Cisco TelePresence Content Server Release 7.2.1 Virtual Machine Installation Guide for Green Field 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:

Cisco Systems, Inc.
www.cisco.com

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 the tested 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.

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

Digital Image Signing Of TCS

There are two types of file used in TCS that is Digital Signed:

- .exe files
- OVA files

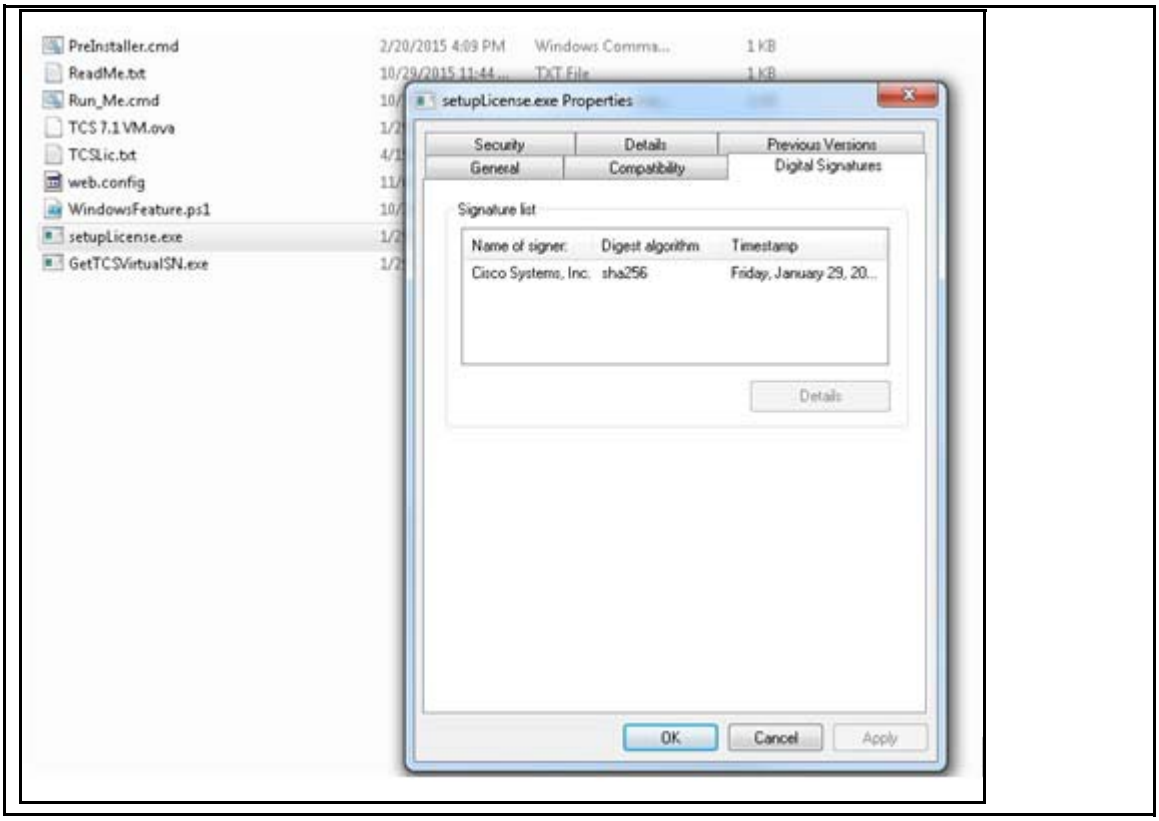
Verification of digital signatures of .exe files

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

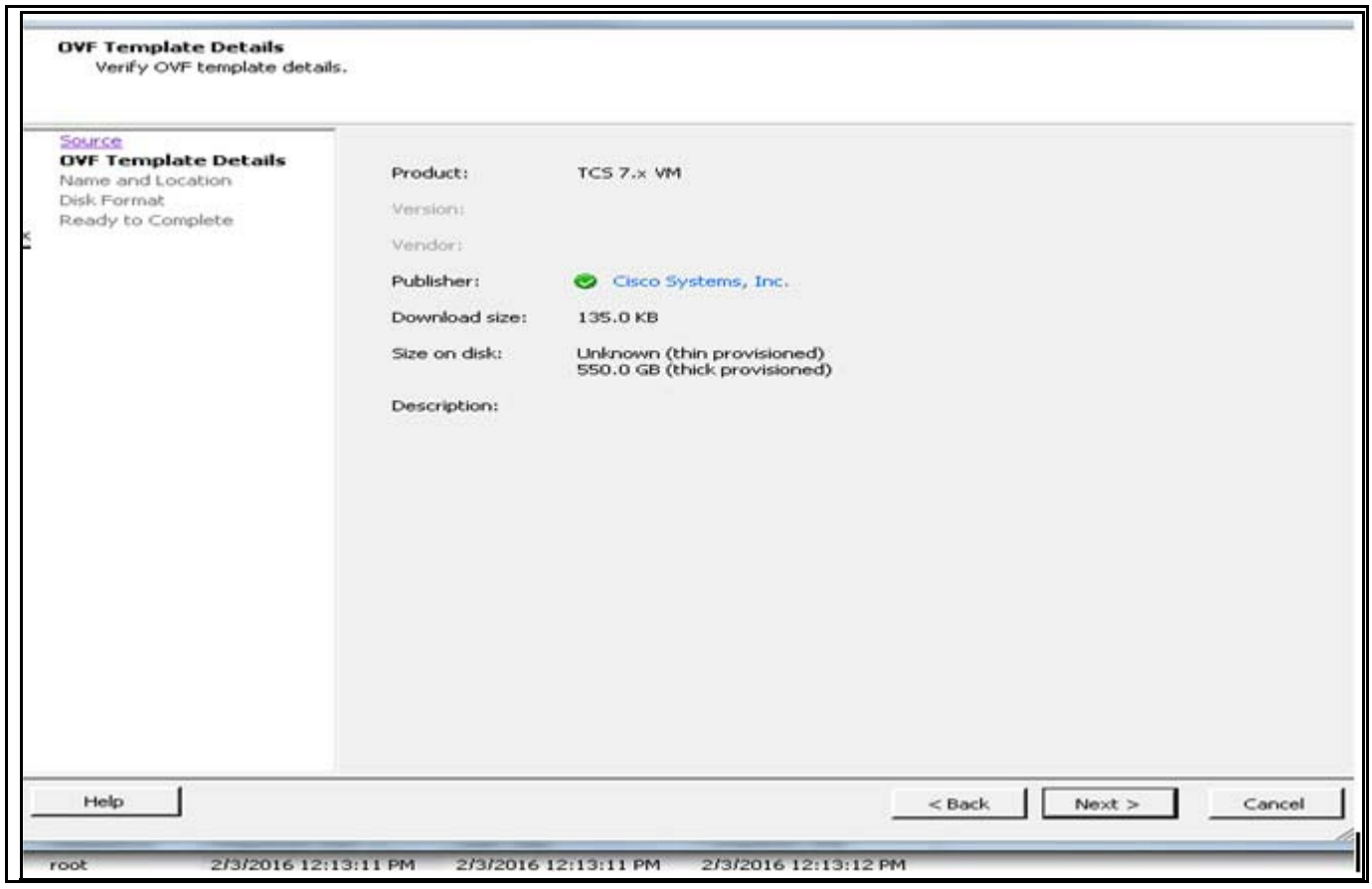
Step 1 Log into the vsphere client.

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. Download the VM Content Server Release 7.2.1 software by using an external download location link that will be provided in the E-delivery notification email:
   a. Content Server software image
   b. OVA template that is specific for the host hardware
   c. System configuration scripts
2. Confirm that you have this system software available for installation:
   a. Windows Server 2012 Standard R2
   b. VMware vSphere Hypervisor (ESXi) software version that is specific for the Content Server second- or third-generation hardware (see Table 1).
   c. SQL Server 2012 Express or Enterprise or Standard Edition.
3. 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 that is the same NTP server that will be specified in the Content Server

Installation Notes

To install VM Content Server Release 7.2.1 on new hardware, you will need the software base Product Authorization Key (PAK) and option PAK. This information is part of the claim certificate that you received after ordering the VM Content Server. See the Install SQL cumulative Update (Hotfix) from following links and restart the system: section for more information.

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.

So 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.

Installing VM Content Server

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 new hardware:

1. Installing VMware vSphere ESXi, page 7
2. Deploy OVA to Host, page 7

3. Installing Windows Server 2012 Standard R2
4. Installing 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.

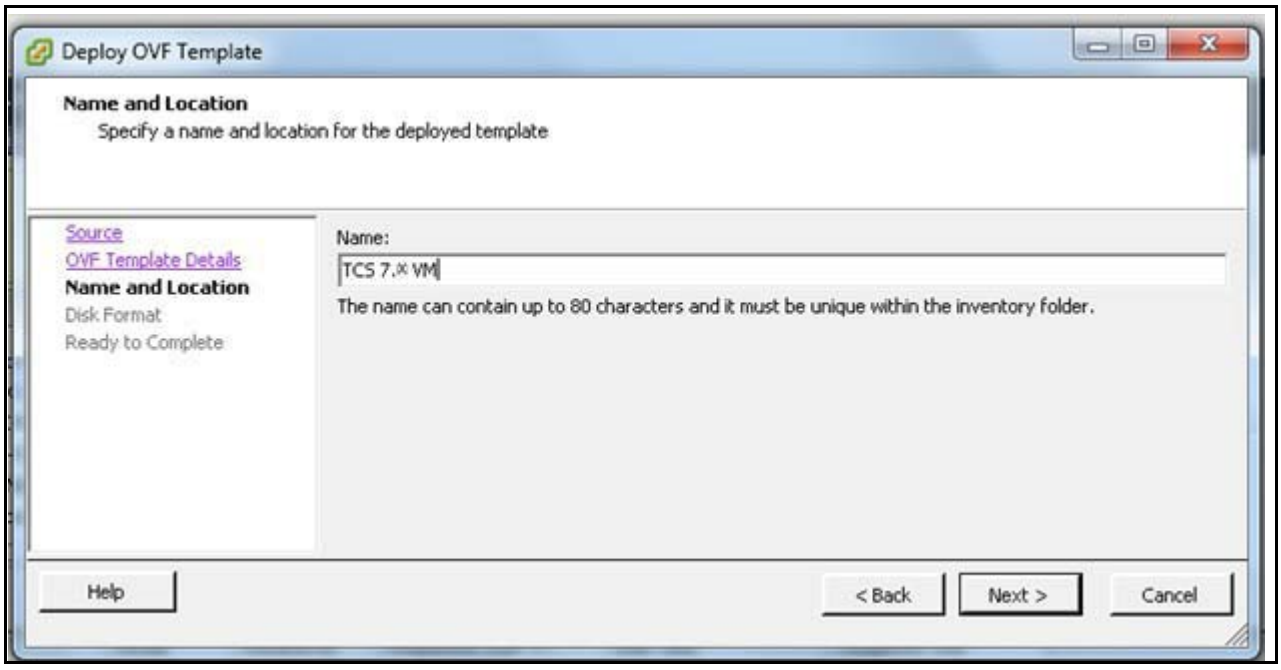
Step 1 Log in to the vSphere client to access the ESXi Host.

