.6(1) components installed on the machine. Click **Next**.

9. In the Upgrade Summary window, verify the version being installed. It should be ECE 12.0(1). The screen also notifies if you need to run the Upgrader on additional servers. Click **Next**.
10. In the ActiveMQ Parameters window, provide the following details. Click **Next**.
 - **ActiveMQ Port:** ActiveMQ listener port used by JMS clients to connect to ActiveMQ messaging server. The port number can be between 1024-65535. Default value is 15097.
 - **Admin ActiveMQ Port:** ActiveMQ Admin listener port used for administering and monitoring resources on the server. The port number can be between 1024-65535. Default value is 15096.
11. In the User Input Summary window, verify the information entered by you during the upgrade process. Click **Install**.

The upgrader creates a backup of the ECE home directory at *ECE_Home\Patches\Backup\Pre_Upgrade_Version\FileServer* and starts upgrading the installation.
12. If the Upgrader finds that any of the out-of-the-box product libraries have been modified, it displays the Unsupported Customization Detected window and you cannot proceed with the upgrade process. In the Unsupported Customization Detected window, you will find the location of the log file (for example, *ECE_Home\eservice\installation\logs\unsupported_customizations_ServerName.txt*) which lists all customizations related issues you need to fix before running the Upgrader. Click **Close** to exit the Upgrader and contact Cisco TAC for assistance.
13. In the Installation Status window, click the **Close** button to complete the upgrade process.

Upgrading the Application Servers

In distributed-server installations, the Upgrader needs to be run on all ECE 11.6(1) application servers. The upgrader automatically installs and configures Jetty as part of the upgrade. The software is installed in the ECE Home directory. For example, *C:\Cisco\Jetty*.

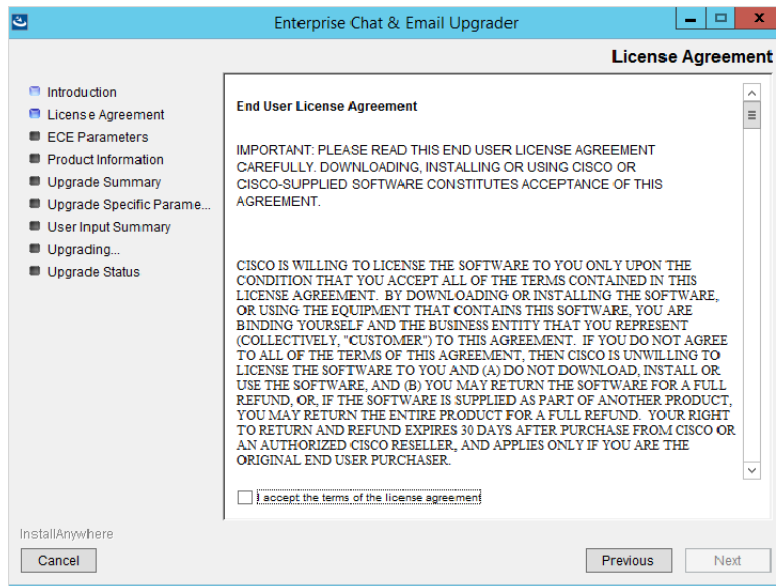


Important: When running the upgrade you must be logged on to the server using the same domain account that was used for installing ECE 11.6(1).

To upgrade the application server:

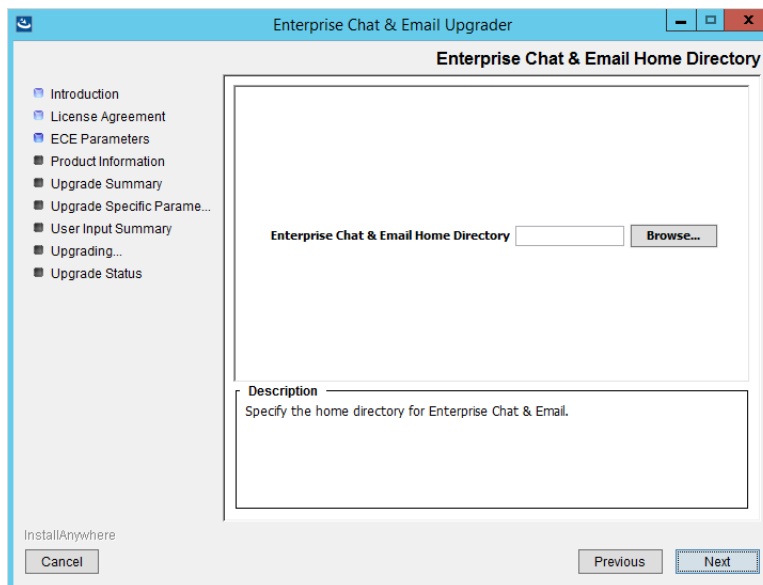
1. Check to see that you have closed all the application files before you begin the upgrade. For example, *eService.ear* or any other files opened from any other application folders must be closed.
2. Create a temporary folder, *Temporary_Folder* and from the upgrade package, copy the upgrade files into *Temporary_Folder*.
3. Double-click *setup_windows.exe* to launch the ECE 11.6(1) Upgrader.
4. When the Introduction window appears, read the installation instructions. Click **Next**.

