



Common Ground Upgrade

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Preupgrade Overview

The preupgrade process ensures that your systems have the necessary software to support your contact center. These tasks prepare the way for a successful upgrade of your Cisco contact center components to the new release.



Note Common Ground Upgrade is not supported if the platform upgrade from Windows Server 2016 and SQL Server 2017 to Windows Server 2019 and SQL Server 2019 is planned as part of upgrade process. Technology Refresh Upgrade is the supported upgrade option for platform upgrade.

Upgrade Tools

During the preupgrade process, use the following tools as required:

- **User Migration Tool**—A standalone Windows command-line application that is used for all upgrades that involve a change of domain. The tool exports all existing user accounts (config/setup and supervisors) from the source domain to a **.bin** file. The file is used in the target domain during the upgrade.

You can download the User Migration Tool from [Cisco.com](https://www.cisco.com) by clicking **ICM User Migration Tool Software**.

- **Regutil Tool**—Used in Technology Refresh upgrades, exports the Cisco Systems, Inc. registry from the source machine during the preupgrade process. The output of the tool is required on the destination machine when running the Unified CCE Installer during the upgrade process.

You can download the Regutil Tool from [Cisco.com](https://www.cisco.com) by clicking **Contact Center Enterprise Tools**.

- **Domain Manager**—Used to provision Active Directory.

The Domain Manager Tool is delivered with the main installer.

- **Upgrade.exe**—Used to upgrade the schema of the logger, AW DB, HDS DB, and BA databases to a version compatible with the current Unified CCE Software version. It is typically used when the installer fails to automatically upgrade the schema of the AW database. The other databases are typically upgraded using EDMT and not the installer.

Perform the following steps to use the tool:

```
<ICM install directory>:\icm\bin>upgrade.exe -s <Server Name> -d
<Database name> -dt <Database Type> -i <Instance Name>
```

Where

<Database Type> - can be either " **logger**" or " **hds**" or " **aw**" or " **ba**", depending on the database that requires the schema to be upgraded.

- **Enhanced Database Migration Tool (EDMT)**—A wizard application that is used for all upgrades to migrate the HDS, Logger, and BA databases during the upgrade process.

You can download the EDMT from [Cisco.com](https://www.cisco.com) by clicking **Cisco Enhanced Data Migration Tool Software Releases**.

The prerequisites for running EDMT are:

- EDMT also requires Microsoft® ODBC Driver 17 for SQL Server® and Visual C++ Redistributable for Visual Studio 2015 (or higher). The latest version of these packages can be downloaded from the Microsoft website. However, a copy of the same is also available in the **Prerequisites** folder of EDMT.

The EDMT displays status messages during the migration process, including warnings and errors. Warnings are displayed for informational purposes only and do not stop the migration. Errors stop the migration process and leave the database in a corrupt state. If an error occurs, restore the database from your backup, fix the error, and run the tool again.



Note

- If you are configuring SQL services to run as Virtual account (NT SERVICE) or Network Service account (NT AUTHORITY\NETWORK SERVICE), you must run EDMT as an administrator.
 - The installer, not the EDMT, upgrades the AW database for the Administration & Data Server.
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Common Ground Preupgrade Task Flow

Perform the following Common Ground preupgrade tasks in any order.



Note

The Common Ground upgrade assumes the host server runs on Windows Server.

Task	See
Review target Release Notes	<i>Release Notes for Cisco Unified Contact Center Enterprise Solutions</i> at https://www.cisco.com/c/en/us/support/customer-collaboration/unified-contact-center-enterprise/products-release-notes-list.html
ESXi Supportability	ESXi Supportability
Virtual Machine Snapshot for Unified CCE Component Virtual Machines	Virtual Machine Snapshot for Unified CCE Component Virtual Machines , on page 4
Download the Enhanced Database Migration Tool	Upgrade Overview
Notify all stakeholders, including: <ul style="list-style-type: none"> • Cisco Technical Assistance Center (TAC) • Local Cisco Representatives • Customer Operations and Emergency Management Center • Third-party vendors as applicable 	

Common Ground Preupgrade Tasks

Disable Configuration Changes

Procedure

Step 1 To disable configuration changes during the upgrade, set the following registry key to 1 on the Side A Call Router: **HKEY_LOCAL_MACHINE\SOFTWARE\Cisco Systems, Inc.\ICM\<instance name>\Router A\Router\CurrentVersion\Configuration\Global\DBMaintenance**.

