



Deploying a System Manually

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General Concepts For Your System Deployment

System Sizes

- 50 concurrent users system
 - Typically supports a company between 500 and 1000 employees

- Primary system (without HA) comprises an Admin virtual machine and an optional Internet Reverse Proxy (for public access)
- 250 concurrent users system
 - Typically supports a company between 2500 and 5000 employees
 - Primary system (without HA) comprises an Admin virtual machine, a Media virtual machine, and an optional Internet Reverse Proxy (for public access)
- 800 concurrent users system
 - Typically supports a company between 8000 and 16,000 employees
 - Primary system (without HA) comprises an Admin virtual machine, a Media virtual machine, and an optional Internet Reverse Proxy (for public access)
- 2000 concurrent users system
 - Typically supports a company between 20,000 and 40,000 employees
 - Primary system (without HA) comprises an Admin virtual machine, 3 Media virtual machines, 2 Web machines, and an optional Internet Reverse Proxy (for public access)

Terms Used During the Deployment

Field Name	Description
WebEx Site URL	Secure http URL for users to host and attend meetings.
WebEx Administration URL	Secure http URL for administrators to configure, monitor, and manage the system.
Public VIP	IP address for the WebEx site URL
Private VIP	<ul style="list-style-type: none"> • IP address for the Administration site URL • IP address for the WebEx site URL (for internal users only, if you have a split-horizon DNS).

Installation Checklist



Restriction

You must use VMware vCenter to manage the ESXi hosts on which the Cisco WebEx Meetings Server system is deployed.

Networking Changes

See the appropriate networking checklist for your deployment. There are two considerations:

- Public access: whether or not users external to your firewall, can host and access meetings from the Internet or mobile devices.

Cisco recommends public access as it results in a better user experience for your mobile workforce.

- Type of DNS setup at your company: split-horizon DNS or a non-split horizon DNS (most common DNS configuration).

For more information about these types of DNS setup, see the *Cisco WebEx Meetings Server Planning Guide*.

- Open port 10200 from the administrator's desktop to the Admin virtual machine.
Port 10200 is used by the web browser during the deployment.

Select the right checklist for your deployment:

- [Networking Checklist for a System with Public Access and Non-Split-Horizon DNS](#)
- [Networking Checklist for a System With No Public Access](#)
- [Networking Checklist for a System with Public Access and Split-Horizon DNS](#)

Required Information

**Note**

The required information varies if you are doing an automatic deployment (supported for 50 concurrent users, 250 concurrent users, and 800 concurrent users) systems or manual deployment (supported for all system sizes). Cisco recommends you select an automatic deployment unless you are deploying a 2000 user system, that requires a manual deployment. Refer to the appropriate link below.

Choose one of the following for a checklist of information required for your deployment type:

- [Required Information For an Automatic Deployment](#)
- [Required Information For a Manual Deployment, on page 3](#)

Required Information For a Manual Deployment

In a manual deployment, you create all the virtual machines for your system using the OVA wizard from your vSphere client. You then install your system using a manual deployment.

You must choose a manual deployment if you are deploying a 2000 user system.

**Note**

Be sure to add the virtual machine FQDNs, IP addresses, WebEx and Administration site URLs, and VIP addresses to your DNS servers before you start the system deployment. We will use this information to check network connectivity at the end of the deployment.

To avoid any DNS issues, you may want to test these URLs and IP addresses before you start the OVA deployment. Otherwise, the system deployment will fail until you correct these errors.

This is the information required for your system, in order.

Field Name	Description	Value For Your System
Public VIP	IP address for the WebEx site URL (site users access to host and attend meetings)	
Private VIP	<ul style="list-style-type: none"> • IP address for the Administration site URL (for administrators to configure, monitor, and manage the system) • IP address for the WebEx site URL (for internal users only, if you have a split-horizon DNS). 	
WebEx Site URL	Secure http URL (all lowercase characters) for users to host and attend meetings.	
WebEx Administration URL	Secure http URL (all lowercase characters) for administrators to configure, monitor, and manage the system.	
FQDN for the internal virtual machines	Depending on the system size you selected, the fully qualified domain name (all lowercase characters) of the media and web virtual machines.	
(Public access only) FQDN of the Internet Reverse Proxy	If you plan to add public access, then you need to enter the fully qualified domain name (all lowercase characters) of the Internet Reverse Proxy virtual machine.	

What To Do Next

With this information, start the system deployment by entering the deployment URL in a browser window. (The deployment URL is written in the console window for the Admin virtual machine.)



Note

If the system is rebooted before the configuration is complete, a new passcode is generated and you must use the deployment URL with the new passcode.

Deploying the OVA File From the VMware vSphere Client

Before deploying your system, you must use the VMware vSphere client to deploy the Admin virtual machine for your system.



Note

The following procedure is provided as a general guidance. The exact screens you see during the OVA deployment depends upon your vCenter, storage, and networking configuration, and might be slightly different from this procedure. See your VMware vSphere documentation for complete information on the OVA wizard.