5. In the License Agreement window, review the licensing terms and select the **I accept the terms of the License Agreement** option. Click **Next**.



Read and accept the terms of the License Agreement

6. In the Enterprise Chat & Email Home Directory window, type the path or browse to the folder where ECE 11.6(1) is installed. Click **Next**.



Provide the location of the home directory

7. In the File Server Parameters window, type the name of the ECE 11.6(1) file server or the UNC path to NAS. Click **Next**.
8. In the Product Information window, verify the ECE 11.6(1) components installed on the machine. Click **Next**.

9. In the Upgrade Summary window, verify the version being installed. It should be ECE 12.0(1). The screen also notifies if you need to run the Upgrader on additional servers. Click **Next**.
10. In the Jetty Parameters window, provide the following details:
 - **Jetty HTTP port:** Jetty HTTP listener port where all the HTTP requests are handled. The value is pre-filled and it cannot be changed.
 - **Jetty HTTP SSL Port:** Jetty HTTPS listener port where all the SSL requests are handled. The value is pre-filled and it cannot be changed.
 - **Jetty Stop Port:** Jetty shutdown command listener port. This port is used for issuing shutdown command to stop Jetty. The port number can be between 1024-65535.
11. In the User Input Summary window, verify the information entered by you during the upgrade process. Click **Install**.

The upgrader creates a backup of the ECE home directory at `ECE_Home\Patches\Backup\Pre_Upgrade_Version\FileServer` and starts upgrading the installation.
12. If the Upgrader finds that any of the out-of-the-box product libraries have been modified, it displays the Unsupported Customization Detected window and you cannot proceed with the upgrade process. In the Unsupported Customization Detected window, you will find the location of the log file (for example, `ECE_Home\eService\installation\logs\unsupported_customizations_ServerName.txt`) which lists all customizations related issues you need to fix before running the Upgrader. Click **Close** to exit the Upgrader and contact Cisco TAC for assistance.
13. In the Installation Status window, click the **Close** button to complete the upgrade process.

Upgrading the Web Servers

In distributed-server installations, the Upgrader needs to be run on all ECE 11.6(1) web servers.

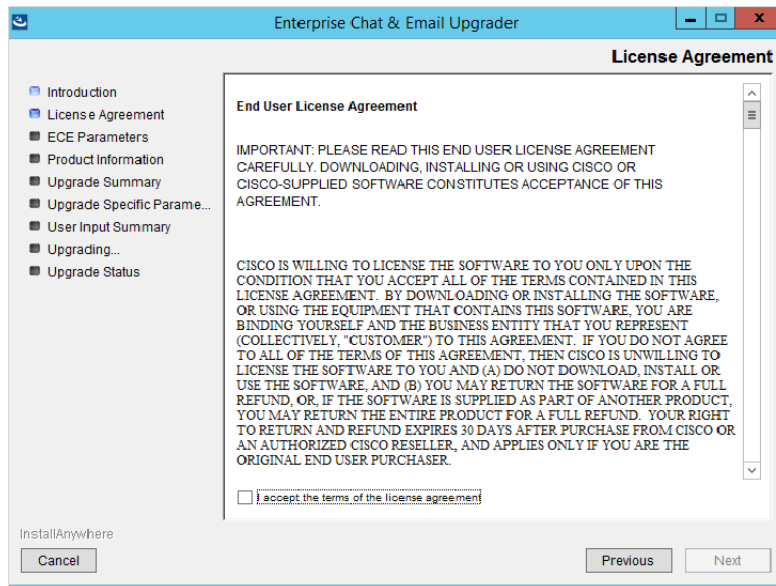


Important: When running the upgrade you must be logged on to the server using the same domain account that was used for installing ECE 11.6(1).

To upgrade the web server:

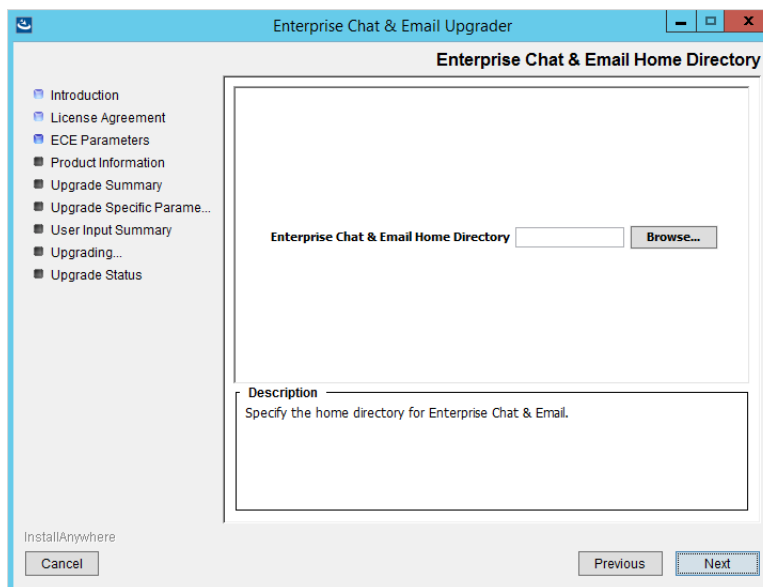
1. Check to see that you have closed all the application files before you begin the upgrade. For example, `eService.ear` or any other files opened from any other application folders must be closed.
2. Create a temporary folder, `Temporary_Folder` and from the upgrade package, copy the upgrade files into `Temporary_Folder`.
3. Double-click `setup_windows.exe` to launch the ECE 12.0(1) Upgrader.
4. When the Introduction window appears, read the installation instructions. Click **Next**.

