Common Ground Upgrade

Preupgrade Overview

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

Upgrade Tools

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

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

  You can download the User Migration Tool from Cisco.com by clicking **ICM User Migration Tool Software**.

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

  You can download the Regutil Tool from Cisco.com by clicking **Contact Center Enterprise Tools**.

- Domain Manager—Used to provision Active Directory.

  The Domain Manager Tool is delivered with the main installer.

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

  Perform the following steps to use the tool:

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

Where

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

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

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

  The prerequisites for running EDMT are:

  - EDMT also requires Microsoft® ODBC Driver 11 for SQL Server® andDriver 11 for SQL Server® and Visual C++ Redistributable for Visual Studio 2015 . The latest version of these packages can be downloaded from the Microsoft website. However, a copy of the same is also available in the **Prerequisites** folder of EDMT.

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

  Note
  - If you are configuring SQL services to run as Virtual account (NT SERVICE) or Network Service account (NT AUTHORITY\NETWORK SERVICE), you must run EDMT as an administrator.

  - The installer, not the EDMT, upgrades the AW database for the Administration & Data Server.

- User Role Update Tool—A powershell script which is required to be executed in any one of the distributor boxes once after the upgrade. Logger, Router and distributor services should be running before running this tool. The User Role Update tool gets the AD security group membership (config and setup groups) of the users in **User_Group table** and update the **UserRole** column.

Common Ground Preupgrade Task Flow

Perform the following Common Ground preupgrade tasks in any order.

Note The Common Ground upgrade assumes the host server runs on Windows Server 2012 R2.

Task	Release 10.0 to 11.0	See
	Release 10.5 to 11.0	
Review target release notes	yes	*Release Notes for Cisco Unified Contact Center Enterprise Solutions* at https://www.cisco.com/c/en/us/support/customer-collaboration/unified-contact-center-enterprise/products-release-notes-list.html
ESXi Supportability	yes	ESXi Supportability
Disaster Recovery Plan	yes	Disaster Recovery Plan, on page 4
Change the SCSI Controller Type	yes	Change the SCSI Controller Type, on page 4
Upgrade VM Network Adapters from E1000 to VMXNet3	yes	Upgrade VM Network Adapters from E1000 to VMXNet3, on page 5
VM Hardware Version Upgrade	yes	VM Hardware Version Upgrade, on page 6
Download the Enhanced Database Migration Tool	yes	Upgrade Overview
Back up the server registry	yes	Use your established processes.
Copy ICM directory on all system nodes	yes	Use your established processes.
Run the following and save the results: **ipconfig -all** **route print -p** **netstat -a**	yes	Use your established processes.
Create bootable image of operating system and network configuration	yes	Use your established processes.
Back up Logger, HDS, BA databases using Microsoft SQL Server Backup and Restore utility	yes	Microsoft SQL Help
Notify all stakeholders, including: • Cisco Technical Assistance Center (TAC) • Local Cisco Representatives • Customer Operations and Emergency Management Center • Third-party vendors as applicable	yes	
Remove DB-lib key from `HKEY_LOCAL_MACHINE\SOFTWARE\Wow6432Node\Microsoft\MSSQLServer\Client\DB-Lib`	yes	

Common Ground Preupgrade Tasks

Disable Configuration Changes

Procedure

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

Step 2 Confirm that configuration changes are disabled by attempting to save a configuration change.

When you try to save the change, a message is displayed confirming the change failure.

Disaster Recovery Plan

Before you start the upgrade process, take a snapshot of the virtual machines on which you are performing an upgrade. Take the snapshot with the VM powered off to reduce the Size of the snapshots and post successful migration to UCCE 11.0(1), Snapshots have to be removed to avoid performance impacts.

It's preferred to take a backup of Virtual Machine OVA as well. In case of Snapshot reversal failure, We still have one more backup.

Change the SCSI Controller Type

LSI Logic Parallel is not supported with Windows Server 2012. If the virtual machine has SCSI Controller type as LSI Logic Parallel, you must change it to LSI Logic SAS.

Procedure

Step 1 Ensure the virtual machine is powered on.

Step 2 Add a new hard disk to the virtual machine.

When choosing the **Virtual Device Node**, select **SCSI (1:0)** and hard disk size as **1MB**.

Note When the new virtual disk is created, it creates a second virtual SCSI controller.