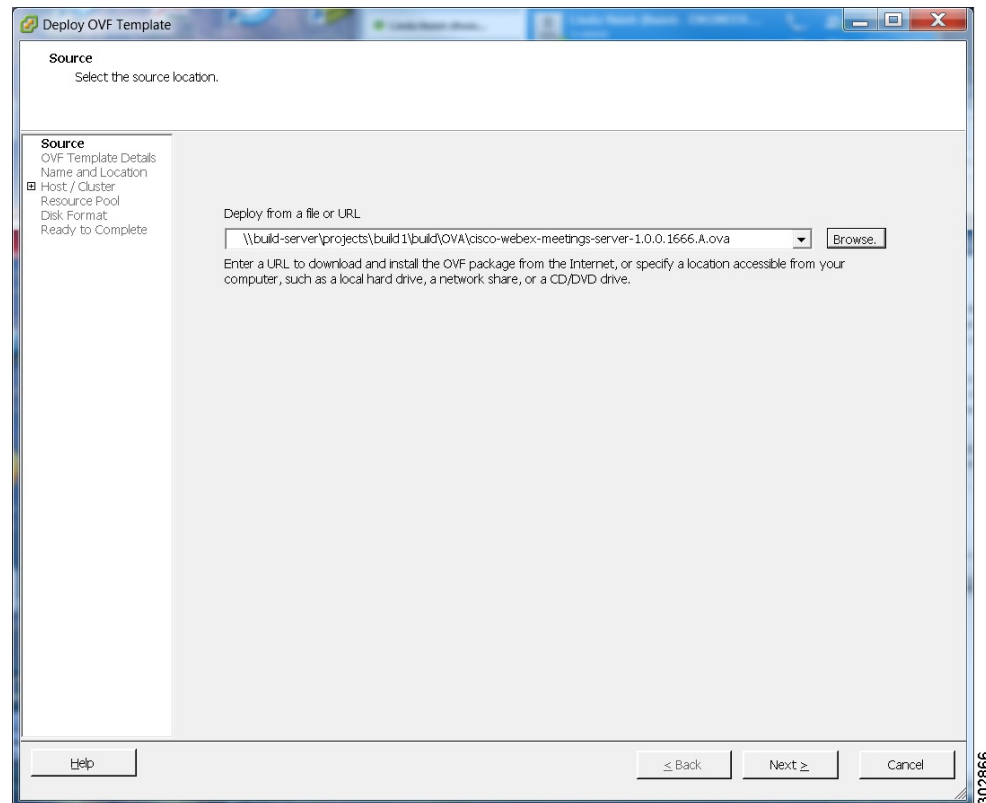
Before You Begin

Obtain the Cisco WebEx Meetings Server OVA file for your system and place it in a location that is accessible from VMware vSphere.

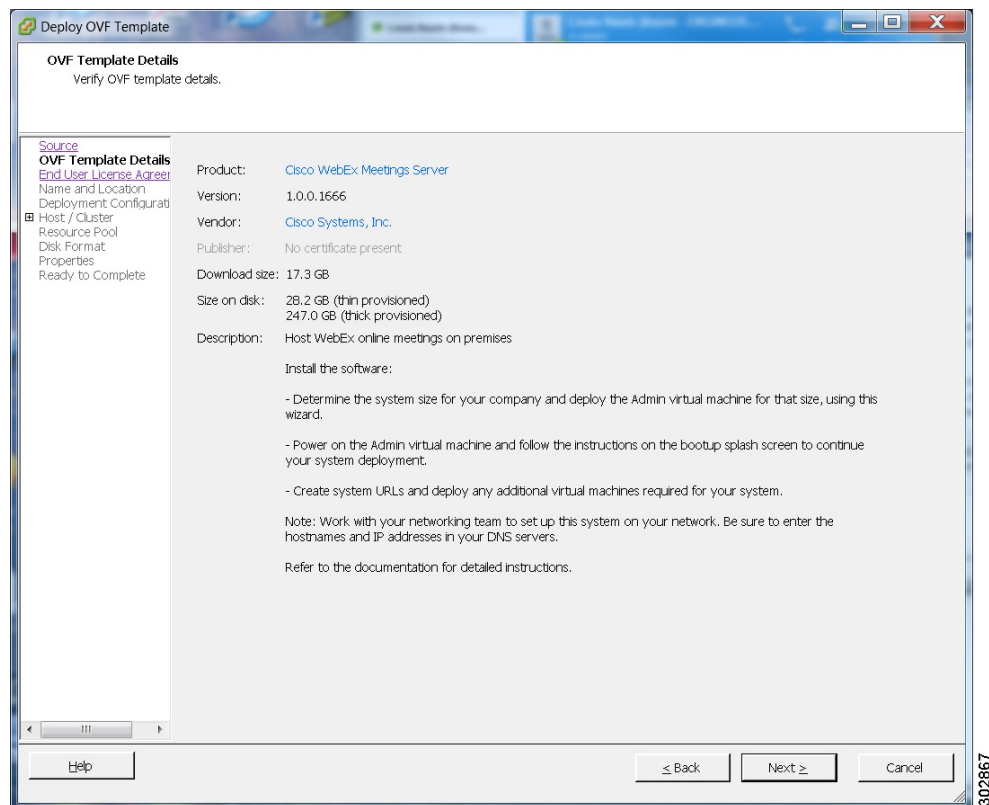
You must use VMware vCenter to manage the ESXi hosts on which the Cisco WebEx Meetings Server system is deployed. Using the vSphere client, sign in to vCenter and deploy the OVA file for the Admin virtual machine.

Procedure

- Step 1** Sign in to your VMware vSphere client.
Be sure to sign in as a user that includes administrator privileges: to deploy, configure, power on or off, and delete virtual machines.
- Step 2** Select **File > Deploy OVF Template...**



- Step 3** Select **Browse** to navigate to the location of the OVA file. Select **Next**.
You can select the **Cisco WebEx Meetings Server** link to go to a Web page with detailed information about this system.



Step 4 Read the End User License Agreement and select **Accept**, then select **Next**.