5. In the License Agreement window, review the licensing terms and select the **I accept the terms of the License Agreement** option. Click **Next**.



Read and accept the terms of the License Agreement

6. In the Enterprise Chat & Email Home Directory window, type the path or browse to the folder where ECE 11.6(1) is installed. Click **Next**.



Provide the location of the home directory

7. In the Application Server Parameter window, provide the application server name and the Jetty HTTP port. The port value should be same as the Jetty HTTP port value provided for the Application Server ([page 31](#)). Click **Next**.
8. In the IIS Web Site Parameter window, select the name of website from the drop down. Click **Next**.

9. In the Domain User Account Parameters window, provide the domain user name and password. Click **Next**.
10. In the Product Information window, verify the ECE 11.6(1) components installed on the machine. Click **Next**.
11. In the Upgrade Summary window, verify the version being installed. It should be ECE 12.0(1). The screen also notifies if you need to run the Upgrader on additional servers. Click **Next**.
12. In the User Input Summary window, verify the information entered by you during the upgrade process. Click **Install**.

The upgrader creates a backup of the ECE home directory at

ECE_Home\Patches\Backup\Pre_Upgrade_Version\FileServer and starts upgrading the installation.

13. If the Upgrader finds that any of the out-of-the-box product libraries have been modified, it displays the Unsupported Customization Detected window and you cannot proceed with the upgrade process. In the Unsupported Customization Detected window, you will find the location of the log file (for example, *ECE_Home\eservice\installation\logs\unsupported_customizations_ServerName.txt*) which lists all customizations related issues you need to fix before running the Upgrader. Click **Close** to exit the Upgrader and contact Cisco TAC for assistance.
14. In the Installation Status window, click the **Close** button to complete the upgrade process.



Post-Upgrade Tasks

- ▶ [Performing Post-Install Tasks on the Database](#)
- ▶ [Updating Custom Chat Templates](#)
- ▶ [Updating Finesse Files](#)
- ▶ [Upgrading Windows Server 2012 to Windows Server 2016](#)
- ▶ [Installing Additional Messaging Server](#)
- ▶ [Installing Additional Services Server](#)
- ▶ [Starting IIS](#)
- ▶ [Starting ECE 12.0\(1\)](#)
- ▶ [Setting up User Desktops](#)
- ▶ [Assigning Permissions on Data Adapters for Archive Database](#)
- ▶ [Troubleshooting Procedures](#)
- ▶ [Uninstalling ECE 12.0\(1\)](#)

This chapter guides you through the tasks to be performed after upgrading the system. It also describes the process of restoring the ECE 11.6(1) installation if the upgrade fails.

Performing Post-Install Tasks on the Database

Creating an Encrypted SQL Server Database

- ▶ This is an optional task and you need to do it only if you want to encrypt the databases. This feature is available only for MS SQL Server Enterprise edition. You can do this task any time after upgrading the installation. For details about doing this task, see the “Creating an Encrypted SQL Server Database” section of the *Enterprise Chat and Email Installation Guide*.

Always On Availability Group Clustering Tasks

- ▶ After upgrading to ECE 12, you need to perform extra tasks on the database server to complete the Always On clustering configuration. For details, see the “Post-Installation Tasks” chapter of the *Enterprise Chat and Email Installation Guide*.

Updating Custom Chat Templates

Perform these tasks on all ECE 11.6(1) web servers in your deployment.

Steps for updating the template files vary based on the starting point of your custom templates:

- ▶ For updating templates created using **Aqua** template, see [page 35](#).
- ▶ For templates created using **Kiwi** template, see [page 38](#).

For Custom Templates Created From Aqua Template

To update the custom chat template files:

1. Merge the updates in the following files from the Aqua template folder with the files in the custom template folder. If a file does not exist in the customer template folder, copy it and paste it in:

- `ECE_Home\Service\templates\chat\aquacomponents:`

- `alternate-contact-options`
- `alternate-engagement-options`
- `article-content`
- `article-toolbar`
- `attachment`
- `attachment-review`

- chat-attach
 - chat-initialize
 - chat-unavailable-message
 - cobrowse
 - error-message
 - escalation-search-results-list
 - footer-small
 - header-small
 - launch-button
 - message-input-horizontal
 - post-chat-survey
 - pre-chat-params-list
 - status-bar
 - thanks-message
 - transcript
 - video
 - wait-screen
- *ECE_Home*\eService\templates\chat\aquacss:
 - application.css
 - iframe-style.css
 - chat-main.less
- *ECE_Home*\eService\templates\chat\aquall10n:
 - da-DA.json
 - de-DE.json
 - en-US.json
 - es-ES.json
 - fr-CA.json
 - fr-FR.json
 - it-IT.json
 - ja-JP.json
 - ko-KR.json
 - nl-NL.json
 - pt-BR.json
 - pt-PT.json
 - ru-RU.json
 - sv-SV.json
 - zh-CN.json
 - messaging_da_DA.properties
 - messaging_de_DE.properties
 - messaging_en_US.properties