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

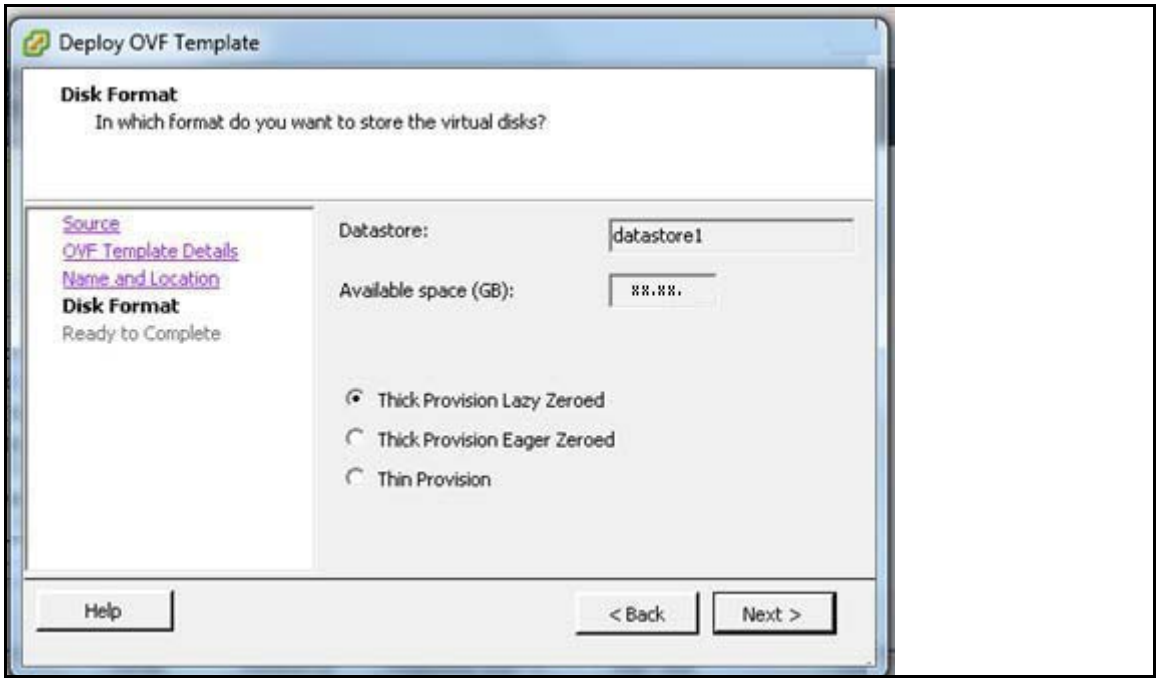
Step 3 On the Source page, **Browse** to the location of the OVA file that is specific to the host appliance. Click **Next**.

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**.

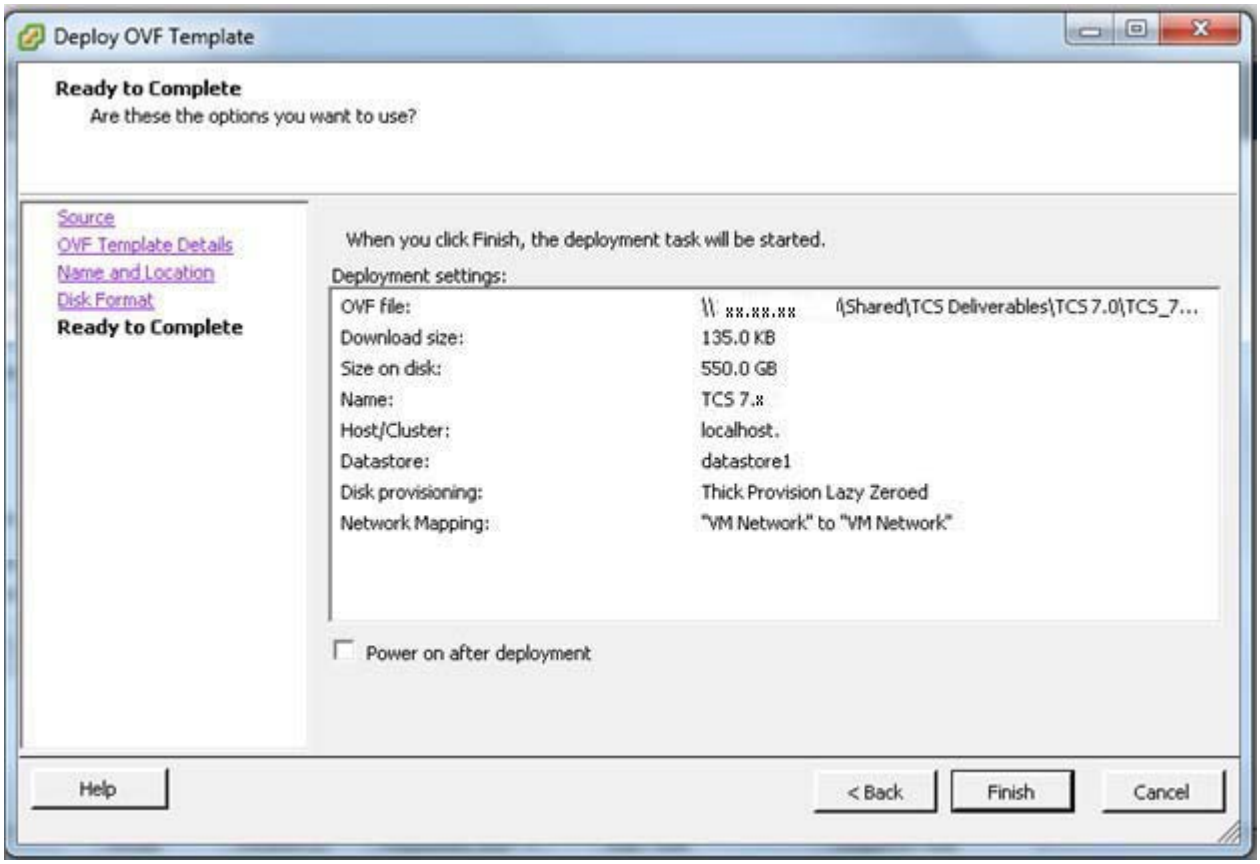


Step 6 On the Ready to Complete page:

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**.

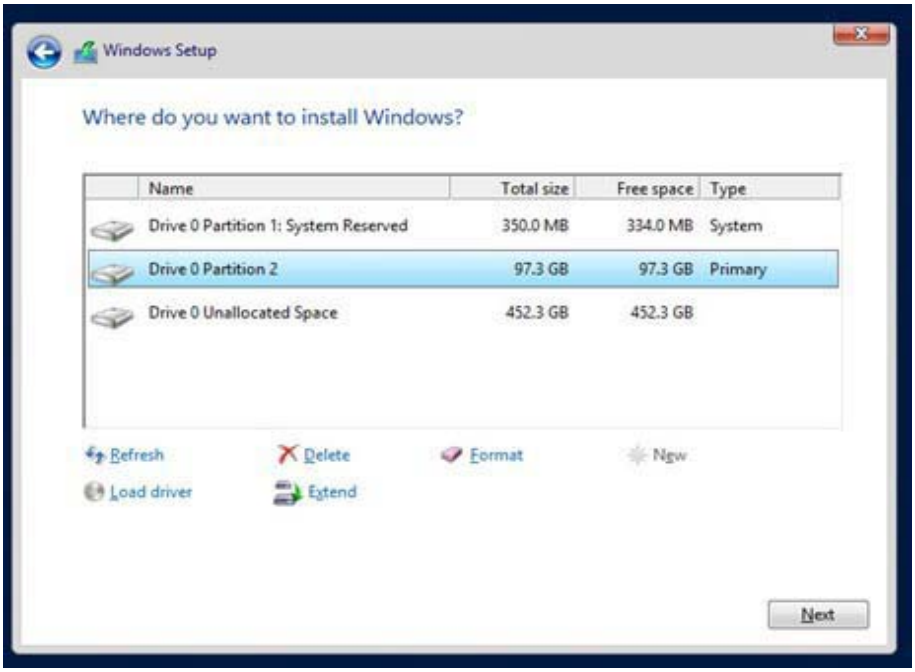
Step 6 In the Install Windows Server screen, choose **Custom** (Advanced).