Caution Do not click **OK** at this stage to confirm the changes.

Step 3 Select the second virtual SCSI controller, and then click **Change Type**.

Step 4 Select the **LSI Logic SAS** radio button, and then click **OK**.

Step 5 Click **OK** to confirm the changes.

Step 6 Log in to the virtual machine.

The operating system automatically detects the new SCSI controller and adds the driver for LSI Logic SAS.

Step 7 In Device Manager, under **Storage controllers**, ensure that the controller is listed as **LSI Adapter SAS 3000 Series**.

Step 8 Power down the virtual machine.

Step 9 Remove the newly added virtual disk. Ensure that you select the **Remove from virtual machine and delete files from disk** option.

Selecting this option purges the new disk from the data store.

The controller is removed automatically.

Step 10 Change the first virtual controller to the LSI Logic SAS setting.

Step 11 Power on the virtual machine.

Step 12 Usually, Windows displays a message telling you to restart the virtual machine for the changes to take effect. If this message is not displayed, restart the virtual machine manually.

Upgrade VM Network Adapters from E1000 to VMXNet3

Before you upgrade the VM's operating system from Windows Server 2008 R2, upgrade the VM network adapters to VMXNet3. Unified CCE 11.0(1) requires VMXNet3 network adapters. If you upgrade the operating system to Windows Server 2012 R2 without upgrading to VMXNet3, the static IP configuration on the ethernet adapter resets to automatic after the Windows upgrade.

Note VMware deprecated support for E1000 Ethernet Controllers from ESXi 5.5 onwards: http://kb.vmware.com/selfservice/microsites/search.do?language=en_US&cmd=displayKC&externalId=2056935

Procedure

Step 1 Ensure the VMware Tools are Installed.

Step 2 Record the public and private network settings, including the IP addresses, Subnet masks, Default Gateway, DNS, Persistent Static Routes, and so on.

Important You need these values to recreate the configurations on the new virtual machine network adapters.

Step 3 Stop the Unified CCE services. The services cannot be active during reconfiguration of the network adapters.

Step 4 Remove the persistent static routes from Windows Server 2008 R2 on the VM. For more information about persistent static routes, see the *Staging Guide for Cisco Unified ICM/Contact Center Enterprise* at http://www.cisco.com/en/US/products/sw/custcosw/ps1844/prod_installation_guides_list.html.

Step 5 Disable the E1000 public network adapter.

Step 6 Disable the E1000 private network adapter, if the VM has a PG, Router, or Logger.

Step 7 Remove the E1000 public network adapter:

a) Shut down the operating system of the VM.
b) Select **Edit Settings** from the VM context menu.

    c) Select the **E1000 public network adapter** on the **Hardware** tab.

    d) Click **Remove** and then click **Finish**.

    e) Start the VM.

Step 8   Remove the E1000 private network adapter from VMs for PGs, Routers, and Loggers:

    a) Shut down the operating system of the VM.

    b) Select **Edit Settings** from the VM context menu.

    c) Select the **E1000 public network adapter** on the **Hardware** tab.

    d) Click **Remove** and then click **Finish**.

    e) Start the VM.

Step 9   Remove ghosted network adapters

    a) Run this in cmd prompt 'set devmgr_show_nonpresent_devices=1' and press **Enter**.

    b) Launch **Device manager** using this cmd'start devmgmt.msc' .

    c) In **Device Manager**, Click **View** and select **show hidden device**.

    d) Expand **Network Adapter** and uninstall the dimmed E1000 network adapters.

Step 10   Add the VMXNet 3 public network adapter:

    a) Select **Edit Settings** from the VM context menu.

    b) Click **Add** on the Hardware tab.

    c) Select **Ethernet Adapter** in the Device Type page and click **Next**.

    d) Select **VMXNet 3** from the Adapter Type drop-down list.

    e) Select the public network port group from the Network label drop-down list and click **Next**.

    f) Click **Finish**.

Step 11   Add the VMXNet 3 private network adapter to VMs for PGs, Routers, and Loggers:

    a) Select **Edit Settings** from the VM context menu.

    b) Click **Add** on the Hardware tab.

    c) Select **Ethernet Adapter** in the Device Type page and click **Next**.

    d) Select **VMXNet 3** from the Adapter Type drop-down list.

    e) Select the public network port group from the Network label drop-down list and click **Next**.

    f) Click **Finish**.