- messaging_es_ES.properties
- messaging_fr_CA.properties
- messaging_fr_FR.properties
- messaging_it_IT.properties
- messaging_ja_JP.properties
- messaging_ko_KR.properties
- messaging_nl_NL.properties
- messaging_pt_BR.properties
- messaging_pt_PT.properties
- messaging_ru_RU.properties
- messaging_sv_SV.properties
- messaging_zh_CN.properties
- *ECE_Home*\eService\templates\chat\aqu\libs:
 - angular-bundle.min.js
 - angular-simple-sidebar.min.js
 - application.min.js
 - egain-angular-services.chat.min.js
 - egain-chat-kiwi-template-controllers.min.js
 - egain-chat-kiwi-template-factories.min.js
 - egain-client-library.min.js
 - egain-va-library.js
 - handlebars.js
 - jquery-2.1.3.min.js
 - lokijs.min.js
 - onetagutil.js
- *ECE_Home*\eService\templates\chat\aqu\libs\css:
 - angular-multi-select.min.css
 - angular-simple-sidebar.min.css
 - animate.min.css
 - bootstrap.min.css
 - ng-scrollbar.min.css
- *ECE_Home*\eService\templates\chat\aqu\libs\videochat:
 - OpenTok.js
- *ECE_Home*\eService\templates\chat\aqu\libs\pages:
 - chat-attach
 - chat-deflection
 - chat-initialize
 - chat-landing
 - chat-main
 - chat-unavailable

- error
- interaction
- post-chat
- pre-chat
- thanks-message
- va-landing
- wait-screen
- *ECE_Home*\eService\templates\chat\aquatranscript:
 - transcript.properties
- *ECE_Home*\eService\templates\chat\ aqua:
 - index.html

For Custom Templates Created From Kiwi Template

To update the custom chat template files:

1. Merge the updates in the following files from the **Kiwi** template folder with the files in the custom template folder. If a file doesn't exist in the customer template folder, copy it and paste it in:

- *ECE_Home*\eService\templates\chat\kiwi:
 - chat.html
 - eGainLiveConfig.js
 - eGainLiveHooks.js
- *ECE_Home*\eService\templates\chat\kiwi\chat\js:
 - altEngmt.js
 - attachment.js
 - chat.js
 - connection.js
 - core.js
 - deflection.js
 - editor.js
 - form-email_friend.js
 - header.js
 - login.js
 - messenger.js
 - multiselect.js
 - OneTagEvents.js
 - survey.js
 - utils.js
 - video.js
 - session.js
- *ECE_Home*\eService\templates\chat\kiwi\transcript:
 - transcript.properties
- *ECE_Home*\eService\templates\chat\kiwi\cobrowse\js:

- cobrowse.js
- *ECE_Home*\eService\templates\chat\kiwi\chat\less:
 - chat-main.less
- *ECE_Home*\eService\templates\chat\kiwi\properties:
 - chat_da_DA.properties
 - chat_de_DE.properties
 - chat_en_US.properties
 - chat_es_ES.properties
 - chat_fr_CA.properties
 - chat_fr_FR.properties
 - chat_it_IT.properties
 - chat_ja_JP.properties
 - chat_ko_KR.properties
 - chat_nl_NL.properties
 - chat_pt_BR.properties
 - chat_pt_PT.properties
 - chat_ru_RU.properties
 - chat_sv_SV.properties
 - chat_zh_CN.properties
 - messaging_da_DA.properties
 - messaging_de_DE.properties
 - messaging_en_US.properties
 - messaging_es_ES.properties
 - messaging_fr_CA.properties
 - messaging_fr_FR.properties
 - messaging_it_IT.properties
 - messaging_ja_JP.properties
 - messaging_ko_KR.properties
 - messaging_nl_NL.properties
 - messaging_pt_BR.properties
 - messaging_pt_PT.properties
 - messaging_ru_RU.properties
 - messaging_sv_SV.properties
 - messaging_zh_CN.properties

2. Copy and paste the following image files from the **Kiwi** template folder to your custom template folder:

- *ECE_Home*\eService\templates\chat\kiwi\chat\img:
 - chat_cust_attachment_icon.png
 - icon_attachment.png
 - icon_attachment_32.gif
 - icon_attachment_64.gif
 - icon_attachment_button.gif
 - icon_close.gif
 - icon_info.gif
 - icon_reject.gif
 - icon_reject_16.gif
 - icon_reject_24.gif

- icon_reject_32.gif
- icon_upload_32.gif
- icon_upload_64.gif

Updating Finesse Files

Perform these tasks from any local machine. You will need access to the `agent.xml` file on the ECE web server.

