Upgrade Unified CCE 12.0(1) Solution With Windows 2016 and SQL 2017 - Common Ground Upgrade Procedure

Contents

Introduction

This document describes in detail the steps involved to perform a common ground upgrade of an existing 12.0(1) Unified Contact Center Enterprise (CCE) servers on Windows 2012 operating system (OS) and Structured Query Language (SQL) 2014 to Windows OS 2016 and SQl 2017 version.

Prerequisites

Requirements

Cisco recommends that you have knowledge of these topics:

- Cisco Unified Contact Center Enterprise (UCCE)
- Customer Voice Portal (CVP)
- Microsoft Windows Operating System
- Microsoft SQL

Components Used

The information used in the document is based on CCE solution 12.0(1) version.

The information in this document was created from the devices in a specific lab environment. All of the devices used in this document started with a cleared (default) configuration. If your network is live, make sure that you understand the potential impact of any step.

Background Information

Microsoft announced the end of mainstream support for windows 2012 operating system in 2018*(extended support valid till 2023).* This push Cisco Contact Center Business Unit (BU) in to make CCE software compatible with windows 2016 OS and SQL 2017. This document aims to cover all the aspects related to common ground upgrade of CCE 12.0 via these sections:

- Common Ground Upgrade of Microsoft OS from 2012 to 2016
- Common Ground Upgrade of Microsoft SQL from 2014 to 2017
- Unified CCE Patch install to support windows 2016 and SQL 2017
- CVP Patch install to support windows 2016

One common question that has come up is, what if a partner or customer has ordered media prior to July 04, meaning that the media they have is for installation on Windows 2012 only, how can they receive new media to install directly on Windows 2016. The following scenarios will answer this question.

- Standard Installation Media Customers and Partners can return to PUT and use their existing SWSS to order new media. The new fulfillment will be for Windows Server 2016/SQL Server 2017 direct install.
- Not For Resale (NFR) Installation Media Customers with NFR media should follow the same steps above, return to PUT and order a new copy of the media.Partners with NFR media should reorder the CCE NPS kit. This is a $0.00 order item and will be fulfilled with media that supports direct installation to Windows 2016.

Common Ground Upgrade of Microsoft OS from 2012 to 2016

On CCE core servers common ground upgrade of windows OS from 2012 to 2016 is supported, this module explains the steps required for upgrade along with the pre and post upgrade task needed on the CCE virtual machines.

Pre-Upgrade Tasks

Perform these common ground pre-upgrade task for host virtual machine , windows OS and CCE application respectively.

Virtual Machine

a) VM hardware version : In the vSphere Client, ensure that you have upgraded the VM hardware version to the version 11. This is to take care of vulnerabilities like Spectre and Meltdown.

b) Guest Operating System : Change the guest operating system to Microsoft Windows Server 2016 (64 bit) via these steps:

