# Cisco TelePresence Content Server Release 7.2.1 Virtual Machine Installation Guide for Existing Customers

**February 14, 2018**

This document provides instructions for installing Cisco TelePresence Content Server Release 7.2.1 as a virtualized application on a VMware vSphere Hypervisor (ESXi) system.

See these sections:

- Recommended Platform
- Limitations and Restrictions
- Digital Image Signing Of TCS
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- SQL Sever 2012 Support
- Before You Begin
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- Migrations options for Existing Customers
- Migrating Data from Old TCS to Shared Network Location
- Installing VM Content Server on Existing Hardware
- Installing TCS Installer
- Migrating Data from Shared Network Location to TCS VM
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# Recommended Platform

These are the supported OVA requirements for **UCS C220** Content Server hardware (**Third-Generation, Fourth-Generation, BE7K and Third Party Hardware**):

| | |
|---|---|
| vCPU[1] | 12 |
| RAM | 8 GB |
| Disk space[2] | 550 GB |

1. Hyper threading is enabled.

2. 550 GB disk space is allocated only for VM.

Content Server Release 7.2.1 is not supported on **First-Generation and Second-Generation Content Server Hardware**.

These are the supported OVA requirement for BE6K Content Server hardware with Hyper threading disabled

| | |
|---|---|
| vCPU | 2 |
| RAM | 4 GB |
| Disk space | C (50GB) + E (250 GB) = 300 GB |

**Note** .Any other UCS models conforming to the Tested Reference Configuration (TRC) or a better TRC should be supported by the tested virtual machine configuration.

# Third Party Hardware Details

| | |
|---|---|
| Machine Make | HP |
| Machine Model No | ProLiant ML350p Gen8 |
| CPU Cores | 6 CPUs x 2.094 GHz |
| Processor Type | Intel(R) CPU E5-2620 v2 @ 2.10GHz |
| RAM | 8 GB |
| Hard Disk | 900x2 GB |

# Limitations and Restrictions

- Table 1 describes the Content Server hardware and VMware vSphere Hypervisor (ESXi) software version compatibility.

*Table 1        Content Server Hardware and VMware ESXi Software Compatibility*

| ESXi Software Version | Content Server Third-Generation and Fourth-Generation Hardware |
|---|---|
| ESXI 6.0 | Yes, with VMware Cisco custom ISO image available here: https://my.vmware.com/web/vmware/info/slug/datacenter_cloud_infrastructure/vmware_vsphere/6_0#custom_iso ESXi to download: CISCO Custom Image for ESXi 6.0.0 GA Install CD. |
| ESXi 5.5 | Yes, with VMware Cisco custom ISO image available here: https://my.vmware.com/web/vmware/info/slug/datacenter_cloud_infrastructure/vmware_vsphere/5_5#custom_iso ESXi to Download: Cisco Custom Image for VMware ESXi 5.5.0 GA Install CD |

Virtual machine loses network connectivity intermittently for the following product versions:

- VMware ESXi 5.0.x
- VMware ESXi 5.1.x
- VMware ESXi 5.5.x
- VMware ESXi 6.0.x

This issue would occur in the following environments, due to the driver bundled with Microsoft Windows 2012:

- The virtual machine is Windows 2012 or Windows 2012 R2.
- The virtual machine is using E1000 or E1000E driver.

A work around for this issue is to use VMXNET3 instead of E1000 or E1000e driver.

For more information see the following article:

https://kb.vmware.com/selfservice/microsites/search.do?language=en_US&cmd=displayKC&externalId=2109922

# Digital Image Signing Of TCS

There are two type of files used in TCS that is Digital Signed:

- .exe files
- OVA files

## Verification of digital signatures of .exe files

Follow the below steps to verify the digital signature of.exe files:

**Step 1** **Right click** on 'Windows' icon to look at the file properties.

**Step 2** Select the **Properties**.

**Step 3** Check if the signature is deemed valid by Windows on the Digital Signature tab, refer the image below:
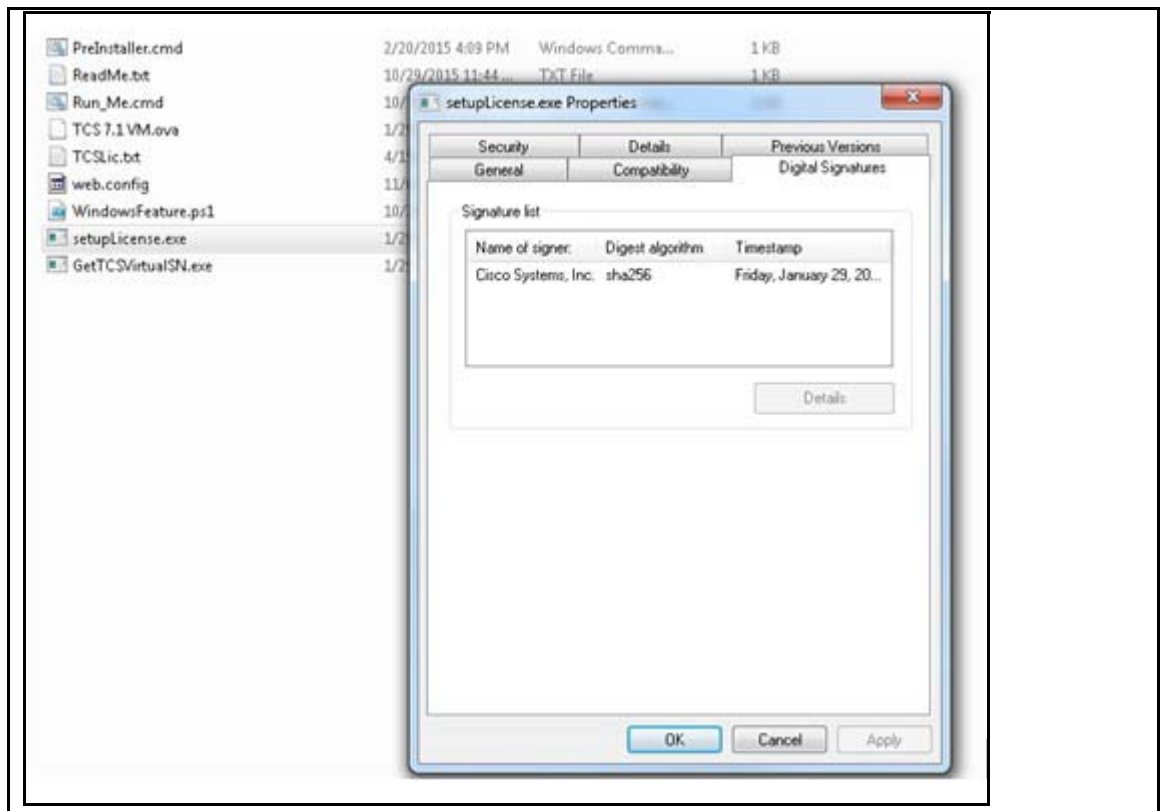
# Verification of digital signatures of OVA files

**Step 1**    Log into the vsphere client.

**Step 2**    Select the File > Deploy OVF Template.

**Step 3**    Select the **Signed OVA** file.

**Step 4**    Click Next. 'Publisher, Vendor' Windows will appear, refer the image below:
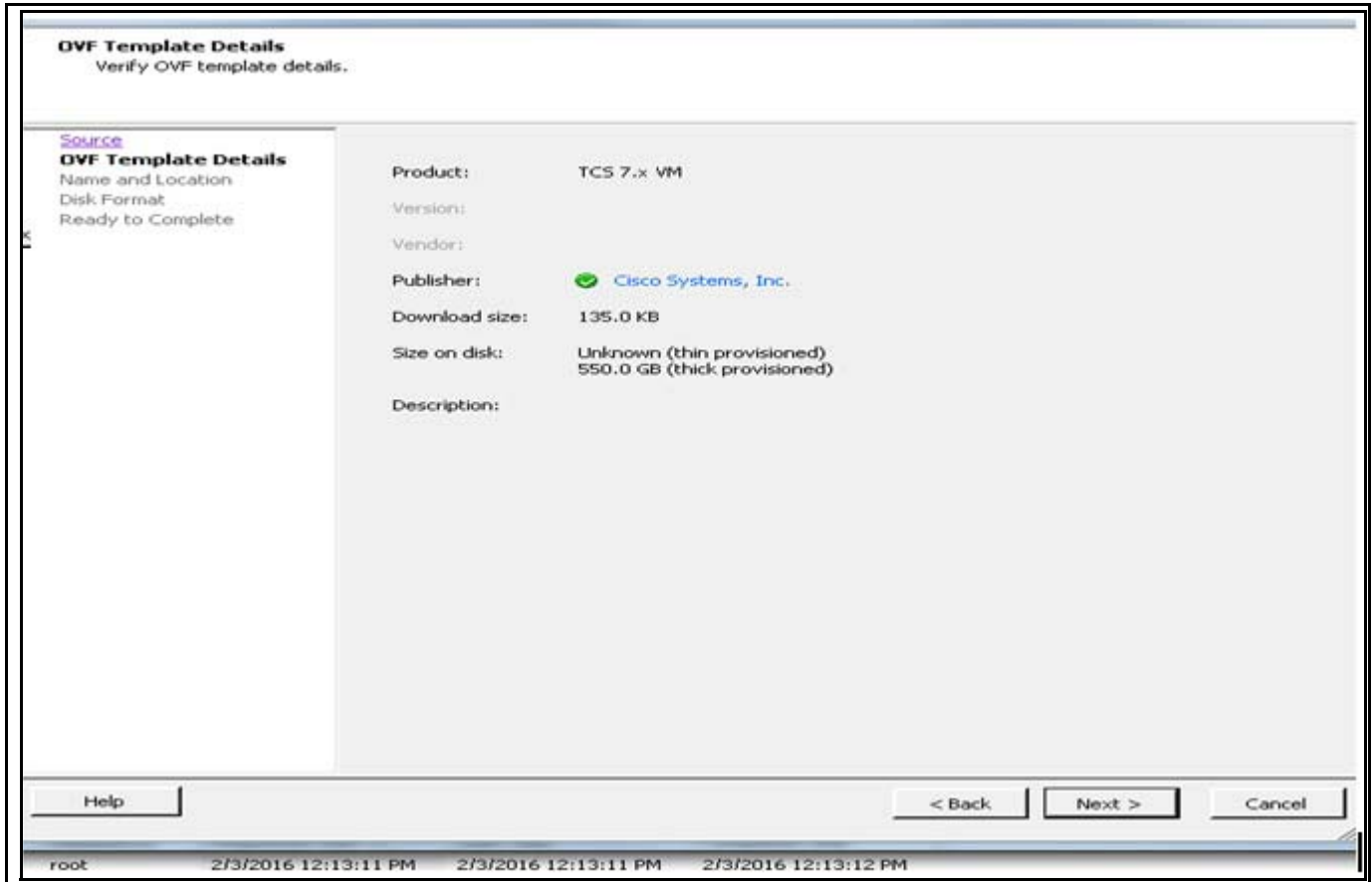


# Installation Prerequisites Checklist

1. Customer needs to purchase **R-VMTCS-MIG-K9 PID** to move from physical appliance TCS to VM TCS.

✎

**Note**    If a customer has an existing contract, this migration PID is free of cost.

2. Download the VM Content Server Release 7.2.1 software by using an external download location link which is provided in the E-delivery notification email:

    a. Content Server software image

    b. OVA template which is specific to the host hardware

    c. System configuration scripts

3. Confirm that you have this system software available for installation:

    a. Windows Server 2012 Standard R2 Service Pack 2 or Service Pack3.

    b. VMware vSphere Hypervisor (ESXi) software version that is specific for the Content Server third generation and fourth generation hardware (see Table 1).

    c. SQL Server 2012 Express or Enterprise or Standard Edition.

4. Before installing VMware ESXi vSphere on the host server, check that:

    a. Virtualization Technology (VT) is enabled in the BIOS

    b. "Virtual Machine Startup/Shutdown" is configured to "Allow Virtual machines to start and stop automatically with the system" and the VM Content Server has been moved to the Automatic startup section

    c. Valid NTP server is configured which is the same NTP server, that will be specified in the Content Server.

# SQL Sever 2012 Support

Earlier SQL Server 2005 was being installed internally as local database server by the TCS installer. In 7.x, the approach is changed. Internal installation of SQL Server 2005 was dropped and now SQL Server 2012 is required as a prerequisite for TCS installation.

Before installation, A SQL Server instance named TCS must be present at local machine. The edition of SQL Server 2012 can be any of Standard editions, Enterprise Edition or Express edition.

If user wants to install Express edition, it can be downloaded from the following location: https://www.microsoft.com/en-in/download/details.aspx?id=29062, download the file ENU\x86\SQLEXPR_x86_ENU.exe

To support TLS 1.1 and 1.2 in Windows environment, SQL server needs to be upgraded to SP2 or SP3 version (both x86 and x64 versions are supported) along with their respective cumulative updates.SQL Server 2012 RTM and SP1 does not support TLS 1.1 and 1.2.

# Before You Begin

Before installing VM Content Server Release 7.2.1 on an existing hardware, you will need to:

- Obtain the license and option keys from the Content Server registry and create a license text file to restore the keys on the VM Content Server.

- Use the Cisco TelePresence Content Server Migration Assistant Tool (Migration Assistant) to migrate the data and configuration settings from the existing hardware to shared network location.