Step 12   Apply the network settings that you recorded in Step 1 from the E1000 public and private network adapters to the VMXNet 3 public and private network adapters.

Step 13   Enable the VMXNet 3 public and private network adapters.

Step 14   Add the persistent static routes to the Windows Server 2008 R2 on the VM.

Step 15   Use traceroute to test the connectivity for the public and private networks.

Step 16   Re-enable the unified CCE services.

VM Hardware Version Upgrade

In the VSphere Client, ensure that you have upgraded the VM hardware version to 9. Download VMware Vsphere Powercli tool and use it to complete this procedure. Ensure the VM is powered off during this procedure.

Procedure

Step 1   Connect to the ESX using VMware VSphere PowerCli "Connect-VIServer -Server ESXIP -Protocol https -User username -Password password".

Step 2   Run command Get-VM "<VM name>" | Set-VM -Version "v9"to change the VM version.

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

Procedure

Step 1   Power off the virtual machine.

Step 2   Click **Edit Settings**.

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

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

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

Step 6   Start the virtual machine.

Common Ground Upgrade Task Flow

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

For Common Ground upgrades, perform the following upgrade tasks:

Task	See
Agent and supervisor desktops	
Identity Service (IdS)/Single Sign-On(SSO)	SSO is an optional feature and exchanges authentication and authorization details between an identity provider (IdP) and an identity service (IdS). If you upgrade to 11.6(1) from 11.5(x) with SSO enabled then upgrade the standalone Cisco IdS server before upgrading other components like Cisco Unified Intelligence Center (CUIC), and Finesse. For co-resident configurations, CUIC must be at the same version as Finesse. Upgrade both, CUIC and Finesse in the same maintenance window. Install the Identity Service. See the **Installation Task Flow for Cisco Identity Service** section in the *Cisco Unified Contact Center Enterprise Features Guide* at https://www.cisco.com/c/en/us/support/customer-collaboration/unified-contact-center-enterprise/products-feature-guides-list.html

Task	See
Upgrade Finesse.	*Cisco Finesse Installation and Upgrade Guide* at http://www.cisco.com/en/US/products/ps11324/prod_installation_guides_list.html **Note** ES65 provides the ability to connect a maximum of two versions of Finesse to the same PG during the upgrade or migration process to facilitate the migration of agents and supervisors to the new Finesse version. However, this mode of operation is not supported for production use beyond the upgrade or migration phase.
Upgrade SocialMiner	*Cisco SocialMiner User Guide* at http://www.cisco.com/c/en/us/support/customer-collaboration/socialminer/products-installation-guides-list.html.
Queuing and self-service components	
Upgrade Cisco Unified Customer Voice Portal.[*]	*Installation and Upgrade Guide for Cisco Unified Customer Voice Portal* at http://www.cisco.com/en/US/products/sw/custcosw/ps1006/prod_installation_guides_list.html
Infrastructure and media resource components	
Upgrade voice and data gateways.	Upgrade Voice and Data Gateways
Reporting server	
Upgrade Cisco Unified Intelligence Center server.	*Installation and Upgrade Guide for Cisco Unified Intelligence Center* at http://www.cisco.com/en/US/products/ps9755/prod_installation_guides_list.html
Unified CCE Central Controller and Administration & Data Server components	
Bring down Side A Logger, and upgrade the VM to the new platform of Windows Server and SQL Server.	Upgrade to Windows Server 2012 R2, on page 12 Upgrade to SQL Server 2014, on page 14
Bring down Side A Logger, and upgrade the VM to the new platform of Windows Server and SQL Server.	