- Ensure the VM is powered off.
- Right-click on the virtual machine, navigate to **Edit settings > Options > General Options** and select the guest operating system as Microsoft Windows Server2016 (64bit), as shown in the image.
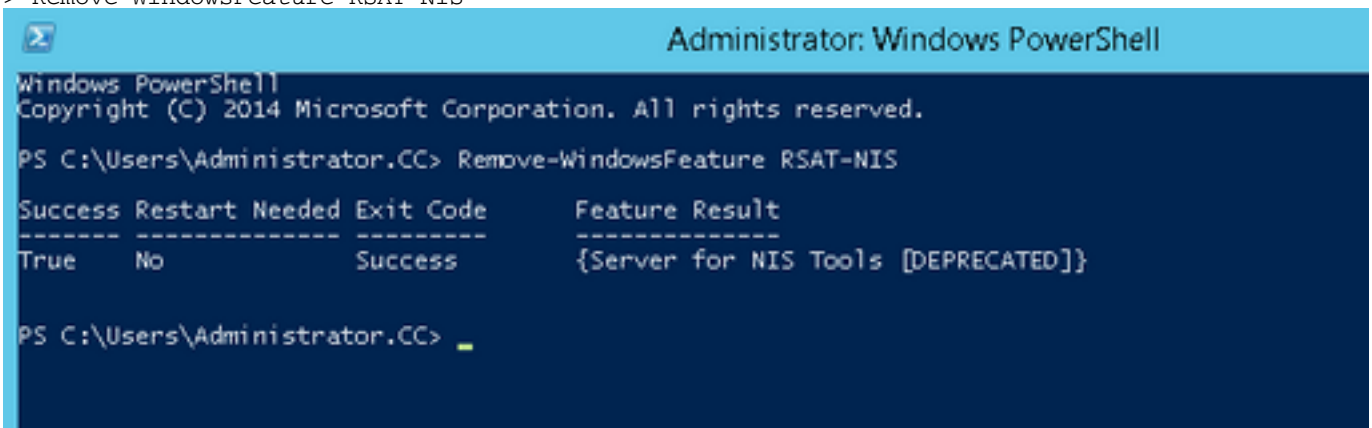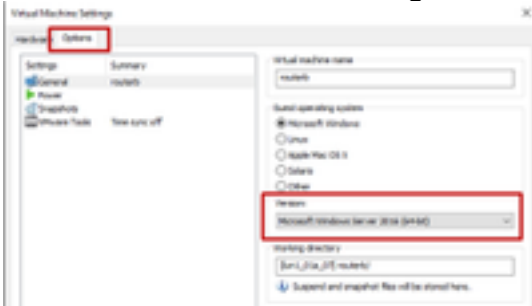

c) Space Requirements: Ensure that the virtual machine has enough space before the upgrade. Operating System upgrade to Windows Server 2016 requires minimum of 32-GB primary hard disk space.

Windows OS

a) NIS Tools: Windows 2016 does not support server for NIS tool. In order to remove the 'Server for NIS Tools' feature follow these steps:

- Option 1: Powershell Run the following command from Powershell (Administrator access)

```
> Remove-WindowsFeature RSAT-NIS
```
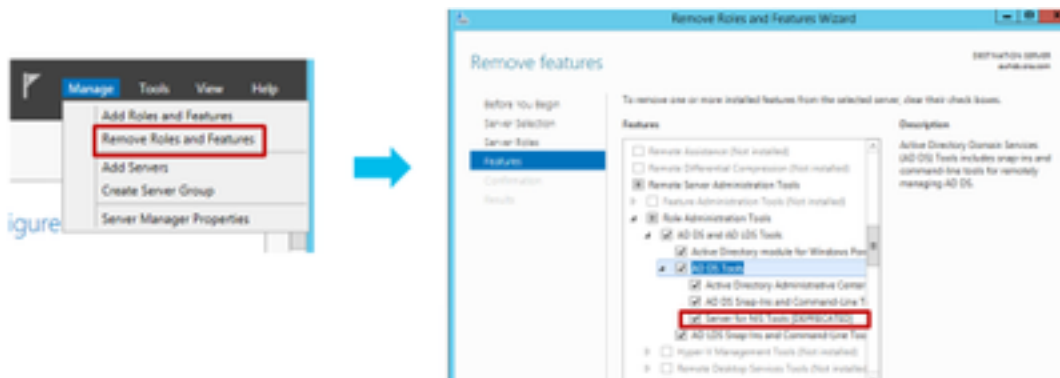

- Option 2: Server Manager Navigate to Server Manager and open **Remove Roles and Features Wizard**.On the Remove Features page, expand **Remote Server Administration Tools > Role Administration Tools > AD DS** and **AD LDS Tools > AD DS Tools**.Uncheck Server for NIS Tools [DEPRECATED] and continue with the wizard.

Note: If NIS tools are not removed windows 2016 upgrade halts with the highlighted warning, as shown in the image.

