



# Installing Cisco UCS Director on VMware vSphere

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## for VMware vSphere



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**Note** The appliance and boot-up logs are located in the `/var/log/ucsd` directory.

- `install.log` contains the one time appliance installation logs.
  - `bootup.log` contains the appliance boot-up sequence information, such as startup messages for the database and infrastructure services.
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## Default Root and Shelladmin Passwords

During installation, Cisco UCS Director uses default passwords for the following accounts:

- Root user for the CentOS operating system of the Cisco UCS Director VM. The default password is `cisco123`.
- Shelladmin user for the Cisco UCS Director Shell menu. The default password is `changeme`.

Once the installation is completed, the first time you log in to Cisco UCS Director, you are prompted to reset the default root and Shelladmin passwords.

The new root and Shelladmin password must meet the password requirements. It cannot be a dictionary word or be all lowercase.

## Prerequisites for VMware vSphere

Before you install Cisco UCS Director for VMware vSphere, complete the following steps:

- Install VMware vSphere or vCenter.
- Configure a VMware vSphere or vCenter user account with system administrator privileges for Cisco UCS Director.

You need administrator privileges to connect to and install Cisco UCS Director on VMware vCenter. Cisco UCS Director requires a user account with system administrator privileges to discover, manage and automate VMware vCenter configuration from Cisco UCS Director. These operations include creating, deleting and modifying VMs, ESXi hosts and clusters, datastores and datastore clusters, standard and DV switches, and virtual network port groups.

- Download the Cisco UCS Director software from the [Download Software area on Cisco.com](#).
- Extract the Cisco UCS Director OVF file from the digitally signed zip file to your local disk. See [Digitally Signed Images](#).

## Minimum System Requirements for a Single-Node Setup

The following tables detail the minimum resource requirements for a single-node setup of . Cisco recommends a single-node setup for installations of up to 5000 VMs.

For optimal performance, the entire memory and CPU allocations specified in the table below should be reserved. Failure to follow these specifications could affect performance. For example, 4 vCPU cores with 3000 MHz and 16G of memory must be reserved for the VM.

The minimum memory required for the **inframgr** service is automatically set during deployment. To enable the **inframgr** service to use more than the minimum required memory, edit the `inframgr.env` file available in the following location:

```
/opt/infra/bin/
```

In this file, update the MEMORY\_MAX parameter to the value you want. To activate the changes, restart the **inframgr** service.

The default memory settings are MEMORY\_MIN=8192m and MEMORY\_MAX=8192m.

For information about minimum system requirements for a multi-node setup, see the [Cisco UCS Director Multi-Node Installation and Configuration Guide](#).

**Table 1: Minimum system requirements for a single-node installation (up to 5,000 VMs)**

Element	Minimum Supported Requirement
vCPU	4
Allocated Memory	16 GB
Reserved Memory	16 GB
Disk Space	100 GB

Element	Minimum Supported Requirement
Disk Write I/O Bandwidth	4 MBps
Disk Read I/O Bandwidth	4 MBps
Memory Allocated for <b>inframgr</b>	8 GB

Restart the database and all services after making these changes to the `/etc/my.cnf`.

### Up to 2,000 VMs

If you plan to manage up to 2,000 VMs, the environment must meet at least the minimum system requirements in the following table.

**Table 2: Minimum System Requirements for up to 2,000 VMs**

Element	Minimum Supported Requirement
vCPU	4
Memory	16 GB
Primary Disk (Hard Disk 1)	100 GB
Secondary Disk (Hard Disk 2)	100 GB
Disk Read I/O Bandwidth	4 MBps
Disk Write I/O Bandwidth	4 MBps

### Up to 5,000 VMs

If you plan to manage no more than 5,000 VMs, the environment must meet at least the minimum system requirements and recommended configurations in the following tables.

**Table 3: Minimum System Requirements for up to 5,000 VMs**

Element	Minimum Supported Requirement
vCPU	8
Memory	20 GB
Primary Disk (Hard Disk 1)	100 GB
Secondary Disk (Hard Disk 2)	100 GB
Disk Write I/O Bandwidth	4 MBps
Disk Read I/O Bandwidth	4 MBps

You must also edit the **MEMORY\_MIN** and **MEMORY\_MAX** settings in `/opt/infra/bin/inframgr.env` as follows:

**MEMORY\_MIN=8192m**

**MEMORY\_MAX=8192m**

Restart the `inframgr` service after making the memory size changes.

Edit the following parameters in the `/etc/my.cnf` file.

**Table 4: Minimum Database Configuration**

Element	Minimum Supported Configuration
<code>thread_cache_size</code>	100
<code>max_connections</code>	1000
<code>innodb_lock_wait_timeout</code>	100
<code>query_cache_size</code>	128 MB
<code>innodb_buffer_pool_size</code>	2048 MB
<code>max_connect_errors</code>	10000
<code>connect_timeout</code>	20
<code>innodb_read_io_threads</code>	64
<code>innodb_write_io_threads</code>	64

Restart the database and all services after making these changes to the `/etc/my.cnf`.