# Obtain License and Option Keys from Old TCS

Copy the license and option keys from the Content Server registry. Follow these steps:

**a.** Log in to the Content Server by using Windows Remote Desktop.

**b.** Press Windows + R to launch the Run application.In the Open field, enter **regedit** and click **OK**.
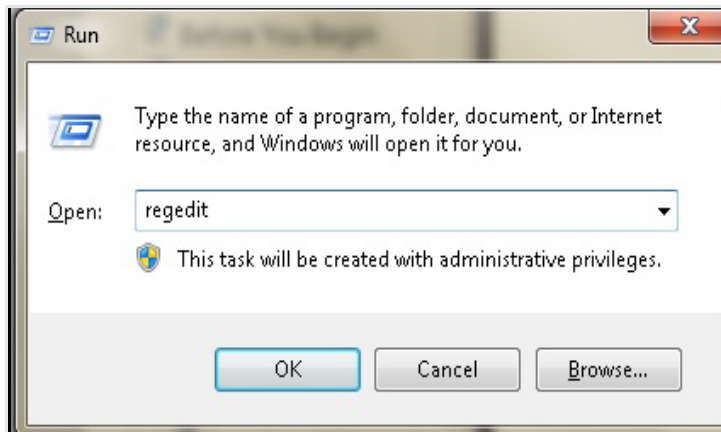


**c.** In Registry Editor navigate to the following path:

HKEY_LOCAL_MACHINE\SOFTWARE\Wow6432Node\TANDBERG\TCS

For Content Server Release 5.x, navigate to the following path:

HKEY_LOCAL_MACHINE\SOFTWARE\TANDBERG\TCS

**d.** Locate the Serial Number and Release Key in the Data column. Copy and save the serial number and release key in a text file. For example:
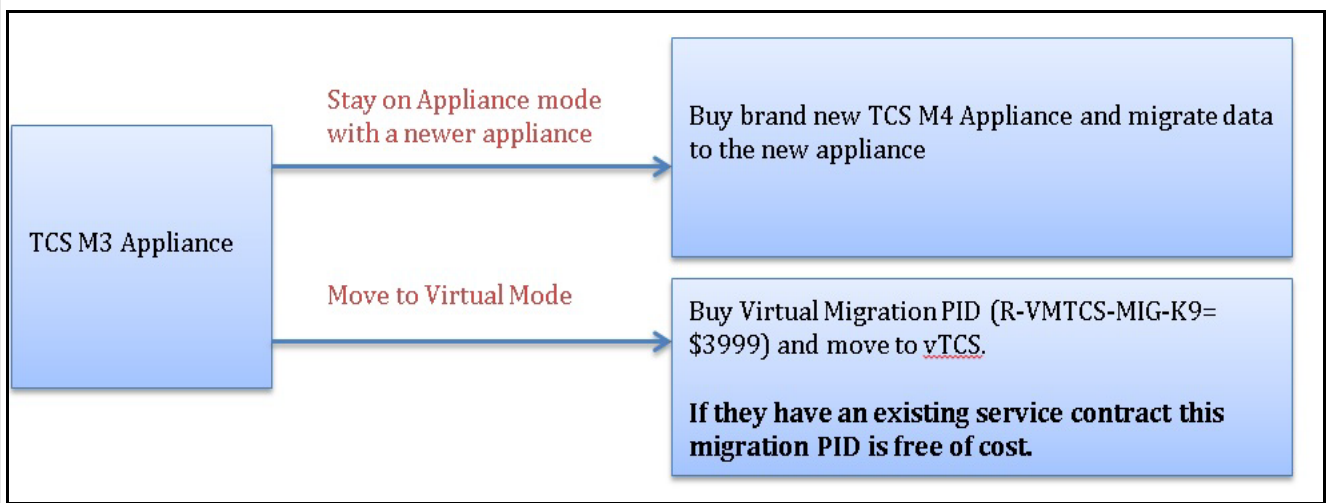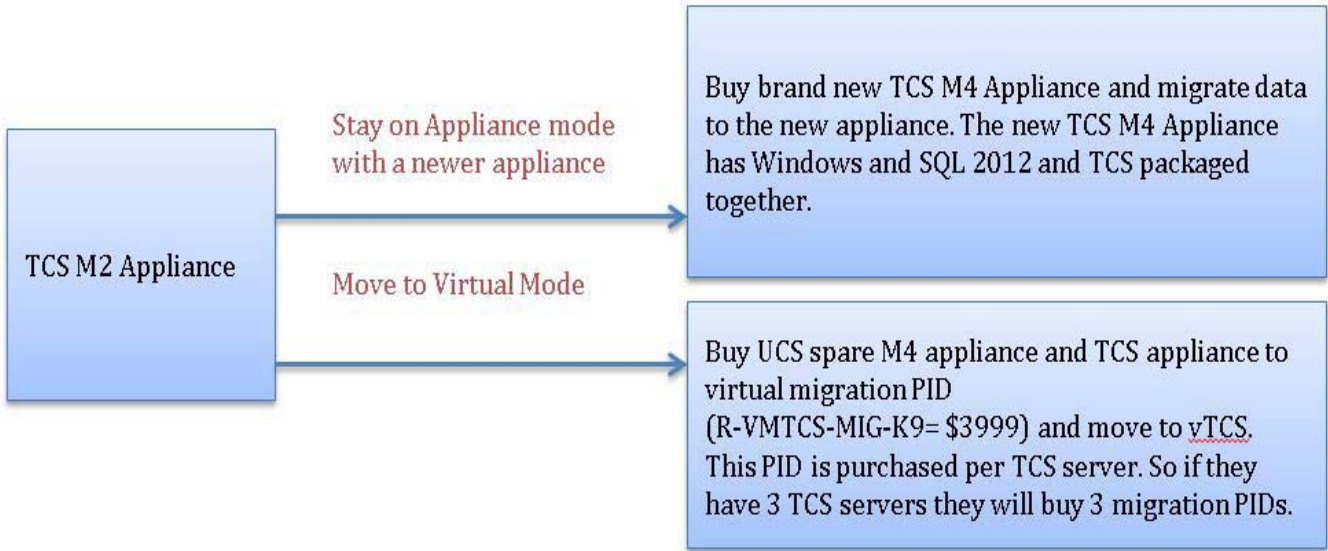0772262265091631
49A30107
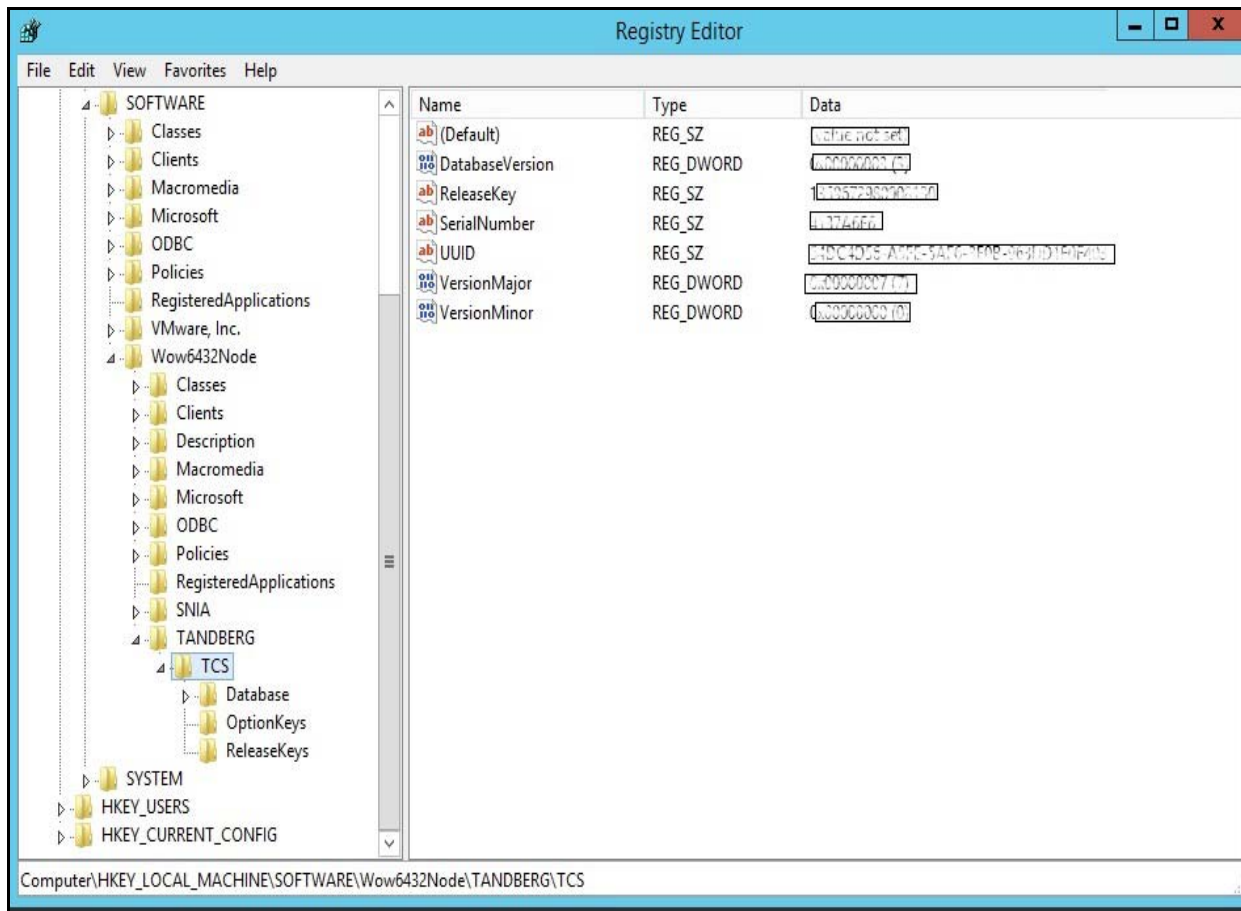
e.  In Registry Editor navigate to the following path:

HKEY_LOCAL_MACHINE\SOFTWARE\Wow6432Node\TANDBERG\TCS\OptionKeys

For Content Server Release 5.x, navigate to the following path:

HKEY_LOCAL_MACHINE\SOFTWARE\TANDBERG\TCS\OptionKeys

f.  Locate the option keys in the Name column. Copy and save the option keys in a text file. For example:
115361R5-1-84E863EF
115361L2-1-D6734B87
115361R5-2-68DB53FA
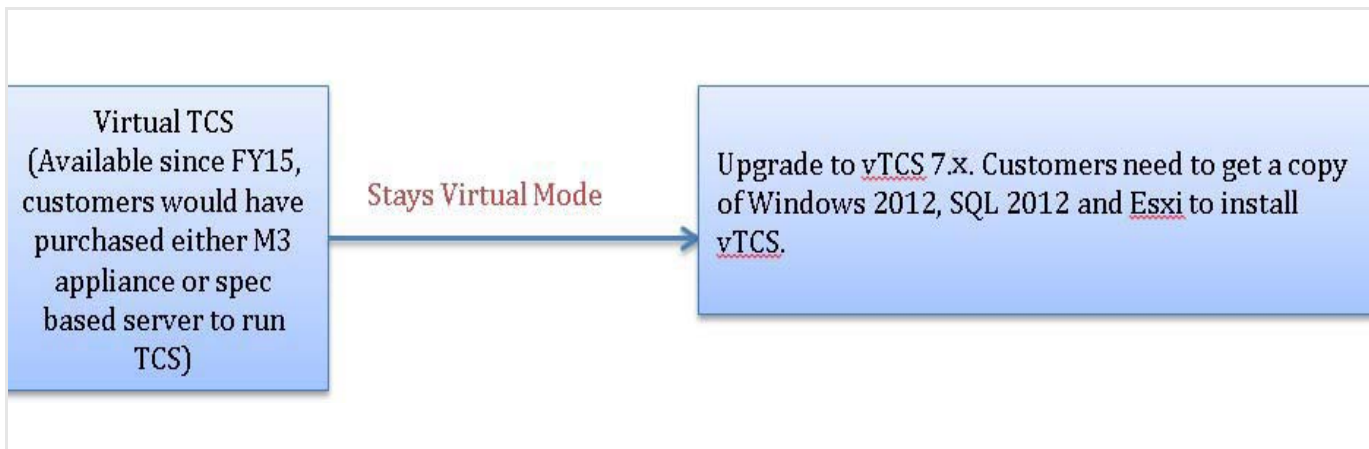115361C1-1-D42D15A3
115361HD1-1-034A588C
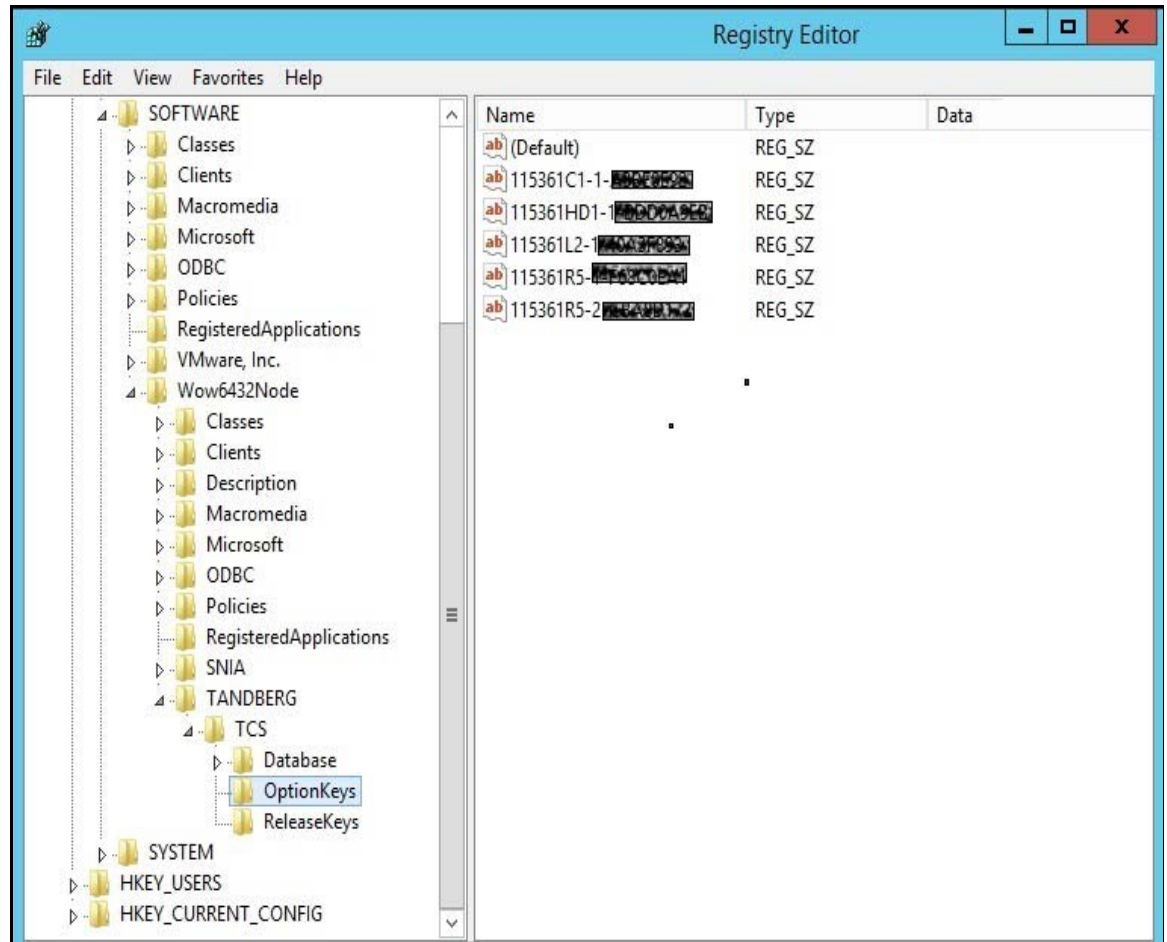
# Migrations options for Existing Customers