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)

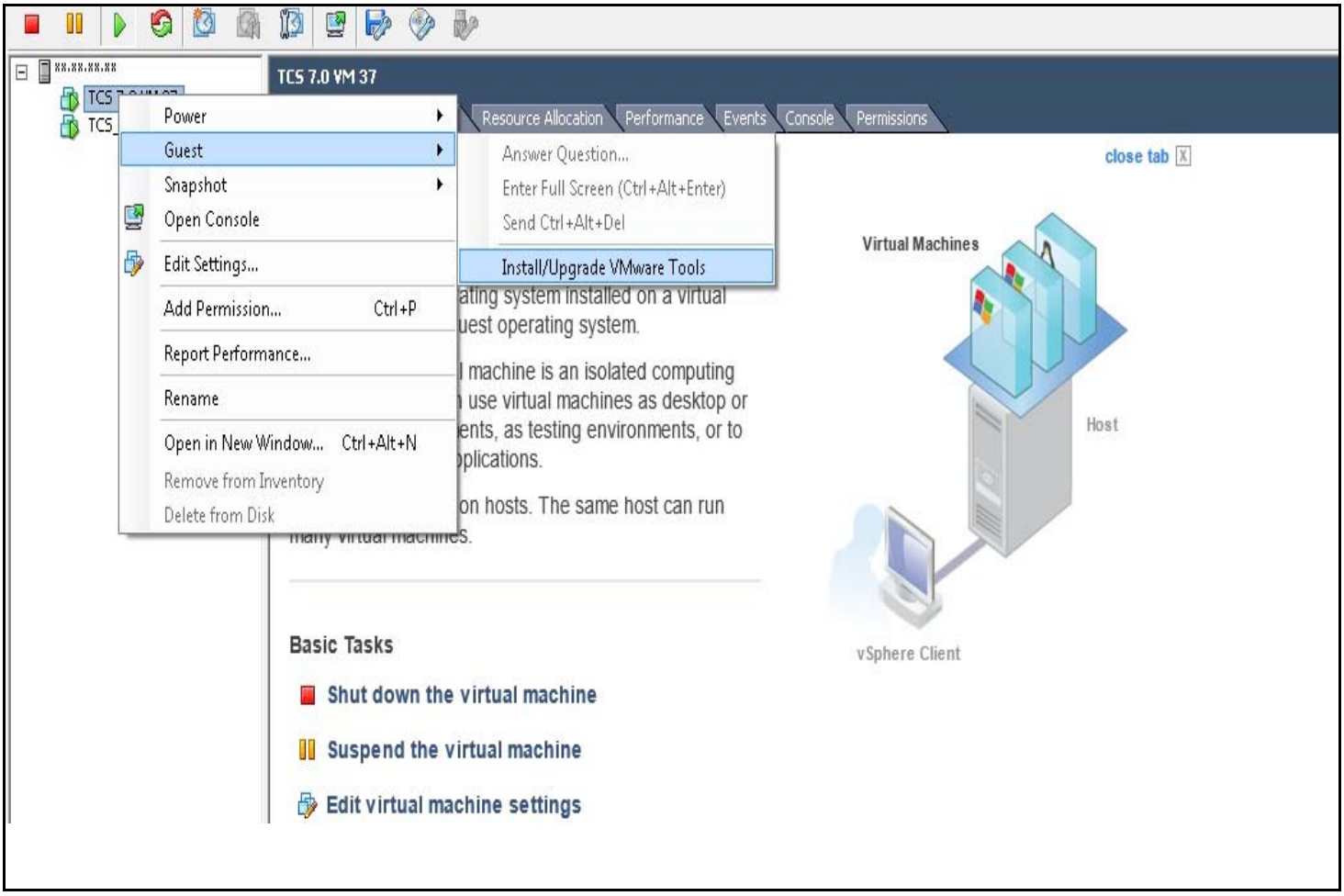


Note The drive letter might differ in your OS. Go to **Disk Management** to change the drive to E:.

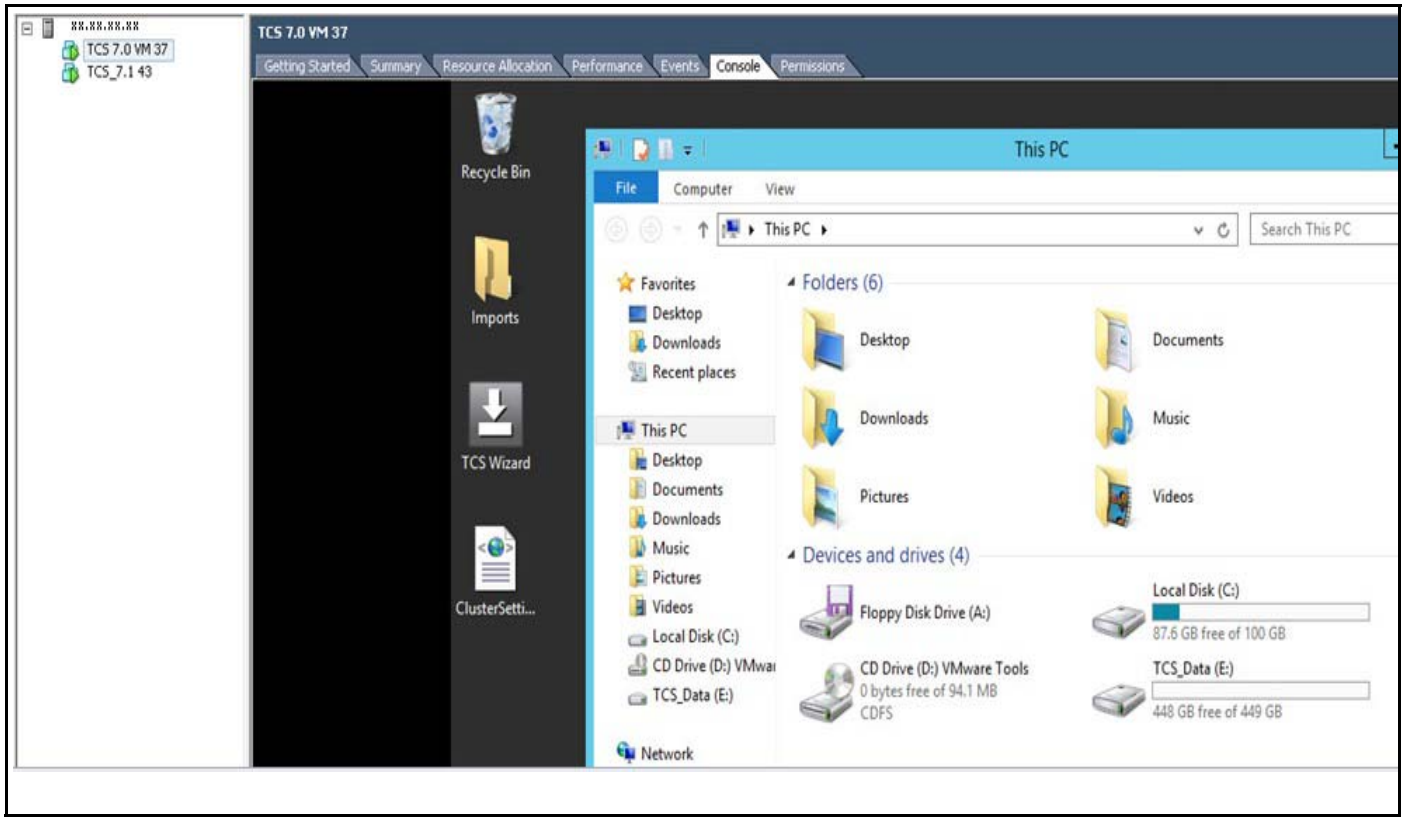
Step 8 Follow the prompts to complete the Windows Server installation.

Step 9 Install VMware Tools:

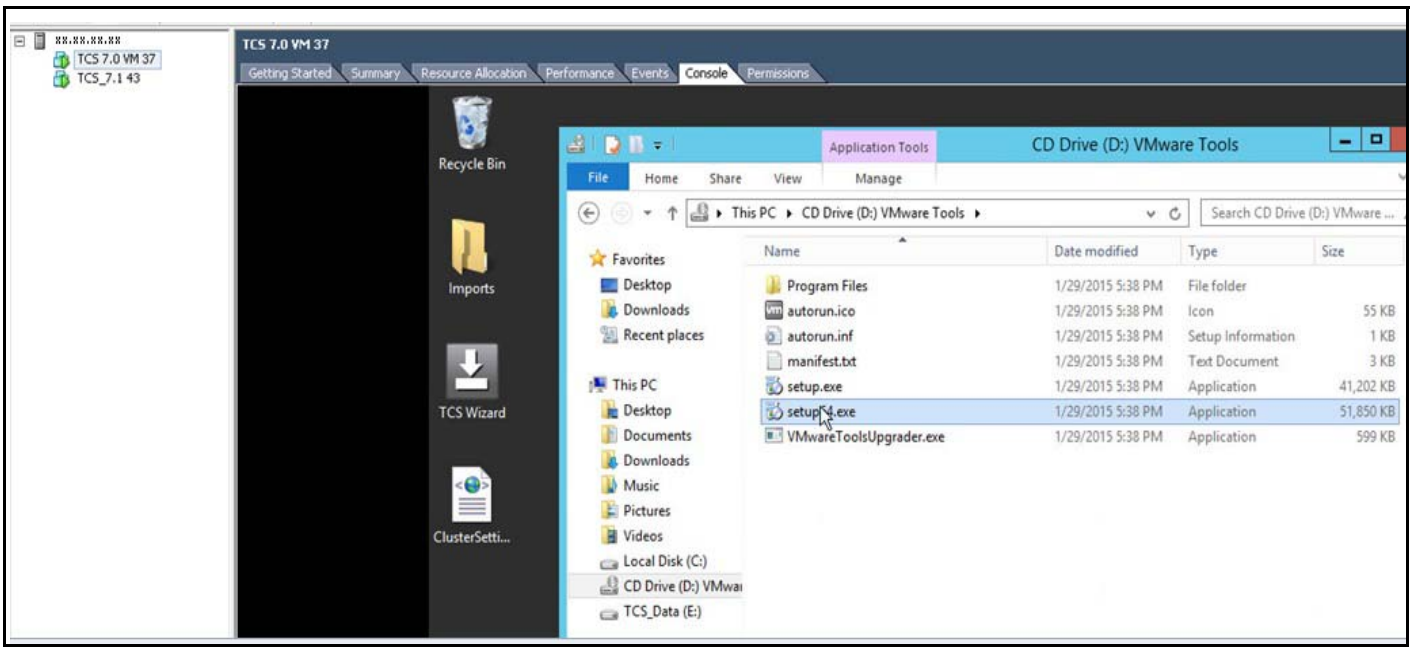
a. Right click the Content Server VM node. Select **Guest > Install/Upgrade VMware Tools**.



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.



