Technology Refresh Upgrade Process

You can perform Technology Refresh Upgrade as a single-stage upgrade or a multistage upgrade.

- Single-stage upgrade: set up all virtual machines (VMs) required for a Packaged CCE solution (rebuild) on a different hardware.

- Multistage upgrade: set up or upgrade the required set of components on a different hardware.

The tasks involved in the Technology Refresh upgrade are:

- Deploy components as per your requirements.

- Migrate CCE databases using the Enhanced Database Migration Tool (EDMT) and upgrade the CCE components. You can upgrade the other solution components also.

- Update the IP address or hostname of components.

- Synchronize components and complete the upgrade on the destination server.

Upgrade Path

The supported upgrade path is 12.0(1) to 12.5(1).

> **Note** To enable the Technology Refresh upgrade support in 12.5(1), install ICM_12.5(1)_ES12 on the 12.5(1) target system.

Prerequisites and Important Considerations

- You can upgrade to Cisco Packaged CCE 2000, 4000, and 12000 Agent deployments as per the supported upgrade path.

- Components must be upgraded as per the supported versions detailed in the *Contact Center Enterprise Compatibility Matrix* at https://www.cisco.com/c/en/us/support/customer-collaboration/unified-contact-center-enterprise/products-device-support-tables-list.html.

- Before upgrading the Unified CCE Central Controller, do the following:

    - In the Unified CCE Router of the source server, Disable Configuration Changes, on page 7.

    - Disable Outbound Option High Availability (if applicable) before the logger upgrade. For details, see Disable Outbound Options High Availability (If Applicable)

- In the Unified CCE Rogger, AW-HDS-DDS, and Peripheral Gateways of the source server, Export the Server Registry, on page 8.

- Before you upgrade the Live Data server, check the **Check and upgrade VMware Tools before each power on** box in the VM's **Options** > **Edit Settings**.

    For more information on VMware Tools upgrade, see the VMware documentation.

- In Technology Refresh upgrade, both source and destination servers must be on the same domain.

- This release contains an updated database schema. During the upgrade process, perform a schema upgrade using the Enhanced Database Migration Tool (EDMT).

    For the upgrade utilities, see https://software.cisco.com/download/type.html?mdfid=268439622

- If you are moving the existing VMs, take the required backups of components on both Side A and Side B before you begin your upgrade. You can take a snapshot of the virtual machines on which you are performing an upgrade.

- If you already have a Customer Collaboration Platform added in the remote site, it is recommended to delete the Customer Collaboration Platform from the remote site and add it as an external machine in the Main site, before upgrade. For more information on how to delete and add an external machine, see the *Cisco Packaged Contact Center Enterprise Administration and Configuration Guide* at https://www.cisco.com/c/en/us/support/customer-collaboration/packaged-contact-center-enterprise/products-maintenance-guides-list.html.

- Make sure that you are running the minimum supported version of ESXi. For information about supported ESXi versions, see the *Virtualization for Cisco Packaged CCE* at https://www.cisco.com/c/en/us/td/docs/voice_ip_comm/uc_system/virtualization/pcce_virt_index.html.

NTP Configuration Requirements

Packaged CCE relies on time synchronization. Properly configuring NTP is critical for reliability of reporting data and cross-component communication. It's important to implement the requirements outlined in NTP and Time Synchronization.

Upgrade Tools

During the upgrade process, use the following tools:

- ICM-CCE-Installer—The main Unified CCE Installer. It copies all files into relevant folders, creates the base registries, and installs needed third-party software such as JRE, Apache Tomcat, and Microsoft .NET Framework.

  You cannot run the installer remotely. Mount the installer ISO file only to a local machine.

- Subskills Group Evaluator (SSGE) Utility—Detects the existence of subskill groups, which cause upgrade failure in upgrades to Release 10.0. Subskill groups are no longer supported as of Release 9.0, making this tool a requirement for upgrades from Release 8.x to Release 10.0.

  The SSGE Utility is delivered with the Enhanced Database Migration Tool (EDMT), which you can download from Cisco.com.

- Common Ground Upgrade Tool (CGUpgradeBackup.exe)—Used to back up and restore all Unified CCE databases (logger db, AW db, HDS db, and BA db as applicable) when you upgrade from a previous version of SQL Server to SQL Server 2008 R2. Used in Common Ground upgrades from Version 8.5(2) and later to Version 10.0 only.

  You can download the Common Ground Upgrade Tool from Cisco.com.

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

  You can download the EDMT from Cisco.com by clicking **Cisco Enhanced Data Migration Tool Software Releases**.

  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. On the other hand, errors stop the migration process and leave the database in a corrupt state. If an error occurs, fix the error, and run the tool again.

- Regutil Tool—Used in Technology Refresh upgrades, the tool 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 by clicking **Contact Center Enterprise Tools**.

Packaged CCE 2000 Agents Deployment

Packaged CCE solution upgrade for 2000 Agent deployments can be done in single-stage on both main site and remote sites (if applicable). In a single-stage upgrade, all components are upgraded and taken to completion. For more information, see .

Single-stage Upgrade

For single-stage upgrades, perform the tasks detailed in the following table.

Task
Upgrade Tasks
Technology Refresh Upgrade Task Flow, on page 4
Postupgrade Tasks
See *Post Technology Refresh Configurations* section in the *Cisco Packaged Contact Center Enterprise Administration and Configuration Guide* at https://www.cisco.com/c/en/us/support/customer-collaboration/ packaged-contact-center-enterprise/products-maintenance-guides-list.html

Technology Refresh Upgrade Task Flow

For single-stage upgrades, perform the tasks detailed in the following table. You can either:

- set up all virtual machines required for a Packaged CCE solution (rebuild) on a different hardware or

- upgrade the existing components which have been moved (from the source server) to the destination server on a different hardware

Note

- On the destination server, follow the VM Layouts for 2000 Agent deployments as specified in the *Solution Design Guide for Cisco Packaged Contact Center Enterprise* at https://www.cisco.com/c/en/us/support/ customer-collaboration/packaged-contact-center-enterprise/products-technical-reference-list.html.

- The VM validations of hardware are turned off during Central Controller upgrade and are activated when cutover is initiated.

- For co-resident configurations, upgrade CUIC-LD-IDS along with the Unified CCE Central Controller upgrade.

Component Group	Components	Notes
Unified CCE Controller	Unified CCE Rogger and AW-HDS-DDS	The CCE components upgrade requires the following maintenance windows on the source server: • First maintenance window to shut down services on Side A of source components. • Second maintenance window in the middle of the upgrade to cutover from Side B to Side A. You must bring down Side B before you bring up Side A.
	Unified CCE Rogger Side A	Migrate the Logger database and upgrade Side A Rogger Migrate the Logger Database and Upgrade the Rogger, on page 8
	Unified CCE AW-HDS-DDS Side A	Migrate AW-HDS-DDS and then upgrade Side A Unified CCE Administration & Data Server Migrate the AW and HDS Database and Upgrade the Unified CCE Administration & Data Server, on page 10
	Unified CCE Rogger Side B	Migrate the Logger database and upgrade Side B Rogger Migrate the Logger Database and Upgrade the Rogger, on page 8
	Unified CCE AW-HDS-DDS Side B	Migrate AW-HDS-DDS and then upgrade Side B Unified CCE Administration & Data Server Migrate the AW and HDS Database and Upgrade the Unified CCE Administration & Data Server, on page 10 After you upgrade AW, import the certificate of all solution components (if applicable) to all AWs.
	External HDS	Migrate the AW and HDS Database & Upgrade the External HDS, on page 12
	Unified CCE Router	Enable Configuration Changes, on page 14
	Database Performance Enhancement	Database Performance Enhancement
Queuing and self-service	Cisco Unified Customer Voice Portal (CVP) (Reporting Server, Call Server/VXMLServer, Unified Call Studio)	For CVP installation or upgrade instructions, see the *Installation and Upgrade Guide for Cisco Unified Customer Voice Portal* at https://www.cisco.com/c/en/us/support/customer-collaboration/unified-customer-voice-portal/products-installation-guides-list.html After upgrading the Unified CVP servers, add the CVP machines to the domain. For more information, see Add Machine to Domain.