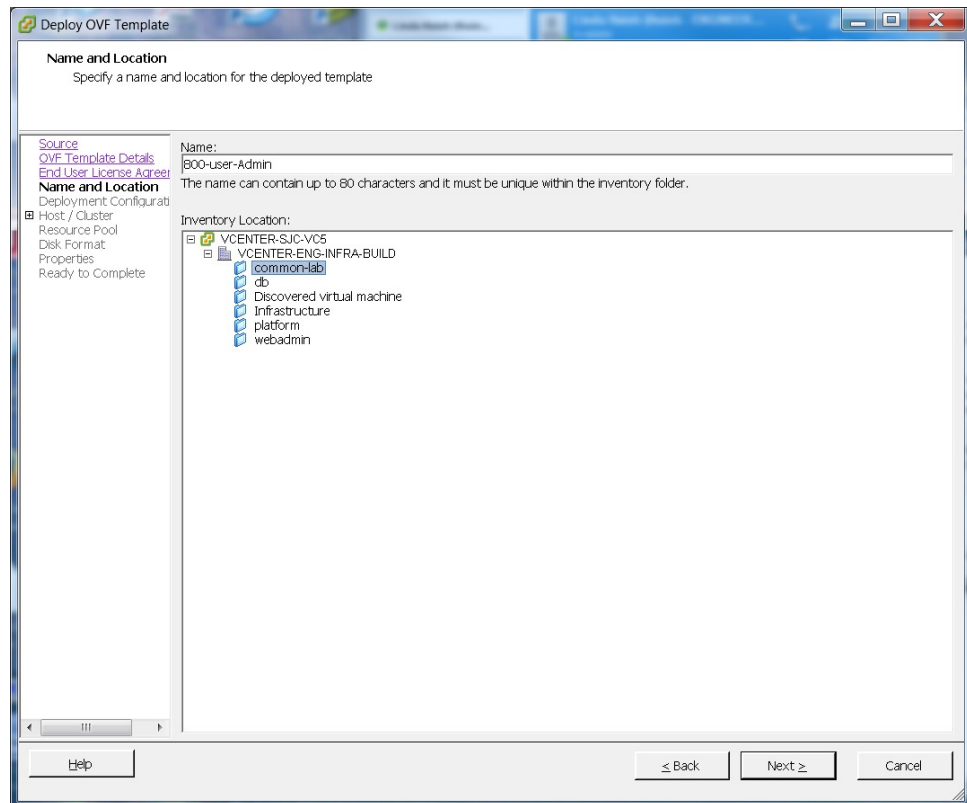
Step 5 Navigate to and select the location in the vCenter inventory where you want to place the Admin virtual machine.

Step 6 Enter the name of the virtual machine for your system size and select **Next**. For more information on selecting the correct size for your company, see [General Concepts For Your System Deployment](#).

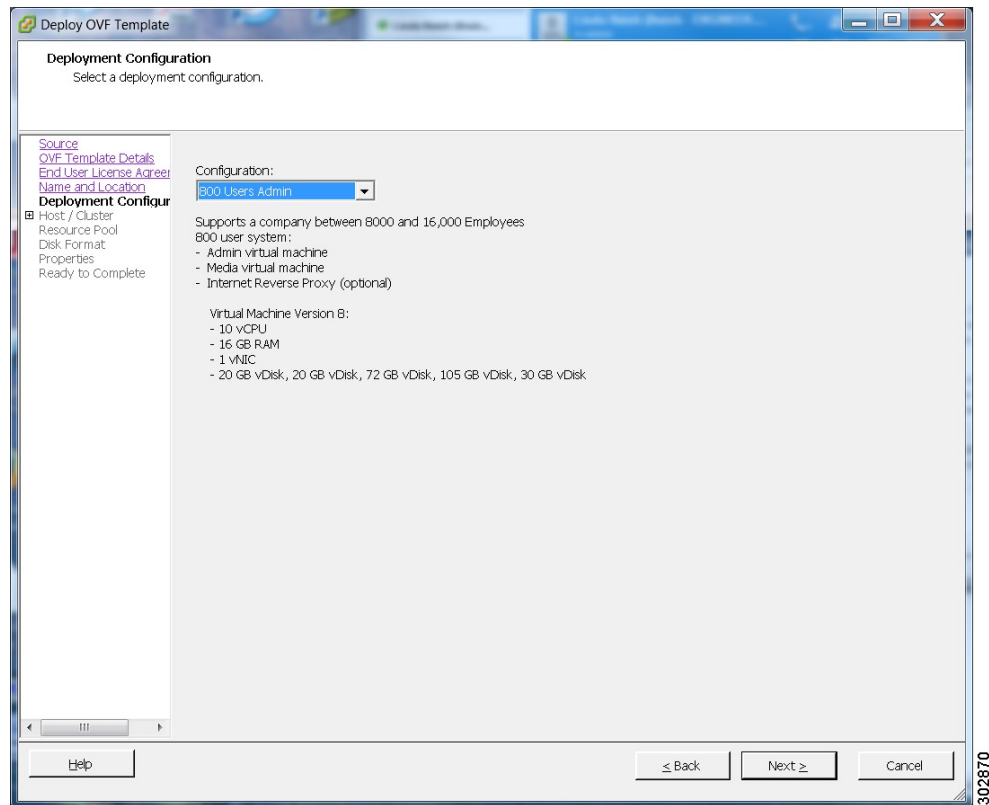
Note You must deploy the Admin virtual machine before deploying any other virtual machines. If you select automatic deployment (recommended), we deploy the other virtual machines for you. If you choose manual deployment (required for 2000 concurrent users system), then after deploying the Admin virtual machine, you must deploy the other virtual machines by using this same wizard.

Cisco recommends you include the type in the virtual machine name; for example, include "Admin" in your Admin virtual machine name to easily identify it in your vCenter inventory.

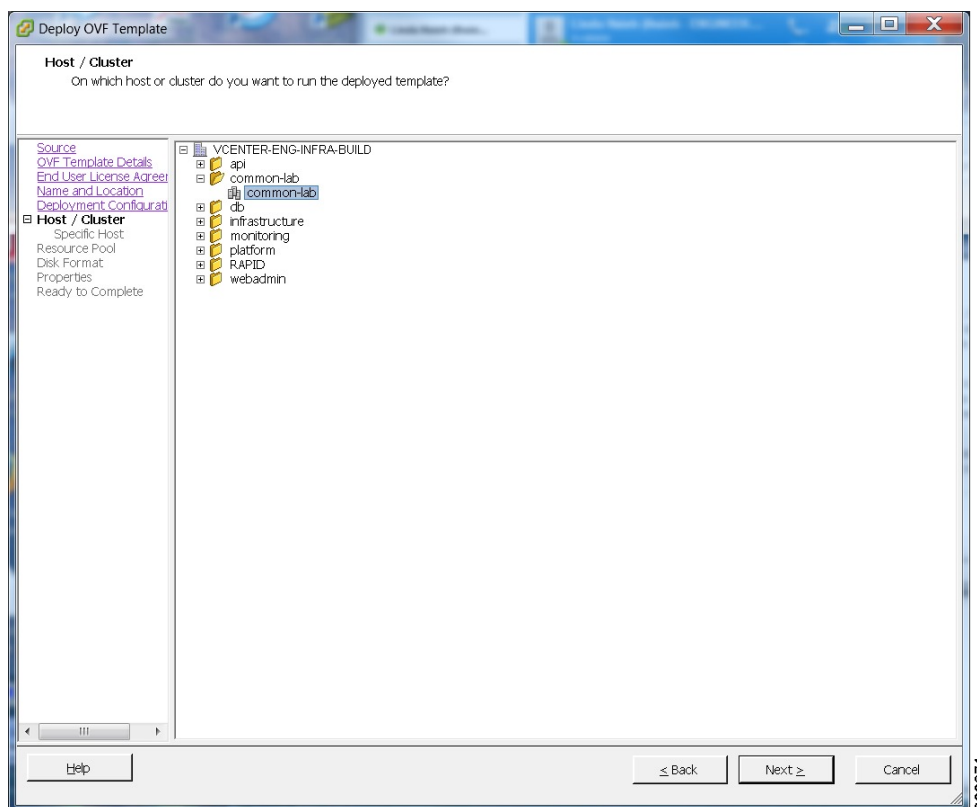
Note All the internal virtual machines for your system must be in the same subnet as the Admin virtual machine. (Depending on the system size you select, you might need one or more media and web internal virtual machines.)