**Existing TCS customers can have any of the following**

**With release of TCS 7.x on both virtual and appliance here are the migration options**

TCS M2 Appliance

Stay on Appliance mode with a newer appliance

Move to Virtual Mode

Buy brand new TCS M4 Appliance and migrate data to the new appliance. The new TCS M4 Appliance has Windows and SQL 2012 and TCS packaged together.

Buy UCS spare M4 appliance and TCS appliance to virtual migration PID (R-VMTCS-MIG-K9= $3999) and move to vTCS. This PID is purchased per TCS server. So if they have 3 TCS servers they will buy 3 migration PIDs.

TCS M3 Appliance

Stay on Appliance mode with a newer appliance

Move to Virtual Mode

Buy brand new TCS M4 Appliance and migrate data to the new appliance

Buy Virtual Migration PID (R-VMTCS-MIG-K9= $3999) and move to vTCS.

**If they have an existing service contract this migration PID is free of cost.**

## Migrating Data from Old TCS to Shared Network Location

Run the Migration Assistant on the existing source Content Server to copy the media and configuration settings to a shared network location.

An existing TCS may be running in one of the following mode:

- If an existing TCS is running in **Cluster** mode, Follow the below **Step 1**, **Step 2** and **Step 3**.
- If existing TCS is running in **Standalone** or **NAS** mode, skip **Step1** and **Step 2** and follow only **Step 3**.

**Step 1** Remove all servers except for the source Content Server from cluster.

**Step 2** Remove the last (source) Content Server from cluster. The source server becomes a stand-alone Content Server with NAS.

**Step 3** Go to the below link and follow the **Step 1** to **Step 9** to migrate the data to shared network location.

http://www.cisco.com/c/en/us/td/docs/telepresence/tcs/6_0/release/notes/tcs-6-1-ma-rn.html

## Installing VM Content Server on Existing Hardware

**Tip** It is recommended to follow the steps given in the guide for a base installation to confirm that no software discrepancies occur while installing TCS.

Complete these tasks to install VM Content Server Release 7.2.1 on existing hardware:

1. Installing VMware vSphere ESXi

2. Deploy OVA to Host, page 12

3. Installing Windows Server 2012 Standard R2

4. Local Policy SettingInstalling Roles and Features

5. Local Policy Setting

6. Installing SQL Server 2012 database server

# Installing VMware vSphere ESXi

Install VMware vSphere ESXi on the host Content Server (See Table 1 for the ESXi version).

For ESXi Release 6.0, see the VMware release notes here:

https://www.vmware.com/support/vsphere6/doc/vsphere-esx-vcenter-server-60-release-notes.html

For ESXi Release 5.5, see the VMware release notes here:

https://www.vmware.com/support/vsphere5/doc/vsphere-esx-vcenter-server-55-release-notes.html

# Deploy OVA to Host

These instructions represent a typical installation. The Deploy OVF Template wizard dynamically changes to reflect the host configuration.

**Step 1**    Log in to the vSphere client to access the ESXi Host.

**Step 2**    Select **File > Deploy OVF Template**.

**Step 3**    On the Source page, **Browse** to the location of the OVA file that is specific to the host appliance and Click **Next**.

**Note**    For TCS 7.2.1, OVA file is in **S_7_2_1_TCSVM_Bundle.zip** and for BE6K, OVA file is in **S_7_2_1_TCSBE6K_Bundle.zip**.
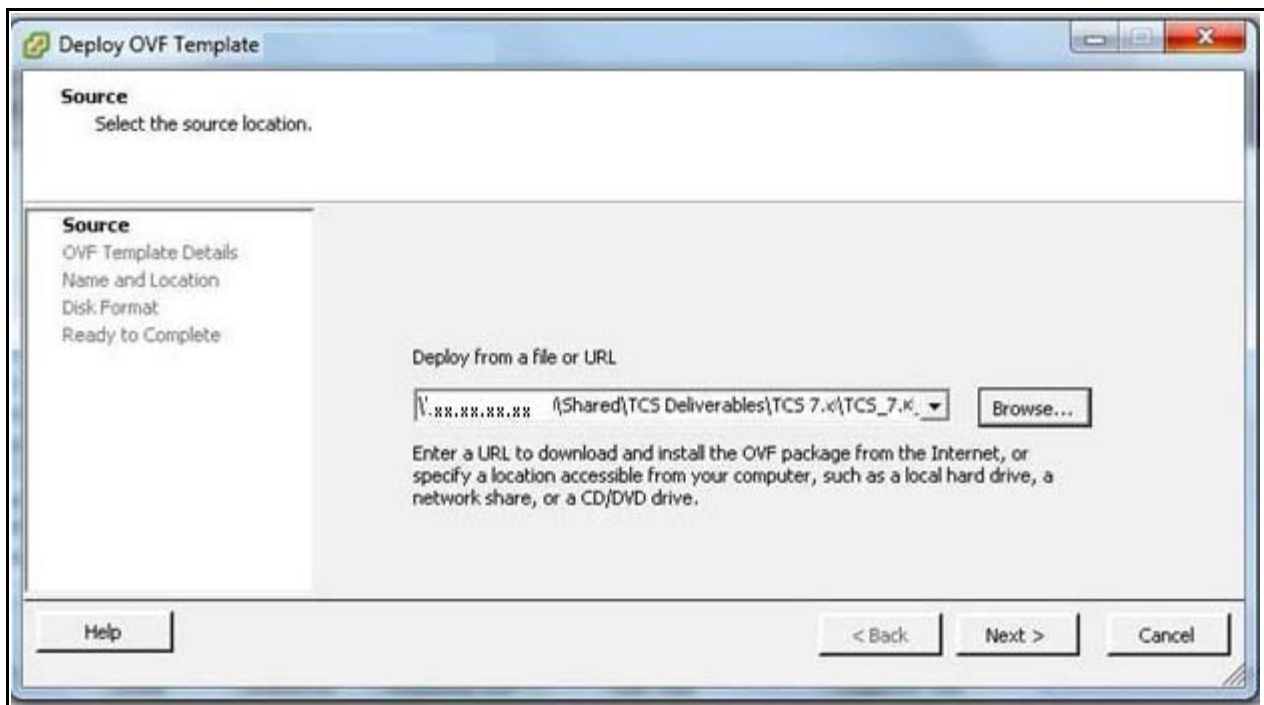
**Step 4** On the Name and Location page, enter the **Name** for the VM Content Server guest, for example "Virtual_TCS". Click **Next**.
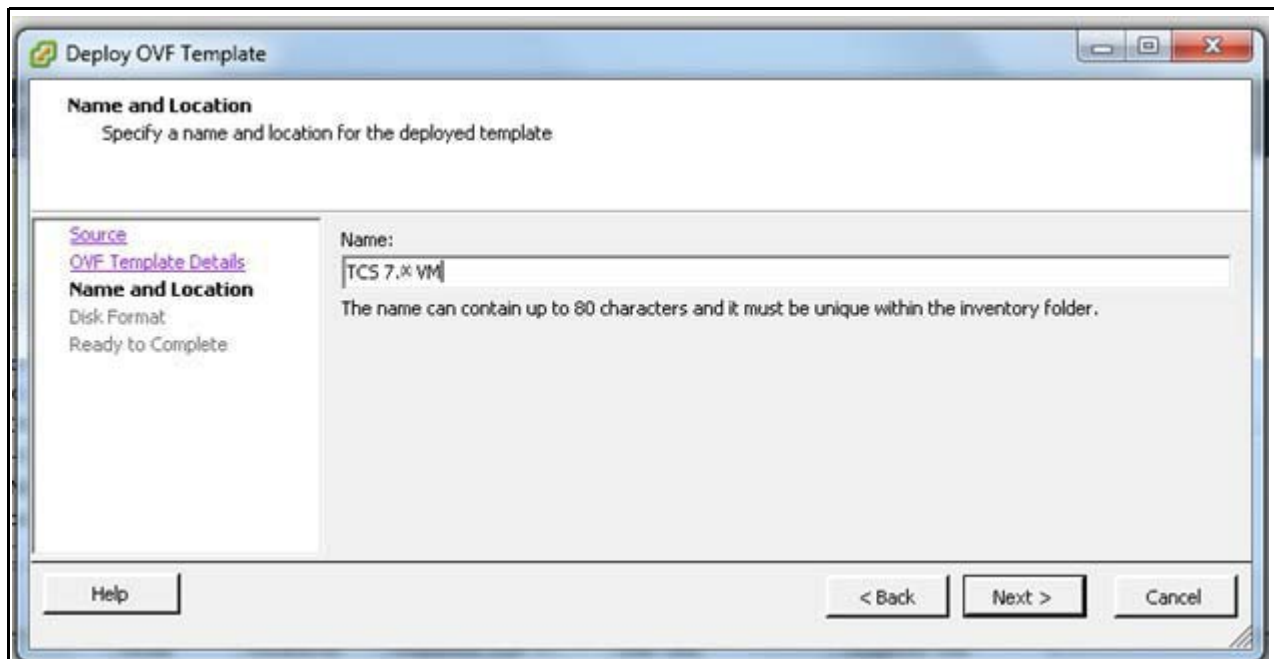


**Step 5** On the Disk Format page, confirm that the **Thick Provision Lazy Zeroed** default disk format is selected. Click **Next**.
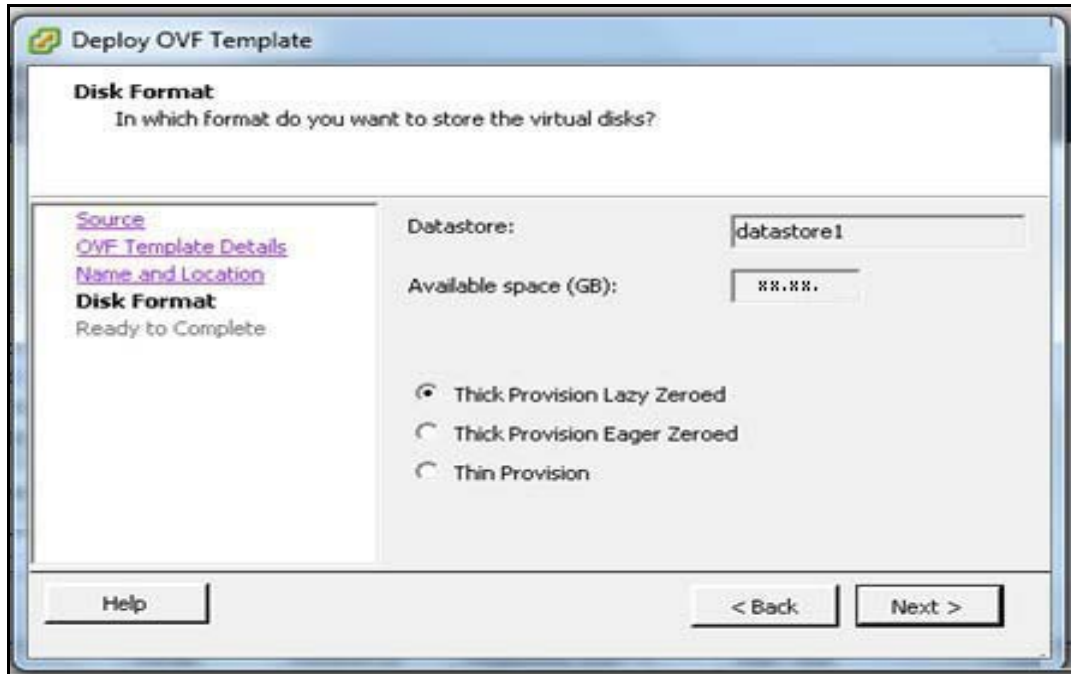
**Step 6** On the Ready to Complete page:

    **a.** Confirm the deployment settings.

    **b.** Select the **Power on after deployment** check box.

    **c.** Click **Finish**.
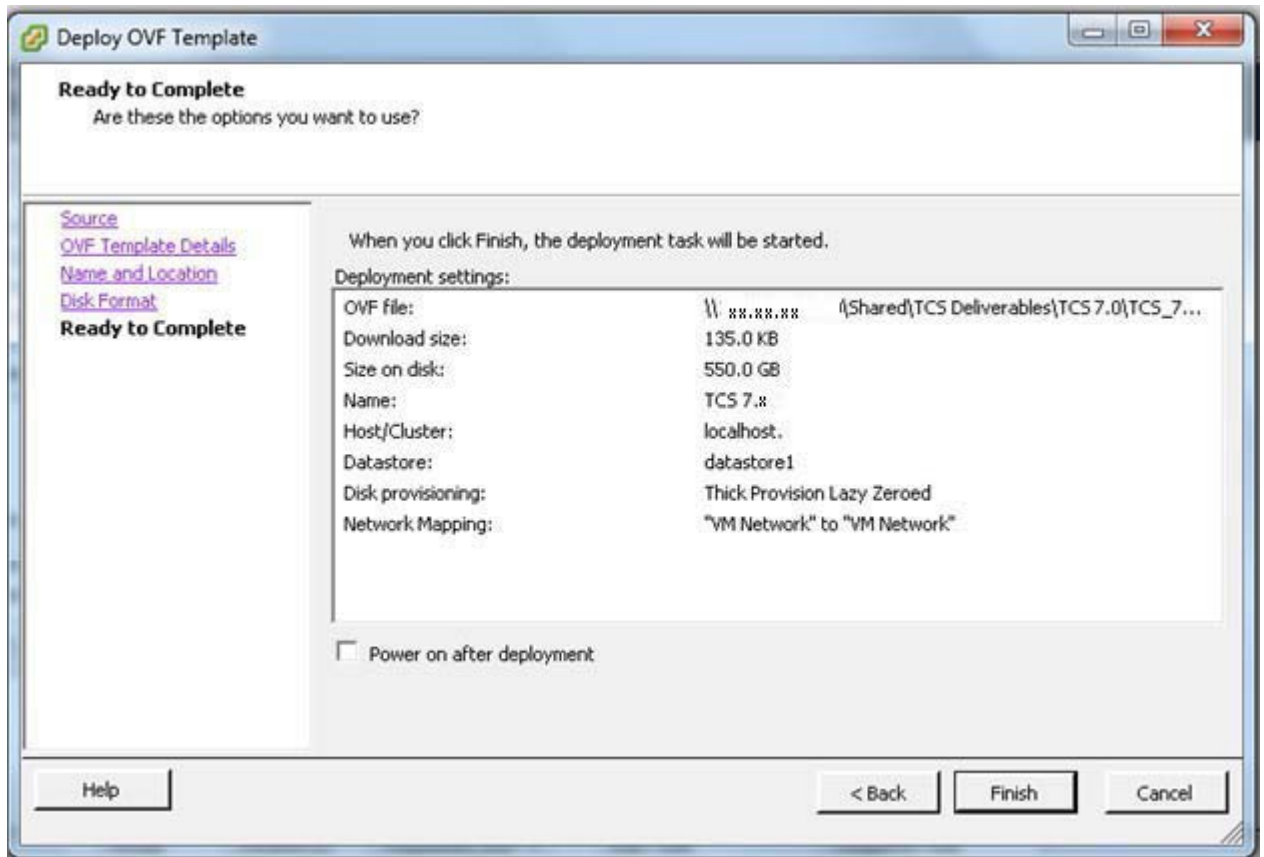
**Step 7**    The installation process begins and a progress bar is displayed. The Content Server OVA is now deployed as a guest on the VM host.

# Installing Windows Server 2012 Standard R2

These instructions represent a typical installation.

**Step 1** Obtain the Windows Server 2012 Standard R2 software to begin installation process.

**Step 2** Power on the VM.

**Step 3** Depending on your Windows Server media type, perform one of these steps:

    **a.** Insert the Windows 2012 DVD in DVD drive. In ESXi, connect the DVD drive letter by using the ESXi option **Connect/Disconnect the CD/DVD devices of Virtual Machine > Connect to <DVD drive letter>**.

    or

    **b.** Mount the Windows 2012 ISO image file in ESXi by using the option **Connect/Disconnect the CD/DVD devices of Virtual Machine > Connect to ISO Image on local disk** and browse the Windows Server ISO image file.

**Step 4** Press **CTRL + ALT + Insert** to boot from the DVD or the mounted ISO image.

**Step 5** If prompted, choose **Windows Server 2012 R2 Standard (Server with GUI) x64**.

**Step 6** In the Install Windows Server screen, choose **Custom** (Advanced).

**Step 7** Create two partitions on the host while installing Windows:

- First partition for program files with a minimum of 100 GB space.

- Second partition for media files with the remainder of available space (450 GB).

**Note** In case of BE6K platform, create two partition of the following sizes:

- First partition for program files with a minimum of 50 GB space.

- Second partition for media files with the remainder of available space (250 GB)
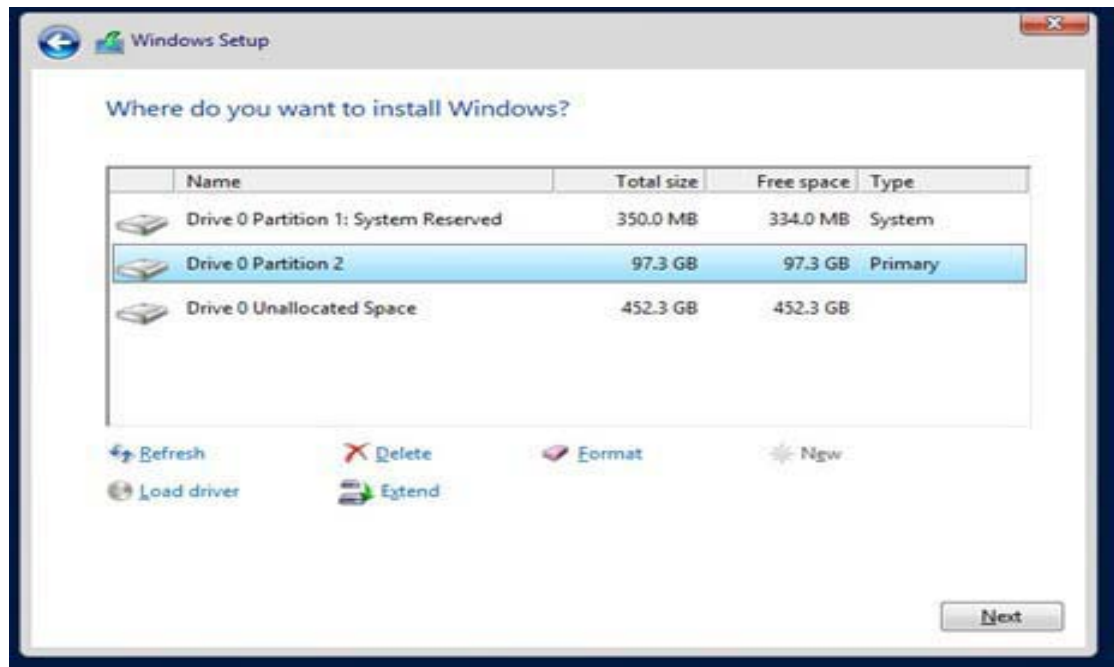
> **Note** The drive letter might differ in your OS. Go to **Disk Management** to change the drive to E:.
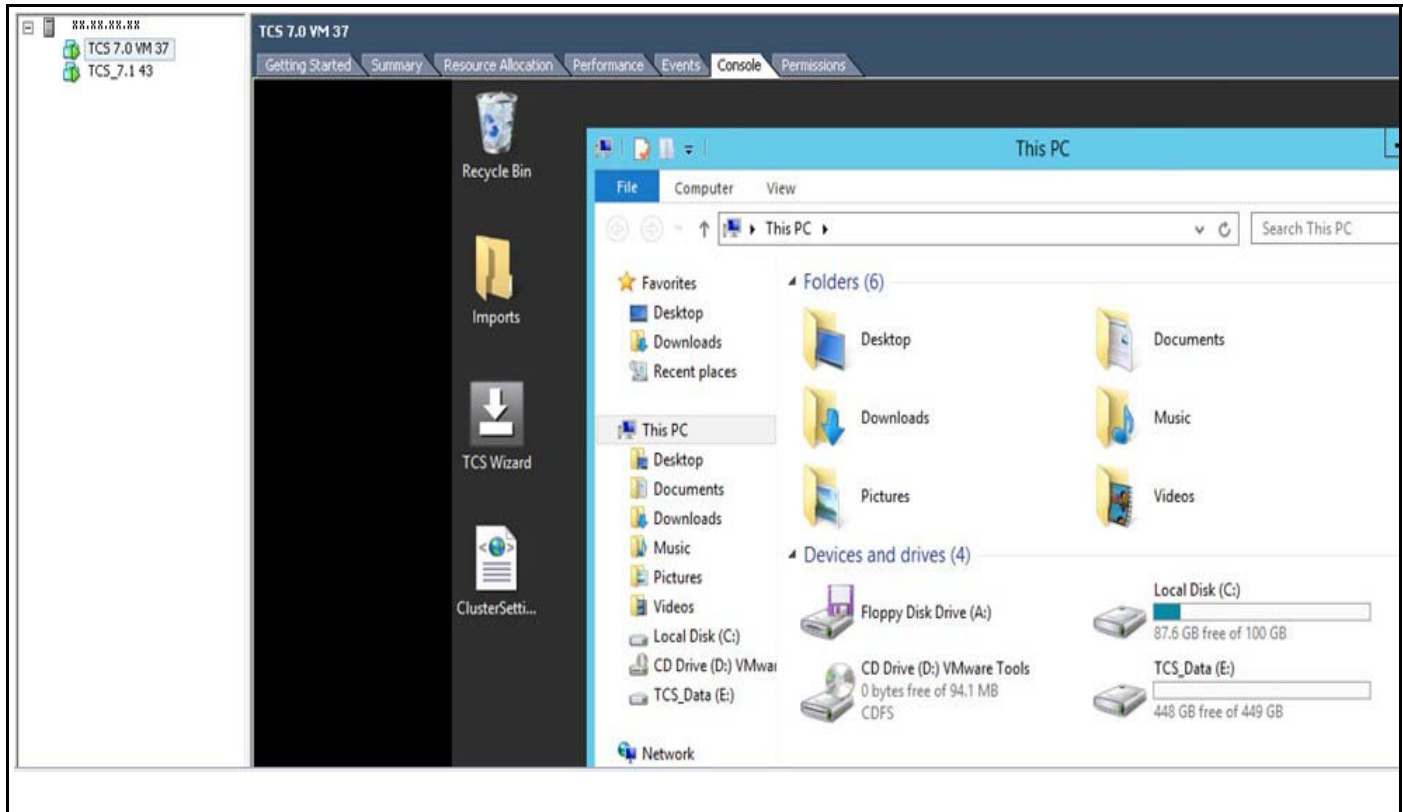
**Step 8** Follow the prompts to complete the Windows Server installation.
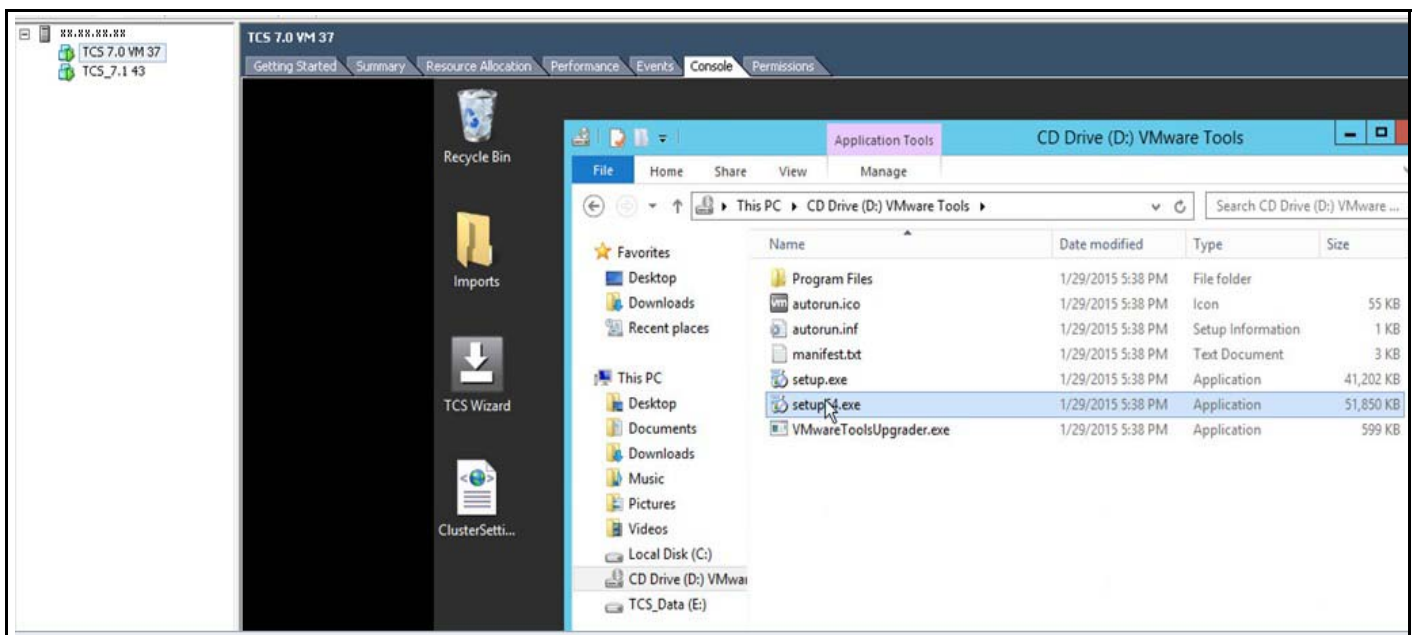
**Step 9** Install VMware Tools:

    **a.** Right click the Content Server VM node. Select **Guest > Install/Upgrade VMware Tools**.
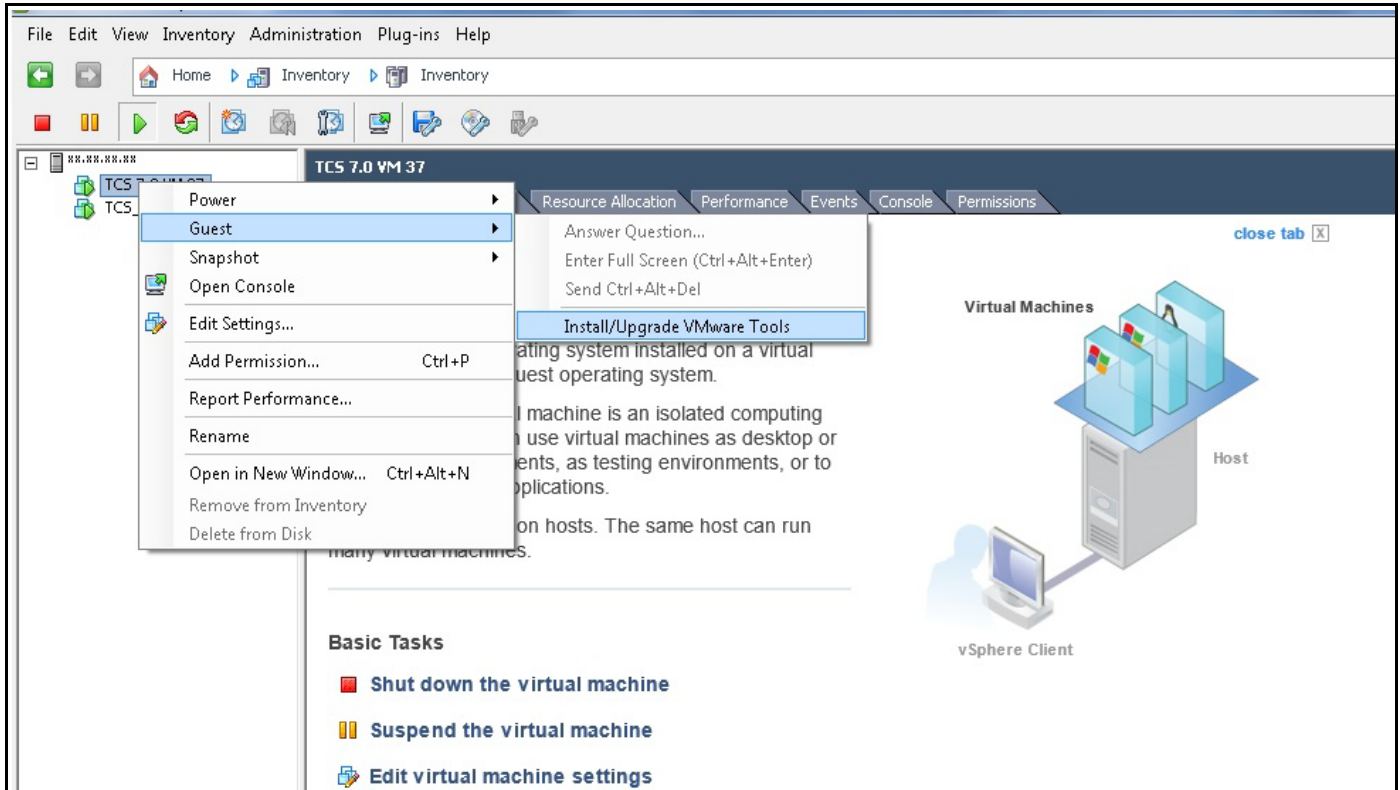
**b.** Click the Console tab. In the Console window double click the mounted drive (VMware Tools).



**c.** Double click **setup64.exe** to launch the Setup wizard. Choose **Typical** to complete the installation.



**d.** When installation is complete, click **Finish**. Click **Restart** to restart the system.

**Step 10** Go to the console to configure the Content Server networking parameters. Assign the IP address, the netmask, the default gateway, and the DNS server address. For more information, see the *Cisco TelePresence Quick Start Guide* on Cisco.com.

**Step 11** Go to **My Computer > Properties** and enable Remote Desktop services.

# Installing Roles and Features

**Step 1** Install Internet Information Services (IIS8). On VM host, navigate to **Server manager > Dashboard**. Click on **Add roles and Features.**
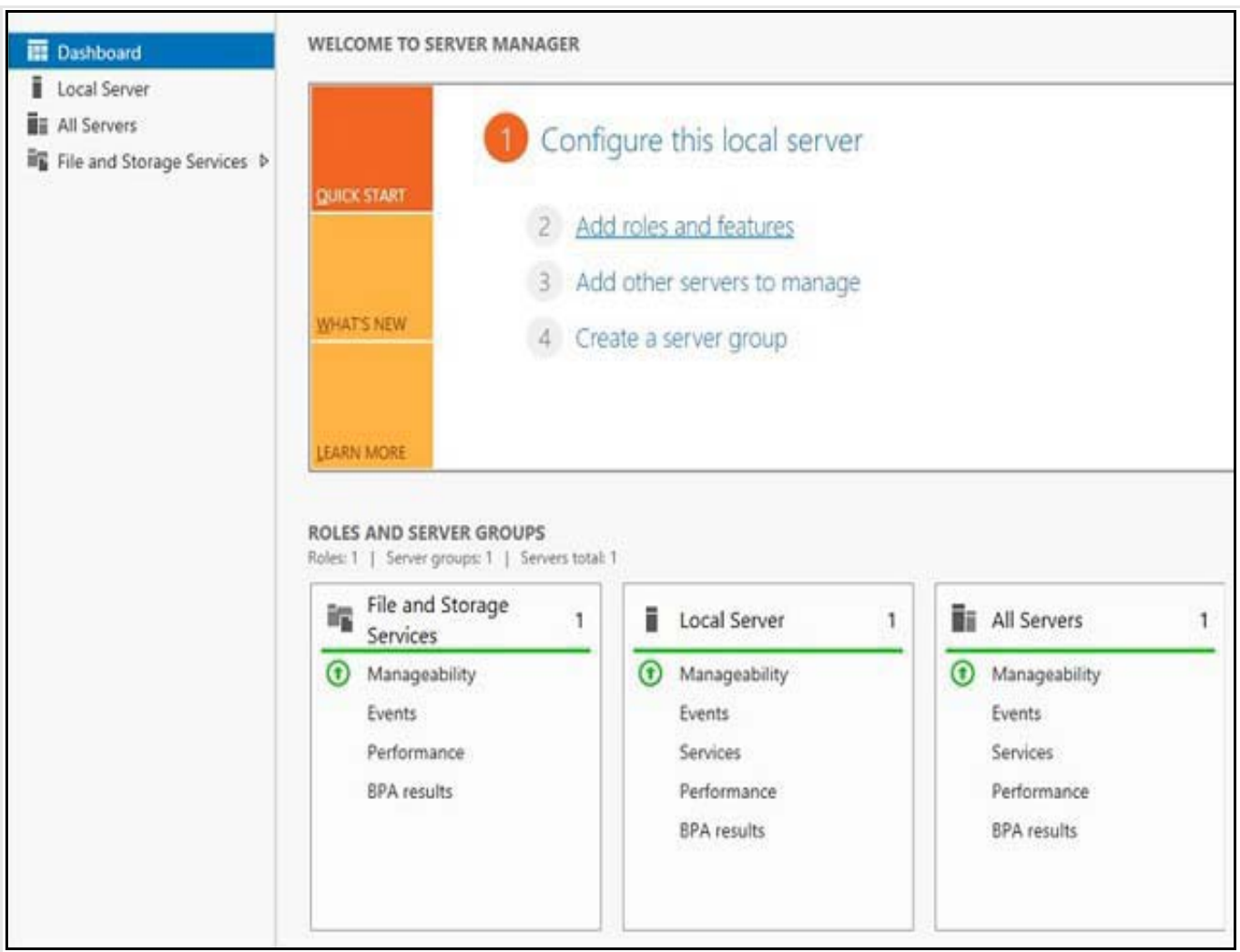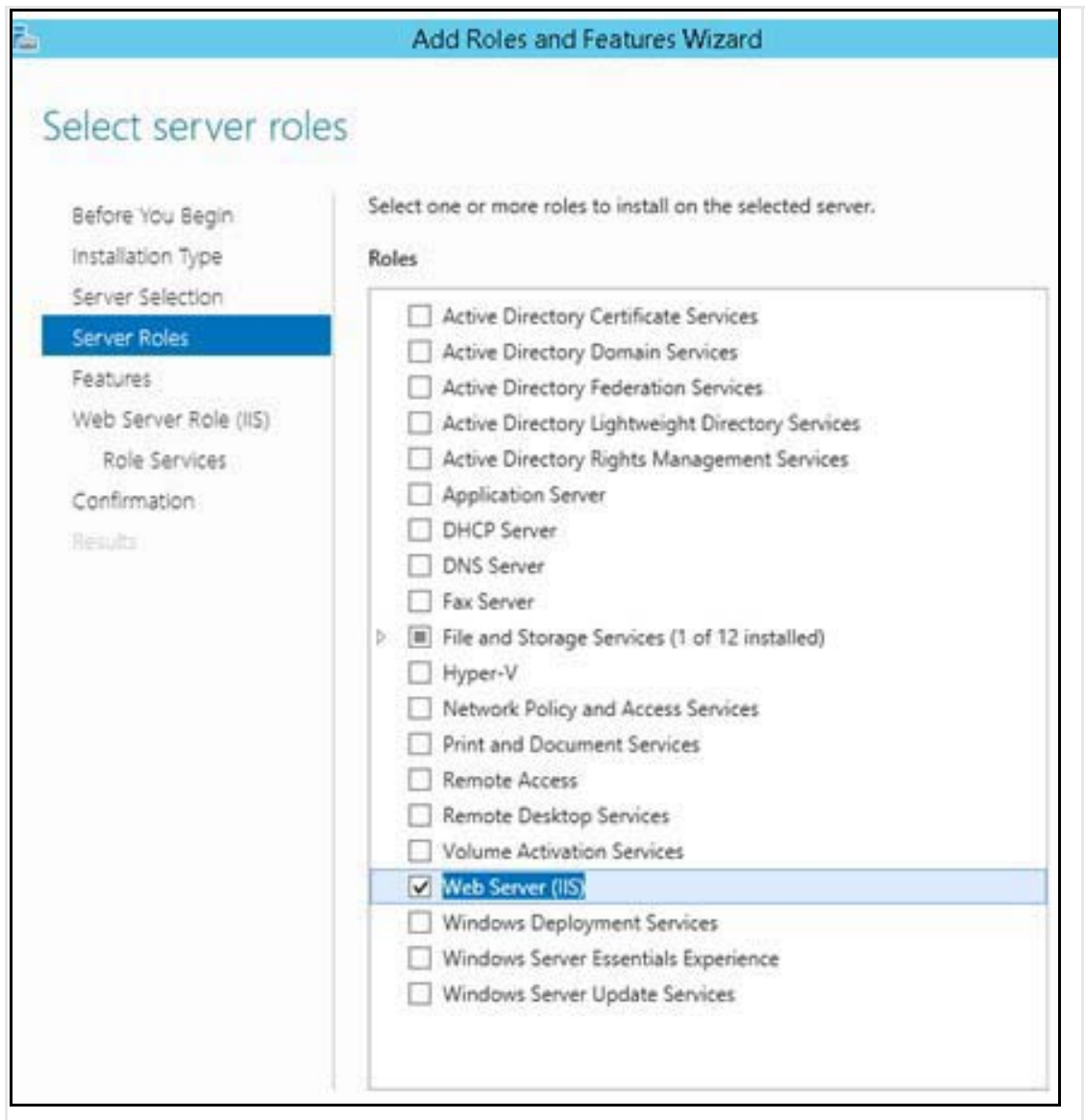
**Step 2** On **Select Server Roles** page, click the **WebServer IIS** check box. A pop-up appears for installing the dependent features, click **Add Features** to continue and click **Next**.