Task	See
Migrate Side A Logger database, and upgrade the Logger.	Migrate Unified CCE Logger Database and Upgrade Logger, on page 15
Bring down Side A Call Router, and upgrade the VM to new platform of Windows Server.	Upgrade to Windows Server 2012 R2, on page 12
Upgrade Side A Call Router.	Upgrade Unified CCE Call Router, on page 16
Upgrade the VM for the Administration & Data Server connected to Side A to the new platform of Windows Server and SQL Server.	Upgrade to Windows Server 2012 R2, on page 12 Upgrade to SQL Server 2014, on page 14
Upgrade the Administration & Data Server connected to Side A.	Migrate HDS Database and Upgrade the Unified CCE Administration & Data Server, on page 17
Bring Side A Logger and Call Router into service, bring down Side B Logger and Call Router.	Bring Upgraded Side A into Service
Upgrade the VM for the Side B Logger to the new platform of Windows Server and SQL Server.	Upgrade to Windows Server 2012 R2, on page 12 Upgrade to SQL Server 2014, on page 14

Task	See
Migrate Side B Logger database and upgrade the Logger.	Migrate Unified CCE Logger Database and Upgrade Logger, on page 15
Upgrade the VM for the Side B Call Router to new platform of Windows Server.	Upgrade to Windows Server 2012 R2, on page 12
Upgrade Side B Call Router.	Upgrade Unified CCE Call Router, on page 16
Bring Side B Call Router into service and verify operation.	Verify operation of upgraded Side B Call Router and Logger
Bring Side B Logger into service and verify operation.	
Upgrade the VM for the Administration & Data Server connected to Side B to the new platform of Windows Server and SQL Server.	Upgrade to Windows Server 2012 R2, on page 12 Upgrade to SQL Server 2014, on page 14
Upgrade the Administration & Data Server connected to Side B.	Migrate HDS Database and Upgrade the Unified CCE Administration & Data Server, on page 17
Upgrade Cisco Unified Intelligence Center reporting templates.	*Installation and Upgrade Guide for Cisco Unified Intelligence Center* at http://www.cisco.com/en/US/products/ps9755/prod_installation_guides_list.html

Task	See
Upgrade Unified Contact Center Management Portal(Unified CCMP).	*Installation and Configuration Guide for Cisco Unified Contact Center Management Portal* at http://www.cisco.com/en/US/products/ps7076/prod_installation_guides_list.html
Upgrade Administration Client.	Upgrade Unified CCE Administration Client
Database Performance Enhancement.	Database Performance Enhancement
Unified CCE Peripheral Gateways and associated components	
Upgrade PGs to new platform of Windows Server.	Upgrade to Windows Server 2012 R2, on page 12
Upgrade PGs.	Upgrade Peripheral Gateways, on page 18
Upgrade Outbound Option Dialer.	Upgrade Outbound Option Dialer, on page 19
Upgrade CTI server.	*CTI OS System Manager Guide for Cisco Unified ICM/Contact Center Enterprise* at http://www.cisco.com/en/US/products/sw/custcosw/ps14/prod_installation_guides_list.html
Upgrade Cisco Unified Contact Center Management Portal.	*Upgrading Dual Sided Unified CCMP* at http://www.cisco.com/en/US/products/ps7076/tsd_products_support_install_and_upgrade_technotes_list.html
Desktop client components	
Call processing components	
Upgrade Cisco Unified Communications Manager.	*Upgrade Guide for Cisco Unified Communications Manager* at http://www.cisco.com/c/en/us/support/unified-communications/unified-communications-manager-callmanager/products-installation-guides-list.html
Upgrade (uninstall and reinstall) the JTAPI client on the Cisco Unified Communications Manager PG.	Upgrade Cisco JTAPI Client on PG

Task	See
Media recording components	
Upgrade MediaSense. [1]	*Installation and Administration Guide for Cisco MediaSense* at http://www.cisco.com/en/US/products/ps11389/prod_installation_guides_list.html
[*]If you are using IP IVR for self-service and queueing, see Getting Started with Cisco Unified IP IVR.	

[1] UCCE 11.0(1) supports only Cisco MediaSense 11.5.

Related Topics

Multistage Upgrades and Maintenance Windows

Common Ground Upgrade Tasks

The following section provides instructions about upgrading the virtual environment and the Unified CCE components. For instructions about upgrading non-Unified CCE components in a Unified CCE solution, for example Finesse and CUIC, see the links to component-specific documents in the Common Ground Upgrade Task Flow, on page 7.

Upgrade to Windows Server 2012 R2

Microsoft supports in-place upgrade of the operating system and SQL. This topic does not provide instructions for upgrading to Microsoft Windows Server 2012 R2. For this information, see the corresponding Microsoft documentation. This topic only highlights the actions that you perform before you attempt the upgrade and after you complete the upgrade of the operating system.