- Step 7** From the drop-down list, select the virtual machine for your system size and select **Next**. Be sure to deploy the Admin virtual machine before any other virtual machines in your system.

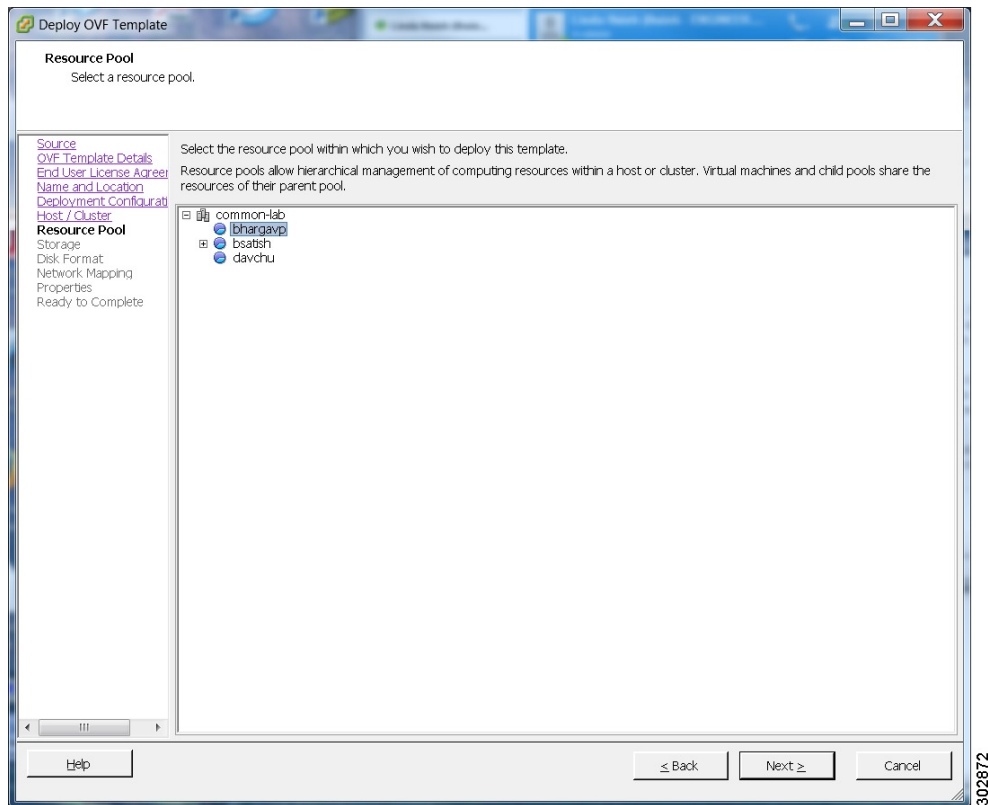


Step 8 Navigate through the vCenter inventory and select the ESXi host or cluster where you want to deploy the virtual machines for your system. Select **Next**.

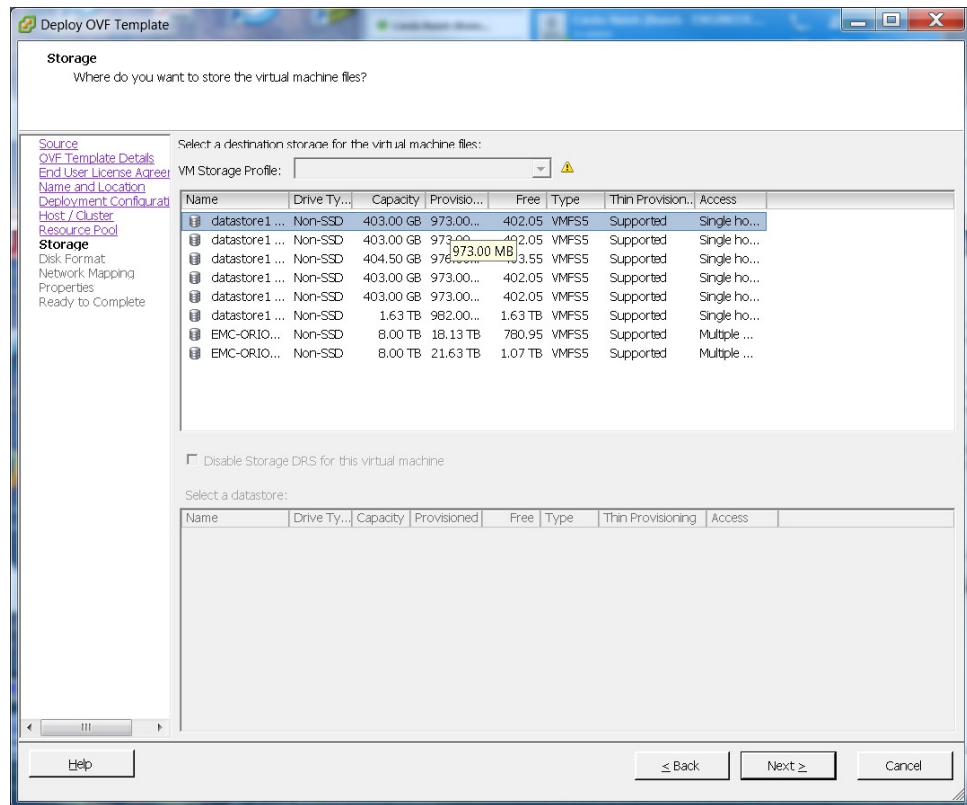


Step 9 If the cluster contains a resource pool, select the resource pool where you want to deploy the OVA template and select **Next**.