To configure the Finesse settings and layout:

1. Launch the URL: `https://Finesse_Server_Name/cfadmin`. Login as a finesse administrator.
2. From Desktops Layout section, configure the layout for the Advisor Desktop gadget. XML contents for the gadget tab are available in the following files on the ECE web server:
`ECE_Home\Service\templates\finesse\gadget\layout\agent.xml`
3. After copying the content of the `agent.xml` file, in the gadget tag, replace the web server name with the host name of the load balancer used for ECE web servers. This task needs to be performed only if you are using a load balancer for ECE web servers.

Upgrading Windows Server 2012 to Windows Server 2016



Important: All ECE servers must be upgraded to Windows 2016.

Backing Up VMs

- ▶ Take a backup of all the VMs where ECE server components are installed. The VM must be shutdown before taking a backup.

Upgrading Windows Server Version

- ▶ On all ECE servers, upgrade Windows 2012 R2 to Windows 2016. Follow Microsoft documentation to complete this task. While doing the upgrade, make sure you select the following options:
 - **Server with Desktop Experience**
 - **Keep personal files and apps**

Installing Additional Messaging Server

- ▶ If you plan to use the messaging server clustering feature for ECE 12.0(1) ([page 14](#)), install the new messaging server using the ECE 12.0(1) installation program. See the *Enterprise Chat and Email Installation Guide* for details about doing this task.

Installing Additional Services Server

- ▶ If you plan to add a second services server to use the high availability feature for ECE 12.0(1) ([page 14](#)), install the new services server using the ECE 12.0(1) installation program. See the *Enterprise Chat and Email Installation Guide* for details about doing this task.

Starting IIS

- ▶ Start IIS (World Wide Web Publishing Service) on all web servers in the installation.

Starting ECE 12.0(1)



Important: Note that as part of the start-up process, the application runs a self-scan to validate signatures of all application binaries and application databases. If the binary files or application databases are altered in anyway, the application will not start.

To start ECE 12.0(1):

- ▶ In collocated installations:
 - On the server where application, messaging, services, file, and database components are installed, start the Cisco Service from the Windows Services panel.
- ▶ In a distributed-server installation:

Ensure that all the machines in the configuration are available and connected to the network.

 - a. Start Cisco Service on the messaging server by starting the Cisco Service from the Windows Services panel.
 - b. On the services server, start the application by starting the Cisco Service from the Windows Services panel.
 - c. On each application server, start the application by starting the Cisco Service from the Windows Services panel.

On starting the application, if you notice high CPU usage (more than 90%) for the SQL Full-text Daemon Launcher service on the active database, stop the service and run it during low volume periods. The CPU

usage can be checked from the **Resource Monitor**. For details, see [“Troubleshooting High CPU Usage on Database Server After Upgrade”](#) on page 42.

Setting up User Desktops

- ▶ Clear the web browser cache on every user desktop.

Updating Supervisor Users in Unified CCE

With ECE 12.0(1), integrated supervisors are now defined only in Unified CCE. When such users are imported in ECE, the Supervisor Role is automatically assigned to the user. Before upgrade, if a user is only assigned the supervisor role in ECE and not marked Supervisors in Unified CCE, they will not be able to access the Supervision Console after upgrade.

At the time of update, a list is generated and is available at the following location on the file server: `ECE_Home\eservice\installation\logs\supervisors.txt`. If you want these users to continue to be supervisors in the ECE application, you must mark them supervisors in Unified CCE.

Assigning Permissions on Data Adapters for Archive Database

You need to perform this task only if you created data adapters while upgrading from ECE 11.6(1) to ECE 12.0(1) ([page 24](#)) and you want your agents to have access to the archived activities and cases available in the archive database.

- ▶ From the Administration Console, go to the Data Adapters section in each department and give permissions to agents who should be able to access the data access links created for the archive database. For details about doing this task, see *Administrator’s Guide to Data Adapters*.

Troubleshooting Procedures

Troubleshooting High CPU Usage on Database Server After Upgrade

Under certain conditions, on starting the application, the SQL Full-text Daemon Launcher service starts using high CPU (more than 90%) on the active database.

To troubleshoot the high CPU usage issue:

1. From the **Resource Monitor**, check the CPU usage for the SQL Full-text Daemon Launcher service.

2. If the CPU usage is high, stop the **SQL Full-text Daemon Launcher** service from the Windows Services panel. Run the service during low volume periods and monitor the CPU usage from the **Resource Monitor**. Once you notice that the service is no longer consuming high CPU, leave the service in **Running** state.

Viewing Log Files

- ▶ If any error occurs while upgrading the installation, error messages are logged in the following:
 - *ECE_Home\service\installation\logs\eg_log_File_Server_upgrade-installer.log*
 - *ECE_Home\service\installation\logs\eg_log_Web_Server_upgrade-installer.log*
 - *ECE_Home\service\installation\logs\eg_log_Services_Server_upgradeinstaller.log*
 - *ECE_Home\service\installation\logs\eg_log_Application_Server_upgradeinstaller.log*
 - *ECE_Home\service\installation\logs\eg_log_Messaging_Server_upgradeinstaller.log*

Restoring ECE 11.6(1) Installation

If you encounter any problems while upgrading, you can restore the ECE 11.6(1) installation and run the Upgrader again.

