Common Ground Upgrade Process

- Packaged CCE 2000 Agents Deployment, on page 1
- Packaged CCE 4000 Agents Deployment, on page 16
- Packaged CCE 12000 Agents Deployment, on page 23

Packaged CCE 2000 Agents Deployment

Common Ground Upgrade Process

Redundant Upgrade Workflow

Note

The redundant upgrade workflow is applicable to the solution deployments with Main site only.

Important

The upgrade requires four maintenance windows:

- First maintenance window to shut down services on Side A and upgrade Side A
- 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.
- Third maintenance window after you upgrade Side B to synchronize Side A to Side B.
- Fourth maintenance window to upgrade Cisco Unified Communications Manager (CUCM).

Common Preupgrade Tasks

Perform the tasks in the following table in the order that they are listed.
### Preupgrade of Side A

<table>
<thead>
<tr>
<th>Task</th>
</tr>
</thead>
<tbody>
<tr>
<td>Disable configuration changes on the Unified CCE. Change the following registry key to 1:</td>
</tr>
<tr>
<td>HKEY_LOCAL_MACHINE\SOFTWARE\Cisco Systems, Inc.\UCS\instance name &gt; Router &gt; Configuration (Global) &gt; DBMaintenance</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Task</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reverse the Cisco IOS Enterprise Ingress Voice Gateway dial-peer priority configuration so that calls are sent to the Side B Unified CVP server.</td>
</tr>
<tr>
<td>Reverse the Side A Unified CCE configuration so that calls are sent to Side A Unified CVP server.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Task</th>
</tr>
</thead>
<tbody>
<tr>
<td>Before you begin, check the following to confirm that call activity has ended on Side A:</td>
</tr>
<tr>
<td>1. Navigate to Unified CCE Administration &gt; Infrastructure &gt; Inventory.</td>
</tr>
<tr>
<td>2. Click the Statistics icon to view the statistics for CVP machine.</td>
</tr>
<tr>
<td>3. In the Unified Communications Manager RTMT tool, check that phones have migrated to Side B.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Task</th>
</tr>
</thead>
<tbody>
<tr>
<td>Navigate to Unified CCE Administration &gt; Infrastructure &gt; Inventory.</td>
</tr>
<tr>
<td>Click the Statistics icon to view the statistics for CVP machine.</td>
</tr>
<tr>
<td>The Infrastructure tab for Call Server displays the port usage information.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Task</th>
</tr>
</thead>
<tbody>
<tr>
<td>In the Unified Communications Manager RTMT tool, check that phones have migrated to Side B.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Task</th>
</tr>
</thead>
<tbody>
<tr>
<td>Place upgrade media ISOs on local data stores. Make sure to remove them when the upgrade is complete.</td>
</tr>
</tbody>
</table>

### Upgrade Side A

#### Before you begin

1. Navigate to Unified CCE Administration > Infrastructure > Inventory. Click the Statistics icon to view the statistics for CVP machine. The Infrastructure tab for Call Server displays the port usage information.
2. In the Unified Communications Manager RTMT tool, check that phones have migrated to Side B.

#### During upgrades when the system first migrates your existing ECC variables to the Default payload, it does not check the CTI message size limit. The member names might exceed the extra 500 bytes that is allocated for ECC Payloads to a CTI client. Manually check the CTI Message Size counter in the Expanded Call Variable Payload List tool to ensure that the Default payload does not exceed the limit. If the Default payload exceeds the limit, modify it to meet the limit.

#### Take a snapshot of each virtual machine you are upgrading from the VMware vSphere Client.
### Task

Upgrade to a supported version of ESXi version, if needed.

For the supported ESXi versions for this release, 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](https://www.cisco.com/c/en/us/td/docs/voice_ip_comm/uc_system/virtualization/pcce_virt_index.html).

If you are using a supported ESXi version and want to upgrade to different supported ESXi version, you can upgrade now, or after the Packaged CCE upgrade is complete.

See Upgrade VMware vSphere ESXi.

---

Upgrade Unified CVP Server.


---

Upgrade all the Cisco Voice Gateways one after another.

See Upgrade Cisco Voice Gateway IOS Version.


---

Upgrade all the Cisco Virtualized Voice Browsers one after another.


---

Upgrade the publishers/primary nodes of Cisco Finesse.


---

Upgrade the publishers/primary nodes of Cisco Unified Intelligence Center with Live Data and Identity Service (IdS).