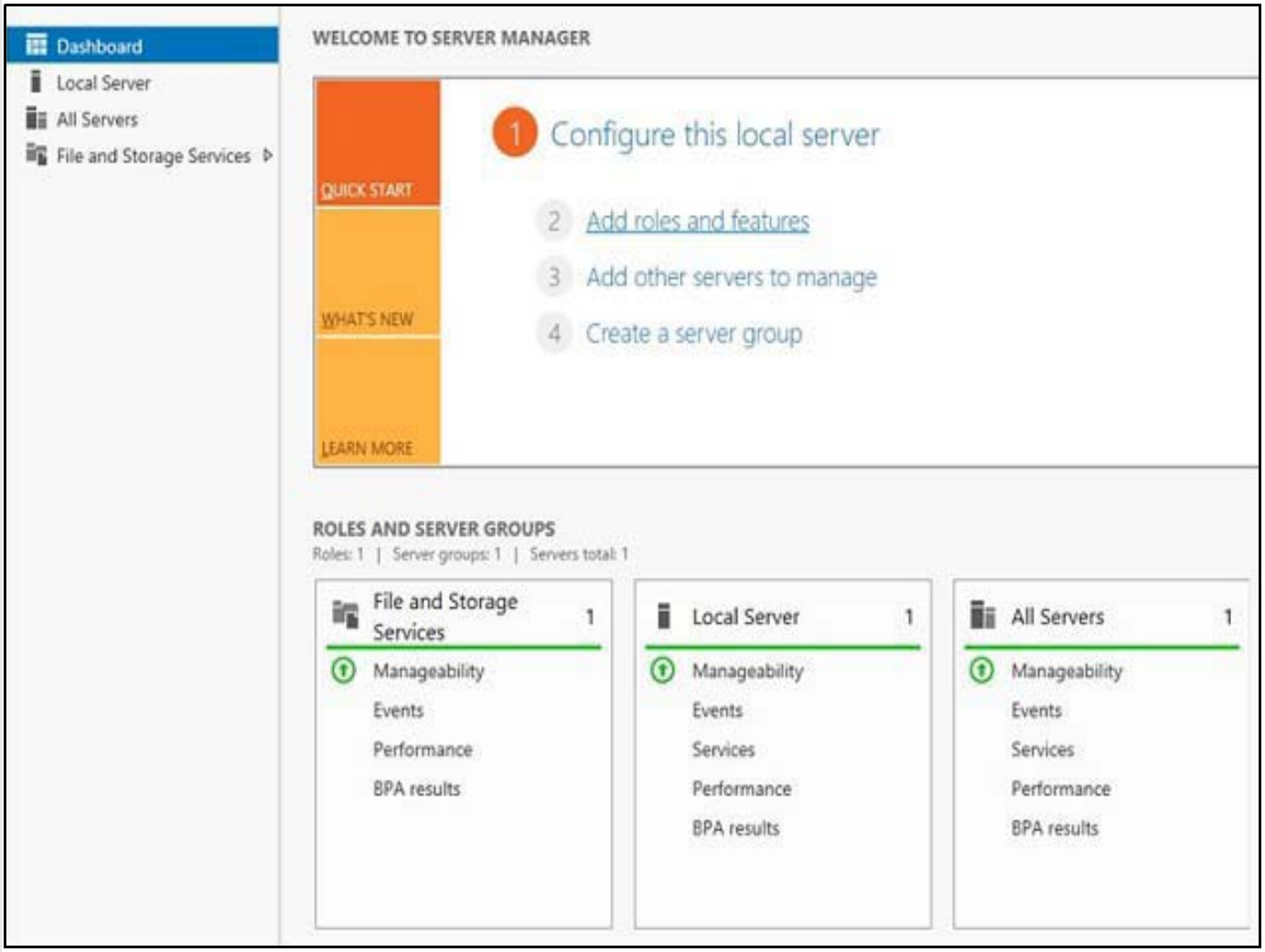
d. When installation is complete, click **Finish**. Click **Restart** to restart the system.

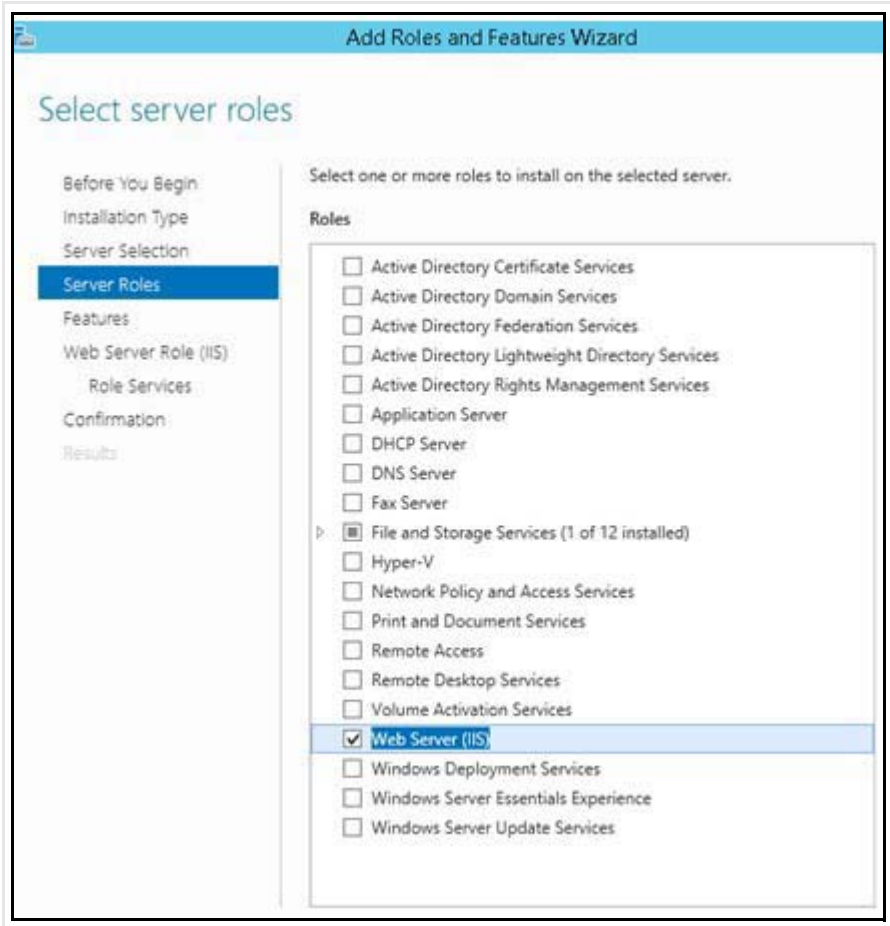
Step 10 Go to the console to configure the Content Server networking parameters. Assign the IP address, the netmask, the default gateway, and the DNS server address. For more information, see the *Cisco TelePresence Quick Start Guide* on Cisco.com.

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

Installing Roles and Features

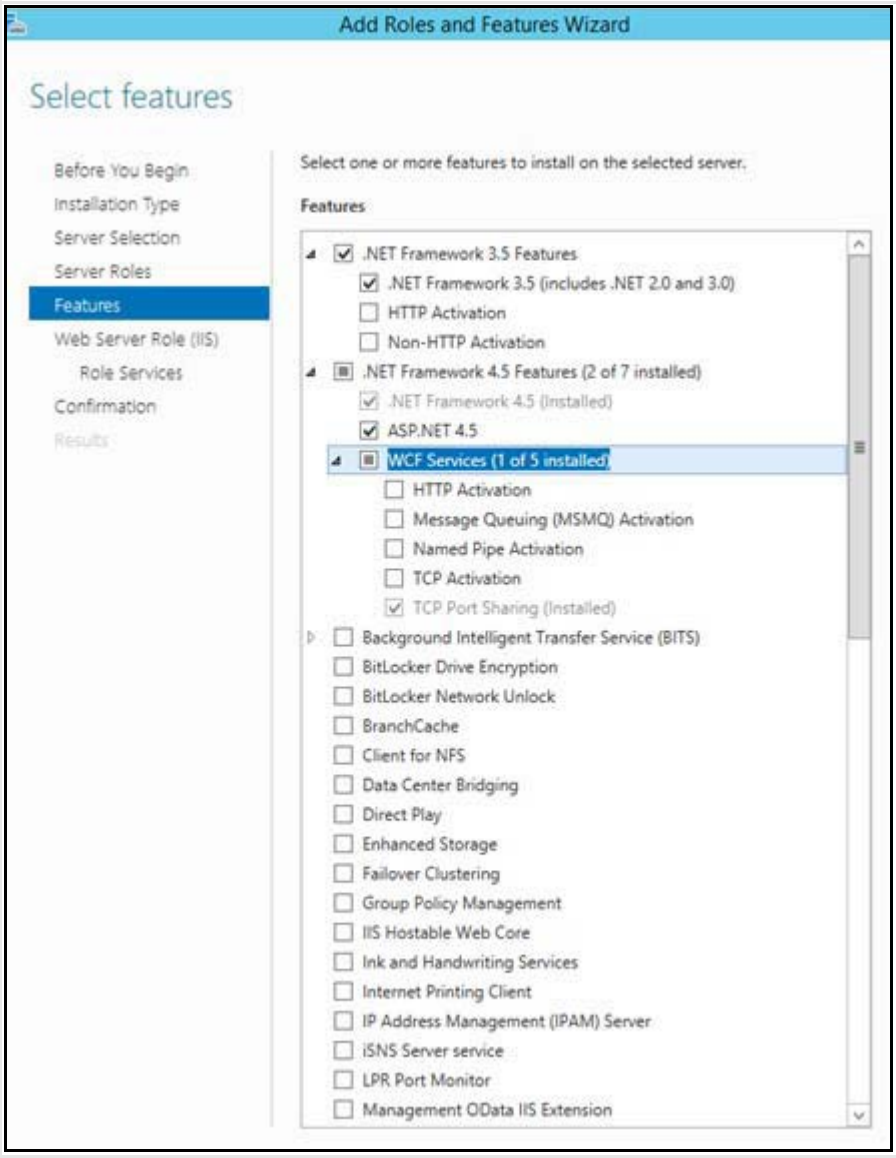
Step 1 Install Internet Information Services (IIS8). On VM host, navigate to **Server manager > Dashboard**. Click on **Add roles and Features.**