☞

Important Unified CCE 11.0(x) supports only Windows Server 2012 R2. For information about supported editions or service packs, see the Unified CCE Solution Compatibility Matrix at http://docwiki.cisco.com/wiki/Compatibility_Matrix_for_Unified_CCE.

Before you begin

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

  If you are upgrading the Logger, ensure that you have disabled configuration changes by performing the following steps:

  1. On the A side of the CallRouter in the system that you are upgrading, set the `HKEY_LOCAL_MACHINE\Software\Cisco Systems, Inc.\ICM\<instance_name>\RouterA\Router\CurrentVersion\Configuration\Global\DBMaintenance` key to 1 .

  2. On the B side of the CallRouter in the system that you are upgrading, set the `HKEY_LOCAL_MACHINE\Software\Cisco Systems, Inc.\ICM\<instance_name>\RouterB\Router\CurrentVersion\Configuration\Global\DBMaintenance` key to 1.

3. Verify that configuration changes are prevented. When you attempt to save a configuration change, you should see the following message: `Failed to update the database. Exclusive access to the CallRouter denied because configuration changes are currently disabled in the router registry.`

- If the virtual machine has SCSI Controller type as LSI Logic Parallel, change it to LSI Logic SAS. For more information, see Change the SCSI Controller Type, on page 4.

- If you did not already upgrade the VM network adapters to VMXNet3, upgrade them before upgrading the OS. see Upgrade VM Network Adapters from E1000 to VMXNet3, on page 5.

- Upgrading to Windows Server 2012 R2 may delete the persistent static routes and static network configurations (for private and public interfaces). Record your configurations before starting the upgrade process, and reconfigure it after the upgrade completes.

> **Note** If your persistent static route uses the private interface IP address as the gateway IP, change it to use the local gateway IP.

For more information about persistent static routes, see the *Staging Guide for Cisco Unified ICM/Contact Center Enterprise* at http://www.cisco.com/c/en/us/support/customer-collaboration/unified-contact-center-enterprise/products-installation-guides-list.html.

- Ensure that the VM does not have a ghosted network adapter before the upgrade.

During an upgrade, you can lose Static Network configuration if there is a ghosted network adapter on the VM.

Make any ghosted network adapter visible and uninstall it from the device manager before the upgrade to Windows Server 2012 R2 Standard. See Upgrade VM Network Adapters from E1000 to VMXNet3, on page 5.

- In the vSphere Client, ensure that you have upgraded the VM hardware version to the version 9.

- Change the guest operating system to Microsoft Windows Server 2012 (64 bit). To do so, right-click the virtual machine, select **Edit settings** > **Options** > **General Options** and select the guest operating system as **Microsoft Windows Server 2012 (64 bit)** and ensure the VM is powered off during this procedure.

- Ensure that the virtual machine has enough space before the upgrade. Operating System upgrade to Windows Server 2012 requires minimum of 16-GB primary hard disk space. If the virtual machine is a Logger/Distributor machine, the upgrade to SQL Server 2014 Standard or Enterprise edition requires an extra 6 GB.

> **Note** If you are performing the Windows upgrade on an AW-only server that does not have 16 GB, then upgrade the AW-only server using Technology Refresh.

What to do next

After upgrading your operating system to Windows Server 2012 R2, do the following:

- Remove the previous windows installation. see *Remove Previous Windows Installation*.

- Multilingual language pack will be uninstalled. Install the language pack manually. For more information on installing language pack, see Microsoft documentation at http://www.microsoft.com/OEM/en/installation/downloads/Pages/Windows-Server-2012-Language-Packs.aspx#fbid=bSYXlh5sO3X.

- Check the persistent static routes and static network configurations (for private and public interfaces). If the network settings are lost, reconfigure it manually.

Related Topics

Change the SCSI Controller Type, on page 4

Set Up Virtual Machines

Technology Refresh Upgrades

Upgrade VM Network Adapters from E1000 to VMXNet3, on page 5

Remove Previous Windows Installation

Before you begin

Enable **Desktop Experience** feature under **User Interfaces and Infrastructure** from Server Manager. This step is necessary for the disk cleanup process.

Procedure

Step 1	Click **Start**, search disk cleanup and then click **Disk Cleanup**.
Step 2	In the **Disk Cleanup Options** dialog box, click **Files from all users on this computer**.
Step 3	In the **User Account Control** dialog box, click **Continue**.
Step 4	Click to select the previous Windows Installation check box, and then click **OK**.