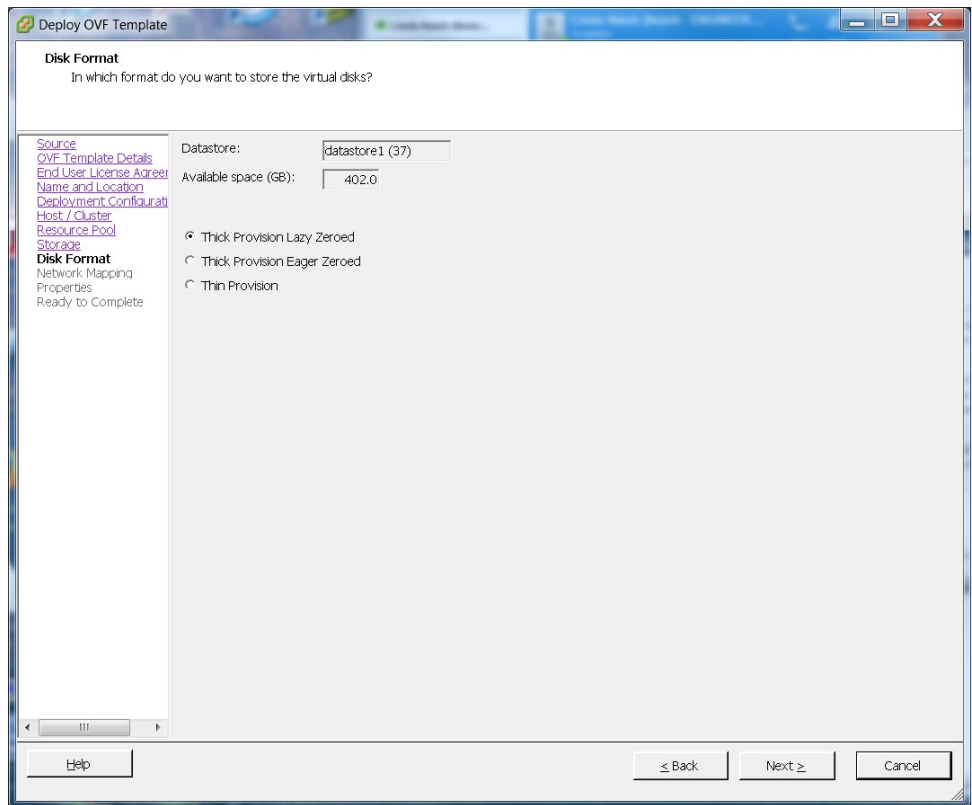
Resource pools share CPU and memory resources or to work with VMware features such as DRS or vMotion. Resource pools must be dedicated to a single ESXi Host. VMware resource pools are not recommended for use with Cisco WebEx Meetings Server.



- Step 10** Select the datastore for your virtual machine and the kind of provisioning for your virtual machine. You must select **Thick Provisioning** and create the maximum virtual disk space required for your system. With Thin Provisioning, VMware allocates the file system space on an *as-needed* basis that can result in poor performance. Lazy zero is sufficient and eager zero is acceptable, but eager zero will take more time to complete.