Component Group	Components	Notes
Gateways	Cisco Virtualized Voice Browser (VVB)	For more information, see the *Installation and Upgrade Guide for Cisco Virtualized Voice Browser* at https://www.cisco.com/c/en/us/support/customer-collaboration/virtualized-voice-browser/products-installation-guides-list.html.
	• IOS Gateways (If used for ingress access only) • IOS VXML Gateways	Upgrade Cisco Voice Gateway IOS Version
Agent and supervisor desktops and Reporting	ECE	For ECE installation or upgrade instructions, see the *Enterprise Chat and Email Installation and Configuration Guide for Packaged Contact Center Enterprise* at https://www.cisco.com/c/en/us/support/customer-collaboration/cisco-enterprise-chat-email/products-installation-guides-list.html
	Cisco Finesse	For Finesse installation or upgrade instructions, see the *Cisco Finesse Installation and Upgrade Guide* at https://www.cisco.com/c/en/us/support/customer-collaboration/finesse/products-installation-guides-list.html.
	CUIC-LD-IDS CUIC (Reporting Templates)	Install or upgrade Cisco Unified Intelligence Center with Live Data and Identity Service (IdS). For CUIC upgrade instructions, see *Installation and Upgrade Guide for Cisco Unified Intelligence Center* Guide at https://www.cisco.com/c/en/us/support/customer-collaboration/unified-intelligence-center/products-installation-guides-list.html. After you upgrade Cisco Unified Intelligence Center (CUIC), you must: • Enable CORS on the CUIC server, and add `cors allowed_origin` with the Finesse hostname. For more information, see *Installation and Upgrade Guide for Cisco Unified Intelligence Center* Guide at https://www.cisco.com/c/en/us/support/customer-collaboration/unified-intelligence-center/products-installation-guides-list.html. • After you upgrade Live Data (LD), you must enable CORS on the LD box for Finesse and CUIC. • Import LD and Finesse certificates to CUIC.

Component Group	Components	Notes
Unified CCE Peripheral Gateways and associated components	Peripheral Gateways	Upgrade Peripheral Gateways, on page 14 You can have many PGs located on different virtual machines. Upgrade both Side A and Side B PGs.
	Outbound Option Dialer	Upgrade the Outbound Option Dialer: Upgrade Outbound Option Dialer, on page 16 To enable Outbound Option High Availability in the Web Setup tool, see *Configure the Logger for Outbound Option* section 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.
	Customer Collaboration Platform	For Customer Collaboration Platform installation or upgrade instructions, see the *Cisco SocialMiner Installation and Upgrade Guide* at http://www.cisco.com/c/en/us/support/ customer-collaboration/socialminer/ products-installation-guides-list.html.
Call Processing Components	Cisco Unified Communications Manager (Unified Communications Manager)	For installation or upgrade instructions, see the *Installation Guide for Cisco Unified Communications Manager and the IM and Presence Service* or *Upgrade and Migration Guide for Cisco Unified Communications Manager and the IM and Presence Service* at https://www.cisco.com/c/en/us/support/ unified-communications/ unified-communications-manager-callmanager/ products-installation-guides-list.html
Cloud Connection Components	Cloud Connect	For Cloud Connect installation instructions, see the *Cisco Unified Contact Center Enterprise Installation and Upgrade Guide* at https://www.cisco.com/c/en/us/support/customer-collaboration/ unified-contact-center-enterprise/ products-installation-guides-list.html

Disable Configuration Changes

Procedure

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**.

Caution   Make sure that you do not perform inventory[1] and configuration[2] changes on the source server before the cutover is complete. Else, you will have to do these updates manually in the inventory on the destination server.

Export the Server Registry

Export the Cisco registry on each source machine that is involved in a Technology Refresh upgrade.

During the upgrade process, you are prompted for the path to the exported registry file location. Perform the following procedure and note the location of the resulting file for later in the upgrade process.

Each time you run the RegUtil with the export option, if a RegUtil_<hostname>.dat file exists, the utility renames that file to RegUtil_<hostname>.dat.bak<number>.

Procedure

Step 1   Open a command prompt and change the directory to the location where the RegUtil.exe resides.

Step 2   Run the RegUtil tool to export the Cisco Systems, Inc. registry using the following command: **RegUtil -export [target directory]** , for example, `C:\icm\bin>RegUtil -export C:\RegUtil`

The target directory must have write access. Therefore, you cannot select the install media on a DVD. The target directory is optional. If it is not specified, the tool outputs the result of the Registry export to the current directory. The output filename is of the format RegUtil_<hostname>.dat, where hostname is the name of the source machine.

Migrate the Logger Database and Upgrade the Rogger

Before you begin

- EDMT requires Microsoft® ODBC Driver 13 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.

- 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.

- Create a shared folder in any desired location. Ensure that:

    - In the Properties window > Sharing tab > Advanced Sharing, the **Share this folder** check box is checked.

    - In the Properties window > Security tab, the permission level is set as Full control for everyone .

---

[1] Addition, modification, or deletion of machines.
[2] Cloud Connect integration, Default Media Server settings, Courtesy Callback, SIP Server Group, Route Pattern, and Locations.

Procedure

Step 1   Use **Unified CCE Service Control** to stop all Unified CCE services on the Router and Logger, on the source server.

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), on page 15.

Step 3   Download the EDMT tool from Cisco.com, and ensure pre-requisites for the same have been installed on the target/destination system, prior to launching EDMT. These include the ODBC Driver 13 for SQL Server, and Visual C++ Redistributable for Visual Studio 2015.

Step 4   Run the **EDMT** from the server that will host the destination Logger and click **Next**.

Step 5   Select **Technology Refresh** and click **Next**.

Step 6   Under **Source Database Connection**, complete the following fields:

- From the **Authentication** drop-down list, select **SQL Server Authentication** or **Windows Authentication** (default).

- In the **HostName/IP Address** field, enter the IP address or hostname of the source server with the Logger database.

- In the **SQL Server Port Number** field, enter the TCP or IP port in which the source SQL Server runs. This field defaults to1433, the standard SQL Server port.

- Enter the values in **Domain Name**, **Username**, and **Password** fields.

  Note
  - For SQL Server Authentication, enter the SQL Server credentials and the domain name (if applicable) for the selected database.

  - For Windows Authentication, the Domain Name, Username, and Password fields are disabled. Windows Single Sign-On (SSO) uses your Windows authentication cached credentials to connect to the selected database.

- Click **Refresh Database List** to refresh the list of available Unified ICM databases on the server.

- In the **Database Name**, select the Logger database.

Step 7   Under **Destination Database Connection**, complete the following fields:

- In the **Authentication** drop-down list, use **Windows Authentication** (default).

- In the **SQL Server Port Number** field, enter the TCP or IP port in which the destination SQL Server runs. This field defaults to1433, the standard SQL Server port.

  Note   The rest of the fields are disabled (read-only) and the default values are displayed.

- Click **Next**.

Step 8   Under **Backup Connection**, complete the following fields:

- In the **HostName/IP Address** field, enter the backup server's IP address or hostname.

- In the **Windows Share Name** field, enter the name of the shared folder where the backup database file is.

       • In the **Windows Share Domain** field, enter the domain name (if applicable).

       • In the **Windows Share Username** and **Windows Share Password** fields, enter the Windows credentials that has read or write access to the specified Windows share.

Step 9	In the **Destination Restore Location**, browse to select the folder where the system creates the database data files (.mdf) and translation log files (.ldf). The destination is prepopulated with the default location for database file storage for the running SQL Server.
Step 10	Click **Next**.
Step 11	Click **Start Migration**.
Step 12	Click **Yes** on the warning pop-up to start the data migration.
Step 13	Upon completion of the migration, click **Exit** to close the tool.
Step 14	(Optional) If Outbound Option High Availability is deployed, repeat steps 1 through 13 to migrate the BA database.
Step 15	Launch the ICM-CCE-Installer and click **Next**.
Step 16	Select **Technology Refresh** and click **Next**.
Step 17	Click **Browse** and specify the path for the RegUtil file you exported from the source machine during the preupgrade process.
Step 18	(Optional) To apply any Minor/Maintenance Releases, click **Browse** and navigate to the Minor/Maintenance Release software. Click **Next**.
Step 19	(Optional) Select **SQL Server 2008 Security Hardening** and click **Next**.
Step 20	Click **OK** on any informational messages that display.
Step 21	Click **Install**.
Step 22	Reboot the system after the upgrade completes.