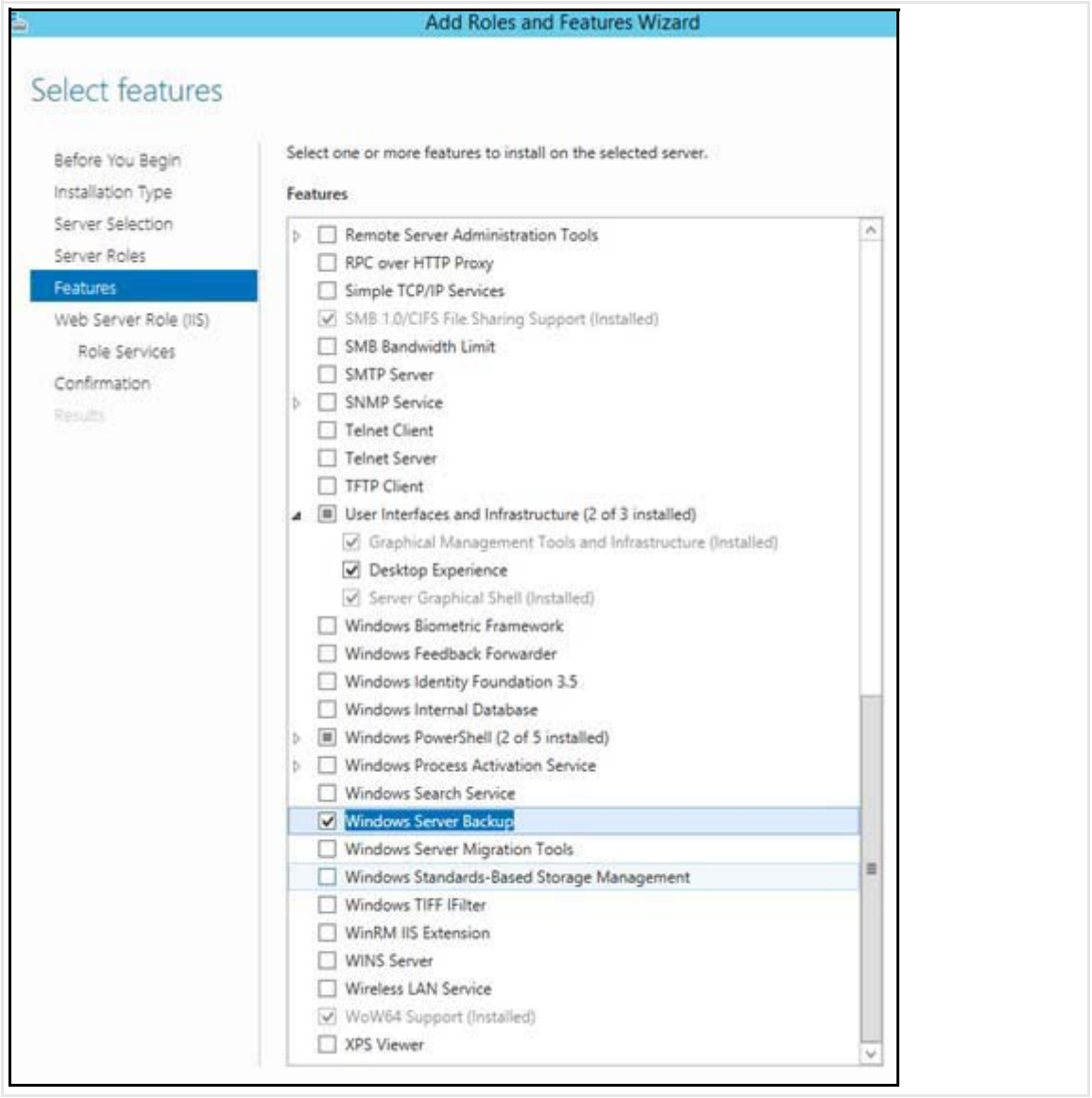




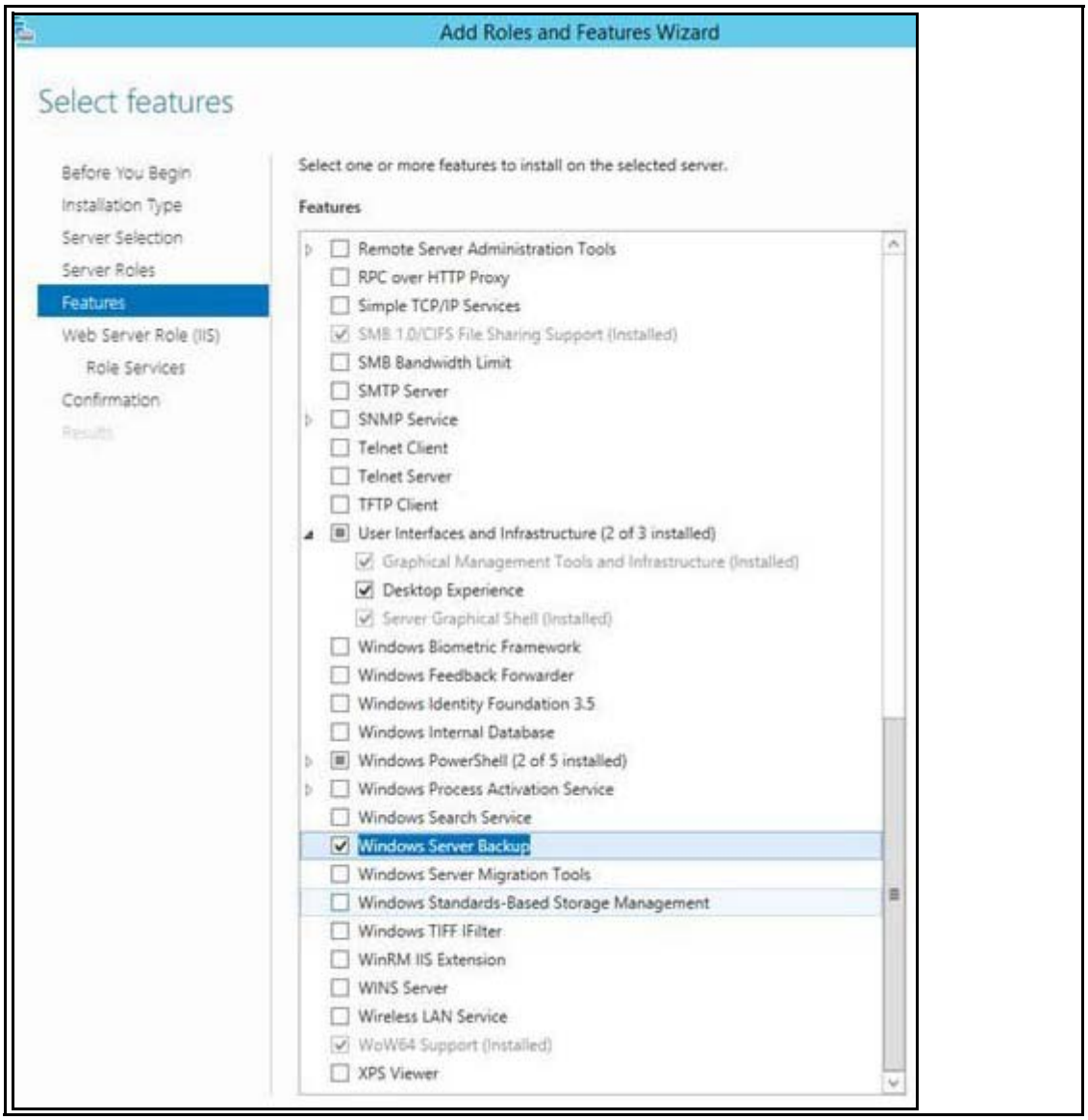
Step 2 On **Select Server Roles** page, click the **WebServer IIS** check box. A pop-up appears for installing the dependent features, click **Add Features** to continue and Click **Next**.

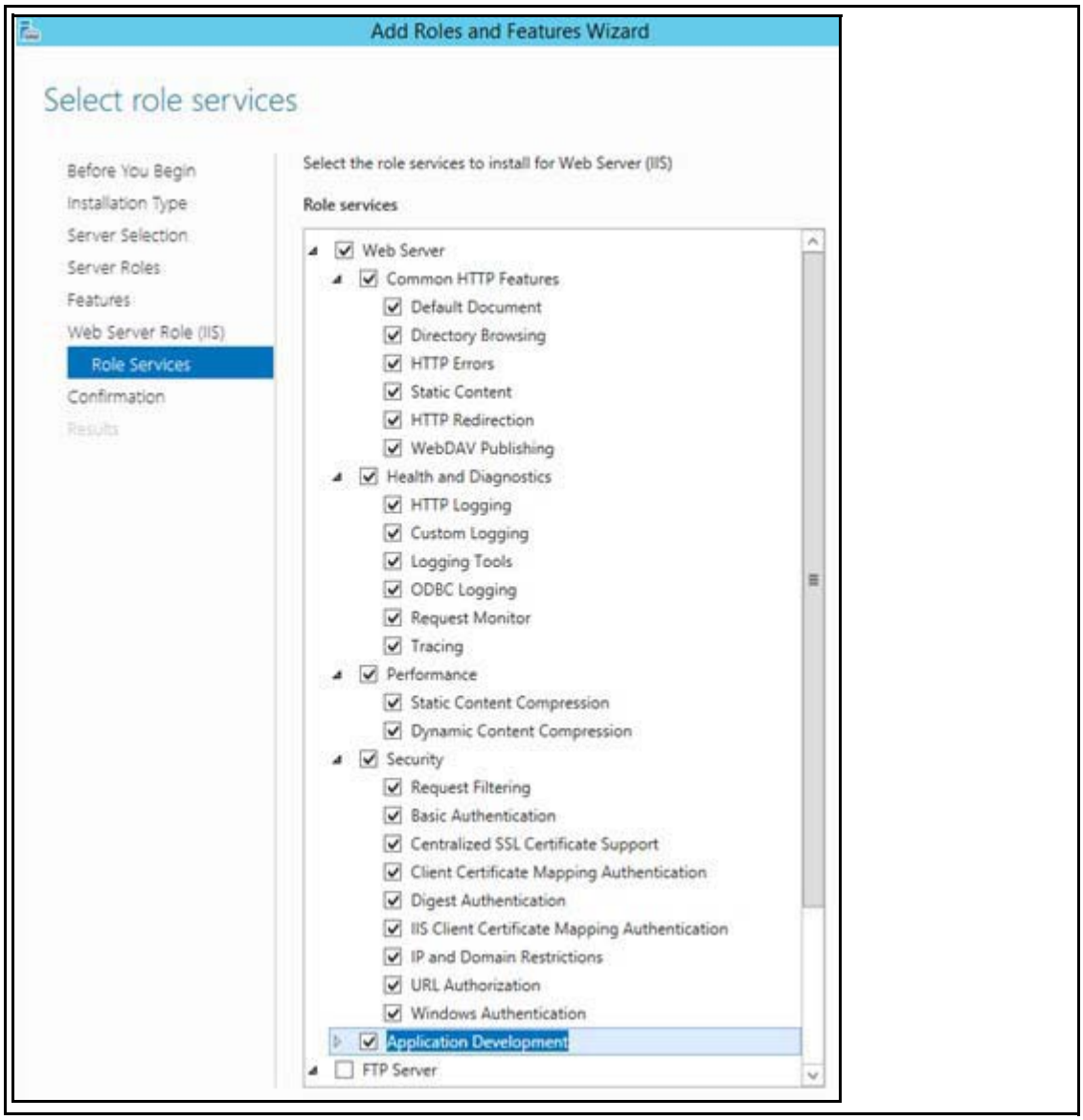
Step 3 On **Select Features** page, select **Net framework 3.5 and ASP.Net 4.5** as shown in the below image. Also select **Windows Server backup and Desktop Experience**. A pop-up appears for installing the dependent features, click **Add Features** to continue and click **Next**.