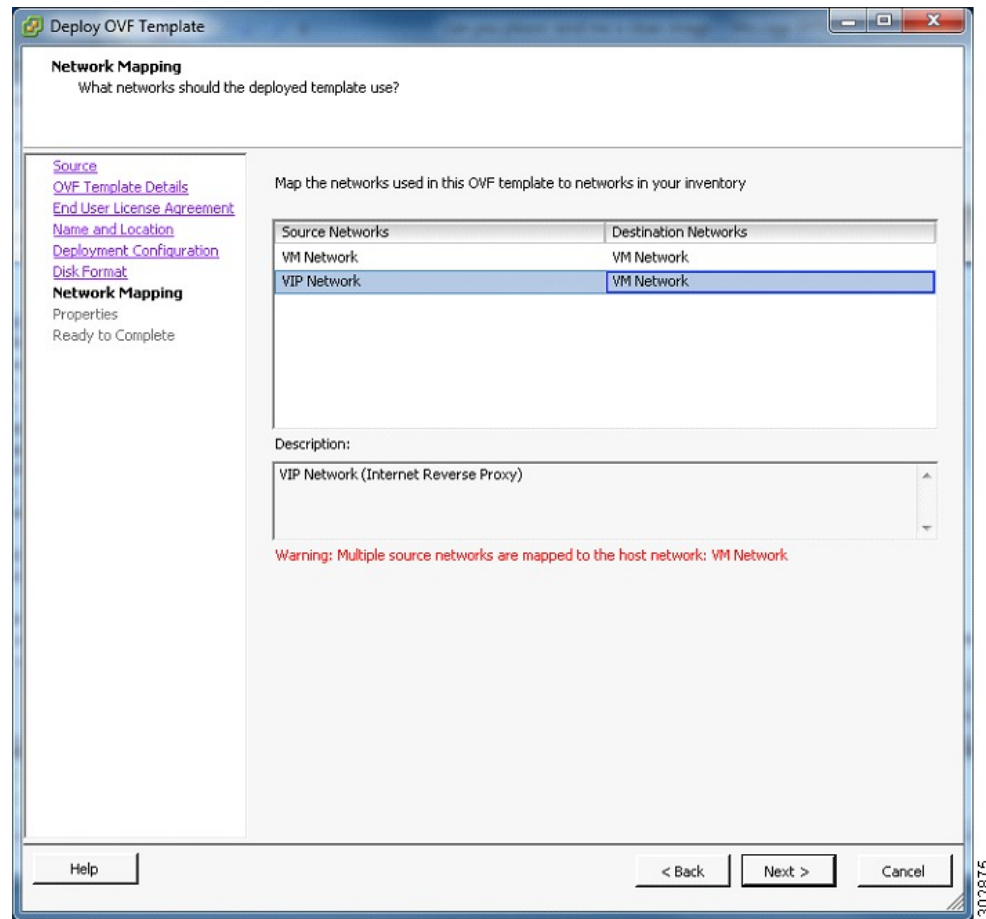


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Step 11 Set up network mapping. For each source network, select a destination network from the drop-down list in the **Destination Networks** column. Select **Next**.

Note Both the VM Network and the VIP Network must be mapped to the same value in the Destination Network column. You can ignore the warning message about multiple source networks mapped to the same host network.



Step 12 Enter the following information for the virtual machine, then select **Next**:

- Hostname of the virtual machine (do not include the domain here)
- Domain for the virtual machine
- IPv4 address (Eth0) of the virtual machine
- Subnet mask of the virtual machine
- Gateway IP address
- Primary DNS server that contains entries for the hostname and IP address of this virtual machine
- Secondary DNS server that contains entries for the hostname and IP address of this virtual machine
- Language displayed during the install process, following the power on of this virtual machine

Note To avoid DNS issues, you can test the URLs and IP addresses before you start the OVA deployment. The deployment will fail if there are errors.

Deploy OVF Template

Customize the software solution for this deployment.

Source
[OVF Template Details](#)
[End User License Agreement](#)
[Name and Location](#)
[Deployment Configuration](#)
[Host / Cluster](#)
[Resource Pool](#)
[Storage](#)
[Disk Format](#)
[Network Mapping](#)
Properties
 Ready to Complete

Networking Properties

Hostname for the virtual machine
 2-64 alphanumeric characters | Required | Hostname only, not including the domain

DNS local domain name
 Domain name | Required | Domain name for the virtual machine (for example, "your_company".com)

IPv4 address
 IPv4 format | Required | Physical IP address (Eth0) for the virtual machine

IPv4 Subnet mask
 IPv4 format | Required | Netmask for the virtual machine

IPv4 Gateway
 IPv4 format | Required | Gateway for the virtual machine

Primary DNS Server IPv4 Address
 IPv4 format | Required | Internal DNS server that contains entries for the hostname and IP address of this virtual machine

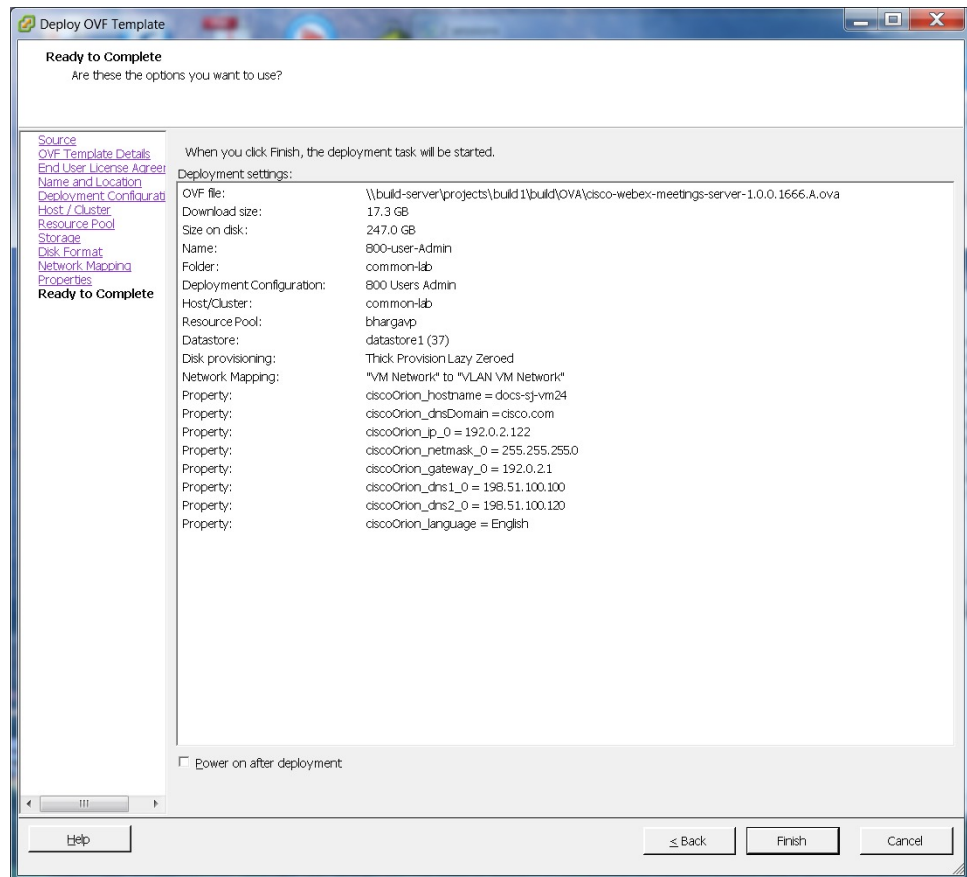
Secondary DNS Server IPv4 Address
 IPv4 format | Optional | Internal DNS server that contains entries for the hostname and IP address of this virtual machine

System language
 String of alphanumeric characters | Required | Language displayed during the installation process, following power on of the Admin virtual machine

Help ≤ Back Next ≥ Cancel

Step 13 Confirm the information that you have entered. If there are any mistakes, select **Back** and change the values.

Step 14 If you are manually upgrading a system, select **Finish**, skip the the balance of this procedure and continue with the next step in [Upgrading the System Manually](#). (Copying data from the original system to the upgrade system by using manual deployment should be performed after the upgraded system is deployed, but not yet powered on.) Otherwise, check **Power on after deployment** and select **Finish**.