Migrate the AW and HDS Database and Upgrade the Unified CCE Administration & Data Server

To upgrade the Administration & Data Server, migrate the AW database and then the HDS database (if applicable). After successful migration, install the new software and import the Cisco registry information.

Before you begin

• EDMT requires Microsoft® ODBC Driver 13 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.

• 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.

• Create a shared folder in any desired location. Ensure that:

       • In the Properties window > Sharing tab > Advanced Sharing, the **Share this folder** checkbox is checked.

       • In the Properties window > Security tab, the permission level is set as Full control for everyone .

Procedure

Step 1 Use **Unified CCE Service Control** to stop all Unified CCE services on the source server.

Step 2 Download the EDMT tool from Cisco.com, and ensure pre-requisites for the same have been installed on the target/destination system, prior to launching EDMT. These include the ODBC Driver 13 for SQL Server, and Visual C++ Redistributable for Visual Studio 2015.

Step 3 Launch the EDMT tool on the destination server that hosts the **Administration and Data Server with AW and HDS database** and click **Next**.

Step 4 Select **Technology Refresh** and click **Next**.

Step 5 Under **Source Database Connection**, complete the following fields:

- From the **Authentication** drop-down list, select **SQL Server Authentication** or **Windows Authentication** (default).

- In the **HostName/IP Address** field, enter the IP address or hostname of the source server with the database.

- In the **SQL Server Port Number** field, enter the TCP or IP port in which the source SQL Server runs. This field defaults to 1433, the standard SQL Server port.

- Enter the values in **Domain Name**, **Username**, and **Password** fields.

  Note
  - For SQL Server Authentication, enter the SQL Server credentials and the domain name (if applicable) for the selected database.

  - For Windows Authentication, the Domain Name, Username, and Password fields are disabled. Windows Single Sign-On (SSO) uses your Windows authentication cached credentials to connect to the selected database.

- Click **Refresh Database List** to refresh the list of available Unified ICM databases on the server.

- In the **Database Name**, select the AW database.

Step 6 Under **Destination Database Connection**, complete the following fields:

- In the **Authentication** drop-down list, use **Windows Authentication** (default).

- In the **SQL Server Port Number** field, enter the TCP or IP port in which the destination SQL Server runs. This field defaults to 1433, the standard SQL Server port.

  Note The rest of the fields are disabled (read-only) and the default values are displayed.

- Click **Next**.

Step 7 Under **Backup Connection**, complete the following fields:

- In the **HostName/IP Address** field, enter the backup server's IP address or hostname.

- In the **Windows Share Name** field, enter the name of the shared folder where the backup database file is.

- In the **Windows Share Domain** field, enter the domain name (if applicable).

       • In the **Windows Share Username** and **Windows Share Password** fields, enter the Windows credentials that has read or write access to the specified Windows share.

Step 8	In the **Destination Restore Location**, browse to select the folder where the system creates the database data files (.mdf) and translation log files (.ldf). The destination is prepopulated with the default location for database file storage for the running SQL Server.
Step 9	Click **Next**.
Step 10	Click **Start Migration**.
Step 11	Click **Yes** on the warning pop-up to start the data migration.
Step 12	Upon completion of the migration, click **Exit** to close the tool.
Step 13	To migrate the HDS database, repeat steps 1 to 12. Under Source Database Connection, in **Database Name**, select the HDS database.
Step 14	Launch the ICM-CCE-Installer and click **Next**.
Step 15	Select **Technology Refresh** and click **Next**.
Step 16	Click **Browse** and specify the path for the RegUtil file you exported from the source machine during the preupgrade process.
Step 17	(Optional) To apply any Minor/Maintenance Releases, click **Browse** and navigate to the Minor/Maintenance Release software. Click **Next**.
Step 18	(Optional) Select **SQL Server Security Hardening** and click **Next**.
Step 19	Click **OK** on any informational messages that display.
Step 20	Click **Install**.
Step 21	Reboot the server when the upgrade completes.

Migrate the AW and HDS Database & Upgrade the External HDS

To upgrade the external HDS, migrate the AW database, and then the HDS database. After successful migration, install the new software and import the Cisco registry information.

Before you begin

• EDMT requires Microsoft® ODBC Driver 13 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.

• 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.

• Create a shared folder in any desired location. Ensure that:

    • In the Properties window > Sharing tab > Advanced Sharing, the **Share this folder** checkbox is checked.

    • In the Properties window > Security tab, the permission level is set as Full control for everyone .

Procedure

Step 1   Use **Unified CCE Service Control** to stop all Unified CCE services on the source server.

Step 2   Download the EDMT tool from Cisco.com, and ensure pre-requisites for the same have been installed on the target/destination system, prior to launching EDMT. These include the ODBC Driver 13 for SQL Server, and Visual C++ Redistributable for Visual Studio 2015.

Step 3   Launch the EDMT tool on the destination server that hosts the **Administration and Data Server with AW and HDS database** and click **Next**.

Step 4   Select **Technology Refresh** and click **Next**.

Step 5   Under **Source Database Connection**, complete the following fields:

- From the **Authentication** drop-down list, select **SQL Server Authentication** or **Windows Authentication** (default).

- In the **HostName/IP Address** field, enter the IP address or hostname of the source server with the database.

- In the **SQL Server Port Number** field, enter the TCP or IP port in which the source SQL Server runs. This field defaults to1433, the standard SQL Server port.

- Enter the values in **Domain Name**, **Username**, and **Password** fields.

  Note   - For SQL Server Authentication, enter the SQL Server credentials and the domain name (if applicable) for the selected database.

          - For Windows Authentication, the Domain Name, Username, and Password fields are disabled. Windows Single Sign-On (SSO) uses your Windows authentication cached credentials to connect to the selected database.

- Click **Refresh Database List** to refresh the list of available Unified ICM databases on the server.

- In the **Database Name**, select the AW database.

Step 6   Under **Destination Database Connection**, complete the following fields:

- In the **Authentication** drop-down list, use **Windows Authentication** (default).

- In the **SQL Server Port Number** field, enter the TCP or IP port in which the destination SQL Server runs. This field defaults to1433, the standard SQL Server port.

  Note   The rest of the fields are disabled (read-only) and the default values are displayed.

- Click **Next**.

Step 7   Under **Backup Connection**, complete the following fields:

- In the **HostName/IP Address** field, enter the backup server's IP address or hostname.

- In the **Windows Share Name** field, enter the name of the shared folder where the backup database file is.

- In the **Windows Share Domain** field, enter the domain name (if applicable).

• In the **Windows Share Username** and **Windows Share Password** fields, enter the Windows credentials that has read or write access to the specified Windows share.

Step 8 In the **Destination Restore Location**, browse to select the folder where the system creates the database data files (.mdf) and translation log files (.ldf). The destination is prepopulated with the default location for database file storage for the running SQL Server.

Step 9 Click **Next**.

Step 10 Click **Start Migration**.

Step 11 Click **Yes** on the warning pop-up to start the data migration.

Step 12 Upon completion of the migration, click **Exit** to close the tool.

Step 13 To migrate the HDS database, repeat steps 1 to 12.

Under Source Database Connection, in **Database Name**, select the HDS database.

Step 14 Launch the ICM-CCE-Installer and click **Next**.

Step 15 Select **Technology Refresh** and click **Next**.

Step 16 Click **Browse** and specify the path for the RegUtil file you exported from the source machine during the preupgrade process.

Step 17 (Optional) To apply any Minor/Maintenance Releases, click **Browse** and navigate to the Minor/Maintenance Release software. Click **Next**.

Step 18 (Optional) Select **SQL Server Security Hardening** and click **Next**.

Step 19 Click **OK** on any informational messages that display.

Step 20 Click **Install**.

Step 21 Reboot the server when the upgrade completes.

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 (PG) within a contact center at different times within different maintenance windows. However, upgrade all PGs that reside on the same virtual machine and redundant PGs (Side A and corresponding Side B) during the same maintenance window.