Note Live data services connect to the new Central controller machines only after you upgrade both sides of Central controller, and enable the configuration changes.

Step 2 Confirm that configuration changes are disabled by attempting to save a configuration change. When you try to save the change, a message is displayed confirming the change failure.

Virtual Machine Snapshot for Unified CCE Component Virtual Machines

Uninstallation of Unified CCE 12.5(1) installed on server machines using the ICM-CCE-Installer ISO is not supported.

To revert to the previous versions that existed before you did a Common Ground in-place upgrade of installations to Unified CCE 12.5(1), perform one of the following tasks:

1. Take a Virtual Machine Snapshot in the powered off state before the upgrade.
2. Clone the Virtual Machine before the upgrade.

Delete these snapshots or clones after the upgrades are successfully completed. Such deletions will prevent performance issues.

Uninstallation and re-installation of other packages like Administration Client and Internet Script Editor (ISE) will continue to be supported.



Note Uninstallation and re-installation are supported for Unified CCE 12.6(x).

VM Hardware Version Upgrade

Perform the following procedure to upgrade the hardware version of the virtual machine (VM).



Note The hardware compatibility of the VM must be set to **ESXi 6.7 and later**.

Before you begin

- Power off the VM.
- Upgrade to the ESXi version compatible with this release. For more information, see https://www.cisco.com/c/dam/en/us/td/docs/voice_ip_comm/uc_system/virtualization/virtualization-unified-contact-center-enterprise.html.

Procedure

Step 1 Launch the vSphere Web Client using the browser.

Step 2 Log in to the vCenter Server.

Step 3 Right-click on the VM, and select the menu option **Compatibility > Upgrade VM Compatibility**.

Note The **Upgrade VM Compatibility** option appears only if the hardware version on the VM is not the latest version supported.

Step 4 In the **Compatible with** field, select .
This sets the hardware version of the VM to 13.

Step 5 Click **Ok**.

Step 6 Power on the VM.

Note If the system prompts, upgrade the VMware tools. For more information, see [Install VMware Tools](#).

Increase the Provisioned Disk Size for Unified Intelligence Center VMs (Standalone and Coresident)

Procedure

Step 1 Power off the virtual machine.

Step 2 Click **Edit Settings**.

Step 3 Click the **Hardware** tab, and select the hard disk to modify.

Step 4 In the **Disk Provisioning** pane, increase the provisioned size from 146 GB to 200 GB.

Step 5 Click **OK** to save your changes and close the dialog box.

Step 6 Start the virtual machine.

Common Ground Upgrade Task Flow

For the Unified CCE core components, there is a general flow for redundant systems to ensure that Cisco Contact Center operation continues during the entire upgrade process. Sides A and B are brought down, upgraded, tested, and brought back up in a sequence that ensures continuous operation of the Cisco Contact Center.



Note For coresident configurations, upgrade CUIC/LiveData/IdS server along with the Unified CCE Central Controller upgrade.

For Common Ground upgrades, perform the following upgrade tasks:

Task	See
Cloud Connection Components	
Install Cloud Connect	<p>Install Cloud Connect</p> <p>If you have Cloud Connect in your environment, refer the Update VM Properties section in Upgrade Overview for Cloud connect upgrade prerequisite to increase the hard disk and RAM before you upgrade the component.</p> <p>Upgrade both the publisher and subscriber. For Cloud Connect upgrade instructions, see the Upgrade Cloud Connect section.</p> <p>If you don't have Cloud Connect in your environment, and you use any Hybrid feature or Orchestration, fresh install Cloud Connect. For fresh install instructions, see the Install Cloud Connect section.</p>
Queuing and self-service components	
Upgrade Cisco Unified Customer Voice Portal. ¹	<i>Installation and Upgrade Guide for Cisco Unified Customer Voice Portal</i> at https://www.cisco.com/c/en/us/support/customer-collaboration/unified-customer-voice-portal/products-installation-guides-list.html
Infrastructure and media resource components	
Cisco Virtualized Voice Browser	<i>Installation and Upgrade Guide for Cisco Virtualized Voice Browser</i> at https://www.cisco.com/c/en/us/support/customer-collaboration/virtualized-voice-browser/products-installation-guides-list.html
Upgrade voice and data gateways.	Upgrade Voice and Data Gateways
Identity Service/SSO	
Identity Service (IdS)/Single Sign-On(SSO)	<p>SSO is an optional feature and exchanges authentication and authorization details between an identity provider (IdP) and an identity service (IdS).</p> <p>For more information, see Upgrade Flowcharts</p> <p>https://www.cisco.com/c/en/us/support/customer-collaboration/unified-intelligence-center/products-installation-guides-list.html</p>