To restore the ECE 11.6(1) installation:

1. Restore the ECE 11.6(1) installation. The backup copies are available at *ECE_Home\Patches\Backup\Pre_Upgrade_Version\File Server*. Perform this task on the file server, all services servers, all web servers, all application servers, and all messaging servers.
2. On the database server machine, enable the reports job population *smys_Reports_Database_Name*. Perform this task only if you are not running the upgrader again and plan to continue using the ECE 11.6(1) installation.
3. Before running the Upgrader again, ensure that you restore the database copies on the SQL 2016 machine again ([page 17](#)).

Uninstalling ECE 12.0(1)

The uninstallation program guides you through the process of uninstalling ECE 12.0(1). The uninstallation should be done on all the servers where the Upgrader was run - the file server, all services servers, all web servers, all messaging servers, and all application servers in the deployment.

The update uninstallation program should be used only if ECE 12.0(1) was installed successfully. If there were any issues while running the Upgrader, and you want to restore the ECE 11.6(1) installation, follow the steps in the section “[Restoring ECE 11.6\(1\) Installation](#)” on [page 43](#).

Preparing to Uninstall

Verifying Availability of Backed-up VMs and Restoring the VMs

1. Before uninstalling the update, ensure that you have a backup of the VMs that was taken before updating the OS from Windows 2012 to Windows 2016 ([page 40](#)).
2. Restore the backed up copies of the VMs.

Stopping the Application

To stop the application:

- ▶ Before you begin the uninstallation process, make sure you stop the application. For details, refer to “Stopping the Application” on [page 15](#).

Stopping IIS

- ▶ Stop IIS (World Wide Web Publishing Service) on all web servers in the installation.

Verifying Availability of Backed-up Databases

- ▶ Before uninstalling the update, ensure that you have a backup of the database on which the update was installed ([page 16](#)).

Uninstalling ECE 12.0(1)

To uninstall ECE 12.0(1):

1. Navigate to `ECE_Home\Uninstaller\patches` and launch the `Upgrade_uninstaller.exe`
2. In the Introduction window, verify that all the information mentioned is correct click on the confirmation checkbox and then Click the **Next** button.
3. In the Domain User Details window, provide the domain user name and password. Click **Next**. This window appears while running the Upgrader on the web server.
4. In the Uninstall Enterprise Chat and Email window, click the **Uninstall** button.

Uninstalling ECE From the Database Server

To uninstall the update from the database server:

- ▶ Restore the active, master, and reports databases from the backup location ([page 16](#)). Make sure that you restore the backup of the database for the last version of the product on which ECE 12.0(1) was installed.

Appendix A: Pre-Upgrade Utilities

- ▶ [About the Utilities](#)
- ▶ [Database Pre-Check Utility](#)
- ▶ [Database DBUpdate Utility](#)

About the Utilities

The Upgrader comes with two utilities, DB PreCheck Utility and DBUpdate Utility, that can be run before doing the actual upgrade.



Important: It is highly recommended that you run these utilities before running the actual Upgrader on your installation. Please contact Cisco TAC if any issues are identified by these utilities.

- ▶ The **DB PreCheck Utility** checks if there is any data in the databases that will cause the upgrade to fail. If any such issues are found, it logs them in a file. This utility also detects the disk space required on the database servers to run the upgrader successfully. For details about running this utility, see [“Running DB Pre-Check Utility” on page 47](#).
- ▶ The **DBUpdate Utility** actually upgrades the standalone copies of the databases and will report if the upgrade can fail because of any database issues. For details about running this utility, see [“Running DBUpdate Utility” on page 50](#).

Database Pre-Check Utility

Preparing to Run the Utility

Installing JDK

- ▶ Install JDK 1.8 Update 65 or higher on the machines from where you are going to run the utilities.

Configuring Database URLs

To be able to run the utility, you have to configure database URLs for the ECE 11.6(1) databases. This section describes the format of these URLs. You will require these URLs while configuring the utilities ([page 47](#)).

Configure URLs for the following databases:

- ▶ Master database
- ▶ Active database
- ▶ Reports database (For installations using Enterprise Edition of MSSQL)

To configure the database URLs:

The database URLs are configured in the format:

```
jdbc:sqlserver://Server_Name:Port_Number;instanceName=Instance_Name;integratedSecurity=true_or_false;databaseName=Database_Name
```

Where:

- ▶ *Server_Name*: Name of the server where the ECE 11.6(1) databases are installed.
- ▶ *Port_Number*: The port number for the MSSQL server. The default port is 1433.
- ▶ *Instance_Name*: The name of the MSSQL instance for the database. The default instance is `MSSQLSERVER`.
- ▶ `integratedSecurity`: Set the value to `true` if you are using Windows Authentication to connect to the database. Set the value to `false` if you are using the SQL Server Authentication mode.
- ▶ *Database_Name*: Name of the ECE 11.6(1) database.

For example, the database URL will look like:

```
jdbc:sqlserver://productDB:1433;instanceName=mssqlserver;integratedSecurity=true;databaseName=ActiveDB
```

Running DB Pre-Check Utility

This utility needs to be run on the *actual* ECE 11.6(1) databases. The application does not have to be stopped to run the DB Pre-check utility. You need to have access to the ECE 11.6(1) database servers from the machine you are trying to run this utility.