The following dependencies occur when upgrading the PG:

- If your contact center uses the CTI OS component, upgrade the CTI OS server at the same time as the associated Avaya PG[3].

- If your contact center uses Outbound Option, upgrade any Outbound Option Dialers associated with Unified Communications Manager PGs at the same time.

- If the Unified Communications Manager application is upgraded, upgrade the JTAPI client associated with the Unified Communications Manager PG at the same time.

To upgrade the Peripheral Gateways, install the new software and import the Cisco registry information.

Procedure

Step 1	Use Unified CCE Service Control to stop all Unified CCE and CTI OS (if applicable when upgrading the Avaya PG) services on the PG server. Change the services to Manual Start.
Step 2	Launch the ICM-CCE-Installer and click **Next**.
Step 3	Select **Technology Refresh** and click **Next**.
Step 4	Click **Browse** and specify the path for the RegUtil file you exported from the source machine during the preupgrade process. The registry information for the Avaya PG also contains information for the CTI OS server (if applicable).
Step 5	(Optional) To apply any Minor/Maintenance Releases, click **Browse** and navigate to the Minor/Maintenance Release software. Click **Next**.
Step 6	Click **OK** on any informational messages that display.
Step 7	Click **Install**.
Step 8	Reboot the system after the upgrade completes.
Step 9	If Avaya PG is configured, after reboot, open the Peripheral Gateway Setup tool, and edit the Avaya PG as required.
Step 10	If CTI OS component is configured, after reboot, open the CTI OS Server setup tool, and edit the CTI OS component as required.

Disable Outbound Options High Availability (If Applicable)

Before you begin

If Outbound Options High Availability is enabled, you must disable it on source machines before you perform the upgrade.

Before proceeding with the following steps, ensure that Outbound Options feature is in maintenance mode. There must not be any customer records getting imported to Outbound database. The outbound campaigns must not be active and outbound callflow must not be in progress.

Perform the following steps on Side A:

---

[3] Applicable only in 4000 and 12000 Agent deployments.

Procedure

Step 1	Launch **Websetup**. Navigate to **Component Management** > **Loggers**.
Step 2	Edit the **Logger** and navigate to **Additional Options**. Uncheck **Enable High Availability** under **Outbound Option**. Enter the SQL Server Admin credentials and click **Next**.
Step 3	Enable **Stop and then start(cycle) the Logger Service for this instance (if it is running)** checkbox . Click **Next** to complete the setup.
Step 4	Repeat similar steps (steps 1, 2, and 3) for side B.

What to do next

You can enable Outbound Options High Availability after the upgrade is successful.

Upgrade Outbound Option Dialer

To upgrade the Outbound Option Dialer, install the new software and import the Cisco registry information.

Before you begin

You must have previously migrated the Outbound Option database during the Logger upgrade.

Procedure

Step 1	Launch the ICM-CCE-Installer and click **Next**.
Step 2	Select **Technology Refresh** and click **Next**.
Step 3	Click **Browse** and specify the path for the RegUtil file you exported from the source machine during the preupgrade process.
Step 4	(Optional) To apply any Maintenance Releases, click **Browse** and navigate to the Maintenance Release software. Click **Next**.
Step 5	Click **OK** on any informational messages that display.
Step 6	Click **Install**.
Step 7	Reboot the system after the upgrade completes.
Step 8	Open the Peripheral Gateway Setup tool from the Installer dialog box or desktop shortcut and edit the Dialer as required.

Packaged CCE 4000 Agents Deployment

Packaged CCE solution upgrade for 4000 Agent deployments can be done in single-stage or in multiple stages (multistage) on both main site and remote sites (if applicable).

In a single-stage upgrade, all components are upgraded and taken to completion. For more information, see

In a multistage upgrade, components are grouped into several stages for upgrading. You must follow the upgrade sequence and the minimum component groupings that must occur together within each stage. At each stage in the upgrade, the upgraded components must interoperate with components that have not yet been upgraded to ensure the overall operation of the contact center. Therefore, it is important to verify this interoperability during the planning stages of the upgrade. For more information, see Multistage Upgrade, on page 21.

Single-stage Upgrade

For single-stage upgrades, perform the tasks detailed in the following table.

Task
Upgrade Tasks
Technology Refresh Upgrade Task Flow, on page 17
Postupgrade Tasks
See *Post Technology Refresh Configurations* section in the *Cisco Packaged Contact Center Enterprise Administration and Configuration Guide* at https://www.cisco.com/c/en/us/support/customer-collaboration/packaged-contact-center-enterprise/products-maintenance-guides-list.html

Technology Refresh Upgrade Task Flow

For single-stage upgrades, perform the tasks detailed in the following table. You can either:

- set up all virtual machines required for a Packaged CCE solution (rebuild) on a different hardware or

- upgrade the existing components which have been moved (from the source server) to the destination server on a different hardware

Component Group	Components	Notes
Unified CCE Central Controller	Unified CCE Rogger and AW-HDS-DDS	The CCE components upgrade requires the following maintenance windows on the source server: • First maintenance window to shut down services on Side A of source components. • Second maintenance window in the middle of the upgrade to cut over from Side B to Side A. You must bring down Side B before you bring up Side A.
	Unified CCE Rogger Side A	Migrate the Logger database and upgrade Side A Rogger Migrate the Logger Database and Upgrade the Rogger, on page 8
	Unified CCE AW-HDS-DDS Side A	Migrate AW-HDS-DDS and then upgrade Side A Unified CCE Administration & Data Server Migrate the AW and HDS Database and Upgrade the Unified CCE Administration & Data Server, on page 10
	Unified CCE Rogger Side B	Migrate the Logger database and upgrade Side B Rogger Migrate the Logger Database and Upgrade the Rogger, on page 8
	Unified CCE AW-HDS-DDS Side B	Migrate AW-HDS-DDS and then upgrade Side B Unified CCE Administration & Data Server Migrate the AW and HDS Database and Upgrade the Unified CCE Administration & Data Server, on page 10 After you upgrade AW, import the certificate of all solution components (if applicable) to all AWs.
	External HDS	Migrate the AW and HDS Database & Upgrade the External HDS, on page 12
	Unified CCE Router	Enable Configuration Changes, on page 14
	Database Performance Enhancement	Database Performance Enhancement
Identity Service (IdS)/SSO	IdS Server	SSO is an optional feature. It exchanges authentication and authorization details between an identity provider (IdP) and an identity service (IdS). For IdS installation or upgrade instructions, see *Installation and Upgrade Guide for Cisco Unified Intelligence Center* at https://www.cisco.com/c/en/us/support/customer-collaboration/unified-intelligence-center/products-installation-guides-list.html

Component Group	Components	Notes
Agent and supervisor desktops	ECE	For ECE installation or upgrade instructions, see the *Enterprise Chat and Email Installation and Configuration Guide for Packaged Contact Center Enterprise* at https://www.cisco.com/c/en/us/support/customer-collaboration/ cisco-enterprise-chat-email/products-installation-guides-list.html
	Cisco Finesse	For Finesse installation or upgrade instructions, see the *Cisco Finesse Installation and Upgrade Guide* at https://www.cisco.com/c/en/us/support/ customer-collaboration/finesse/products-installation-guides-list.html.
Queuing and self-service	Cisco Unified Customer Voice Portal (CVP) (Reporting Server, Call Server/VXMLServer, Unified Call Studio)	For CVP installation or upgrade instructions, see the *Installation and Upgrade Guide for Cisco Unified Customer Voice Portal* at https://www.cisco.com/c/en/us/support/customer-collaboration/ unified-customer-voice-portal/products-installation-guides-list.html
Gateways	Cisco Virtualized Voice Browser	For VVB installation or upgrade instructions, see the *Installation and Upgrade Guide for Cisco Virtualized Voice Browser* at https://www.cisco.com/c/en/us/support/customer-collaboration/ virtualized-voice-browser/products-installation-guides-list.html.
	• IOS Gateways (If used for ingress access only.) • IOS VXML Gateways	Upgrade Cisco Voice Gateway IOS Version
Reporting Management	Cisco Unified Intelligence Center (CUIC) Reporting Server	For CUIC installation or upgrade instructions, see *Installation and Upgrade Guide for Cisco Unified Intelligence Center* Guide at https://www.cisco.com/ c/en/us/support/customer-collaboration/unified-intelligence-center/ products-installation-guides-list.html. After you upgrade Cisco Unified Intelligence Center (CUIC), you must: • Enable CORS on the CUIC server, and add **cors allowed_origin** with the Finesse hostname. • Import LD and Finesse certificates to CUIC.
Reporting	CUIC (Reporting Templates)	For CUIC installation or upgrade instructions, see *Installation and Upgrade Guide for Cisco Unified Intelligence Center* Guide at https://www.cisco.com/ c/en/us/support/customer-collaboration/unified-intelligence-center/ products-installation-guides-list.html.
Live Data	Standalone Live Data	To install or upgrade Live Data, see the *Installation and Upgrade Guide for Cisco Unified Intelligence Center Guide* at https://www.cisco.com/c/en/ us/support/customer-collaboration/unified-intelligence-center/ products-installation-guides-list.html. After you upgrade Live Data (LD), you must enable CORS on the LD server, and add **cors allowed_origin** with Finesse hostname.