Upgrade to SQL Server 2014

Microsoft supports in-place upgrade of operating system and SQL Server. After you upgrade the operating system, upgrade to SQL Server 2014.

Note   *Unified CCE Solution Compatibility Matrix* at https://www.cisco.com/c/en/us/support/customer-collaboration/unified-contact-center-enterprise/products-device-support-tables-list.html

Before you begin

- The upgrade to SQL Server 2014 requires a minimum of 6-GB hard disk space. Ensure that the virtual machine has the required space before you begin the upgrade.

- Ensure that the virtual machine has SQL Server 2008 R2 SP2. Ensure that your SQL Server 2008 R2 installation works properly. Set the SQL Server service to **Active** state during the upgrade.

- If the virtual machine has SQL Server 2008 R2 Enterprise, then upgrade to SQL Server 2014 Enterprise version only. However, if the virtual machine has SQL 2008 R2 Standard Edition, it can be upgraded to either SQL Server 2014 Standard or Enterprise Edition.

- If present, remove DB-lib registry key from the location `HKEY_LOCAL_MACHINE\SOFTWARE\Wow6432Node\Microsoft\MSSQLServer\Client\DB-Lib` before starting the SQL upgrade.

Procedure

Step 1 Run the SQL Server 2014 Standard or Enterprise Edition installer. Consult Microsoft documentation as needed.

Step 2 Step through the wizard. As appropriate, accept the default or choose the correct instance for your deployment. Select **Rebuild** on the **Full-Text Search Upgrade Options** page.

Step 3 After the upgrade, change the SQL Server and SQL Server Agent service accounts to Virtual accounts.

To change to Virtual account:

a. Open SQL Server 2014 Configuration Manager.

b. Under **SQL server services**, right-click **SQL Server(MSSQLSERVER)**, and select **Properties**.

c. Select **This Account**.

d. In the **Account Name** field, enter **NT SERVICE\MSSQLSERVER**.

e. Leave the **Password** field blank. See Microsoft documentation on Windows service accounts and permissions for more information at https://msdn.microsoft.com/en-us/library/ms143504.aspx.

f. Click **OK**.

Repeat the same steps for SQL Server Agent with Account Name as **NT SERVICE\SQLSERVERAGENT** and start the services.

Note   While you can use the Network or Local Services account instead of the Virtual account, using the Virtual account provides security.

Note
- SQL Server Client Tools of SQL Server 2008 R2 remain on the server along with the same tools of SQL Server 2014. These tools include SQL Server Management Studio, SQL Server Profiler, the Database Engine Tuning Advisor, sqlcmd, and osql.

- SQL Server 2014 supports importing of settings from earlier versions of SQL Server Client Tools.

Migrate Unified CCE Logger Database and Upgrade Logger

To upgrade the Logger, you do the following tasks:

- Migrate the Logger database.

- if you use Outbound option, migrate the outbound option database.

- Install the new software.

Before you begin

Before you perform this procedure, ensure that you have upgraded the VM to the new platform of Windows Server and SQL Server.

Procedure

Step 1	Using Unified CCE Service Control, stop all Unified CCE services on the Server and change to Manual Start.
Step 2	Launch the EDMT, and click **Next**.
Step 3	Select **Common Ground**, and click **Next**.
Step 4	On the warning message, click **Yes** if you have taken a backup of your database, and no services are currently running.
	Note If you have not taken the backup of your database, click **No** to exit the installer.
Step 5	In the Database Connection section, highlight the database that you want to upgrade, and then click **Next**.
Step 6	Click **Start Migration**. A warning message is displayed asking for confirmation of the data migration.
Step 7	Click **Yes** to confirm.
Step 8	Click **OK** to acknowledge the message. After completion of the data migration, a warning message is displayed telling you to select a valid deployment type.
Step 9	Exit the EDMT.
	If Outbound Option is deployed, repeat the same steps to migrate the BA database.
Step 10	To upgrade the Logger, launch the 11.0 ICM-CCE-Installer by running **setup.exe**, and click **Next**.
Step 11	To apply any Minor Releases, click **Browse** and navigate to the 11.5(1) Minor Release software. Click **Next**.
Step 12	To apply any Minor Releases, click **Browse** and navigate to the 11.6(1) Minor Release software. Click **Next**.
Step 13	Select **SQL Server 2014 Security Hardening** and click **Next**.
Step 14	Click **OK** on any informational messages that display.
Step 15	Click **Install**.
Step 16	Reboot the server when the upgrade completes.