To run the DB Pre-Check utility:

1. Create a temporary folder, *Temporary_Folder*.
2. From the upgrade files, copy the `Utilities\DBPrecheck\windows-mssql` folder into *Temporary_Folder*.
3. Open the `Temporary_Folder\Utilities\DBPrecheck\windows-mssql\standalone.properties` file in a text editor and set the following properties.
 - `ACTIVE_DATABASE_URL`: Provide the active database URL. For the format of the URL, see [“Configuring Database URLs” on page 46](#).
 - `MASTER_DATABASE_URL`: Provide the master database URL. For the format of the URL, see [“Configuring Database URLs” on page 46](#).

Set the following four properties only if you are using SQL Server Authentication to connect to the active database.

- `ACTIVE_ADMIN_USER`: User name of the database administrator for MSSQL Server. Any database administrator with the following roles can be used: `dbcreator`, `securityadmin`, `sysadmin`.
- `ACTIVE_ADMIN_PASS`: Password of the database administrator.
- `ACTIVE_USER`: Database username of the active database.
- `ACTIVE_PASS`: Database password of the active database.

Set the following four properties only if you are using SQL Server Authentication to connect to the master database.

- `MASTER_ADMIN_USER`: User name of the database administrator for MSSQL Server. Any database administrator with the following roles can be used: `dbcreator`, `securityadmin`, `sysadmin`.
- `MASTER_ADMIN_PASS`: Password of the database administrator.
- `MASTER_USER`: Database username of the master database.
- `MASTER_PASS`: Database password of the master database.

Set the following reports database properties only if your installation uses the Enterprise Edition of MSSQL:



Important: If your installation uses the Standard Edition of MSSQL, you must comment out the reports database properties before running the utility. Prefix the property names with “#” to comment them.

- `REPORTS_DATABASE_URL`: Provide the reports database URL. For the format of the URL, see “Configuring Database URLs” on page 49.

Set the following four properties only if you are using SQL Server Authentication to connect to the database.

- `REPORTS_ADMIN_USER`: User name of the database administrator for MSSQL Server. Any database administrator with the following roles can be used: `dbcreator`, `securityadmin`, `sysadmin`.
 - `REPORTS_ADMIN_PASS`: Password of the database administrator.
 - `REPORTS_USER`: Database username of the reports database.
 - `REPORTS_PASS`: Database password of the reports database.
4. Open the `Temporary\Folder\Utilities\DBPrecheck\windows-mssql\DBPrecheck.bat` file in a text editor and set the following properties:
 - Locate the `SET JAVA_HOME` property and set the value to the location where JDK 1.8 Update 65 or higher is installed on your machine (page 46). For example, `C:/Java/jdk1.8.0_65`.
 5. Double-click `DBPrecheck.bat` to launch the utility. You will be notified when the pre-check finishes.
 - If the utility fails to execute because of any configuration issues, error messages are logged in the `upgrade_db.log`. Fix the properties configured in the `standalone.properties` and `DBPrecheck.bat` files and try to run the utility again.
 - If the DB pre-check utility identifies any issues, all the log messages are logged in the log file `egpl_precheck.log`. Please contact Cisco TAC if any issues are identified by the utility.

The log files are created at the same location from where you launch the utility.

Database DBUpdate Utility

Preparing to Run the Utility

Installing JDK

- ▶ Install JDK 1.8 Update 65 or higher on the machines from where you are going to run the utilities.

Restoring Databases

The DBUpdate utility should always be run on copies of databases and not on the actual databases for your installation. While restoring the databases, make sure that edition of MSSQL 2016 database server matches the edition you plan to use for ECE 12.0(1).

To restore the databases:

- ▶ Create a copy of the following databases to be used by the utility:
 - Master database
 - Active database.
 - For installations using Standard edition of MSSQL 2014, restore a second copy of the active database and give it a different name than the active database, for example, `reportsdb`. The utility will do a test upgrade run on this copy to convert it to the reports database.
 - Reports database (For installations using Enterprise Edition of MSSQL 2014)

Creating Database Users for ECE Databases

- ▶ Create database users for the restored ECE 11.6(1) databases. This information will be required while configuring the DBUpdate Utility (page 50). Scripts and instructions to create the users are available in the upgrade package in the `Utilities\DBUpdate\windows-mssql\LoginCreationScripts` folder.

Configuring Database URLs

To be able to run the utility, you have to configure database URLs for the restored databases. This section describes the format of these URLs. You will require these URLs while configuring the utilities (page 50).

Configure URLs for the following databases:

- ▶ Master database
- ▶ Active database
- ▶ Reports database (For installations using Enterprise Edition of MSSQL)

To configure the database URLs:

The database URLs are configured in the format:

```
jdbc:sqlserver://Server_Name:Port_Number;instanceName=Instance_Name;integratedSecurity=true_or_false;databaseName=Database_Name
```

Where:

- ▶ *Server_Name*: Name of the server where you have restored the database. If you are using **Always On** clustering and have restored the databases on a node of the cluster, provide the Listener name instead of the server name.
- ▶ *Port_Number*: The port number for the MSSQL server. The default port is 1433.
- ▶ *Instance_Name*: The name of the MSSQL instance used to restore the database. The default instance is `MSSQLSERVER`.
- ▶ `integratedSecurity`: Set the value to `true` if you are using Windows Authentication to connect to the database. Set the value to `false` if you are using the SQL Server Authentication mode.
- ▶ *Database_Name*: Name of the restored database.