Component Group	Components	Notes
Collocated Peripheral Gateways and associated components	Peripheral Gateways[4]	Upgrade Peripheral Gateways, on page 14 You can have many PGs located on different virtual machines. Upgrade both Side A and Side B PGs.
	Outbound Option Dialer	Upgrade Outbound Option Dialer, on page 16 To enable Outbound Option High Availability in the Web Setup tool, see *Configure the Logger for Outbound Option* section 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.
	• CTI Server • CTI OS Server	CTI OS Server is applicable only if Avaya PG is used. For installation instructions, see the *CTI OS System Manager Guide for Cisco Unified ICM* at https://www.cisco.com/c/en/us/support/customer-collaboration/unified-contact-center-enterprise/products-installation-guides-list.html.
Peripheral Gateways and associated components not collocated	Customer Collaboration Platform	For Customer Collaboration Platform installation or upgrade instructions, see the *Cisco SocialMiner Installation and Upgrade Guide* at http://www.cisco.com/c/en/us/support/customer-collaboration/socialminer/products-installation-guides-list.html.
Agent and Supervisor Desktops	CTI OS Desktops	For CTI OS Desktop client installation instructions, see the *CTI OS System Manager Guide for Cisco Unified ICM* at https://www.cisco.com/c/en/us/support/customer-collaboration/unified-contact-center-enterprise/products-installation-guides-list.html.
Call Processing Components	Cisco Unified Communications Manager (Unified Communications Manager)	For installation or upgrade instructions, see the *Installation Guide for Cisco Unified Communications Manager and the IM and Presence Service* or *Upgrade and Migration Guide for Cisco Unified Communications Manager and the IM and Presence Service* at https://www.cisco.com/c/en/us/support/unified-communications/unified-communications-manager-callmanager/products-installation-guides-list.html
	JTAPI client on Agent (Cisco Unified Communications Manager) PG	Upgrade Cisco JTAPI Client on the Unified Communications Manager PG
Cloud Connection Components	Cloud Connect	For Cloud Connect installation instructions, see the *Cisco Unified Contact Center Enterprise Installation and Upgrade Guide* at https://www.cisco.com/c/en/us/support/customer-collaboration/unified-contact-center-enterprise/products-installation-guides-list.html

[4] After upgrading the Central Controller to 12.5(1), if you intend to keep the PGs in 12.0(1), you must install ICM_12.0(1)_ES49 on the PG machines for an inventory update.

Multistage Upgrade

For multistage upgrades, perform the tasks detailed in the following table.

Task
Upgrade Tasks
Technology Refresh Upgrade Task Flow, on page 21
Postupgrade Tasks
Follow the post upgrade tasks after each stage of upgrade.   For more information, see *Post Technology Refresh Configurations* section in the *Cisco Packaged Contact Center Enterprise Administration and Configuration Guide* at https://www.cisco.com/c/en/us/support/customer-collaboration/packaged-contact-center-enterprise/products-maintenance-guides-list.html

Technology Refresh Upgrade Task Flow

For multistage upgrades, perform the upgrade tasks detailed in the following table. The upgrade tasks are as per the Upgrade Flowcharts for 4000 Agent Deployments. You can either:

- set up the required virtual machines (rebuild) on a different hardware or

- upgrade the existing components which have been moved (from the source server) to the destination server on a different hardware

Note Maintenance window is applicable for each component until the inventory update and configurations are complete.

Stage	Component Group	Components	Notes
0	Identity Service (IdS)/SSO	IdS Server	SSO is an optional feature. It exchanges authentication and authorization details between an identity provider (IdP) and an identity service (IdS). For IdS installation or upgrade instructions, see *Installation and Upgrade Guide for Cisco Unified Intelligence Center* at https://www.cisco.com/c/en/us/support/customer-collaboration/unified-intelligence-center/products-installation-guides-list.html
1	Agent and supervisor desktops	ECE	For ECE installation or upgrade instructions, see the *Enterprise Chat and Email Installation and Configuration Guide for Packaged Contact Center Enterprise* at https://www.cisco.com/c/en/us/support/customer-collaboration/cisco-enterprise-chat-email/products-installation-guides-list.html
		Cisco Finesse	For Finesse installation or upgrade instructions, see the *Cisco Finesse Installation and Upgrade Guide* at https://www.cisco.com/c/en/us/support/customer-collaboration/finesse/products-installation-guides-list.html.

Stage	Component Group	Components	Notes
2	Queuing and self-service	Cisco Unified Customer Voice Portal (CVP) (Reporting Server, Call Server/VXMLServer, Unified Call Studio)	For CVP installation or upgrade instructions, see the *Installation and Upgrade Guide for Cisco Unified Customer Voice Portal* at https://www.cisco.com/c/en/us/support/customer-collaboration/unified-customer-voice-portal/products-installation-guides-list.html
3	Gateways	Cisco Virtualized Voice Browser	For VVB installation or upgrade instructions, see the *Installation and Upgrade Guide for Cisco Virtualized Voice Browser* at https://www.cisco.com/c/en/us/support/customer-collaboration/virtualized-voice-browser/products-installation-guides-list.html.
		• IOS Gateways (If used for ingress access only. If used for Outbound Option Dialer, see stage 6 in Upgrade Flowcharts for 4000 Agent Deployments.) • IOS VXML Gateways	Upgrade Cisco Voice Gateway IOS Version
4	Reporting Management	Cisco Unified Intelligence Center (CUIC) Reporting Server	For CUIC installation or upgrade instructions, see *Installation and Upgrade Guide for Cisco Unified Intelligence Center* Guide at https://www.cisco.com/c/en/us/support/customer-collaboration/unified-intelligence-center/products-installation-guides-list.html. After you upgrade Cisco Unified Intelligence Center (CUIC), you must: • Enable CORS on the CUIC server, and add `cors allowed_origin` with the Finesse hostname. • Import LD and Finesse certificates to CUIC.

Stage	Component Group	Components	Notes
5	Unified CCE Central Controller	Unified CCE Rogger and AW-HDS-DDS	The CCE components upgrade requires the following maintenance windows on the source server: • First maintenance window to shut down services on Side A of source components. • Second maintenance window in the middle of the upgrade to cut over from Side B to Side A. You must bring down Side B before you bring up Side A.
		Unified CCE Rogger Side A	Migrate the Logger database and upgrade Side A Rogger Migrate the Logger Database and Upgrade the Rogger, on page 8
		Unified CCE AW-HDS-DDS Side A	Migrate AW-HDS-DDS and then upgrade Side A Unified CCE Administration & Data Server Migrate the AW and HDS Database and Upgrade the Unified CCE Administration & Data Server, on page 10
		Unified CCE Rogger Side B	Migrate the Logger database and upgrade Side B Rogger Migrate the Logger Database and Upgrade the Rogger, on page 8
		Unified CCE AW-HDS-DDS Side B	Migrate AW-HDS-DDS and then upgrade Side B Unified CCE Administration & Data Server Migrate the AW and HDS Database and Upgrade the Unified CCE Administration & Data Server, on page 10 After you upgrade AW, import the certificate of all solution components (if applicable) to all AWs.
		External HDS	Migrate the AW and HDS Database & Upgrade the External HDS, on page 12
		Unified CCE Router	Enable Configuration Changes, on page 14
		CUIC (Reporting Templates)	For CUIC installation or upgrade instructions, see *Installation and Upgrade Guide for Cisco Unified Intelligence Center* Guide at https://www.cisco.com/c/en/us/support/customer-collaboration/unified-intelligence-center/products-installation-guides-list.html.
		Standalone Live Data	To install or upgrade Live Data, see the *Installation and Upgrade Guide for Cisco Unified Intelligence Center Guide* at https://www.cisco.com/c/en/us/support/customer-collaboration/unified-intelligence-center/products-installation-guides-list.html. After you upgrade Live Data (LD), you must enable CORS on the LD server, and add `cors allowed_origin` with Finesse hostname.
		Database Performance Enhancement	Database Performance Enhancement