**Step 3** On **Select Features** page, select **Net framework 3.5 and ASP.Net 4.5** as shown in the below image. Also select **Windows Server backup and Desktop Experience**. A pop-up appears for installing the dependent features, click **Add Features** to continue and click **Next**.
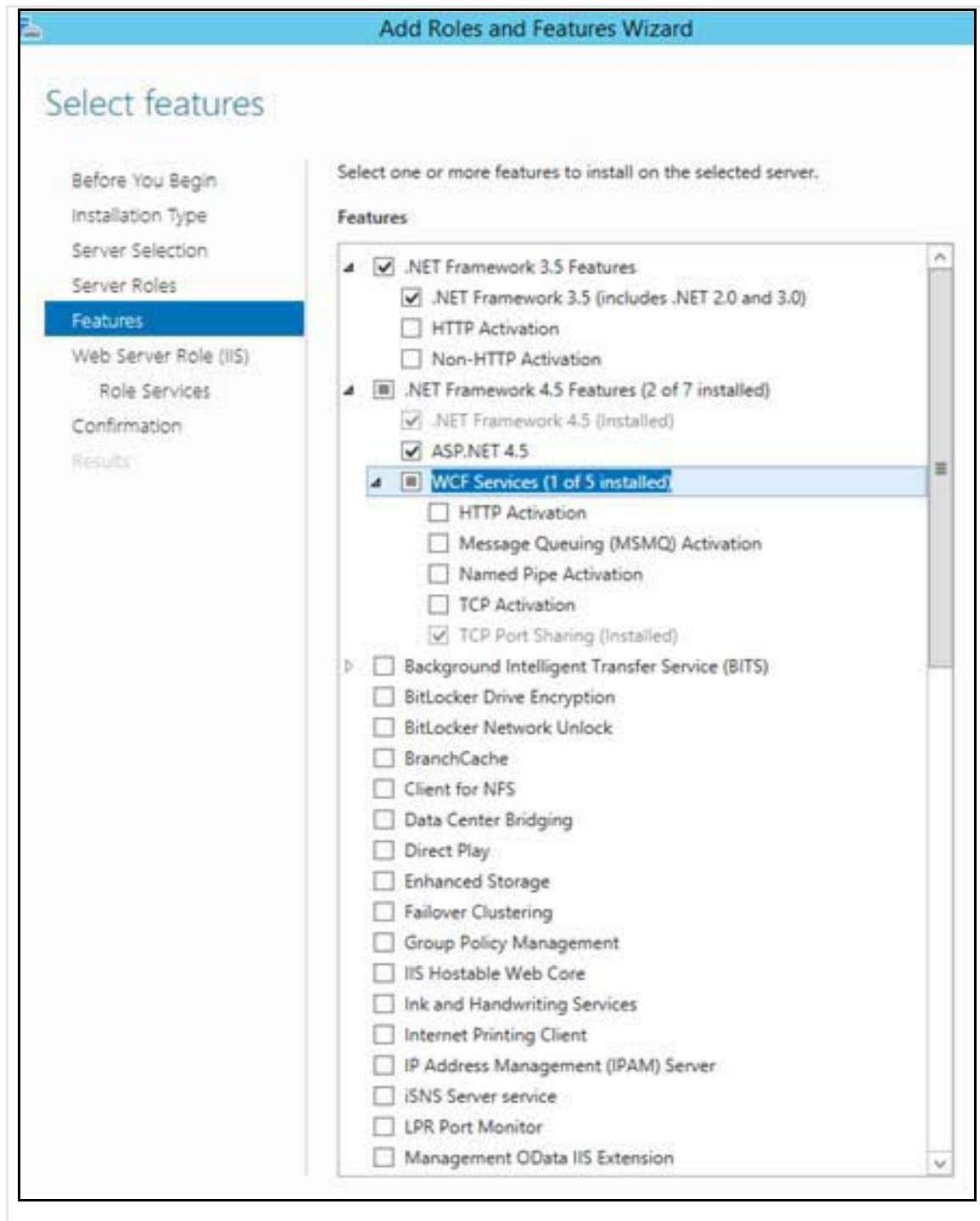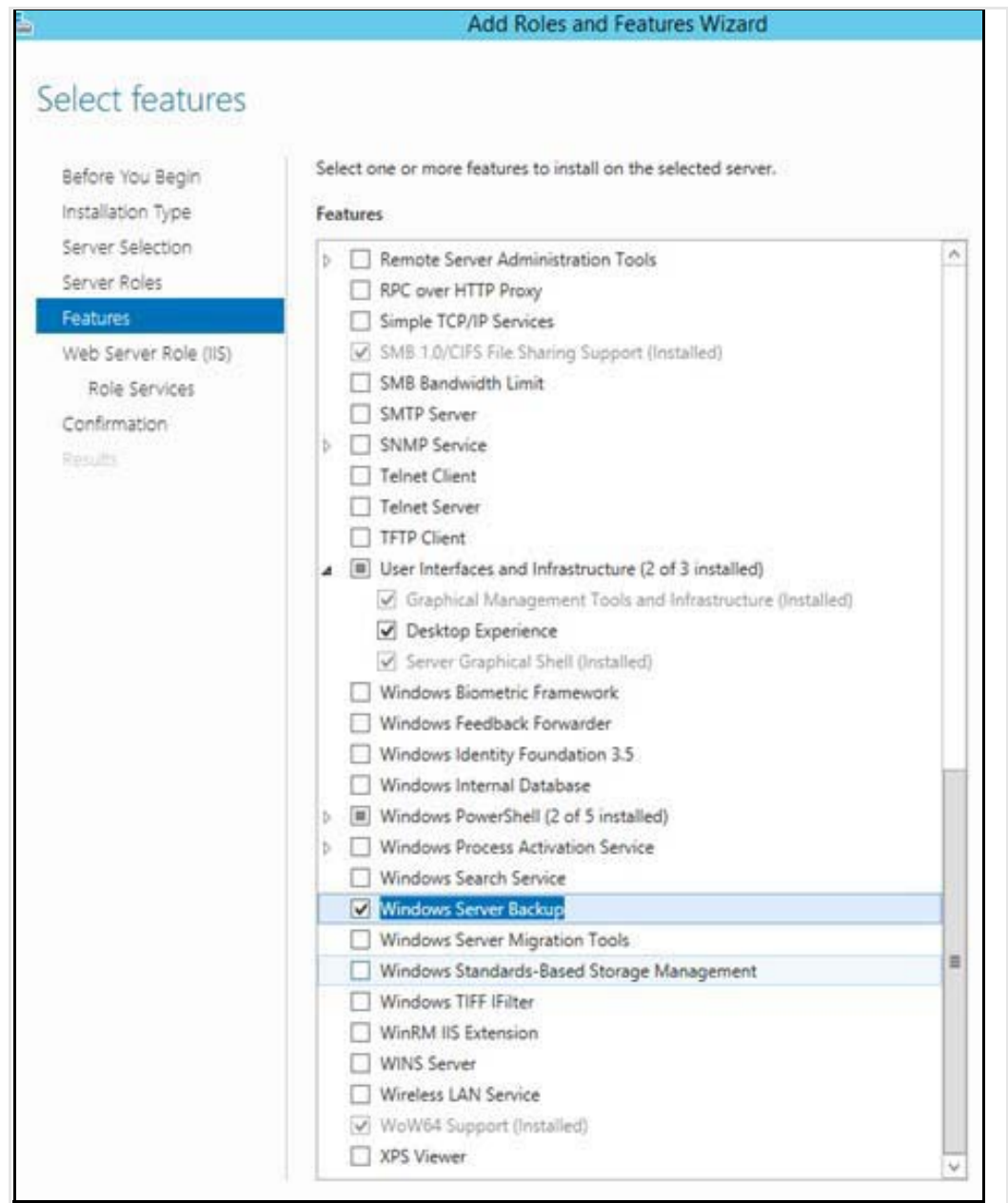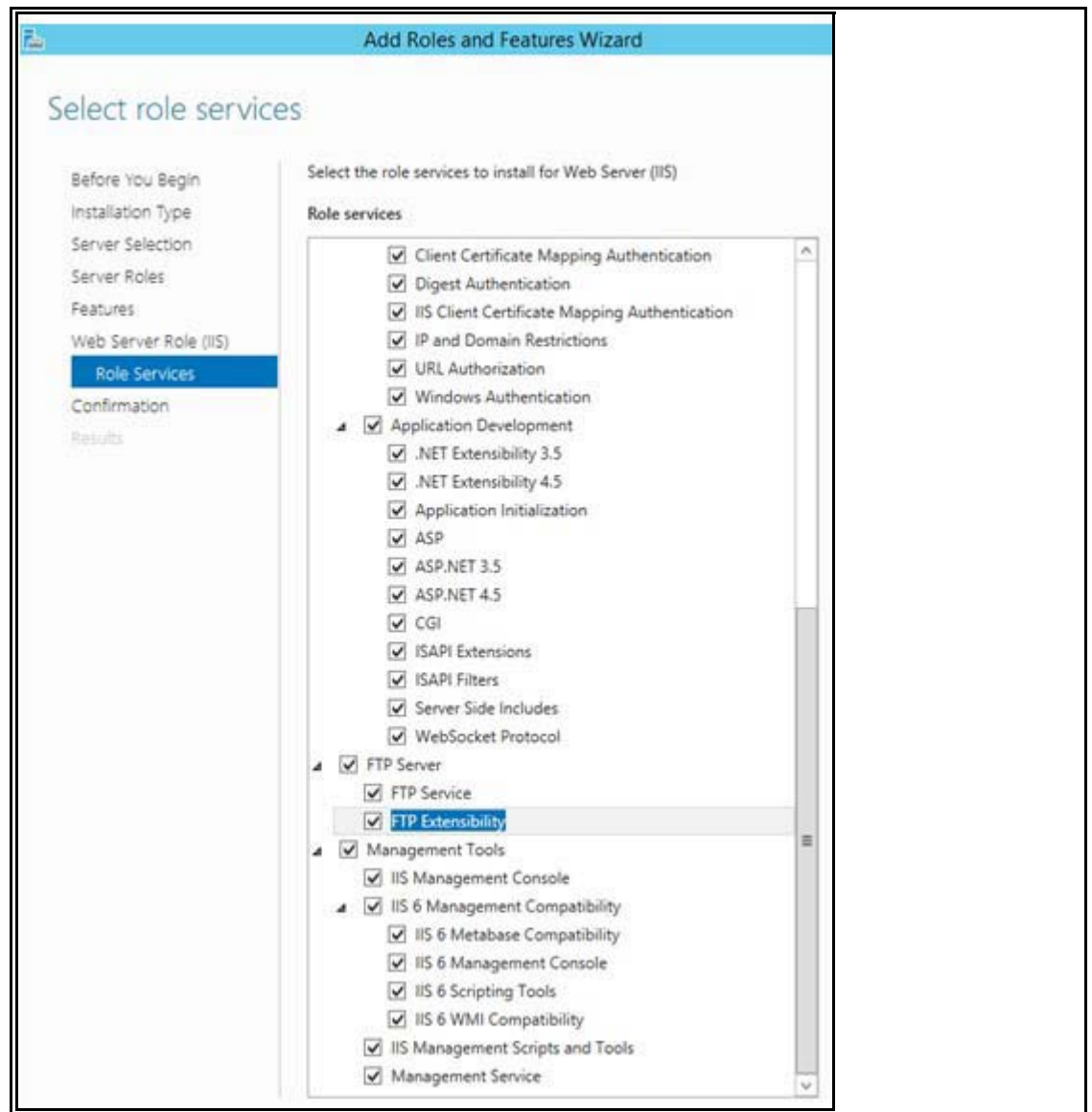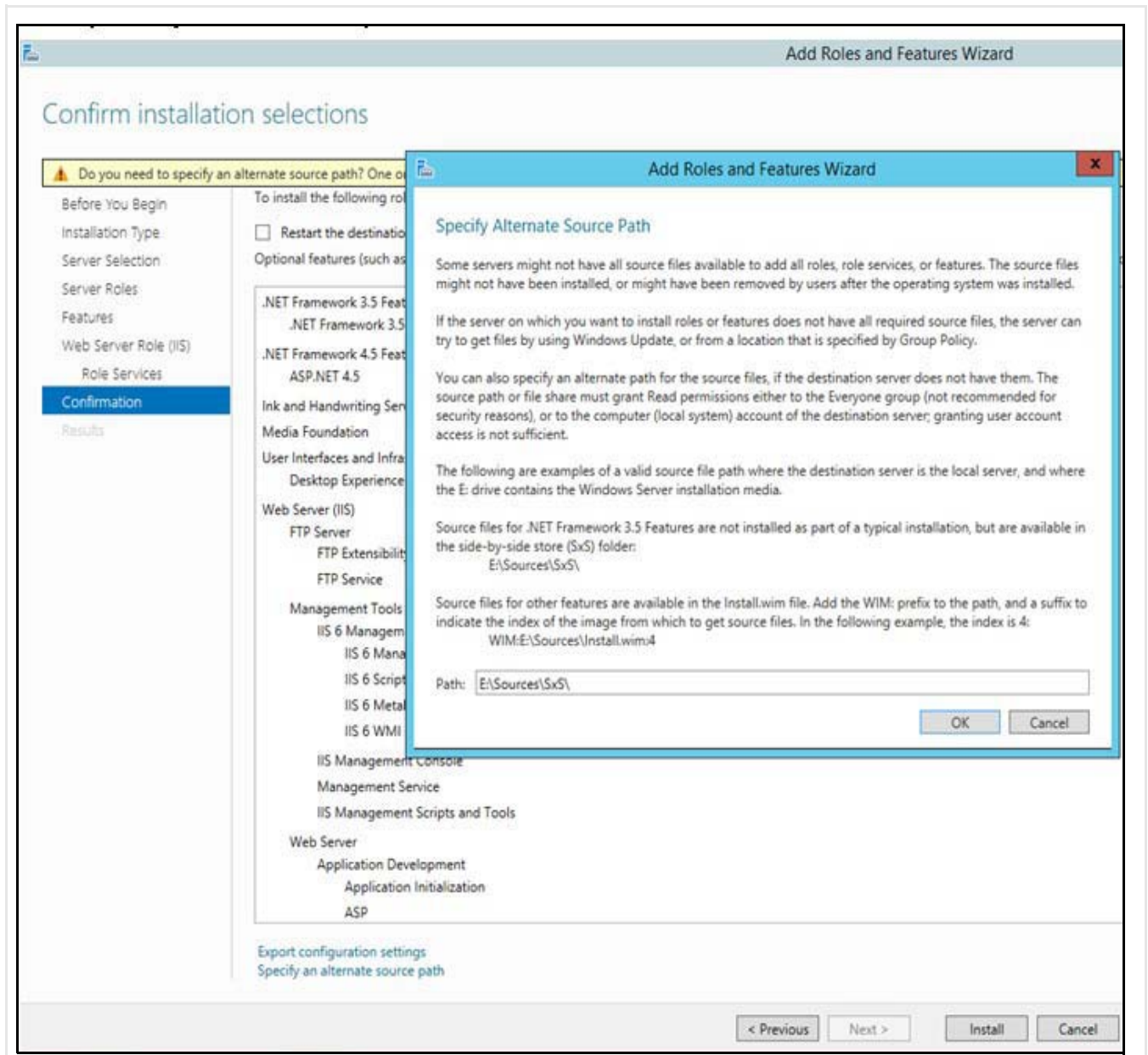
**Step 4**    On the **Select Role Services** page, select all the sub features under Web Server. Click **Next**.
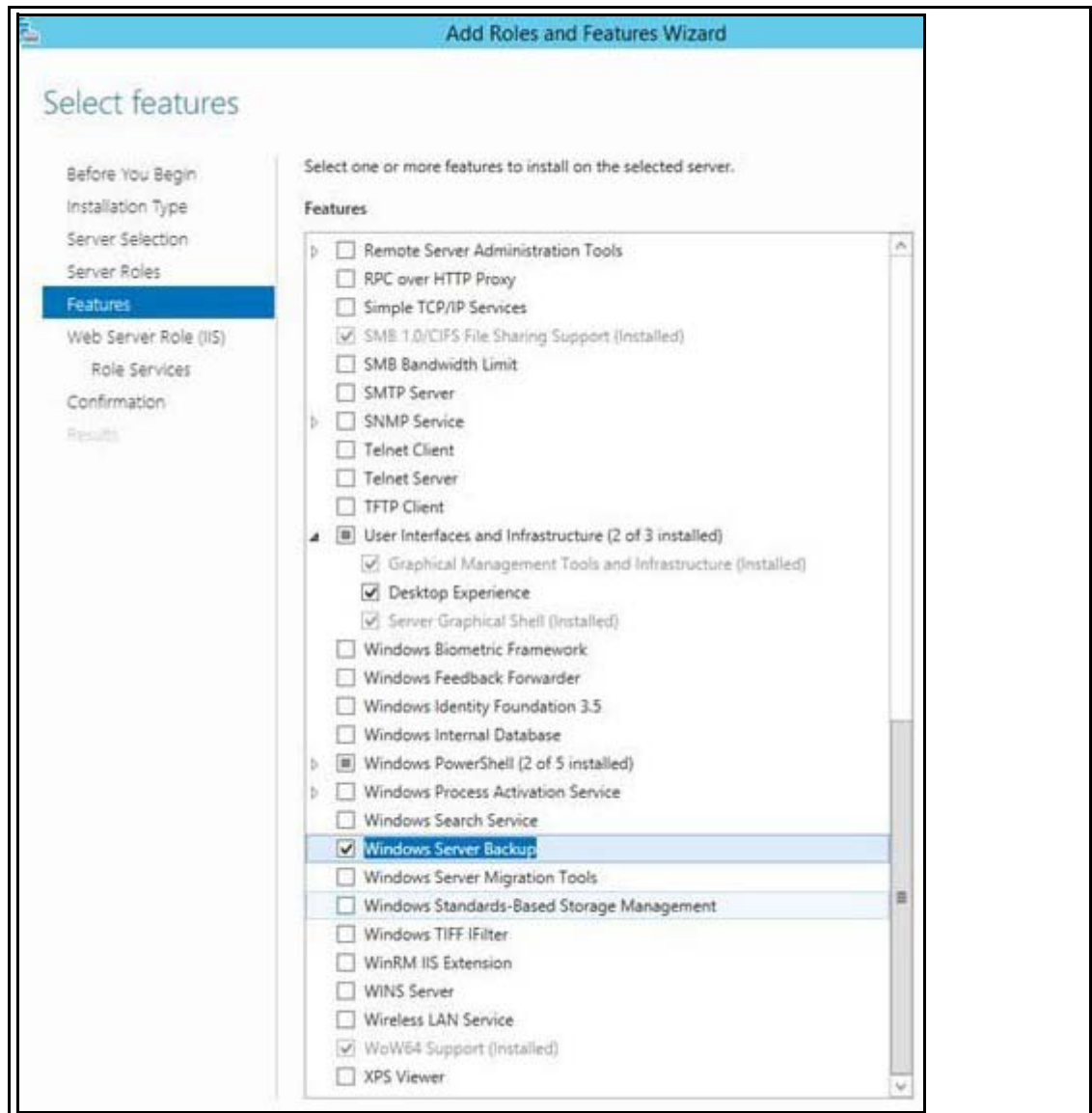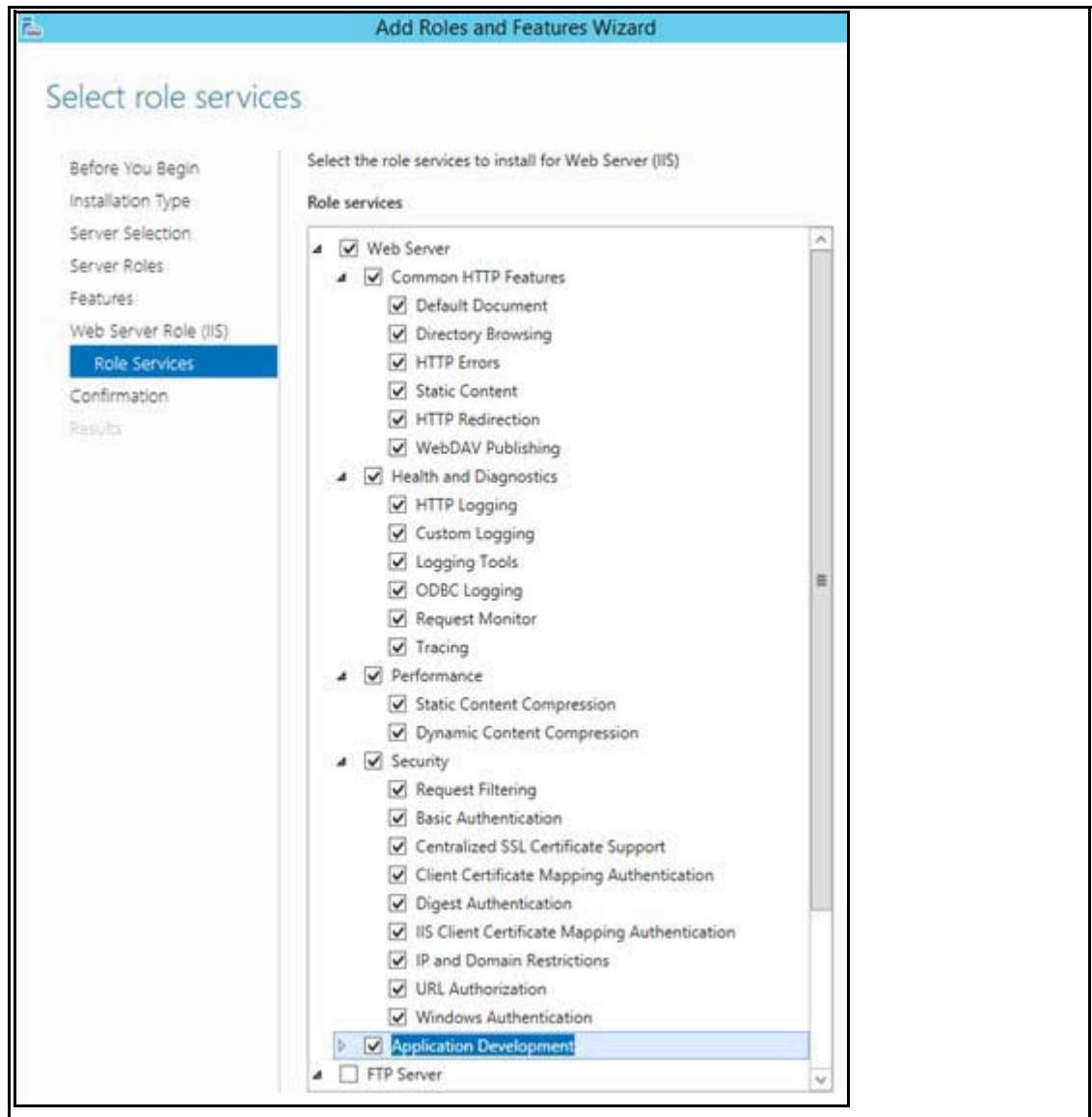
**Step 5** On the **Confirmation Installation Selection** page, click on '**specify an alternate source path**'. Mount the **Windows Server 2012 R2 standard Edition** image to a drive. On the **Specify alternate source path** page, specify the path **<OS Mounted drive letter>:\sources\sxs**, as shown in the image. Click **OK**.