Task	See
Upgrade Enterprise Chat and Email (ECE)	For ECE installation or upgrade instructions, see the <i>Enterprise Chat and Email Installation and Configuration Guide for Unified Contact Center Enterprise</i> at https://www.cisco.com/c/en/us/support/customer-collaboration/cisco-enterprise-chat-email/products-installation-guides-list.html
Upgrade Finesse	For more information, see <i>Cisco Finesse Installation and Upgrade Guide Cisco Finesse Installation and Upgrade Guide</i> at https://www.cisco.com/c/en/us/support/customer-collaboration/finesse/products-installation-guides-list.html .
Reporting server	
Upgrade Cisco Unified Intelligence Center server.	<i>Installation and Upgrade Guide for Cisco Unified Intelligence Center</i> at https://www.cisco.com/c/en/us/support/customer-collaboration/unified-intelligence-center/products-installation-guides-list.html
Unified CCE Central Controller and Administration & Data Server components	
Migrate Side A Logger database, and upgrade the Logger.	Migrate Unified CCE Logger Database and Upgrade Logger, on page 9
Upgrade Side A Call Router.	Upgrade Unified CCE Call Router, on page 10
Upgrade the Administration & Data Server connected to Side A.	Migrate HDS Database and Upgrade Unified CCE Administration & Data Server, on page 11
Bring Side A Logger and Call Router into service, bring down Side B Logger and Call Router.	Bring Upgraded Side A into Service
Migrate Side B Logger database and upgrade the Logger.	Migrate Unified CCE Logger Database and Upgrade Logger, on page 9
Upgrade Side B Call Router.	Upgrade Unified CCE Call Router, on page 10
Bring Side B Call Router into service and verify operation. Bring Side B Logger into service and verify operation.	Verify Operation of Upgraded Side B Call Router and Logger
Upgrade the Administration & Data Server connected to Side B.	Migrate HDS Database and Upgrade Unified CCE Administration & Data Server, on page 11
Upgrade Cisco Unified Intelligence Center reporting templates.	Import Reports section in <i>Cisco Unified Intelligence Center User Guide</i> at https://www.cisco.com/c/en/us/support/customer-collaboration/unified-intelligence-center/products-user-guide-list.html

Task	See
Upgrade Unified Contact Center Management Portal(Unified CCMP).	<i>Installation and Configuration Guide for Cisco Unified Contact Center Management Portal</i> at https://www.cisco.com/c/en/us/support/customer-collaboration/unified-contact-center-management-portal/products-installation-guides-list.html
Upgrade Administration Client.	Upgrade Unified CCE Administration Client
Database Performance Enhancement.	Database Performance Enhancement
Certificates for Unified CCE Web Administration	Certificates for Unified Contact Center Enterprise Web Administration
Unified CCE Peripheral Gateways and associated components	
Upgrade PGs.	Upgrade Peripheral Gateways, on page 13
Upgrade Outbound Option Dialer.	Upgrade Outbound Option Dialer, on page 13
Upgrade Customer Collaboration Platform	<i>Cisco Customer Collaboration Platform User Guide</i> at http://www.cisco.com/c/en/us/support/customer-collaboration/socialminer/products-installation-guides-list.html .
Upgrade CTI OS server.	<i>Cisco Agent Desktop Installation Guide</i> at https://www.cisco.com/c/en/us/support/customer-collaboration/computer-telephony-integration-option/products-installation-guides-list.html
Desktop client components	
CTI OS Client desktop applications.	<i>Cisco Agent Desktop Installation Guide</i> at https://www.cisco.com/c/en/us/support/customer-collaboration/agent-desktop/products-installation-guides-list.html Note The CTI Toolkit Desktop is only supported for System PG and other TDM PG deployments like Avaya PG.
Call processing components	
Upgrade Cisco Unified Communications Manager.	<i>Upgrade and Migration Guide for Cisco Unified Communications Manager and IM and Presence Service</i> at http://www.cisco.com/c/en/us/support/unified-communications/unified-communications-manager-callmanager/products-installation-guides-list.html
Upgrade (uninstall and reinstall) the JTAPI client on the Cisco Unified Communications Manager PG.	Upgrade Cisco JTAPI Client on PG