Stage	Component Group	Components	Notes
6	Collocated Peripheral Gateways and associated components	Peripheral Gateways[5]	Upgrade Peripheral Gateways, on page 14 You can have many PGs located on different virtual machines. Upgrade both Side A and Side B PGs.
		Outbound Option Dialer	Upgrade Outbound Option Dialer, on page 16 To enable Outbound Option High Availability in the Web Setup tool, see *Configure the Logger for Outbound Option* section 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.
		• CTI Server • CTI OS Server	CTI OS Server is applicable only if Avaya PG is used. For installation instructions, see the *CTI OS System Manager Guide for Cisco Unified ICM* at https://www.cisco.com/c/en/us/support/customer-collaboration/unified-contact-center-enterprise/products-installation-guides-list.html.
7	Peripheral Gateways and associated components not collocated	Customer Collaboration Platform	For Customer Collaboration Platform installation or upgrade instructions, see the *Cisco SocialMiner Installation and Upgrade Guide* at http://www.cisco.com/c/en/us/support/customer-collaboration/socialminer/products-installation-guides-list.html.
8	Agent and Supervisor Desktops	CTI OS Desktops	For CTI OS Desktop client installation instructions, see the *CTI OS System Manager Guide for Cisco Unified ICM* at https://www.cisco.com/c/en/us/support/customer-collaboration/unified-contact-center-enterprise/products-installation-guides-list.html.
9	Call Processing Components	Cisco Unified Communications Manager (Unified Communications Manager)	For installation or upgrade instructions, see the *Installation Guide for Cisco Unified Communications Manager and the IM and Presence Service* or *Upgrade and Migration Guide for Cisco Unified Communications Manager and the IM and Presence Service* at https://www.cisco.com/c/en/us/support/unified-communications/unified-communications-manager-callmanager/products-installation-guides-list.html
		JTAPI client on Agent (Cisco Unified Communications Manager) PG	Upgrade Cisco JTAPI Client on the Unified Communications Manager PG
10	Cloud Connection Components	Cloud Connect	For Cloud Connect installation instructions, see the *Cisco Unified Contact Center Enterprise Installation and Upgrade Guide* at https://www.cisco.com/c/en/us/support/customer-collaboration/unified-contact-center-enterprise/products-installation-guides-list.html

[5] After upgrading the Central Controller to 12.5(1), if you intend to keep the PGs in 12.0(1), you must install ICM_12.0(1)_ES49 on the PG machines for an inventory update.

Packaged CCE 12000 Agents Deployment

Packaged CCE solution upgrade for 12000 Agent deployments can be done in single-stage or in multiple stages (multistage) on both main site and remote sites (if applicable).

In a single-stage upgrade, all components are upgraded and taken to completion. For more information, see Single-stage Upgrade, on page 25.

In a multistage upgrade, components are grouped into several stages for upgrading. You must follow the upgrade sequence and the minimum component groupings that must occur together within each stage. At each stage in the upgrade, the upgraded components must interoperate with components that have not yet been upgraded to ensure the overall operation of the contact center. Therefore, it is important to verify this interoperability during the planning stages of the upgrade. For more information, see Multistage Upgrade, on page 29.

Single-stage Upgrade

For single-stage upgrades, perform the tasks detailed in the following table.

Task
Upgrade Tasks
Technology Refresh Upgrade Task Flow, on page 25
Postupgrade Tasks
See *Post Technology Refresh Configurations* section in the *Cisco Packaged Contact Center Enterprise Administration and Configuration Guide* at https://www.cisco.com/c/en/us/support/customer-collaboration/packaged-contact-center-enterprise/products-maintenance-guides-list.html

Technology Refresh Upgrade Task Flow

For single-stage upgrades, perform the tasks detailed in the following table. You can either:

- set up all virtual machines required for a Packaged CCE solution (rebuild) on a different hardware or
- upgrade the existing components which have been moved (from the source server) to the destination server on a different hardware

Component Group	Components	Notes
Unified CCE Central Controller	Unified CCE Router, Logger, and AW-HDS-DDS	The CCE components upgrade requires the following maintenance windows on the source server: • First maintenance window to shut down services on Side A of source components. • Second maintenance window in the middle of the upgrade to cutover from Side B to Side A. You must bring down Side B before you bring up Side A.
	Unified CCE Router Side A	Upgrade Side A Call Router Upgrade Unified CCE Call Router, on page 34
	Unified CCE Logger Side A	Migrate the Side A Logger database and upgrade the Logger Migrate the Logger Database and Upgrade the Logger, on page 34
	Unified CCE AW-HDS and HDS-DDS Side A	Migrate Side A AW-HDS, HDS-DDS, and upgrade Side A Unified CCE Administration & Data Server Migrate the AW and HDS Database and Upgrade the Unified CCE Administration & Data Server, on page 10
	Unified CCE Router Side B	Upgrade Side B Call Router Upgrade Unified CCE Call Router, on page 34
	Unified CCE Logger Side B	Migrate the Side B Logger database and upgrade the Logger Migrate the Logger Database and Upgrade the Logger, on page 34
	Unified CCE AW-HDS and HDS-DDS Side B	Migrate Side B AW-HDS, HDS-DDS, and upgrade Side B Unified CCE Administration & Data Server Migrate the AW and HDS Database and Upgrade the Unified CCE Administration & Data Server, on page 10 After you upgrade AW, import the certificate of all solution components (if applicable) to all AWs.
	External HDS	Migrate the AW and HDS Database & Upgrade the External HDS, on page 12
	Unified CCE Router	Enable Configuration Changes, on page 14
	Database Performance Enhancement	Database Performance Enhancement

Component Group	Components	Notes
Identity Service (IdS)/SSO	IdS Server	SSO is an optional feature. It exchanges authentication and authorization details between an identity provider (IdP) and an identity service (IdS). For IdS installation or upgrade instructions, see *Installation and Upgrade Guide for Cisco Unified Intelligence Center* at https://www.cisco.com/c/en/us/support/customer-collaboration/ unified-intelligence-center/products-installation-guides-list.html
Agent and supervisor desktops	ECE	For ECE installation or upgrade instructions, see the *Enterprise Chat and Email Installation and Configuration Guide for Packaged Contact Center Enterprise* at https://www.cisco.com/ c/en/us/support/customer-collaboration/ cisco-enterprise-chat-email/products-installation-guides-list.html
	Cisco Finesse	For Finesse installation or upgrade instructions, see the *Cisco Finesse Installation and Upgrade Guide* at https://www.cisco.com/ c/en/us/support/customer-collaboration/finesse/ products-installation-guides-list.html.
Queuing and self-service	Cisco Unified Customer Voice Portal (CVP) (Reporting Server, Call Server/VXMLServer, Unified Call Studio)	For CVP installation or upgrade instructions, see the *Installation and Upgrade Guide for Cisco Unified Customer Voice Portal* at https://www.cisco.com/c/en/us/support/customer-collaboration/ unified-customer-voice-portal/ products-installation-guides-list.html
Gateways	Cisco Virtualized Voice Browser	For VVB installation or upgrade instructions, see the *Installation and Upgrade Guide for Cisco Virtualized Voice Browser* at https://www.cisco.com/c/en/us/support/customer-collaboration/ virtualized-voice-browser/products-installation-guides-list.html.
	• IOS Gateways (If used for ingress access only.) • IOS VXML Gateways	Upgrade Cisco Voice Gateway IOS Version
Reporting Management	Cisco Unified Intelligence Center (CUIC) Reporting Server	For CUIC installation or upgrade instructions, see *Installation and Upgrade Guide for Cisco Unified Intelligence Center* Guide at https://www.cisco.com/c/en/us/support/customer-collaboration/ unified-intelligence-center/products-installation-guides-list.html. After you upgrade Cisco Unified Intelligence Center (CUIC), you must: • Enable CORS on the CUIC server, and add **cors allowed_origin** with the Finesse hostname. • Import LD and Finesse certificates to CUIC.