Step 15 If you are deploying an Admin virtual machine, go to vCenter and open a console window for the virtual machine. Once it powers on, we will check the networking information you entered during the OVA deployment.

- If we are able to confirm connectivity, a green checkmark is displayed.
- If there is a problem, a red X is displayed. Fix the error and re-attempt the OVA deployment.

Step 16 When all the information is confirmed, write down the case-sensitive URL displayed in the console window. A software administrator will type this URL into a web browser, and continue the system deployment.

Note If the system is re-booted before the configuration is complete, a new passcode is generated and you must use the URL with the new passcode.

What to Do Next

If you are performing a manual deployment, Cisco recommends that you deploy the rest of the virtual machines for your system at this time. This avoids any issues such as time outs when powering on virtual machines.

If the deployment is successful, continue with system deployment in a browser window.

If the deployment failed, see [Checking Your Networking Configuration After a Failed OVA Deployment](#).

Checking Your Networking Configuration After a Failed OVA Deployment

Confirm the networking entries for the virtual machine.



Important

Do not use **Edit Settings...** for any of the virtual machines in your system, other than after a failed deployment. Once the system is up and running, you must use the WebEx Administration site to make any further edits to virtual machine settings. If you use your vSphere client, those changes will not be accepted by the system.



Note

For detailed steps, see your VMware vSphere documentation.

Procedure

- Step 1** In the vSphere client, select **Power > Shut Down Guest** on the virtual machine.
- Step 2** Find the virtual machine in the Inventory and right-click **Edit settings...**
- Step 3** Select the **Options** tab.
- Step 4** Select **Properties** and confirm that all the networking information has been entered correctly. If any changes are required, redeploy the OVA with the correct settings.
One possible networking issue is that the VLAN routing is not set up correctly for the ESXi host. Because the virtual machine is on that VLAN, the virtual machine won't have network connectivity. From the network where the ESXi host resides, you should be able to ping the default gateway IP address of the VLAN you will be using for the virtual machines in your system.

Selecting Your Language for Setup

Determine your preferred language for setting up the system.



Note

Do not close this browser window until the system deployment is complete. If you close the browser early, you may have to restart the deployment.

Before You Begin

Be sure you have deployed the Admin virtual machine from VMware vCenter. See [Deploying the OVA File From the VMware vSphere Client](#)

Procedure

- Step 1** Select the language from the drop-down menu.
- Step 2** Select **Next**.
-

Confirming the Deployment

To confirm that you are deploying a new system or expanding an existing system, select **Next**.

Confirming the Size of Your System

You selected the size of your system when you deployed the Admin virtual machine by using the OVA file.

- Confirm that the system size you selected during the OVA deployment is correct.
 - If the system size you selected is correct, then select **Next**.
 - If the system size you selected is incorrect, then select **I want to change System Size**.
- a) Using your VMware vSphere client, select **Power > Shut Down Guest** for the Admin virtual machine with the incorrect system size.
- b) Right-click the virtual machine and select **Delete from Disk**.
- c) Redeploy the OVA file and select the Admin virtual machine for the correct system size.

Choosing What System to Install

Procedure

- Step 1** Determine the type of installation.
- If you are installing this system for the first time, then choose **Install a primary system**.
 - If you have already installed a primary system and want a redundant High Availability system, then choose **Create a High Availability (HA) redundant system**.
- Note** You should not install a HA system before installing the primary system, as you cannot use the HA system unless the primary system has been installed.
- Step 2** Select **Next**.
-

Choosing the Type of System Deployment

You can choose automatic or manual deployment of the system virtual machines.

Procedure

Step 1 Select automatic or manual deployment:

- **Automatic:** This is the fastest installation method. We deploy all the virtual machines required for your system.
We recommend that you select **Automatic** unless you are deploying a 2000-user system that requires a manual deployment.
- **Manual:** You manually deploy each virtual machine by using VMware vCenter. After answering a few questions about your system, you are provided with a list of the virtual machines required for your system.

Your choice of automatic or manual deployment depends upon the following:

- If you have time constraints, an automatic deployment is faster than a manual deployment.
- If you prefer step-by-step guidance, this guidance is provided during an automatic deployment.
- If you are familiar with VMware vCenter and do not want to provide us your vCenter credentials, select manual deployment.

Step 2 Select Next.

Adding Public Access

If you add public access, users can host or attend meetings from the Internet or mobile devices. For additional information on setting this up for your company, see the *Cisco WebEx Meetings Server Planning Guide*.



Note

You can always change this option later, through the WebEx Administration site.

Procedure

Step 1 Choose whether or not external users can host or attend meetings.

- If you want to add public access, confirm that the **Create an Internet Reverse Proxy virtual machine** check box has a check.

- If you want only internal users (behind your company's firewall) to host or attend meetings, then uncheck the **Create an Internet Reverse Proxy virtual machine** check box.

Step 2 Select Next.

What to Do Next

- With public access: [Choosing vCenter Settings for Internet Reverse Proxy](#)
- Without public access: [Entering the Private VIP Address](#)
- For IPv6 client connections: [Configuring IPv6 for Client Connections](#)

Entering the Public VIP Address

- This public VIP address must be visible from both the Internet and the internal network (split-horizon DNS only).
- This public VIP address must be on the same subnet as the Internet Reverse proxy.
- If you do not have a split-horizon DNS, then all users use the Public VIP address to host and attend meetings.
- If you have a split-horizon DNS, and added public access, then external users use the Public VIP address to host and attend meetings.

For more information on non-split horizon and split-horizon DNS, and public access, see the *Cisco WebEx Meetings Server Planning Guide*.



Note

If you are creating a High Availability (HA) system, you do not need to reenter this information, as we will use the information you entered for the primary system.

- Enter the public VIP IPv4 address and select **Next**.

Entering the Private VIP Address

Administrators configure, monitor, and maintain the system from the Administration site URL that maps to the private VIP address.



Note

If you have a split-horizon DNS, then internal users also use the Private VIP address to host and attend meetings.