---

Back up and export the Side A SQL database and the Outbound Option (if used) in Roggert VM.

- Use Microsoft SQL Server Backup and Restore utilities for the back up.
- Note the HDS customizable values.
- Copy the backup files to a shared location.

---

Run the Enhanced Database Migration Tool on rogger, external HDS (if used), and non-external HDS to perform a schema upgrade during the upgrade process.

See Run EDMT.
Task

If you use Outbound Option High Availability, for the enhancements in Outbound Option High Availability to work effectively, disable Outbound Option High Availability before the logger upgrade and then enable it after the upgrade. For details, see Disable Outbound Options High Availability (If Applicable).

Run the Unified CCE Release installer on the Side A Unified CCE Logger.
See Install Cisco Unified Contact Center Enterprise.

Run the Unified CCE Release installer on the Side A Unified CCE AW-HDS-DDS.
See Install Cisco Unified Contact Center Enterprise.

Run the Unified CCE installer on the Side A PG.
See Install Cisco Unified Contact Center Enterprise.

(Optional) Upgrade the External HDS associated with Side A (if used)
Run the Unified CCE Release installer the External HDS associated with Side A.
See Install Cisco Unified Contact Center Enterprise.

(Optional) Upgrade ECE.

If you do not have CA certificates, import self-signed certificates of upgraded components into Side A AW machines. For more information, see Self-Signed Certificates 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.

Side A Postupgrade Tasks

You must bring down Side B before you bring up Side A. Perform these tasks during maintenance window to cut over from Side B to Side A.

Task

Reverse the Cisco IOS Enterprise Ingress Voice Gateway dial-peer priority configuration so that calls are sent to the Side A Unified CVP server first and then to Side B.

(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/packaged-contact-center-enterprise/products-installation-guides-list.html
Task

Using Unified CCE Service Control, stop all Unified CCE services on the Side B Unified CCE servers that you are upgrading, and set the startup type to **Manual**.

1. Side B Unified CCE Rogger
2. Side B Unified CCE AW-HDS-DDS
3. Side B PG
4. External HDS with Side B as the Central Controller preferred side (if used)

Verify that the services have stopped.

Perform Database Performance Enhancement of TempDB, Logger Database, and AW-HDS Database. For more information, see [Database Performance Enhancement](#), on page 140.

Using Unified CCE Service Control, start all Unified CCE services on the Side A Unified CCE servers that you are upgrading, and set the startup type to **Automatic**.

1. Side A Unified CCE Rogger
2. Side A Unified CCE AW-HDS-DDS
3. Side A PG
4. External HDS with Side A as the Central Controller preferred side (if used)

Verify that the services have started.

Set the following registry key to 0 on Side A Unified CCE Rogger:

```
HKEY_LOCAL_MACHINE\SOFTWARE\Cisco Systems, Inc.\ICM\<instance name>\RouterA\Router\CurrentVersion\Configuration\Global\DBMaintenance
```

Direct agents to sign into the Side A Finesse Primary node.

Preupgrade of Side B

**Task**

Disable configuration changes on the Side B Unified CCE Rogger. Change the following registry key to 1:

```
HKEY_LOCAL_MACHINE\SOFTWARE\Cisco Systems, Inc.\ICM\<instance name>\RouterB\Router\CurrentVersion\Configuration\Global\DBMaintenance
```

Upgrade Side B

Before you begin, check the following to confirm that call activity has ended on Side B:

- On the Unified CVP Statistics portal, make sure that no Side B ports are in use.

1. Navigate to **Unified CCE Administration** > **Infrastructure** > **Inventory**.
2. Click the **Statistics** icon to view the statistics for CVP machine.
   
   The **Infrastructure** tab for Call Server displays the port usage information.
In the Unified Communications Manager RTMT tool, check that phones have migrated to Side A.

Place the upgrade media ISOs on local data stores. Ensure that you remove the media ISOs when the upgrade is complete.