¹ If you are using IP IVR for self-service and queuing, see [Getting Started with Cisco Unified IP IVR](#).

Common Ground Upgrade Tasks

The following section provides instructions about upgrading the virtual environment and the Unified CCE components. For instructions about upgrading non-Unified CCE components in a Unified CCE solution, for example Finesse and CUIC, see the links to component-specific documents in the [Common Ground Upgrade Task Flow, on page 6](#).

Migrate Unified CCE Logger Database and Upgrade Logger

To upgrade the Logger, you do the following tasks:

1. Migrate the Logger database.
2. If you use Outbound Option High Availability, do the following:
 - Migrate the Outbound Option database.
 - For the enhancements in Outbound Option High Availability to work effectively, Outbound Option High Availability must be disabled before the logger upgrade and then enabled after the upgrade. For more information, see [Disable Outbound Options High Availability \(If Applicable\)](#).
3. Install the new software.

Procedure

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- Step 1** Using Unified CCE Service Control, stop all Unified CCE services on the server and change to Manual Start.
- Step 2** (Optional) If Outbound Option High Availability is deployed, disable Outbound Options High Availability. For details, see [Disable Outbound Options High Availability \(If Applicable\)](#).
- Step 3** Download the EDMT tool from [Cisco.com](#), and ensure pre-requisites for the same have been installed on the Logger system, prior to launching EDMT. These include the ODBC Driver 17 for SQL Server, and Visual C++ Redistributable for Visual Studio 2015.
- For more information about EDMT, see [Preupgrade Overview, on page 1](#).
- Step 4** Launch the EDMT and click **Next**.
- Step 5** Select **Common Ground**, and click **Next**.
- Step 6** On the warning message, click **Yes** if you have taken a backup of your database, and no services are currently running.
- Note** If you have not taken the backup of your database, click **No** to exit the installer.
- Step 7** In the Database Connection section, highlight the database that you want to upgrade, and then click **Next**.
- Step 8** Click **Start Migration**. A warning message is displayed asking for confirmation of the data migration.
- Step 9** Click **Yes** to confirm.
- Step 10** Click **OK** to acknowledge the message. After completion of the data migration, a warning message is displayed asking you to select a valid deployment type.
- Note** This message notification is applicable only when EDMT finds the `DeploymentType` as **0(Zero)** in the **Congestion_Control** table during data migration.

- Step 11** Exit the EDMT.
- Step 12** (Optional) If Outbound Option High Availability is deployed, repeat steps 1 through 12 to migrate the BA database.
- Step 13** To upgrade the Logger, launch the ICM-CCE-Installer, and click **Next**.
- Step 14** To apply the Unified ICM 12.6 Minor Release, click **Browse** and navigate to the Minor Release software. Click **Next**. You can also proceed with the installation of Unified ICM 12.5(1) without selecting the Unified ICM 12.6(1) installer in this step. After installing Unified ICM 12.5(1), double-click the Unified ICM 12.6(1) installer, and proceed from step 20.
- Step 15** (Optional) Select **SQL Server Security Hardening** and click **Next**.
- Step 16** Click **OK** on any informational messages that display.
- Step 17** Click **Install**.
- Step 18** Reboot the server when the upgrade completes.
- Step 19** Log in to your system using domain credentials with administrative privileges.
- Step 20** Wait for the Unified CCE 12.6(1) installation wizard to launch. Click **Next** to proceed.
- Step 21** Select the radio button to accept the license agreement and click **Next**.
- Step 22** Click **Install** to begin the installation.
- Step 23** Select the radio button to restart the system and click **Finish**.
- Note** You can upgrade from Unified ICM 12.5(1) to Unified ICM 12.6(1) by double-clicking the Unified ICM 12.6(1) installer, and proceeding from Step 20.
- Step 24** (Optional) If you use Outbound Option High Availability, enable Outbound Option High Availability in the Web Setup tool. For details, see the *Configure the Logger for Outbound Option* topic in the *Outbound Option Guide for Unified Contact Center Enterprise* at <https://www.cisco.com/c/en/us/support/customer-collaboration/unified-contact-center-enterprise/products-user-guide-list.html>.