For example, the database URL will look like:

```
jdbc:sqlserver://productDB:1433;instanceName=mssqlserver;integratedSecurity=true;databaseName=ActiveDB
```

Running DBUpdate Utility

To run the DBUpdate utility:

1. Create a temporary folder, *Temporary_Folder*.
2. From the upgrade files, copy the `Utilities\DBUpdate\windows-mssql` folder into *Temporary_Folder*.
3. Open the `Temporary_Folder\Utilities\DBUpdate\windows-mssql\standalone.properties` file in a text editor and set the following properties:
 - `ACTIVE_DATABASE_URL`: Provide the active database URL. For the format of the URL, see [“Configuring Database URLs” on page 49](#).
 - `MASTER_DATABASE_URL`: Provide the master database URL. For the format of the URL, see [“Configuring Database URLs” on page 49](#).
 - `REPORTS_DATABASE_URL`: Provide the reports database URL. For the format of the URL, see [“Configuring Database URLs” on page 49](#).
 - `ACT_DB_FG1_NAME`: Provide the name of the first file group to be created for the active database
 - `ACT_DB_FG1_DATAFILE_PATH`: Provide the location for the first filegroup.
 - `ACT_DB_FG2_NAME`: Provide the location for the second filegroup.
 - `ACT_DB_FG2_DATAFILE_PATH`: Provide the location for the second filegroup.
 - `ACT_DB_FG3_NAME`: Provide the location for the third filegroup.
 - `ACT_DB_FG3_DATAFILE_PATH`: Provide the location for the third filegroup.
 - `ACT_DB_FG4_NAME`: Provide the location for the fourth filegroup.
 - `ACT_DB_FG4_DATAFILE_PATH`: Provide the location for the fourth filegroup.
 - `REPORTS_DB_FG1_NAME`: Provide the name of the first file group to be created for the Reports database.
 - `REPORTS_DB_FG1_DATAFILE_PATH`: Provide the location for the first filegroup.
 - `REPORTS_DB_FG2_NAME`: Provide the name of the second file group to be created for the reports database.
 - `REPORTS_DB_FG2_DATAFILE_PATH`: Provide the location for the second filegroup.
 - `REPORTS_DB_FG3_NAME`: Provide the name of the third file group to be created for the reports database.
 - `REPORTS_DB_FG3_DATAFILE_PATH`: Provide the location for the third filegroup.
 - `REPORTS_DB_FG4_NAME`: Provide the name of the fourth file group to be created for the reports database.
 - `REPORTS_DB_FG4_DATAFILE_PATH`: Provide the location for the fourth filegroup.

Set the following four properties only if you are using SQL Server Authentication to connect to the active database.

- `ACTIVE_ADMIN_USER`: User name of the database administrator for MSSQL Server. Any database user with the following roles can be used: `dbcreator`, `securityadmin`, `sysadmin`.
- `ACTIVE_ADMIN_PASS`: Password of the database administrator.
- `ACTIVE_USER`: Database username of the active database ([page 49](#)).
- `ACTIVE_PASS`: Database password of the active database.

Set the following four properties only if you are using SQL Server Authentication to connect to the master database.

- MASTER_ADMIN_USER: User name of the database administrator for MSSQL Server. Any database administrator with the following roles can be used: `dbcreator`, `securityadmin`, `sysadmin`.
- MASTER_ADMIN_PASS: Password of the database administrator.
- MASTER_USER: Database username of the master database (page 49).
- MASTER_PASS: Database password of the master database.

Set the following two properties only if you are using SQL Server Authentication to connect to the reports database.

- REPORTS_ADMIN_USER: User name of the database administrator for MSSQL Server. Any database administrator with the following roles can be used: `dbcreator`, `securityadmin`, `sysadmin`.
- REPORTS_ADMIN_PASS: Password of the database administrator.
- REPORTS_USER: Database username of the reports database (page 49).
- REPORTS_PASS: Database password of the reports database.

4. Open the `Temporary_Folder\Utilities\DBUpdate\windows-mssql\DBUpdate.bat` file in a text editor and set the following properties:
 - Locate the `SET JAVA_HOME` property and set the value to the location where JDK 1.8 Update 65 or higher is installed on your machine (page 48). For example, `C:/Java/jdk1.8.0_65`.
5. Double-click `DBUpdate.bat` to launch the utility. You will be notified when the upgrade finishes.
 - If the utility fails to execute because of any configuration issues, error messages are logged in the `upgrade_db.log`. Fix the properties configured in the `standalone.properties` and `DBUpdate.bat` files and try to run the utility again.
 - If the upgrade fails, all the log messages are logged in the log file `upgrade_db.log`. Please contact Cisco TAC if the upgrade fails.

The log files are created at the same location from where you launch the utility.