**Step 6** On **Confirmation Installation selection** page, click **Install**.

**Step 7** Once feature installation is completed, click **Close.** Restart the system.

# Local Policy Setting

| Local Policies | |
|---|---|
| Local Policy Object Display Name | User Right |
| Backup files and directories | Se Backup Privilege |
| Debug Programs | Se Debug Privilege |
| Manage auditing and security log | Se Security Privilege |

To add the rights to the local administrator account, follow these steps:

**Step 1** Log on to the computer as a user, who has administrative credentials.

**Step 2** Click **Start**.

**Step 3** Click **Run**, type 'Control admintools' and then click **OK**.

**Step 4** Double-click **Local Security Policy**.

**Step 5** In the **Local Security Settings** dialog box, click **Local Policies**,

**Step 6** Double-click **User Rights Assignment**, and then double-click **Backup Files and Directories**.

**Step 7** In the **Backup Files and Directories Properties** dialog box, click **Add User or Group**.

**Step 8** In the **Select User or Groups** dialog box, type the user account that is being used for setup, and then click **OK** two times.

**Step 9** Repeat the procedure for the other two policies that are mentioned in the "**Local policies**" section.

**Note** On the **File** menu, click **Exit** to close the **Local Security Settings** dialog box.

# Installing SQL Server 2012 database server

To support TLS 1.1 and 1.2 in Windows Environment, SQL Server 2012 SP2 or SP3 with Cumulative Updates needs to be installed. From Services.msc stop **SQL server (TCS)** service and depending upon the previous installed SQL version (x86 or x64 bit), select the installer and upgrade SQL server:

- SQL Server 2012 SP2 (KB2958429), version 11.2.5058.0 can be downloaded from: https://www.microsoft.com/en-us/download/details.aspx?id=43340
- SQL Server 2012 SP3 (KB3072779), version 11.3.6020.0 can be downloaded from: https://www.microsoft.com/en-in/download/details.aspx?id=49996

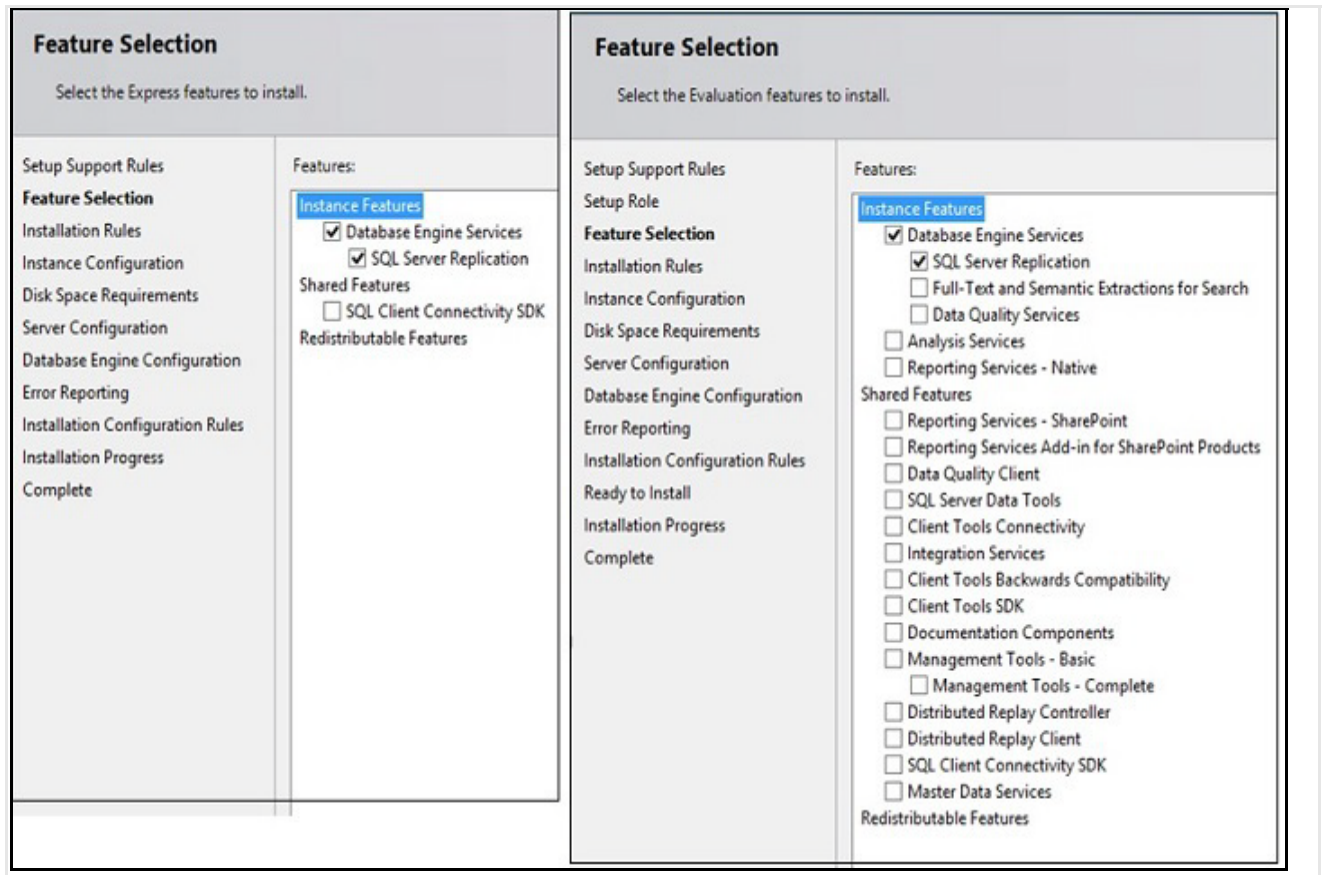Complete the following steps to install SQL server 2012 (SP2 or SP3):