Related Topics

Upgrade Unified CCE Call Router

Before you begin

Before you perform this procedure, ensure that you have upgraded the virtual machine to new platform of Windows. For more information, see Upgrade to Windows Server 2012 R2, on page 12.

Procedure

Step 1	Reboot the Call Router virtual machine.
Step 2	Launch the 11.0 ICM-CCE-Installer and click **Next**.
Step 3	(Optional) To apply any Minor Releases, click **Browse** and navigate to the Minor 11.5(1) Release software. Click **Next**.
Step 4	(Optional) To apply any Minor Releases, click **Browse** and navigate to the Minor 11.6(1) 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 HDS Database and Upgrade the Unified CCE Administration & Data Server

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

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

Before you begin

Before you perform this procedure, ensure that you have upgraded the VM to the compatible versions of Windows Server and SQL Server.

Procedure

Step 1	Using Unified CCE Service Control, stop all Unified CCE services on the Server and change to Manual Start.
Step 2	For HDS-related deployments, launch the EDMT and click **Next**. Select **Common Ground** and click **Next**. Review or change the information that is displayed as required and click **Start Migration**. Click **Yes** on the warning message that displays. Exit the EDMT.
Step 3	Launch the 11.0 ICM-CCE-Installer and click **Next**.
Step 4	Optional: To apply any Minor Releases, click **Browse** and navigate to the 11.5(1) Minor Release software. Click **Next**.
Step 5	Optional: To apply any Minor Releases, click **Browse** and navigate to the 11.6(1) Minor Release software. Click **Next**.
Step 6	(Optional) Select **SQL Server 2014 Security Hardening** and click **Next**.
Step 7	Click **OK** on any informational messages that display.
Step 8	Click **Install**.
Step 9	Reboot the server when the upgrade completes.

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

Related Topics

Upgrade Peripheral Gateways

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

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

- If your contact center uses the CTI OS component, upgrade the CTI OS server at the same time as the associated Unified Communications Manager PG.

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

- When you upgrade the Unified Communications Manager application, upgrade the JTAPI client that is associated with the Unified Communications Manager PG at the same time.

Before you begin

Before you perform this procedure, ensure that you have upgraded the virtual machine to the new platform of Windows. For more information, see Upgrade to Windows Server 2012 R2, on page 12.

Procedure

Step 1   Launch the 11.0 ICM-CCE-CCHInstaller and click **Next**.

Step 2   (Optional) To apply any Minor Releases, click **Browse** and navigate to the 11.5(1) Minor Release software. Click **Next**.

Step 3   (Optional) To apply any Minor Releases, click **Browse** and navigate to the 11.6(1) Minor Release software. Click **Next**.

Step 4   Click **OK** on any informational messages that display.

Step 5   Click **Install**.

Step 6   Reboot the server when the upgrade completes.

Related Topics

Set up Peripheral Gateways

Upgrade Outbound Option Dialer

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

Procedure

Step 1   Launch the 11.0 ICM-CCE-Installer and click **Next**.

Step 2   (Optional) To apply any Minor Releases, click **Browse** and navigate to the 11.5(1) Minor Release software. Click **Next**.

Step 3   (Optional) To apply any Minor Releases, click **Browse** and navigate to the 11.6(1) Minor Release software. Click **Next**.

Step 4   (Optional) Select **SQL Server 2014 Security Hardening** and 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.

Step 8   Use Unified CCE Service Control to set all Unified CCE services to Automatic Start.

Upgrade Unified CCE Administration Client

Procedure

Step 1   Launch the 11.0 AdminClientInstaller and click **Next**.

Step 2   (Optional) To apply any Minor Releases, click **Browse**, and navigate to the 11.5(1) Minor Release software. Click **Next**.

Step 3   (Optional) To apply any Minor Releases, click **Browse**, and navigate to the 11.6(1) Minor Release software. Click **Next**.

Step 4   Click **OK** on any informational messages that display.

Step 5   Click **Install**.

Step 6   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.