Upgrade Unified CCE Call Router

Procedure

- Step 1** Launch the ICM-CCE-Installer and click **Next**.
- Step 2** To apply the Unified ICM 12.6 Minor Release, click **Browse** and navigate to the Minor Release software. Click **Next**. You can also proceed with the installation of Unified ICM 12.5(1) without selecting the Unified ICM 12.6(1) installer in this step. After installing Unified ICM 12.5(1), double-click the Unified ICM 12.6(1) installer, and proceed from step 7.
- Step 3** Click **OK** on any informational messages that display.
- Step 4** Click **Install**.
- Step 5** Reboot the server when the upgrade completes.
- Step 6** Log in to your system using domain credentials with administrative privileges.
- Step 7** Wait for the Unified CCE 12.6(1) installation wizard to launch. Click **Next** to proceed.
- Step 8** Select the radio button to accept the license agreement and click **Next**.
- Step 9** Click **Install** to begin the installation.

Step 10 Select the radio button to restart the system and click **Finish**.

Note You can upgrade from Unified ICM 12.5(1) to Unified ICM 12.6(1) by double-clicking the Unified ICM 12.6(1) installer, and proceeding from Step 7.

Migrate HDS Database and Upgrade Unified CCE Administration & Data Server

The deployment of the Administration & Database Server determines which tools to use for an upgrade:

- For an AW-only deployment, the EDMT is not required; the ICM-CCE-Installer completes the upgrade.
- For any deployment that involves an HDS database, use the EDMT to migrate the HDS database before running the installer.

Procedure

Step 1 Using Unified CCE Service Control, stop all Unified CCE services on the Server and change to Manual Start.

Step 2 For HDS-related deployments. Download the EDMT tool from [Cisco.com](https://www.cisco.com), and ensure pre-requisites for the same have been installed on the Administration & Database Server system, before launching EDMT. These include the ODBC Driver 17 for SQL Server, and Visual C++ Redistributable for Visual Studio 2015.

For more information about EDMT, see [Preupgrade Overview, on page 1](#).

Step 3 Launch the EDMT and click **Next**. Select **Common Ground** and click **Next**. Review or change the information that is displayed as required and click **Start Migration**. Click **Yes** on the warning message that displays. Exit the EDMT.

Note This message notification is applicable only when EDMT finds the `DeploymentTypeas 0 (Zero)` in the **Congestion_Control** table during data migration.

Step 4 Launch the ICM-CCE-Installer and click **Next**.

Step 5 To apply the Unified ICM 12.6 Minor Release, click **Browse** and navigate to the Minor Release software. Click **Next**. You can also proceed with the installation of Unified ICM 12.5(1) without selecting the Unified ICM 12.6(1) installer in this step. After installing Unified ICM 12.5(1), double-click the Unified ICM 12.6(1) installer, and proceed from step 11.

Step 6 (Optional) Select **SQL Server Security Hardening** and click **Next**.

Step 7 Click **OK** on any informational messages that display.

Step 8 Click **Install**.

Step 9 Reboot the server when the upgrade completes.

Note The time required to complete a data migration varies in a direct relationship to the database size (the larger the database size, the longer it takes to migrate) and the server hardware performance level.

For more information about configuring permissions in your local machine, see [Configure Permissions in the Local Machine](#).

Step 10 Log in to your system using domain credentials with administrative privileges.

Step 11 Wait for the Unified CCE 12.6(1) installation wizard to launch. Click **Next** to proceed.

Step 12 Select the radio button to accept the license agreement and click **Next**.

Step 13 Click **Install** to begin the installation.

Step 14 Select the radio button to restart the system and click **Finish**.