**Note**

If you are adding a High Availability (HA) system, you do not need to reenter this information, as we will use the information you entered for the primary system.

Before You Begin

The private virtual IP (VIP) address must be on the same subnet as your internal (Admin and Media, if applicable) virtual machines.

- Enter the IPv4 private VIP address and select **Next**.

WebEx Site and WebEx Administration URLs

WebEx Site URL

End users access the WebEx site URL to host or attend meetings. This URL resolves to either the private VIP address or the public VIP address, depending on whether or not you are using a split-horizon DNS.

- Resolves to the public VIP address for all users, when you do not have “split-horizon” DNS.
- Resolves to the public VIP address for external users when you have split-horizon DNS.
- Resolves to the private VIP address for internal users when you have split-horizon DNS.

WebEx Administration URL

Administrators access the WebEx Administration URL to configure, manage, and monitor the system. This URL resolves to the private VIP address.

Names for the WebEx Site and WebEx Administration URLs

You may choose almost any names for these URLs, comprising all lowercase characters. However, you cannot use the following as the hostname in the site URLs:

- the same name as the hostnames for any of the virtual machines comprising the system
- authentication
- client
- companylogo
- dispatcher
- docs
- elm-admin
- elm-client-services
- emails
- maintenance
- manager

- orion
- oriondata
- oriontemp
- nbr
- npp
- probe
- reminder
- ROOT
- solr
- TomcatROOT
- upgradeserver
- url0107ld
- version
- WBXService
- webex

Entering the WebEx Site and Administration URLs

These URLs provide access and management of the system. If you are adding a High Availability (HA) system, it is not necessary to reenter this information; the primary system URLs should match the HA system URLs. The URLs have these limitations:

- You cannot reuse the hostnames of the virtual machines in your system in the hostname portion of the Administration or WebEx site URLs.
- The WebEx Site URL must be different from the WebEx Administration URL.
- Enter the following secure (https) URLs:
 - WebEx site URL for users to host and attend meetings
 - WebEx Administration URL for system administrators to manage your system
- Select **Next**.

Confirming that the Network is Configured Correctly

This screen provides links to online help for the networking changes required for your system. The online help provides details on DNS server changes as well as firewall settings.

You must make the DNS server and firewall changes that allow us to test network connectivity.

If you have not done so already, complete the networking configuration and select **Next**.

If you are testing an automatic deployment, we deploy the virtual machines required for your system when you select **Next**.

If you are testing a manual deployment, enter the hostnames for your virtual machines and deploy them (if you have not deployed them already).

When the deployment is complete, test them by powering them on and verifying that all the virtual machines powered on successfully.

Deploying Virtual Machines

After providing information about the virtual machines in the system, we will attempt to connect to each of the virtual machines deployed for your system.



Note

Do not leave this page until the system has connected to all the virtual machines, or the connection failed with error messages indicating the problem.

Procedure

-
- Step 1** Enter the fully qualified domain names (FQDNs) for any additional virtual machines required for your system. (You entered the Admin virtual machine FQDN earlier, when you deployed it from the OVA file.)
- Step 2** If you have not done so already, using VMware vCenter, deploy all the additional virtual machines required for the system.
- Step 3** Power on all these virtual machines and verify that they powered on successfully. Then select **Detect virtual machines**.
We establish connections to these virtual machines. This might take several minutes.
- Step 4** Wait until a **Connected** status is displayed for each the virtual machine, then complete one of the following:
- If there are no errors, the status shows all green checks. If you are satisfied with the configuration so far, select **Next**. Otherwise, you can change the FQDNs of the virtual machines by again selecting **Detect virtual machines**.
 - If you see errors, fix the errors and select **Next** to continue.

Note You can select **Download log file** to obtain the log file for this deployment, providing a record that can be used to troubleshoot a failed deployment.
 - If there are other problems with one or more of the virtual machines, from the VMware vCenter power off the virtual machines with errors and manually delete them. (If you do not delete them, you might see error messages regarding these virtual machines.) After fixing the problems, redeploy the virtual machines from the OVA file and select **Detect virtual machines**.
-

Checking the System

The system check verifies the configuration parameters of your system. This includes confirming that the virtual machines have the required minimum configuration, and validating the WebEx site and WebEx Administration URLs.

The system check takes several minutes to complete. Do not leave this page until all the checks have been completed successfully, or the system check fails and shows error messages indicating the problem.

If you reload the page before the checks are complete, you are returned to the first page of this system deployment. When the checks are completed successfully, the first page of configuration utility appears.

The Administration site URL used during the deployment process is the Administration virtual machine hostname. During basic configuration, the hostname is replaced with the Administration site URL. As a result, the first time you sign in to the Administration site, the system might prompt you to accept the certificate exception.

- Complete one of the following:
 - If there are no errors and the status shows all green checks, select **Next** and continue with [Configuring an eMail \(SMTP\) Server](#). In rare cases, you might see **Not tested**. This does not mean that there are any problems with your virtual machines. It simply states that system checks were not completed; for example, the entry might display because there was a temporary loss of network connectivity. Once you complete the deployment, you can sign in to the Administration site and check these resources.
 - If there is a problem with network connectivity, verify that the WebEx Site URL, Administration URL, and IP addresses are entered correctly. Verify that these sites are in the same subnet, and the parameters have been correctly entered in the DNS servers.
 - If there are problems with your system meeting the minimum system capacity, you have two options:
 - Power down all the virtual machines from VMware vCenter and manually delete them. Then retry the system deployment on a system with resources that meet or exceed the minimum requirements.
 - Proceed with your current installation. If you do, you must acknowledge that you forgo the right to request technical support from Cisco. Confirm by checking the error message check box and select **Next**.
 - If there are any problems with one or more of your virtual machines, power off the virtual machines with errors and manually delete them by using the VMware vCenter. Fix the issues and retry the system deployment.
- Select **Continue** to go to the basic configuration where you begin by setting up the mail server ([Configuring an eMail \(SMTP\) Server](#)) and identifying an administrator ([Creating Administrator Accounts](#)). If another administrator will complete the basic configuration, send this URL to that administrator.