<table>
<thead>
<tr>
<th>Task</th>
</tr>
</thead>
<tbody>
<tr>
<td>Upgrade to a supported version of ESXi version, if needed.</td>
</tr>
<tr>
<td>For the supported ESXi versions for this release, see the Virtualization for Cisco Packaged CCE at <a href="https://www.cisco.com/c/en/us/td/docs/voice_ip_comm/uc_system/virtualization/pcce_virt_index.html">https://www.cisco.com/c/en/us/td/docs/voice_ip_comm/uc_system/virtualization/pcce_virt_index.html</a>.</td>
</tr>
<tr>
<td>If you are using a supported ESXi version and want to upgrade to different supported ESXi version, you can upgrade now, or after the Packaged CCE upgrade is complete. See Upgrade VMware vSphere ESXi.</td>
</tr>
<tr>
<td>Upgrade the Unified CVP Reporting Server</td>
</tr>
<tr>
<td>See Upgrade Unified CVP Reporting Server</td>
</tr>
<tr>
<td>Upgrade Unified CVP Server.</td>
</tr>
<tr>
<td>Upgrade the subscribers/secondary nodes of Cisco Finesse.</td>
</tr>
<tr>
<td>Upgrade the subscribers/secondary nodes of Cisco Unified Intelligence Center with Live Data and Identity Service (IdS).</td>
</tr>
<tr>
<td>Back up and export the Side B SQL database and the Outbound Option (if used) database in the Rigger VM.</td>
</tr>
<tr>
<td>• Use Microsoft SQL Server Backup and Restore utilities for the back up.</td>
</tr>
<tr>
<td>• Note the HDS customizable values.</td>
</tr>
<tr>
<td>• Copy the backup files to a shared location.</td>
</tr>
<tr>
<td>Run the Enhanced Database Migration Tool on rogger, external HDS (if used), and non-external HDS to perform a schema upgrade during the upgrade process.</td>
</tr>
<tr>
<td>See Run EDMT.</td>
</tr>
<tr>
<td>If you use Outbound Option High Availability, for the enhancements in Outbound Option High Availability to work effectively, disable Outbound Option High Availability before the logger upgrade and then enable it after the upgrade. For details, see Disable Outbound Options High Availability (If Applicable)</td>
</tr>
</tbody>
</table>
### Task

Run the Unified CCE installer on the Side B Unified CCE Rogger.
See Install Cisco Unified Contact Center Enterprise

Run the Unified CCE installer on the Side B Unified CCE AW-HDS-DDS.
See Install Cisco Unified Contact Center Enterprise

Run the Unified CCE installer on the Side B PG.
See Install Cisco Unified Contact Center Enterprise

(Optional) Upgrade the External HDS associated with Side B (if used)
See Install Cisco Unified Contact Center Enterprise

(Optional) Upgrade ECE.

If you do not have CA certificates, import self-signed certificates of upgraded components into Side B AW machines. For more information, see Self-Signed Certificates 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.

### Sync Side A to Side B

Perform these tasks during the third maintenance window to sync Side A and Side B.

<table>
<thead>
<tr>
<th>Task</th>
</tr>
</thead>
<tbody>
<tr>
<td>Set the following registry key to 0 on either the Side B Unified CCE Rogger:</td>
</tr>
<tr>
<td>HKEY_LOCAL_MACHINE\SOFTWARE\Cisco Systems, Inc\ICM&lt;instance name&gt;\Router B\Router\CurrentVersion\Configuration\Global\DBMaintenance</td>
</tr>
</tbody>
</table>


On each of the following VMs, select **Unified CCE Service Control** on the desktop. Start the Unified CCE services and change Startup to Automatic, in this order:

1. Side B Unified CCE Rogger
2. Side B Unified CCE AW-HDS-DDS
3. Side B PG
4. External HDS with Side B as the Central Controller preferred side (if used)

Verify that the services are started.
**Task**

Perform Database Performance Enhancement of TempDB, Logger Database, and AW-HDS Database for Side B. For more information, see Database Performance Enhancement.

Run the **UserRoleUpdate.PS1** tool in Powershell in any one of the distributor machines. This ensures that the User Role is updated in the database for the existing users.

To download **UserRoleUpdate.PS1** script, go to the link [https://software.cisco.com/download/home/268439622/type](https://software.cisco.com/download/home/268439622/type) and select **User Role Update Bulk Tool** from the list.

Download the file **UserRoleUpdateScript_1201.zip** and extract the script.

**Postupgrade Tasks**

**Task**

**Bring back Side A and Side B to call flow**


Change the Cisco IOS Enterprise Voice Gateway dial-peer configuration to point to both Side A and Side B Unified CVP Servers.

**Upgrade UCM in Side A and Side B**

Perform these tasks to upgrade UCM in both Side A and Side B.

**Important**

Upgrade of CUCM requires a minimal maintenance window.