**Step 1** Under Installation tab, click '**New SQL Server stand-alone installation or add features to an existing installation**'.
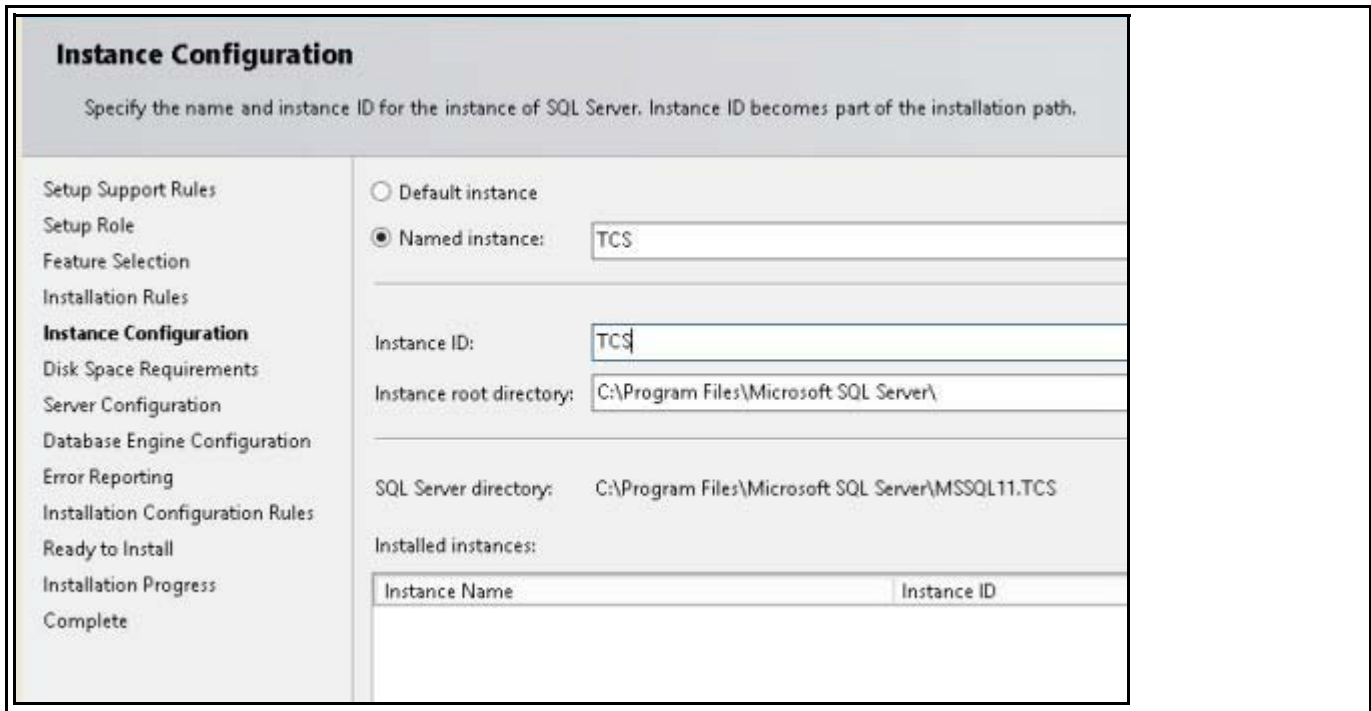
**Step 2**      Click '**I accept the license terms**'.

**Step 3**      Click **Next.**

**Step 4**      Check the **Database Engine Services box** and click **Next**.



**Step 5**      In Instance Name, click **Named instance** radio button and enter the instance name as **TCS**.

**Step 6**   Click **Next**.

**Step 7**   In the **Service Account**, choose **Use the built-in System account** (Local system, or Network service).

✎
**Note**   SQL server collation should be set to **Latin1_General_CI_AS, 'Dictionary, case insensitive, 1252 character set'**.

**Step 8**   In the **Authentication Mode**, you can click any of the two given modes:

- Windows authentication or
- Mixed mode.

**Step 9**   Restart the system.

✎
**Note**   If **Mixed mode** is selected, click **Enter** and **Confirm** the SA (system administrator) password.

Install SQL cumulative Update (Hotfix) from following links, depending upon the previous installed SQL version of x86 or x64 bit and restart the system:

- SQL server 2012 SP2 (KB3205054), Hotfix 5678 version 11.2.5678.0 can be downloaded from: https://www.microsoft.com/en-us/download/details.aspx?id=50731
- SQL server 2012 SP3(KB4025925), Hotfix 6607 version 11.3.6607.0 can be downloaded from: https://www.microsoft.com/en-us/download/details.aspx?id=50733

# Installing TCS Installer

**Step 1** Copy the **S_7_2_1_TCSVM_Bundle.zip** file to a folder on your system and extract the files. Launch the command prompt and change the directory to the folder location.

**Note** For TCS 7.2.1, file name is **S_7_2_1_TCSVM_Bundle.zip**.

**Step 2** Follow the below steps for **TCS VM**:

   **a.** In the **S_7_2_1_TCSVM_Bundle.zip** extracted directory, create a *TCSLic.txt* file by using the licensing information in this format:

   <<Virtual Serial No>>
   <<Release Key>>
   <<Recording 5 Key>>
   <<Live 2 Key>>

Use the license keys obtained from the section Obtain License and Option Keys from Old TCS

**Note** For TCS 7.2.1, extracted directory is **S_7_2_1_TCSVM_Bundle.zip**. In the license text file, make sure that there are no extra spaces before or after the license keys.

```
TCSLic - Notepad
File  Edit  Format  View  Help
49A30107
0772262265091631
115361R5-1-84E863EF
115361L2-1-D6734B87
```

**Step 3** In the command prompt, run the **PreInstaller.cmd** from the **S_7_2_1_TCSVM_Bundle.zip** folder to configure the Content Server Pre-Installer.

**Note** For TCS 7.2.1 configuration, run **S_7_2_1_TCSVM_Bundle.zip**

**Step 4** Run **S7_2_1.exe** to install the VM Content Server software on the appliance.

**Step 5** Run the **PostInstaller.cmd** from the VMScripts folder in the command prompt to configure the Post-Installer. This will reboot the system.

**Step 6** To make sure the newly created TCS VM is **Up** and **Running**. Launch TCS UI in a web browser.

By default TCS 7.2.1 comes up with TLS 1.0 enabled. To enable TLS 1.1 and TLS 1.2 use IIS Crypto tool, download it from below link and configure it with given settings:

https://www.nartac.com/Products/IISCrypto/Download
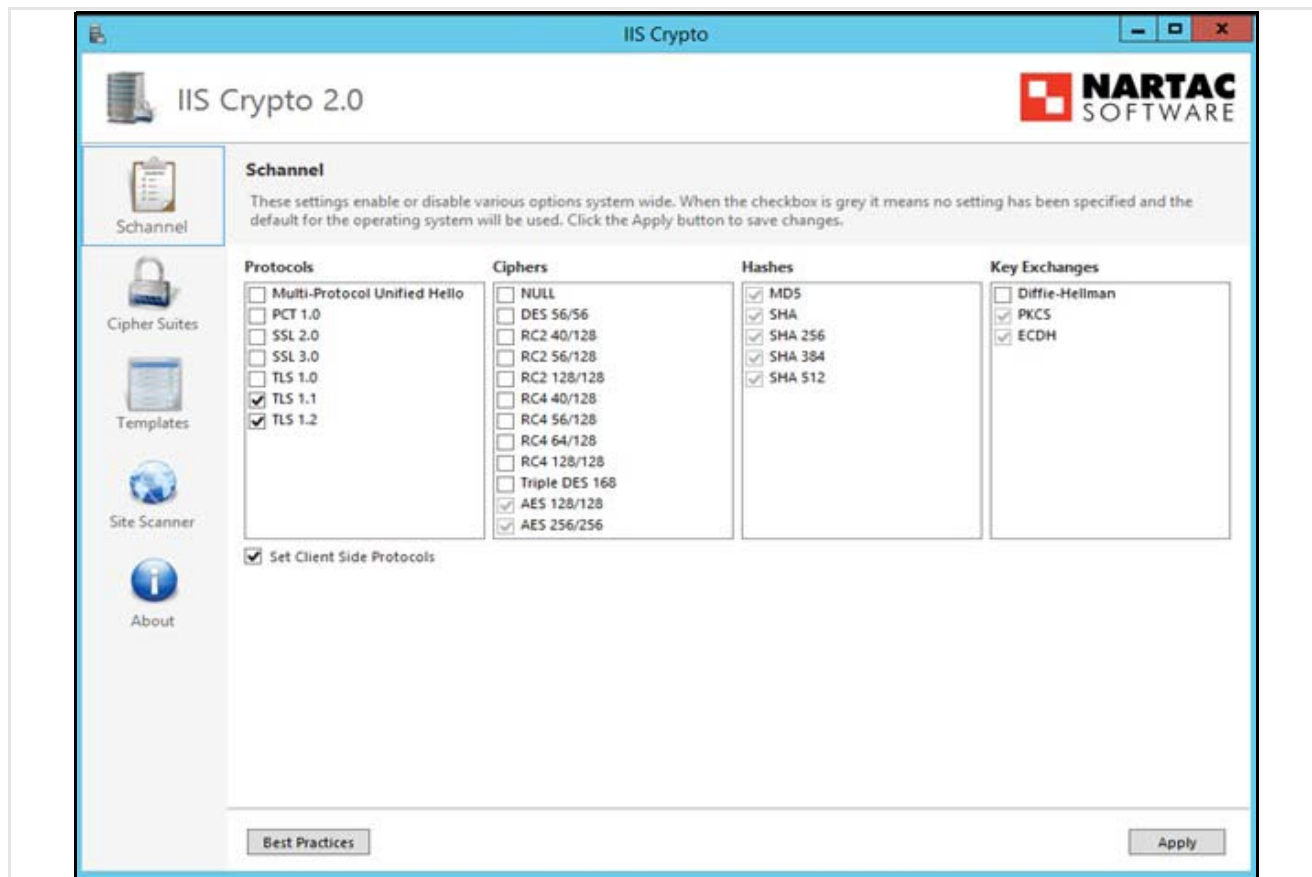
**Note** After running Repair on TCS 7.2.1, all the TLS 1.1 and 1.2 settings in registry will be reverted back to TLS 1.0.

# Migrating Data from Shared Network Location to TCS VM

To migrate the data from shared network location to VM TCS, follow the below steps:

**Step 1** Add the newly created **TCS VM** to the same domain that was used in Old TCS.

**Note** Follow the below **Step 2**, if the Old TCS was in **NAS** or **Cluster** mode. Skip **Step 2**, if Old TCS was in **Standalone** mode.

**Step 2** Add the newly created **TCS VM** to the same NAS that was used in Old TCS.

**Step 3** Run the Migration Assistant on the newly created TCS VM to restore the media and configuration settings from the shared network location.

Go to the below link and follow the **Step 10** to **Step 17** to migrate the data from shared network location to newly created TCS VM.

http://www.cisco.com/c/en/us/td/docs/telepresence/tcs/6_0/release/notes/tcs-6-1-ma-rn.html

**Note** Follow the below **Step 4**, if Old TCS was in Cluster mode.

**Step 4** When you finish the data migration, add the destination Content Server to the cluster as the first cluster member. Add additional cluster members, as needed.

# Related Documentation

- Cisco TelePresence Content Server Documentation

  *http://www.cisco.com/en/US/products/ps11347/tsd_products_support_series_home.html*
- Cisco UCS C220 Documentation

  *http://www.cisco.com/en/US/products/ps10493/tsd_products_support_series_home.html*
- Cisco Capture Transform Share Documentation

  *http://www.cisco.com/en/US/products/ps12130/products_installation_and_configuration_guides_list.html*

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# Obtaining Documentation and Submitting a Service Request

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