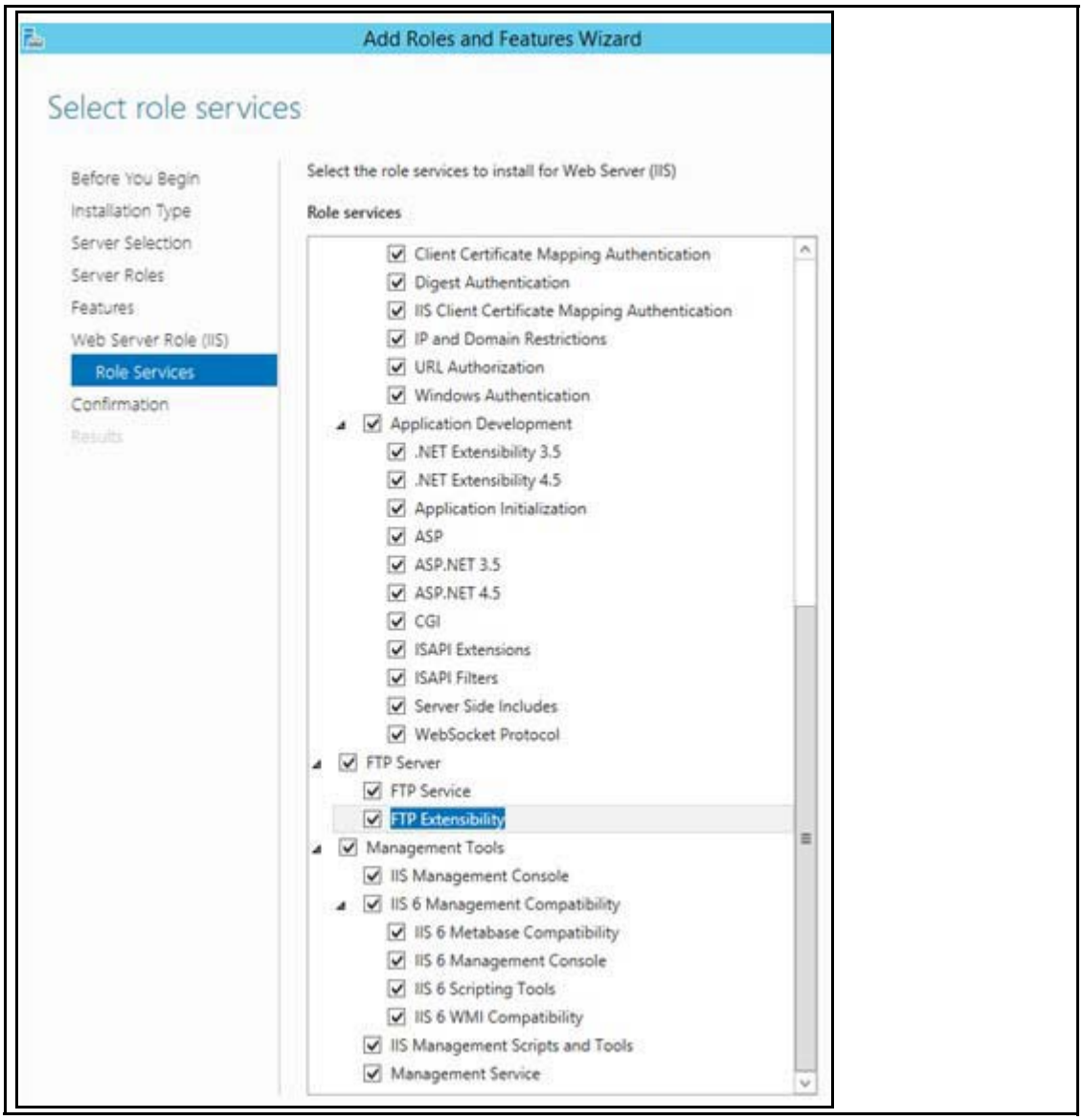

Add Roles and Features Wizard
Select features
Before You Begin
Installation Type
Server Selection
Server Roles
Features
Web Server Role (IIS)
Role Services
Confirmation
Results
Select one or more features to install on the selected server.
Features
.NET Framework 3.5 Features
.NET Framework 3.5 (includes .NET 2.0 and 3.0)
HTTP Activation
Non-HTTP Activation
.NET Framework 4.5 Features (2 of 7 installed)
.NET Framework 4.5 (Installed)
ASP.NET 4.5
WCF Services (1 of 5 installed)
HTTP Activation
Message Queuing (MSMQ) Activation
Named Pipe Activation
TCP Activation
TCP Port Sharing (Installed)
Background Intelligent Transfer Service (BITS)
BitLocker Drive Encryption
BitLocker Network Unlock
BranchCache
Client for NFS
Data Center Bridging
Direct Play
Enhanced Storage
Failover Clustering
Group Policy Management
IIS Hostable Web Core
Ink and Handwriting Services
Internet Printing Client
IP Address Management (IPAM) Server
iSNS Server service
LPR Port Monitor
Management OData IIS Extension



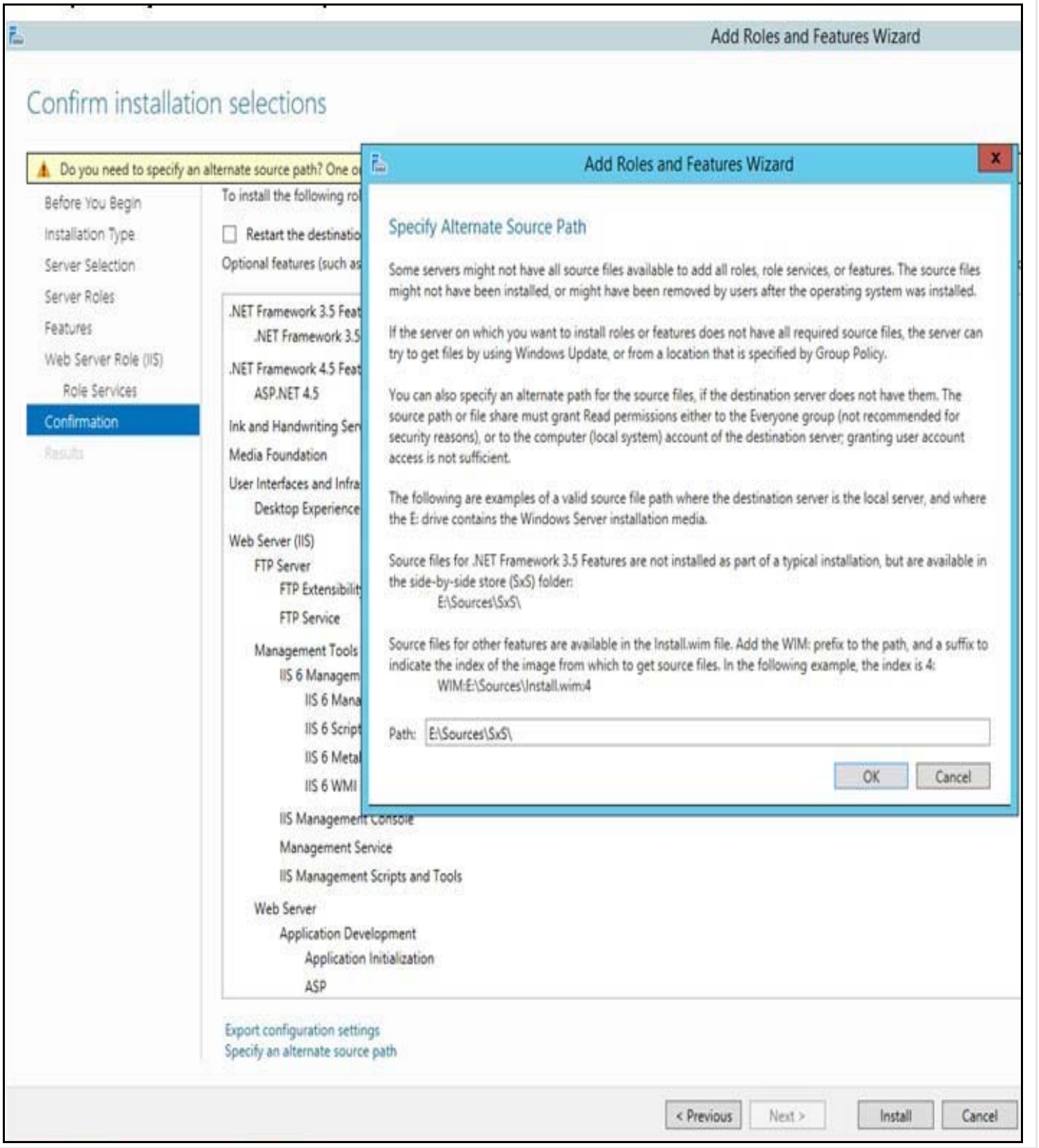
Step 4 On the **Select Role Services** page, select all the features and sub features on this page under webserver. Click **Next**.