<table>
<thead>
<tr>
<th>Step</th>
<th>Task</th>
</tr>
</thead>
</table>
| 1    | Upgrade the Side A CUCM Publisher and Subscriber.  
| 2    | Upgrade JTAPI on the Side A PG. See **Upgrade Cisco JTAPI Client on the Unified Communications Manager PG**.  
**Important** If you are installing CUCM 12.5, install Cisco JTAPI Client on CUCM. See **Install Cisco JTAPI Client on Unified Communications Manager, Release 12.0 and above**. |
<table>
<thead>
<tr>
<th>Step</th>
<th>Task</th>
</tr>
</thead>
</table>
| 3    | Upgrade the Side B CUCM Subscriber.  
**Important**  
The CUCM Publisher upgrade must be complete and the 12.5 software must be active before you upgrade the CUCM Subscriber. |
| 4    | Upgrade JTAPI on the Side B PG. See Upgrade Cisco JTAPI Client on the Unified Communications Manager PG.  
**Important**  
If you are installing CUCM 12.5, install Cisco JTAPI Client on the PG machine. For more information, see Install Cisco JTAPI Client on Unified Communications Manager, Release 12.0 and above. |

**UCM 12.5 Postupgrade Steps**

Perform these tasks if CUCM is on-box and you have upgraded to CUCM 12.5 on the M4 server. This procedure is performed on the main site.

**Note**

Ensure that you do not change IP address of the CUCM Publisher and Subscriber.

<table>
<thead>
<tr>
<th>Step</th>
<th>Task</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Move the CUCM Publisher and Subscriber from Side A host to a different host.</td>
</tr>
<tr>
<td>2</td>
<td>Move the CUCM Subscriber from Side B host to a different host.</td>
</tr>
<tr>
<td>3</td>
<td>Add CUCM Publisher as an external machine to the main site of the Packaged CCE Inventory.</td>
</tr>
</tbody>
</table>

**Multistage Upgrade Workflow**

**Note**

The multistage upgrade workflow is applicable for solution deployments with both main site and remote site (if available).

A CCE solution upgrade likely involves a multistage process; components are grouped in several stages for upgrading. 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.

Before upgrading a production system, perform the upgrade on a lab system that mirrors your production system to identify potential problems safely.

The following table details the required sequence for upgrading Packaged CCE 2000 Agent Deployments components, and the minimum component groupings that must occur together within each stage. Follow each
stage to completion within each maintenance window. Each maintenance window must accommodate any testing required to ensure system integrity and contact center operation.

You can combine more than one complete stage into a single maintenance window, but you cannot break any one stage into multiple maintenance windows.

Upgrade the CCE components as follows:

- Upgrade Agent Desktop, CUIC, Live Data, and IdS server along with the CCE Central Controller upgrade.
- Run Stage 3 and Stage 4 upgrades in the same maintenance window.

<table>
<thead>
<tr>
<th>Stage</th>
<th>Component Group</th>
<th>Components</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Gateways</td>
<td>• IOS Gateways (If used for ingress access only. If used for Outbound Option Dialer, see Stage 6.) • IOS VXML Gateways • Cisco Virtualized Voice Browser</td>
<td></td>
</tr>
<tr>
<td>Stage</td>
<td>Component Group</td>
<td>Components</td>
<td>Notes</td>
</tr>
<tr>
<td>-------</td>
<td>----------------</td>
<td>------------</td>
<td>-------</td>
</tr>
</tbody>
</table>
| 2     | Agent/Supervisor Desktop, Central Controller, and Reporting | • ECE  
• Cisco Finesse  
• Unified CCE Rogger  
• Admin & Data server (AW/HDS/DDS)  
• CUIC-LD-IDS  
• CUIC Reporting Templates | • After you upgrade AW, import the self-signed certificate of all solution components (if applicable) to all AWs.  
• After you upgrade Finesse to Release 12.5, to load any gadgets to Finesse, you must first import all self-signed certificates (if applicable) to Finesse.  
• After you upgrade LD, you must import the Finesse certificate to LD. |
| 3     | Peripherals | • Agent (Unified Communications Manager) PG  
• CTI Server  
• Outbound Option Dailer and SIP IOS Gateway | You can have many PGs located on different virtual machines. You can upgrade each PG virtual machine in its own maintenance window. |
| 4     | Peripherals | • MR PG, VRU PG  
• CRM connector | You can have many PGs located on different virtual machines. You can upgrade each PG virtual machine in its own maintenance window. |
| 5     | Call Processing | • Cisco Unified Communications Manager (Unified Communications Manager)  
• JTAPI on Agent (Unified Communications Manager) PG | You must install JTAPI client only when you upgrade to UCM 12.5.  
If you upgrade to CUCM 12.5 on the M4 servers, ensure that you deploy CUCM off-box. CUCM 12.5 on-box deployment are only supported for M5 servers.  
Upgrade Flowcharts

The following diagram illustrates the solution-level upgrade flow for the Packaged CCE 2000 Agent Deployment solution upgrade.