Component Group	Components	Notes
Reporting	CUIC (Reporting Templates)	For CUIC installation or upgrade instructions, see *Installation and Upgrade Guide for Cisco Unified Intelligence Center* Guide at https://www.cisco.com/c/en/us/support/customer-collaboration/unified-intelligence-center/products-installation-guides-list.html.
Live Data	Standalone Live Data	To install or upgrade Live Data, see the *Installation and Upgrade Guide for Cisco Unified Intelligence Center Guide* at https://www.cisco.com/c/en/us/support/customer-collaboration/unified-intelligence-center/products-installation-guides-list.html. After you upgrade Live Data (LD), you must enable CORS on the LD server, and add **cors allowed_origin** with Finesse hostname.
Collocated Peripheral Gateways and associated components	Peripheral Gateways[6]	Upgrade Peripheral Gateways, on page 14 You can have many PGs located on different virtual machines. Upgrade both Side A and Side B PGs.
	Outbound Option Dialer	Upgrade Outbound Option Dialer, on page 16 To enable Outbound Option High Availability in the Web Setup tool, see *Configure the Logger for Outbound Option* section 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.
	• CTI Server • CTI OS Server	CTI OS Server is applicable only if Avaya PG is used. For installation instructions, see the *CTI OS System Manager Guide for Cisco Unified ICM* at https://www.cisco.com/c/en/us/support/customer-collaboration/unified-contact-center-enterprise/products-installation-guides-list.html.
Peripheral Gateways and associated components not collocated	Customer Collaboration Platform	For Customer Collaboration Platform installation or upgrade instructions, see the *Cisco SocialMiner Installation and Upgrade Guide* at http://www.cisco.com/c/en/us/support/customer-collaboration/socialminer/products-installation-guides-list.html.
Agent and Supervisor Desktops	CTI OS Desktops	For CTI OS Desktop client installation instructions, see the *CTI OS System Manager Guide for Cisco Unified ICM* at https://www.cisco.com/c/en/us/support/customer-collaboration/unified-contact-center-enterprise/products-installation-guides-list.html .

Component Group	Components	Notes
Call Processing Components	Cisco Unified Communications Manager (Unified Communications Manager)	For installation instructions, see the *Installation Guide for Cisco Unified Communications Manager and the IM and Presence Service* or *Upgrade and Migration Guide for Cisco Unified Communications Manager and the IM and Presence Service* at https://www.cisco.com/c/en/us/support/unified-communications/unified-communications-manager-callmanager/products-installation-guides-list.html
	JTAPI client on Agent (Cisco Unified Communications Manager) PG	Upgrade Cisco JTAPI Client on the Unified Communications Manager PG
Cloud Connection Components	Cloud Connect	For Cloud Connect installation instructions, see the *Cisco Unified Contact Center Enterprise Installation and Upgrade Guide* at https://www.cisco.com/c/en/us/support/customer-collaboration/unified-contact-center-enterprise/products-installation-guides-list.html

[6] After upgrading the Central Controller to 12.5(1), if you intend to keep the PGs in 12.0(1), you must install ICM_12.0(1)_ES49 on the PG machines for an inventory update.

Multistage Upgrade

For multistage upgrades, perform the following tasks in the order that they are listed.

Task
Upgrade Tasks
Technology Refresh Upgrade Task Flow, on page 29
Postupgrade Tasks
Follow the post upgrade tasks after each stage of upgrade. For more information, see *Post Technology Refresh Configurations* section in the *Cisco Packaged Contact Center Enterprise Administration and Configuration Guide* at https://www.cisco.com/c/en/us/support/customer-collaboration/packaged-contact-center-enterprise/products-maintenance-guides-list.html

Technology Refresh Upgrade Task Flow

For multistage upgrades, perform the tasks as detailed in the following table. The upgrade tasks are as per the Upgrade Flowcharts for 12000 Agent Deployments. You can either:

- set up the required virtual machines (rebuild) on a different hardware or
- upgrade the existing components which have been moved (from the source server) to the destination server on a different hardware

✎

Note   Maintenance window is applicable for each component until the inventory update and configurations are complete.

Stage	Component Group	Components	Notes
0	Identity Service (IdS)/SSO	IdS Server	SSO is an optional feature. It exchanges authentication and authorization details between an identity provider (IdP) and an identity service (IdS).
			For IdS installation or upgrade instructions, see *Installation and Upgrade Guide for Cisco Unified Intelligence Center* at https://www.cisco.com/c/en/us/support/customer-collaboration/unified-intelligence-center/products-installation-guides-list.html
1	Agent and supervisor desktops	ECE	For ECE installation or upgrade instructions, see the *Enterprise Chat and Email Installation and Configuration Guide for Packaged Contact Center Enterprise* at https://www.cisco.com/c/en/us/support/customer-collaboration/cisco-enterprise-chat-email/products-installation-guides-list.html
		Cisco Finesse	For Finesse installation or upgrade instructions, see the *Cisco Finesse Installation and Upgrade Guide* at https://www.cisco.com/c/en/us/support/customer-collaboration/finesse/products-installation-guides-list.html.
2	Queuing and self-service	Cisco Unified Customer Voice Portal (CVP) (Reporting Server, Call Server/VXMLServer, Unified Call Studio)	For CVP installation or upgrade instructions, see the *Installation and Upgrade Guide for Cisco Unified Customer Voice Portal* at https://www.cisco.com/c/en/us/support/customer-collaboration/unified-customer-voice-portal/products-installation-guides-list.html
3	Gateways	Cisco Virtualized Voice Browser	For VVB installation or upgrade instructions, see the *Installation and Upgrade Guide for Cisco Virtualized Voice Browser* at https://www.cisco.com/c/en/us/support/customer-collaboration/virtualized-voice-browser/products-installation-guides-list.html.
		• IOS Gateways (If used for ingress access only. If used for Outbound Option Dialer, see stage 6 in Upgrade Flowcharts for 4000 Agent Deployments.) • IOS VXML Gateways	Upgrade Cisco Voice Gateway IOS Version

Stage	Component Group	Components	Notes
4	Reporting Management	Cisco Unified Intelligence Center (CUIC) Reporting Server	For CUIC installation or upgrade instructions, see *Installation and Upgrade Guide for Cisco Unified Intelligence Center* Guide at https://www.cisco.com/c/en/us/support/customer-collaboration/unified-intelligence-center/products-installation-guides-list.html. After you upgrade Cisco Unified Intelligence Center (CUIC), you must: • Enable CORS on the CUIC server, and add **cors allowed_origin** with the Finesse hostname. • Import LD and Finesse certificates to CUIC.