Add Roles and Features Wizard
Select features
Before You Begin
Installation Type
Server Selection
Server Roles
Features
Web Server Role (IIS)
Role Services
Confirmation
Results
Select one or more features to install on the selected server.
Features
Remote Server Administration Tools
RPC over HTTP Proxy
Simple TCP/IP Services
SMB 1.0/CIFS File Sharing Support (Installed)
SMB Bandwidth Limit
SMTP Server
SNMP Service
Telnet Client
Telnet Server
TFTP Client
User Interfaces and Infrastructure (2 of 3 installed)
Graphical Management Tools and Infrastructure (Installed)
Desktop Experience
Server Graphical Shell (Installed)
Windows Biometric Framework
Windows Feedback Forwarder
Windows Identity Foundation 3.5
Windows Internal Database
Windows PowerShell (2 of 5 installed)
Windows Process Activation Service
Windows Search Service
Windows Server Backup
Windows Server Migration Tools
Windows Standards-Based Storage Management
Windows TIFF IFilter
WinRM IIS Extension
WINS Server
Wireless LAN Service
WoW64 Support (Installed)
XPS Viewer


Add Roles and Features Wizard
Select role services
Before You Begin
Installation Type
Server Selection
Server Roles
Features
Web Server Role (IIS)
Role Services
Confirmation
Results
Select the role services to install for Web Server (IIS)
Role services
Web Server
Common HTTP Features
Default Document
Directory Browsing
HTTP Errors
Static Content
HTTP Redirection
WebDAV Publishing
Health and Diagnostics
HTTP Logging
Custom Logging
Logging Tools
ODBC Logging
Request Monitor
Tracing
Performance
Static Content Compression
Dynamic Content Compression
Security
Request Filtering
Basic Authentication
Centralized SSL Certificate Support
Client Certificate Mapping Authentication
Digest Authentication
IIS Client Certificate Mapping Authentication
IP and Domain Restrictions
URL Authorization
Windows Authentication
Application Development
FTP Server



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**.


Add Roles and Features Wizard
Confirm installation selections
Do you need to specify an alternate source path? One o
Before You Begin
Installation Type
Server Selection
Server Roles
Features
Web Server Role (IIS)
Role Services
Confirmation
Results
To install the following ro
Restart the destinatio
Optional features (such as
.NET Framework 3.5 Feat
.NET Framework 3.5
.NET Framework 4.5 Feat
ASP.NET 4.5
Ink and Handwriting Ser
Media Foundation
User Interfaces and Infra
Desktop Experience
Web Server (IIS)
FTP Server
FTP Extensibilit
FTP Service
Management Tools
IIS 6 Managem
IIS 6 Mana
IIS 6 Script
IIS 6 Metal
IIS 6 WMI
IIS Management Console
Management Service
IIS Management Scripts and Tools
Web Server
Application Development
Application Initialization
ASP
Export configuration settings
Specify an alternate source path
< Previous
Next >
Install
Cancel
Add Roles and Features Wizard
Specify Alternate Source Path
Some servers might not have all source files available to add all roles, role services, or features. The source files might not have been installed, or might have been removed by users after the operating system was installed.
If the server on which you want to install roles or features does not have all required source files, the server can try to get files by using Windows Update, or from a location that is specified by Group Policy.
You can also specify an alternate path for the source files, if the destination server does not have them. The source path or file share must grant Read permissions either to the Everyone group (not recommended for security reasons), or to the computer (local system) account of the destination server; granting user account access is not sufficient.
The following are examples of a valid source file path where the destination server is the local server, and where the E: drive contains the Windows Server installation media.
Source files for .NET Framework 3.5 Features are not installed as part of a typical installation, but are available in the side-by-side store (SxS) folder:
E:\Sources\SxS\
Source files for other features are available in the Install.wim file. Add the WIM: prefix to the path, and a suffix to indicate the index of the image from which to get source files. In the following example, the index is 4:
WIM:E:\Sources\Install.wim:4
Path:
E:\Sources\SxS\
OK
Cancel

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.

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.

- 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

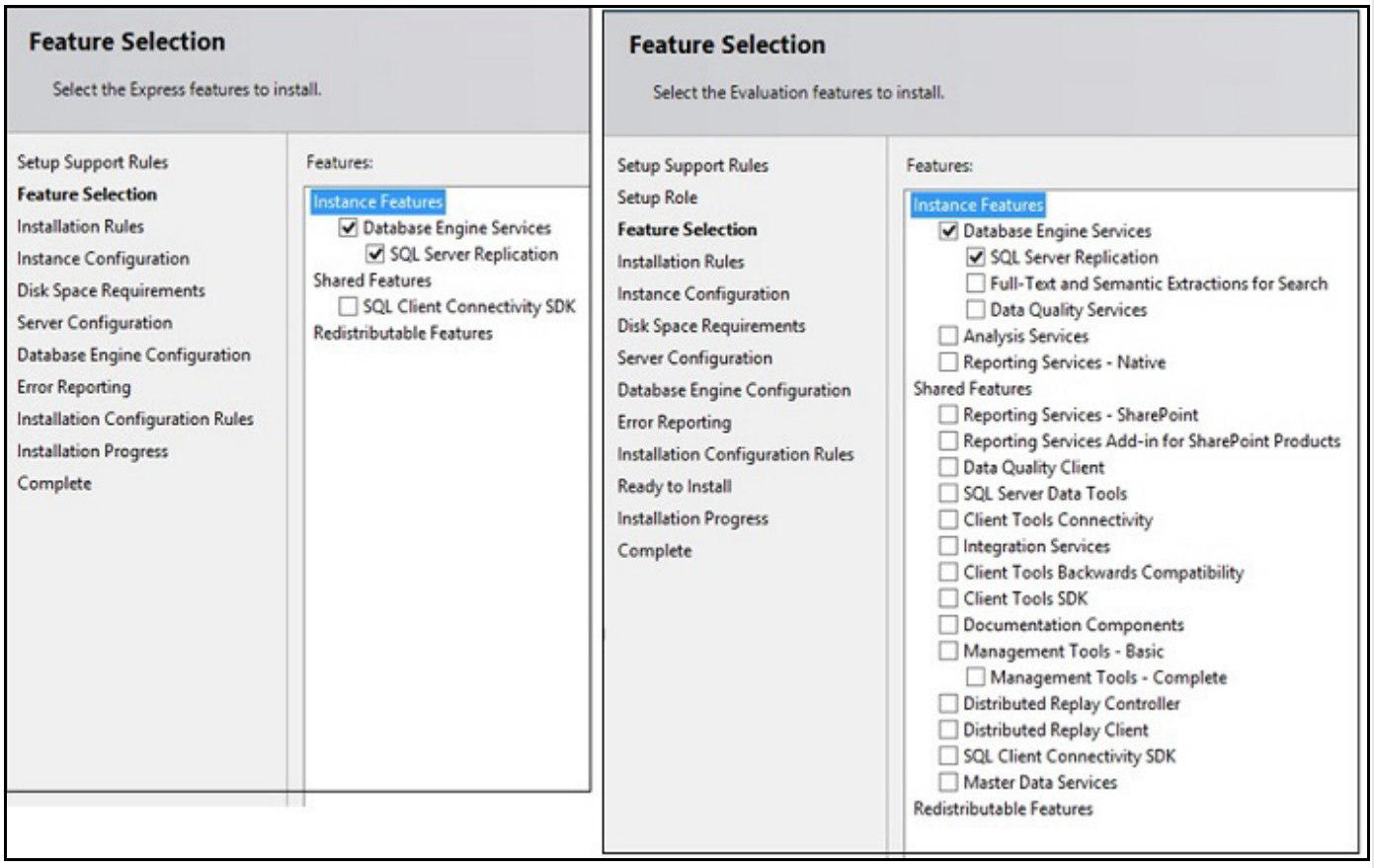
Complete the following steps to install SQL server 2012 (SP2 or SP3):

Step 1 Under Installation tab, click '**New SQL Server stand-alone installation or add features to an existing installation**'.

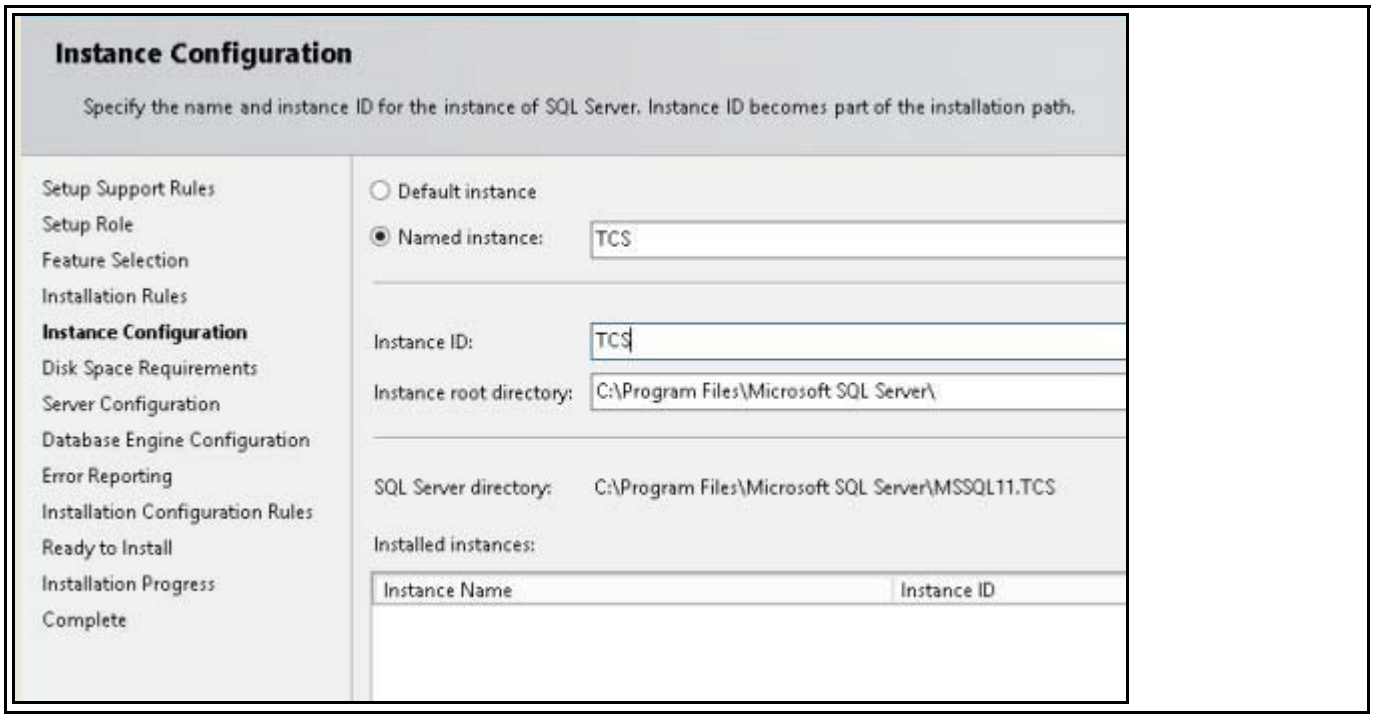
Step 2 Click '**I accept the license terms**'.