![Diagram](image)

The following diagrams illustrate the stages of the component-level upgrade flows for the Packaged CCE 2000 Agent Deployment solution upgrade. Each diagram covers one of the stages. The letter at the end of each flow indicates the start of the next flow that you are required to perform.

![Diagram](image)
Upgrade Flowcharts

A

Cisco Virtualized Voice Browser

Upgrade Voice and Data Gateways

B

B

Back up server registry, databases

Disable configuration changes

C
Hardware Refresh with Common Ground Upgrade

If you are performing a hardware refresh as part of the upgrade process, you must first prepare the target servers as described in the following documents:

- Prepare Customer Site Servers

After you configure the servers, you can move the VMs to the servers and complete the Common Ground Upgrade Process, on page 1.

As a part of hardware refresh, if you are migrating from existing C240 M3S/C240 M4SX to C240 M5SX/Specification based hardware, perform the following migration steps:

Pre-migration Steps

<table>
<thead>
<tr>
<th>Step</th>
<th>Task</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>Update the annotation of the core VMs as per requirement for Specification Based hardware. See Installation Tasks.</td>
</tr>
</tbody>
</table>

Migration Steps

<table>
<thead>
<tr>
<th>Steps</th>
<th>Task</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Move the VMs to the target hardware</td>
</tr>
<tr>
<td>2</td>
<td>Log in to the Packaged CCE Administration and open the Inventory.</td>
</tr>
</tbody>
</table>
| 3     | Perform the following in the Packaged CCE Inventory:  
  1. Click Update Hosts.  
  2. Provide ESXI details of the target hardware.  
  3. Select the hardware type as **M5 Tested Reference Configuration/Specification Based Configuration**.  
  4. Complete the wizard.  
  **Note** If CUCM and CVP Reporting Server were on-box in the old hardware, you must add them back as external machines after completing the deployment. |
Packaged CCE 4000 Agents Deployment

Common Ground Upgrade Process

Multistage Upgrade Workflow

Note

A CCE solution upgrade likely involves a multistage process; components are grouped in several stages for upgrading. 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.

Before upgrading a production system, perform the upgrade on a lab system that mirrors your production system to identify potential problems safely.

The following table details the required sequence for upgrading Packaged CCE 4000 Agent Deployments components, and the minimum component groupings that must occur together within each stage. Follow each stage to completion within each maintenance window. Each maintenance window must accommodate any testing required to ensure system integrity and contact center operation.

You can combine more than one complete stage into a single maintenance window, but you cannot break any one stage into multiple maintenance windows.

Upgrade the CCE components as follows:

<table>
<thead>
<tr>
<th>Stage</th>
<th>Component Group</th>
<th>Components</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stage</td>
<td>Component Group</td>
<td>Components</td>
<td>Notes</td>
</tr>
<tr>
<td>-------</td>
<td>----------------</td>
<td>------------</td>
<td>-------</td>
</tr>
<tr>
<td>3</td>
<td>Gateways</td>
<td>• IOS Gateways (If used for ingress access only. If used for Outbound Option Dialer, see Stage 6.) • IOS VXML Gateways • Cisco Virtualized Voice Browser</td>
<td></td>
</tr>
<tr>
<td>Stage</td>
<td>Component Group</td>
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<td>Notes</td>
</tr>
<tr>
<td>-------</td>
<td>----------------</td>
<td>------------</td>
<td>-------</td>
</tr>
<tr>
<td>5</td>
<td>Central Controller</td>
<td>• Unified CCE Logger&lt;br&gt;• Admin &amp; Data server (AW/HDS/DDS)&lt;br&gt;• Standalone Live Data&lt;br&gt;• CUIC Reporting Templates&lt;br&gt;• Administration Client</td>
<td>• After you upgrade AW, import the self-signed certificate of all solution components (if applicable) to all AWs.&lt;br&gt;• After you upgrade Live Data (LD), you must enable CORS on the LD box for Finesse and CUIC. For more information, see Installation and Upgrade Guide for Cisco Unified Intelligence Center Guide at <a href="https://www.cisco.com/c/en/us/support/customer-collaboration/unified-intelligence-center/products-installation-guides-list.html">https://www.cisco.com/c/en/us/support/customer-collaboration/unified-intelligence-center/products-installation-guides-list.html</a>.&lt;br&gt;• After you upgrade LD, you must import the Finesse certificate to LD.</td>
</tr>
<tr>
<td>6</td>
<td>Peripherals</td>
<td>• Agent (Unified Communications Manager) PG&lt;br&gt;• CTI Server&lt;br&gt;• CTI OS Server&lt;br&gt;• Outbound Option Dialer and SIP IOS Gateway</td>
<td>• CTI OS Server is applicable only if Avaya PG is used.&lt;br&gt;• You can have many PGs located on different virtual machines. You can upgrade each PG virtual machine in its own maintenance window.</td>
</tr>
<tr>
<td>7</td>
<td>Peripherals</td>
<td>• MR PG, VRU PG&lt;br&gt;• CRM connector</td>
<td>You can have many PGs located on different virtual machines. You can upgrade each PG virtual machine in its own maintenance window.</td>
</tr>
<tr>
<td>8</td>
<td>Agent desktop client software</td>
<td>CTI OS (Agent/Supervisor Desktops)</td>
<td>• CTI OS is applicable only if Avaya PG is used.&lt;br&gt;• You can have many desktops located in many different sites. You can upgrade CTI OS desktops in multiple maintenance windows; the later upgrade stages are not dependent on the completion of this stage.</td>
</tr>
<tr>
<td>9</td>
<td>Call Processing</td>
<td>• Cisco Unified Communications Manager (Unified Communications Manager)&lt;br&gt;• JTAPI on Agent (Unified Communications Manager) PG</td>
<td>You must install JTAPI client only when you upgrade to UCM 12.5.&lt;br&gt;If you upgrade to CUCM 12.5 on the M4 servers, ensure that you deploy CUCM off-box. CUCM 12.5 on-box deployment are only supported for M5 servers.&lt;br&gt;For more information, refer to Virtualization for Packaged Contact Center Enterprise at <a href="https://www.cisco.com/c/en/us/td/docs/voice_ip_comm/uc_system/virtualization/pcce_virt_index.html">https://www.cisco.com/c/en/us/td/docs/voice_ip_comm/uc_system/virtualization/pcce_virt_index.html</a>.</td>
</tr>
</tbody>
</table>
The following diagram illustrates the solution-level upgrade flow for the Packaged CCE 4000 Agent Deployment solution upgrade.

The following diagrams illustrate the stages of the component-level upgrade flows for the Packaged CCE 4000 Agent Deployment solution upgrade. Each diagram covers one of the stages. The letter at the end of each flow indicates the start of the next flow that you are required to perform.
Common Ground Upgrade Process

upgrade flowcharts

A

Upgrade ECE

Upgrade Finesse

B

Upgrade CVP Reporting Server

Upgrade CVP Call Server/VXMLServer

Upgrade CVP Unified Call Studio

C

Cisco Virtualized Voice Browser

Upgrade Voice and Data Gateways

D
Upgrade CUIC Reporting Server

Live Data (if standalone)

Back up server registry, databases

Disable configuration changes

D

E

E

F
Common Ground Upgrade Process

Upgrade Flowcharts

F

Upgrade Agent PG or System PG

Is Outbound Option, Customer Collaboration Platform or ECE deployed?

yes

Upgrade MR PG

no

Upgrade CTI OS Server

Upgrade Outbound Option Dialer / Customer Collaboration Platform

Upgrade VRU PG

G
Packaged CCE 12000 Agents Deployment

Common Ground Upgrade Process

Multistage Upgrade Workflow

Note

A CCE solution upgrade likely involves a multistage process; components are grouped in several stages for upgrading. 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.

Before upgrading a production system, perform the upgrade on a lab system that mirrors your production system to identify potential problems safely.

The following table details the required sequence for upgrading Packaged CCE 12000 Agent Deployments components, and the minimum component groupings that must occur together within each stage. Follow each stage to completion within each maintenance window. Each maintenance window must accommodate any testing required to ensure system integrity and contact center operation.