## Installing on VMware vSphere



**Note** We recommend that you use VMware vCenter for OVF deployment. VMware vCenter versions 5.x and above are supported. OVF deployment wizards support only IPv4 addresses. If you require IPv6, deploy the OVF with IPv4 addresses and then use the ShellAdmin to configure IPv6 addresses.

### Before you begin

You need administrator privileges to connect to VMware vCenter. Cisco UCS Director requires a user account with system administrator privileges to discover, manage and automate VMware vCenter configuration from Cisco UCS Director. These operations include creating, deleting and modifying VMs, ESXi hosts and clusters, datastores and datastore clusters, standard and DV switches, and virtual network port groups.



**Note** If you do not want to use DHCP, you need the following information: IPv4 address, subnet mask, and default gateway.

**Step 1** In the **Navigation** pane, choose the **Data Center** where you want to deploy Cisco UCS Director.

**Step 2** Choose **Datacenter > Deploy OVF Template**.

**Step 3** In the **Source** pane, do one of the following to choose your OVA source location:

- Choose files , navigate to the location where you downloaded the OVF, choose the OVA file, and click **Open**.
- Replace *FQDN* (Fully Qualified Domain Name) with the path to the URL on your local area network where the OVA file is stored, including the IP address or domain name, and click **Next**.

**Step 4** In the **Name and Location** pane, do the following:

- a) In the **Name** field, edit the default VM name.
- b) From the **Inventory Location** area, choose the inventory location where is being deployed, and click **Next**.

**Note** If you chose a Data Center in Step 2, option b might not be available.

- c) Click **Next**.

**Step 5** In the **Compute Resource** pane, choose the required host, and click **Next**.

**Step 6** The **Review Details** pane, will display template details ,verify and click **Next**.

**Step 7** On the **Select Storage** , choose the storage location for the VM.

**Step 8** In the **Disk Format** pane, choose one of the following options and click **Next**:

- **Thick Provisioned (Lazy Zeroed)** format—To allocate storage immediately in thick format. This is the recommended format. All performance data is verified with this format.
- **Thick Provisioned (Eager Zeroed)** format—To allocate storage in thick format. It might take longer to create disks using this option.
- **Thin Provisioned** format—To allocate storage on demand as data is written to disk.

**Important** We recommend that you do not choose the **Thin Provisioned** format.

**Step 9** In the **NetworkMapping** pane, choose the network and click **Next**

**Step 10** In the **Properties** pane, enter the following information and click **Next**:

- **Management IP Address**—The management IP address to be used for eth0. If your network uses DHCP, leave the default value of 0.0.0.0.
- **Management IP Subnet Mask**—The management IP subnet mask to be used for eth0. If your network uses DHCP, leave the default value of 0.0.0.0.
- **Gateway IP Address**—The Gateway IP Address to be used for eth0. If your network uses DHCP, leave the default value of 0.0.0.0.
- **Ucsd Root Password**
- **ShellAdmin Password**

**Note** While deploying the OVA in a **Customise template** window,if no default passwords are populated for root and shelladmin, please enter the default password **cisco123** for **root** and **changeme** for **shelladmin**.

**Step 11** In the **Ready to Complete** pane, do the following:

- a) Verify the options that you chose in the previous panes.
- b) Click **Finish** to start the deployment process.

**Step 12** After the appliance has booted up, copy and paste the management IP address (from the IP address that is shown) into a supported web browser to access the **Login** page.

- Step 13** On the **Login** page, enter `admin` as the username and `admin` for the login password.
- Note** We recommend that you change the default admin password after this initial login.

**Step 14** Choose **Administration > License**.

**Step 15** On the **License** page, click **License Keys**.

**Step 16** Click **Manage Personalities**.

**Step 17** On the **Personality Configuration** screen, check the required personalities.

You can check either **UCSD** or **Big Data** or both personalities if required.

**Step 18** Click **Submit**.

For information about upgrading from Cisco UCSD 6.7.4.x to Cisco UCSD 6.8 system follow the migration process under the [Cisco UCS Director Upgrade Guide, Release 6.8](#).

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## Reserving System Resources

For optimal performance, we recommend reserving extra system resources for beyond the minimum system requirements listed in [Minimum System Requirements for a Single-Node Setup, on page 2](#).




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**Note** For more information about how to reserve system resources, see the VMWare documentation.

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**Step 1** Log in to VMware vCenter.

**Step 2** Choose the VM for .

**Step 3** Shut down the VM.

**Step 4** In VMware vCenter, click the **Resource Allocation** tab to view the current resource allocations, and click **Edit**.

**Step 5** In the **Virtual Machine Properties** pane, edit resource allocations by choosing a resource and entering the new values.

**Step 6** Verify that the new resource allocations have been made.

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