Note: In some circumstanceous after the OS upgrade Windows Netlogon service can be moved to STOPPED and MANUAL state. Ensure the service is changed to automatic and started for xp_logininfo to work. More details on this behaviour can be checked in Microsoft KB article '*https://docs.microsoft.com/en-us/troubleshoot/windows-server/identity/netlogon-service-not-start-automatically*'

Note:Reboot of the server is not required

CCE Application

a) Services: Set the services to manual via **CCE Service Control** and stop all the services.

b) DBMaintenance registry: On the loggers, ensure that DBMaintenance registry is set to 1 in order to disable configuration changes during the upgrade procedure. Open Windows regedit and navigate to: **HKEY_LOCAL_MACHINE\Software\Cisco Systems,Inc.\ICM\<instance_name>\RouterA-B\Router\CurrentVersion\Configuration\Global\DBMaintenance,** set the key to 1.

Upgrade Windows to 2016 OS

Follow these steps in order to upgrade Windows 2012 to Windows 2016:

Step 1. Select download and install updates (recommended) option if server has access to Internet, otherwise select Not right now.

Step 2. Select windows server 2016 (Desktop Experience).
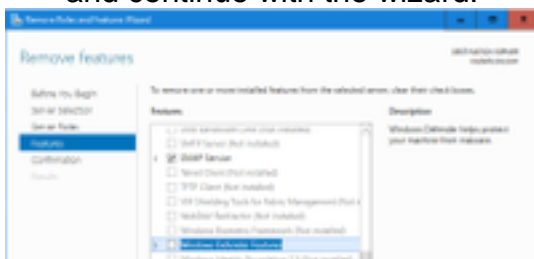
Step 3. Select Keep Personal files and app.

> **Note**: In some scenarios Windows Server 2016 upgrade prompt you to uninstall antivirus due to compatibility issue with Windows Defender. If prompted proceed with the uninstall.
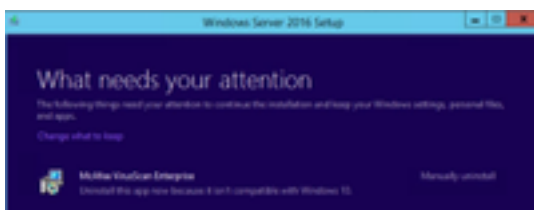
Post Upgrade Steps

a) Windows Defender: By default windows defender is enabled on Windows Server 2016. This can cause CCE installation to take longer than expected due to the scan of files by defender. Based on your company policies perform one of these options:

- Option 1: Disable Windows Defender Navigate to Server Manager and open Remove Roles and Features Wizard.On the Remove Features page, uncheck windows defender features and continue with the wizard.

- Option 2: Exclude ICM Folder Add the ICM product folder <Install Drive:>\icm to the exclusion list of Windows Defender.

  Note: Details on the steps can be checked via this Microsoft document:.File Exclusion Windows Defender

b) Antivirus: In some scenarios Windows Server 2016 upgrade prompt you to uninstall antivirus due to compatibility issue with Windows Defender. If prompted, proceed with the uninstall.

c) Language pack: Windows upgrade also uninstalls any multilingual language pack, install the language pack manually.

d) Persistent Static routes: Ensure that the static routes are present between the router and PG pair.

Common Ground Upgrade of Microsoft SQL from 2014 to 2017

This section explains the steps required to upgrade Microsoft SQL from 2014 to 2017 on CCE Routers and Loggers (Roggers), CCE loggers and CCE Administrators and Data servers.

Pre-Upgrade Tasks

a) Standard or Enterprise Edition**:** Confirm the type of SQL edition present.

- Virtual machine with SQL Enterprise Edition can be upgraded only to the Enterprise version.
- Virtual machine with SQL Standard Edition can be upgraded to either SQL Server Standard or Enterprise Edition.
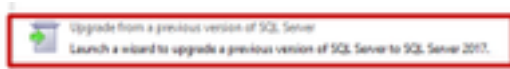
b) Space Requirements: Ensure that the virtual machine has enough space before the upgrade.