Stage	Component Group	Components	Notes
5	Unified CCE Central Controller	Unified CCE Router, Logger, and AW-HDS-DDS	CCE components upgraded on the source server requires the following maintenance windows: • First maintenance window to shut down services on Side A of source components. • Second maintenance window in the middle of the upgrade to cut over from Side B to Side A. You must bring down Side B before you bring up Side A.
		Unified CCE Router Side A	Upgrade Side A Call Router Upgrade Unified CCE Call Router, on page 34
		Unified CCE Logger Side A	Migrate the Side A Logger database and upgrade the Logger Migrate the Logger Database and Upgrade the Logger, on page 34
		Unified CCE AW-HDS and HDS-DDS Side A	Migrate Side A AW-HDS, HDS-DDS, and upgrade Side A Unified CCE Administration & Data Server Migrate the AW and HDS Database and Upgrade the Unified CCE Administration & Data Server, on page 10
		Unified CCE Router Side B	Upgrade Side B Call Router Upgrade Unified CCE Call Router, on page 34
		Unified CCE Logger Side B	Migrate the Side B Logger database and upgrade the Logger Migrate the Logger Database and Upgrade the Logger, on page 34
		Unified CCE AW-HDS and HDS-DDS Side B	Migrate Side B AW-HDS, HDS-DDS, and upgrade Side B Unified CCE Administration & Data Server Migrate the AW and HDS Database and Upgrade the Unified CCE Administration & Data Server, on page 10 After you upgrade AW, import the certificate of all solution components (if applicable) to all AWs.
		External HDS	Migrate the AW and HDS Database & Upgrade the External HDS, on page 12
		Unified CCE Router	Enable Configuration Changes, on page 14
		CUIC (Reporting Templates)	For CUIC installation or upgrade instructions, see *Installation and Upgrade Guide for Cisco Unified Intelligence Center* Guide at https://www.cisco.com/c/en/us/support/customer-collaboration/unified-intelligence-center/products-installation-guides-list.html.
		Standalone Live Data	

Stage	Component Group	Components	Notes
			To install or upgrade Live Data, see the *Installation and Upgrade Guide for Cisco Unified Intelligence Center Guide* at https://www.cisco.com/c/en/us/support/customer-collaboration/unified-intelligence-center/products-installation-guides-list.html.
			After you upgrade Live Data (LD), you must enable CORS on the LD server, and add **cors allowed_origin** with Finesse hostname.
		Database Performance Enhancement	Database Performance Enhancement
6	Collocated Peripheral Gateways and associated components	Peripheral Gateways[7]	Upgrade Peripheral Gateways, on page 14
			You can have many PGs located on different virtual machines. Upgrade both Side A and Side B PGs.
		Outbound Option Dialer	Upgrade Outbound Option Dialer, on page 16
			To enable Outbound Option High Availability in the Web Setup tool, see *Configure the Logger for Outbound Option* section 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.
		• CTI Server • CTI OS Server	CTI OS Server is applicable only if Avaya PG is used.
			For installation instructions, see the *CTI OS System Manager Guide for Cisco Unified ICM* at https://www.cisco.com/c/en/us/support/customer-collaboration/unified-contact-center-enterprise/products-installation-guides-list.html.
7	Peripheral Gateways and associated components not collocated	Customer Collaboration Platform	For Customer Collaboration Platform installation or upgrade instructions, see the *Cisco SocialMiner Installation and Upgrade Guide* at http://www.cisco.com/c/en/us/support/customer-collaboration/socialminer/products-installation-guides-list.html.
8	Agent and Supervisor Desktops	CTI OS Desktops	For CTI OS Desktop client installation instructions, see the *CTI OS System Manager Guide for Cisco Unified ICM* at https://www.cisco.com/c/en/us/support/customer-collaboration/unified-contact-center-enterprise/products-installation-guides-list.html .

Stage	Component Group	Components	Notes
9	Call Processing Components	Cisco Unified Communications Manager (Unified Communications Manager)	For installation or upgrade instructions, see the *Installation Guide for Cisco Unified Communications Manager and the IM and Presence Service* or *Upgrade and Migration Guide for Cisco Unified Communications Manager and the IM and Presence Service* at https://www.cisco.com/c/en/us/support/unified-communications/unified-communications-manager-callmanager/products-installation-guides-list.html
		JTAPI client on Agent (Cisco Unified Communications Manager) PG	Upgrade Cisco JTAPI Client on the Unified Communications Manager PG
10	Cloud Connection Components	Cloud Connect	For Cloud Connect installation instructions, see the *Cisco Unified Contact Center Enterprise Installation and Upgrade Guide* at https://www.cisco.com/c/en/us/support/customer-collaboration/unified-contact-center-enterprise/products-installation-guides-list.html

[7] After upgrading the Central Controller to 12.5(1), if you intend to keep the PGs in 12.0(1), you must install ICM_12.0(1)_ES49 on the PG machines for an inventory update.

Upgrade Unified CCE Call Router

To upgrade the Call Router, install the new software and import the Cisco registry information.

Procedure

Step 1 Launch the ICM-CCE-Installer and click **Next**.

Step 2 Select **Technology Refresh** and click **Next**.

Step 3 Click **Browse** and specify the path for the RegUtil file you exported from the source machine during the preupgrade process.

Step 4 (Optional) To apply any Minor/Maintenance Releases, click **Browse** and navigate to the Minor/Maintenance Release software. Click **Next**.

Step 5 Click **OK** on any informational messages that display.

Step 6 Click **Install**.

Step 7 Reboot the server when the upgrade completes.

Migrate the Logger Database and Upgrade the Logger

Before you begin

- EDMT requires Microsoft® ODBC Driver 13 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.

• 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.

• Create a shared folder in any desired location. Ensure that:

  • In the Properties window > Sharing tab > Advanced Sharing, the **Share this folder** check box is checked.

  • In the Properties window > Security tab, the permission level is set as Full control for everyone .

Procedure

Step 1 Use **Unified CCE Service Control** to stop all Unified CCE services on the Logger, on the source server.

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), on page 15.

Step 3 Download the EDMT tool from Cisco.com, and ensure pre-requisites for the same have been installed on the target/destination system, prior to launching EDMT. These include the ODBC Driver 13 for SQL Server, and Visual C++ Redistributable for Visual Studio 2015.

Step 4 Run the **EDMT** from the server that will host the destination Logger and click **Next**.

Step 5 Select **Technology Refresh** and click **Next**.

Step 6 Under **Source Database Connection**, complete the following fields:

  • From the **Authentication** drop-down list, select **SQL Server Authentication** or **Windows Authentication** (default).

  • In the **HostName/IP Address** field, enter the IP address or hostname of the source server with the Logger database.

  • In the **SQL Server Port Number** field, enter the TCP or IP port in which the source SQL Server runs. This field defaults to1433, the standard SQL Server port.

  • Enter the values in **Domain Name**, **Username**, and **Password** fields.

Note	• For SQL Server Authentication, enter the SQL Server credentials and the domain name (if applicable) for the selected database.
	• For Windows Authentication, the Domain Name, Username, and Password fields are disabled. Windows Single Sign-On (SSO) uses your Windows authentication cached credentials to connect to the selected database.

  • Click **Refresh Database List** to refresh the list of available Unified ICM databases on the server.

  • In the **Database Name**, select the Logger database.

Step 7 Under **Destination Database Connection**, complete the following fields:

  • In the **Authentication** drop-down list, use **Windows Authentication** (default).

  • In the **SQL Server Port Number** field, enter the TCP or IP port in which the destination SQL Server runs. This field defaults to1433, the standard SQL Server port.

Note	The rest of the fields are disabled (read-only) and the default values are displayed.

> • Click **Next**.

Step 8   Under **Backup Connection**, complete the following fields:

> • In the **HostName/IP Address** field, enter the backup server's IP address or hostname.
>
> • In the **Windows Share Name** field, enter the name of the shared folder where the backup database file is.
>
> • In the **Windows Share Domain** field, enter the domain name (if applicable).
>
> • In the **Windows Share Username** and **Windows Share Password** fields, enter the Windows credentials that has read or write access to the specified Windows share.

Step 9   In the **Destination Restore Location**, browse to select the folder where the system creates the database data files (.mdf) and translation log files (.ldf). The destination is prepopulated with the default location for database file storage for the running SQL Server.

Step 10   Click **Next**.

Step 11   Click **Start Migration**.

Step 12   Click **Yes** on the warning pop-up to start the data migration.

Step 13   Upon completion of the migration, click **Exit** to close the tool.

Step 14   (Optional) If Outbound Option High Availability is deployed, repeat steps 1 through 13 to migrate the BA database.

Step 15   Launch the ICM-CCE-Installer and click **Next**.

Step 16   Select **Technology Refresh** and click **Next**.

Step 17   Click **Browse** and specify the path for the RegUtil file you exported from the source machine during the preupgrade process.

Step 18   (Optional) To apply any Minor/Maintenance Releases, click **Browse** and navigate to the Minor/Maintenance Release software. Click **Next**.

Step 19   (Optional) Select **SQL Server 2008 Security Hardening** and click **Next**.

Step 20   Click **OK** on any informational messages that display.

Step 21   Click **Install**.

Step 22   Reboot the system after the upgrade completes.