You can combine more than one complete stage into a single maintenance window, but you cannot break any one stage into multiple maintenance windows.

Upgrade the CCE components as follows:
<table>
<thead>
<tr>
<th>Stage</th>
<th>Component Group</th>
<th>Components</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>Identity Service (IdS)</td>
<td>IdS Server</td>
<td>For IdS upgrade, see the procedure as documented in the Upgrades section of Unified Intelligence Center Installation and Upgrade Guide at: <a href="https://www.cisco.com/c/en/us/support/customer-collaboration/unified-intelligence-center/products-installation-guides-list.html">https://www.cisco.com/c/en/us/support/customer-collaboration/unified-intelligence-center/products-installation-guides-list.html</a></td>
</tr>
<tr>
<td>3</td>
<td>Gateways</td>
<td>• IOS Gateways (If used for ingress access only. If used for Outbound Option Dialer, see Stage 6.) • IOS VXML Gateways • Cisco Virtualized Voice Browser</td>
<td></td>
</tr>
<tr>
<td>Stage</td>
<td>Component Group</td>
<td>Components</td>
<td>Notes</td>
</tr>
<tr>
<td>-------</td>
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<td>-----------------------------------------------------------------------------</td>
<td>-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>4</td>
<td>Reporting server</td>
<td>CUIC server</td>
<td>After you upgrade Cisco Unified Intelligence Center (CUIC), you must:</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• Enable CORS on the CUIC server, and add <code>cors allowed_origin</code> with the Finesse hostname.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• Import LD and Finesse certificates to CUIC.</td>
</tr>
<tr>
<td>5</td>
<td>Central Controller</td>
<td>• Unified CCE Router&lt;br&gt;• Unified CCE Logger&lt;br&gt;• Admin &amp; Data server (AW/HDS/DDS)&lt;br&gt;• Standalone Live Data&lt;br&gt;• CUIC Reporting Templates&lt;br&gt;• Administration Client</td>
<td>• After you upgrade AW, import the self-signed certificate of all solution components (if applicable) to all AWs.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• After you upgrade LD, you must import the Finesse certificate to LD.</td>
</tr>
<tr>
<td>6</td>
<td>Peripherals</td>
<td>• Agent (Unified Communications Manager) PG&lt;br&gt;• CTI Server&lt;br&gt;• CTI OS Server&lt;br&gt;• Outbound Option Dialer and SIP IOS Gateway</td>
<td>You can have many PGs located on different virtual machines. You can upgrade each PG virtual machine in its own maintenance window.</td>
</tr>
<tr>
<td>7</td>
<td>Peripherals</td>
<td>• MR PG, VRU PG&lt;br&gt;• CRM connector</td>
<td>You can have many PGs located on different virtual machines. You can upgrade each PG virtual machine in its own maintenance window.</td>
</tr>
<tr>
<td>8</td>
<td>Agent desktop client software</td>
<td>CTI OS (Agent/Supervisor Desktops)</td>
<td>You can have many desktops located in many different sites. You can upgrade CTI OS desktops in multiple maintenance windows; the later upgrade stages are not dependent on the completion of this stage.</td>
</tr>
</tbody>
</table>
You must install JTAPI client only when you upgrade to UCM 12.5.

If you upgrade to CUCM 12.5 on the M4 servers, ensure that you deploy CUCM off-box. CUCM 12.5 on-box deployment are only supported for M5 servers.

For more information, refer to Virtualization for Packaged Contact Center Enterprise at https://www.cisco.com/c/en/us/td/docs/voice_ip_comm/uc_system/virtualization/pcce_virt_index.html.

Upgrade Flowcharts

The following diagram illustrates the solution-level upgrade flow for the Packaged CCE 12000 Agent Deployment solution upgrade.
The following diagrams illustrate the stages of the component-level upgrade flows for the Packaged CCE 12000 Agent Deployment solution upgrade. Each diagram covers one of the stages. The letter at the end of each flow indicates the start of the next flow that you are required to perform.
Common Ground Upgrade Process

Upgrade Flowcharts

1. Upgrade Agent PG or System PG
2. Is Outbound Option, Customer Collaboration Platform or ECE deployed?
   - yes: Upgrade MR PG
   - no: Upgrade CTI OS Server
3. Upgrade Outbound Option Dialer / Customer Collaboration Platform
4. Upgrade VRU PG

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