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 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

To install the VM Content Server and the license and option keys, you will need the software base Product Authorization Key (PAK) and option PAK. This information is part of the claim certificate that you received after ordering the VM Content Server.

Note You must be logged in as a **Local Administrator** to install, uninstall, or manage the VM Content Server.

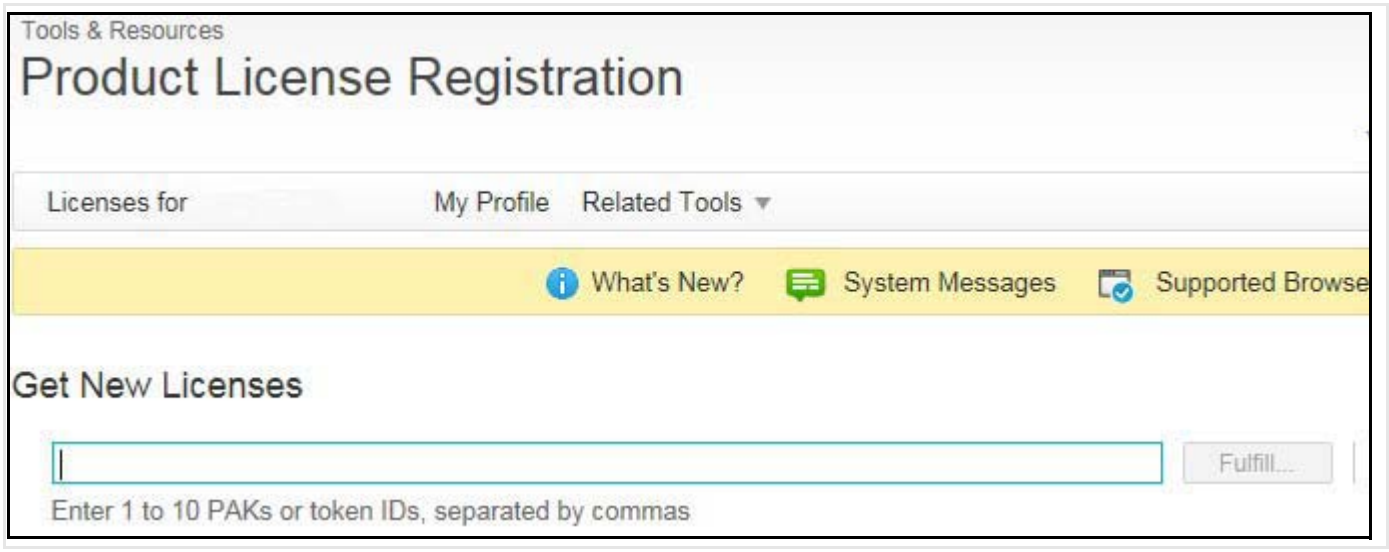
Step 1 Copy the **S_7_2_1_TCSVM_Bundle.zip** or **S_7_2_1_TCSBE6K_Bundle.zip** file to a folder on your system and extract the files. Launch the command prompt and change the directory to the folder location.

Note For TCS 7.2.1, file name is **S_7_2_1_TCSVM_Bundle.zip** and for BE6K, file name is **S_7_2_1_TCSBE6K_Bundle.zip**.

Step 2 Run **GetTCSVirtualSN.exe** to generate the virtual serial number (vSN) for your Content Server VM. Copy the virtual serial number.

Note To get the virtual serial number, use the command prompt and run as an administrator. Go to the location, where the S_7_2_1_TCSVM_Bundle.zip is extracted. Run **GetTCSVirtualSN.exe** from the command prompt.

Step 3 Go to the Cisco Product License Registration website (Cisco login required).



Enter this information:

a. In the Get New Licenses From a PAK or Token field, enter the Software Base PAK from the VM Content Server claim certificate. Click **Fulfill single PAK/Token**.

b. In the Virtual Serial Number field, enter the vSN from Step 2 and click **Next**.

c. Enter the End User email credentials and click the License Agreement check box. Click **Get License**. The License Request popup window displays the progress. When the process is complete, click **Close**.

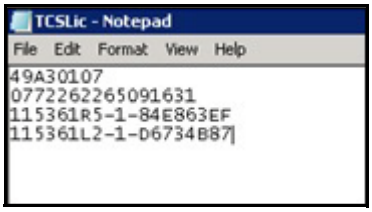
d. The License Key is generated and sent to the user specified in the previous step.

Step 4 Follow the below steps:

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>>

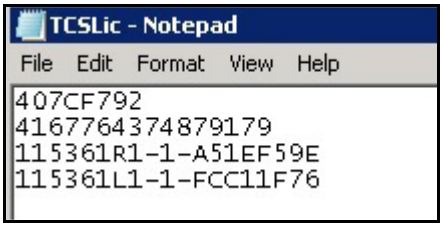
Note For TCS 7.2.1, extracted directory is **S_7_2_1_TCSVM_Bundle.zip**. In the license text file, make sure that there are no extra spaces before or after the license keys.



b. In the **S_7_2_1_TCSBE6K_Bundle.zip** extracted directory, create a *TCSLic.txt* file by using the licensing information in this format:

<<Virtual Serial No>>
<<Release Key>>
<<Recording 1 Key>>
<<Live 1 Key>>

Note For BE6K, extracted directory is **S_7_2_1_TCSBE6K_Bundle.zip.** In the license text file, make sure that there are no extra spaces before or after the license keys.



Step 5 In the command prompt, run the **PreInstaller.cmd** from the extracted **S_7_2_1_TCSVM_Bundle.zip or S_7_2_1_TCSBE6K_Bundle.zip** directory to configure the Content Server Pre-Installer.

Step 6 Run **S7_2_1.exe** to install the VM Content Server software on the appliance.

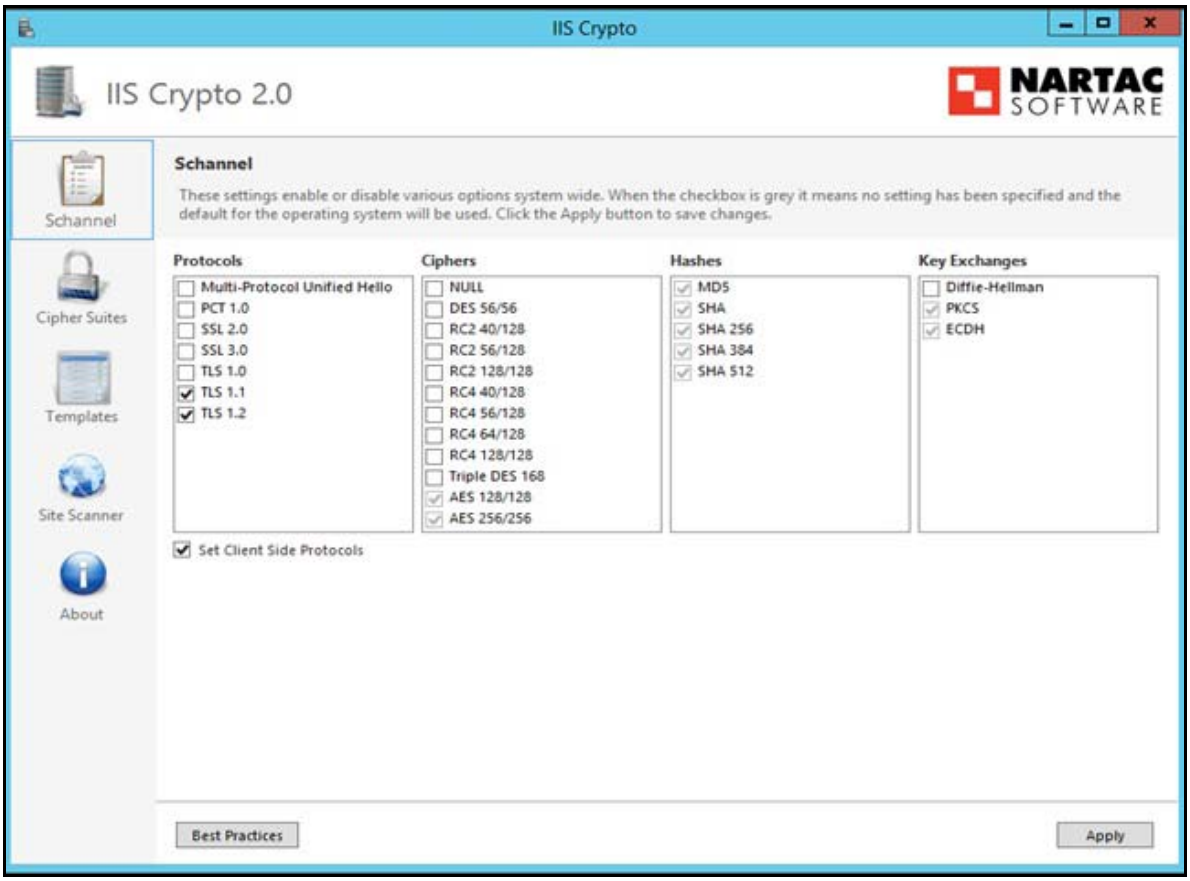
Follow the prompts to complete the TCS installation.

Step 7 Run the **PostInstaller.cmd** from the VM Scripts folder in the command prompt to configure the Post-Installer. This will reboot the system.

Step 8 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 the 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.

Migrations options for New Customers

Appliance TCS 7.2.1 Release: M4 Appliance with TCS and Windows and SQL 2012 Packaged**.**

Virtual TCS 7.2.1 Release: Customers can deploy vTCS on a M4 server or spec based.

About Data Migration

If you have existing TCS with 5.x or 6.x build, you can migrate configuration and data files from your existing hardware to the newly created VM TCS. Follow the below link for more details on data migration:

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

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

Information About Accessibility and Cisco Products

For information about the accessibility of this product, contact the Cisco accessibility team at accessibility@cisco.com.

Obtaining Documentation and Submitting a Service Request

For information on obtaining documentation, using the Cisco Bug Search Tool (BST), submitting a service request, and gathering additional information, see *What's New in Cisco Product Documentation* at: http://www.cisco.com/en/US/docs/general/whatsnew/whatsnew.html.

Subscribe to *What's New in Cisco Product Documentation*, which lists all new and revised Cisco technical documentation, as an RSS feed and deliver content directly to your desktop using a reader application. The RSS feeds are a free service.

This document is to be used in conjunction with the documents listed in the "Related Documentation" section.