Note You can upgrade from Unified ICM version 12.5(1) to Unified ICM 12.6(1) by double-clicking the Unified ICM 12.6(1) installer, and proceeding from Step 11.

Upgrade Unified CCE Administration Client

Procedure

Step 1 Launch the 12.5 AdminClientInstaller and click **Next**.

Step 2 To apply any 12.6(1) Minor Release, click **Browse** and navigate to the Minor Release software. Click **Next**. You can also proceed with the installation of Administration Client 12.5(1) without selecting the Unified ICM 12.6(1) installer in this step. After installing Unified ICM 12.5(1), double-click the Unified ICM 12.6(1) installer, and proceed from step 6.

Step 3 Click **OK** on any informational messages that display.

Step 4 Click **Install**.

Step 5 Reboot the server when the upgrade completes.

For more information about configuring permissions in your local machine, see [Configure Permissions in the Local Machine](#).

Step 6 Log in to your system using domain credentials with administrative privileges. The Unified CCE Release 12.6(1) installation wizard to launches. Click **Next** to proceed.

Step 7 Select the radio button to accept the license agreement and click **Next**.

Step 8 Click **Install** to begin the installation.

Step 9 Select the radio button to restart the system and click **Finish**.

Enable Configuration Changes

Procedure

Step 1 To enable configuration changes during the upgrade, set the following registry key to 0 on the Side A Call Router: **HKEY_LOCAL_MACHINE\SOFTWARE\Cisco Systems, Inc.\ICM\<instance name>\Router A\Router\CurrentVersion\Configuration\Global\DBMaintenance**.

Step 2 To confirm that configuration changes are enabled, save a configuration change.

Save your changes.

Upgrade Peripheral Gateways

You can upgrade different Peripheral Gateways (PGs) within a contact center within different maintenance windows. However, upgrade all PGs that reside on the same virtual machine and their redundant PGs (Side A and then the corresponding Side B; or vice-versa) during the same maintenance window.

The following dependencies occur when upgrading the Unified Communications Manager PG:

- If your contact center uses Outbound Option, upgrade any Outbound Option Dialers that are associated with Unified Communications Manager PGs at the same time.
- When you upgrade the Unified Communications Manager application, upgrade the JTAPI client that is associated with the Unified Communications Manager PG at the same time.

When the CTI server that is associated with the PG gets upgraded, the CTI server connection mode is set to the Mixed mode by default. The Mixed mode enables both Secured and Non-Secured mode of connection. For the Secured mode of connection, a new port is selected based on the port selection logic. For more information on Port Utilization, see the *Port Utilization Guide for Cisco Unified Contact Center Solutions*. If the port that is selected by default conflicts with the existing ports, then you need to either release the default port or change the Secured mode port to an available port after the upgrade.

Procedure

- Step 1** Launch the ICM-CCE-Installer and click **Next**.
 - Step 2** To apply the Unified ICM 12.6 Minor Release, click **Browse** and navigate to the Minor Release software. Click **Next**. You can also proceed with the installation of Unified ICM 12.5(1) without selecting the Unified ICM 12.6(1) installer in this step. After installing Unified ICM 12.5(1), double-click the Unified ICM 12.6(1) installer, and proceed with the installation.
 - Step 3** Click **OK** on any informational messages that display.
 - Step 4** Click **Install**.
 - Step 5** Reboot the server when the upgrade completes.
-

Upgrade Outbound Option Dialer

During the upgrade, information about which contacts were called and which you need call is lost for in-process outbound campaigns. Plan the timing of the upgrade accordingly.

Procedure

- Step 1** Launch the ICM-CCE-Installer and click **Next**.
- Step 2** To apply the Unified ICM 12.6 Minor Release, click **Browse** and navigate to the Minor Release software. Click **Next**. You can also proceed with the installation of Unified ICM 12.5(1) without selecting the Unified

ICM 12.6(1) installer in this step. After installing Unified ICM 12.5(1), double-click the Unified ICM 12.6(1) installer, and proceed with the installation.

Step 3 Click **OK** on any informational messages that display.

Step 4 Click **Install**.

Step 5 Reboot the server when the upgrade completes.

Step 6 Use Unified CCE Service Control to set all Unified CCE services to Automatic Start.