- On Logger, Administrators and Data Servers the upgrade to SQL Server 2017 Standard or Enterprise Edition requires an extra 6 GB.
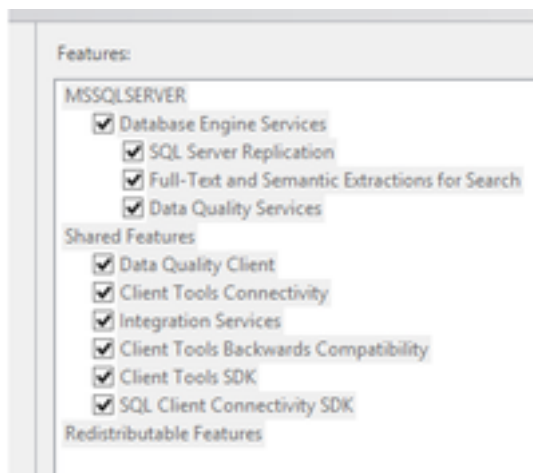
Upgrade SQL to 2017

a) Standard Edition.

Step 1. Select the upgrade wizard option.

Step 2. Ensure all required features are present .

3. On the Full-text Upgrade window, select Rebuild.

Post Upgrade Steps

a) SQL Server Management Studio for 2017: SQL Server 2017 does not contain SQL Server Management Studio in the default toolkit.

- Server with Internet connection: Re-run the SQL Server setup to install Management Studio. Navigate to **SQL Selection Center >Installation > Install SQL Server Management Tools.**

- Server without Internet connection: Download and install SQL server 2017 Management Studio manually.

Unified CCE Patch install to support windows 2016 and SQL 2017

After the upgrade of Windows Server 2012 and SQL Server 2014 platform to windows 2016 and SQL 2017 on a CCE 12.0(1) implementation, apply the Unified CCE 12.0(1) ES18 patch.

Readme : https://www.cisco.com/web/software/280840583/147172/Release_Document_1.html
Download
Path: https://software.cisco.com/download/specialrelease/60cc617f633ae3bfe2dcf418474b4f45

Pre-Install Tasks

a) Outbound High Availability: Before you apply the patch, ensure to disable Outbound HA feature.

b) Windows Defender : Ensure that Windows Defender is disabled or uninstalled.

Install

The CCE patch has to be present on all these CCE core components.

- Logger
- Distributor
- Router
- PG

To install the patch, launch the installer and follow the instructions on the screen.

Note: When CCE 12.0(1) is installed on Windows Server 2012 R2 and SQL Server 2014 and a common ground platform upgrade to Windows Server 2016 and SQL Server 2017 is not planned to be performed, the installation of ES18 is not required.

Note: Upgrades from 11.x to 12.0(1) after platform upgrade, do not require installation of ES18 post 12.0(1) installation.

Post Install Steps

a) Group Membership: Before the CCE services are started, fix the group membership account via Service account Manager tool. In 12.0 release, this is a expected behaviour as there is a change related to Service Account Manager.
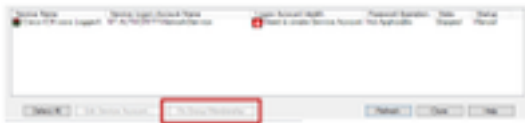
CVP Patch install to support windows 2016

After the upgrade of Windows Server 2012 to windows 2016, for a CVP 12.0(1) implementation to be compatible, you must apply CVP 12.0(1) ES_5 patch.

Readme : https://www.cisco.com/web/software/280840592/147174/Release_Document_1.html
Download
Path: https://software.cisco.com/download/specialrelease/e66f58780d6d53a6b4ede77f0b63834a

Pre-Install Tasks

a) Audio Files Backup: Before you install the patch, the audio files must be backed up from **C:\Cisco\CVP\VXMLServer\Tomcat\webapps\CVP\audio** folder.
b) Jar files backup: Take backup of custom jar files, if present.

Install

Patch has to be present on all these CVP servers.

  * CVP VXMLServer and CallServer
  * OPSConsoleServer
  * Unified Remote Operations server
  * Reporting Server

To install the patch, ensure that the CVP related services are stopped, launch the patch installer and follow the instructions on the screen.

Post Install Steps

a) Ensure Cisco CVP CallServer, VXMLServer and WebServicesManager services are up after the ES is installed and servers are rebooted.

b) Ensure the "audio" folder is created under "C:\Cisco\CVP\VXMLServer\Tomcat\webapps\CVP".

c) Restore the backed up audio files and custom jar files if present.