



Configuring Cisco UCS Director Bare Metal Agent

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Adding a Bare Metal Agent Account

Before you begin

Before you add a Bare Metal Agent account, do the following:

- Make sure that the Bare Metal Agent is installed.



Note You are not prompted to enter the BMA root passwords during installation. However, the first time you log in to Cisco UCS Director after installation is completed, you are prompted to enter the default root password. The default password is pxeboot.

- Make sure that the Bare Metal Agent VM is completely booted up, login to Bare Metal Agent VM Console to view the Management IP address.
- Login to Bare Metal Agent through VM Console or SSH client to access the CLI and change the default root password using the **passwd root** command.
- Set up the environment required to support a single or separate PXE and Management network configuration, with the appropriate VLANs.

- To provide required DHCP services, ensure that the PXE interface of the Bare Metal Agent is connected to PXE VLAN network and configure DHCP service with an appropriate IP address range.
- Ensure to use the same Samba password of the legacy BMA (version 6.7.4.x) in the Samba Password and Confirm Samba Password fields in the migrated BMA (version 6.8.x.x), if the Samba Service for Windows PXE check box is enabled.
- Log into Bare Metal Agent VM using SSH client and update WinPE.wim with eth1 IP address details of the migrated BMA (version 6.8.x.x), if the legacy BMA (version 6.7.4.x) and migrated BMA (version 6.8.x.x) are deployed with different PXE IP addresses.
- Log into Cisco UCS Manager and update the service profile with PXE VLAN details of the migrated BMA (version 6.8.x.x), reset the server, and then resubmit the service request in Cisco UCS Director appliance, if the legacy BMA (version 6.7.4.x) and migrated BMA (version 6.8.X.X) are deployed with different PXEVLAN ID or a failed service request is available in the migrated Cisco UCS Director appliance (version 6.8.x.x).

Step 1 Choose **Administration > Physical Accounts**.

Step 2 On the **Physical Accounts** page, click **Bare Metal Agents**.

Step 3 On the **Add Bare Metal Agent Appliance** screen complete the following fields:

| Name | Description |
|---|---|
| Account Name field | The name you assign to this Bare Metal Agent account. |
| Description field | (Optional) A description of this Bare Metal Agent. |
| Bare Metal Agent uses different interfaces for mgmt and PXE traffic check box | Check this box if your configuration uses separate networks for the PXE server and the management network that hosts the traffic manager. |
| Management/PXE Address field | The IP address assigned to the Management network for Bare Metal Agent. If your configuration uses a single network for the Management and PXE networks, this IP address is automatically assigned as the PXE address. Note This address must be reachable from Cisco UCS Director. |
| PXE Interface Address field | The IP address for the Bare Metal Agent PXE network, if your configuration uses separate networks. Note This field appears only if the Bare Metal Agent uses Different Interfaces for Management and PXE Traffic box has been checked. |
| Login ID field | An account with administrative privileges that you can use to log in to Bare Metal Agent. |
| Password field | The password for the account. |

| Name | Description |
|--|---|
| Enable Samba service for Windows PXE check box | Samba is used for Bare Metal Agent to install Windows Operating Systems. Check this box if you want to install Windows Operating Systems. In Cisco UCS Director, Release 6.8, ensure to use the same Samba password of the legacy BMA (version 6.7.4.x) in the Samba Password and Confirm Samba Password fields in the migrated BMA (version 6.8.x.x), if this check box is enabled. |
| Samba Password field | Enter the password for the Samba service. |
| Confirm Samba Password field | Confirm the password for the Samba service. |
| Location field | (Optional) The location of this Bare Metal Agent, such as a physical location. |
| Database Address drop-down list | Bare Metal Agent requires access to the Cisco UCS Director database. Choose the IP address of Cisco UCS Director which is on the same Management network as the Bare Metal Agent. Note If you are configuring the Bare Metal Agent for the Cisco UCS Director multi-node deployment, choose the IP address of the Inventory Database node. |

Step 4 Click **Submit**.

What to do next

Configure the DHCP Server for Bare Metal Agent.

Configuring the DHCP Server for a Bare Metal Agent Account



Note For a multi-home DHCP configuration, use this procedure to configure the first subnet for the DHCP server. For the remaining subnets, you must manually edit the DHCP configuration file (`/etc/dhcpd.conf`).

Before you begin

To provide required DHCP services, ensure that at least one DHCP server is located in the same PXE VLAN as Bare Metal Agent. Configure the DHCP server with an appropriate IP address range. The DHCP server, together with the TFTP server, is used to communicate with a PXE server.

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- Step 1** Log in to the Cisco UCS Director server with the following credentials:
- User—**admin**
 - Password—**admin**
- Step 2** Choose **Administration > Physical Accounts**.
- Step 3** On the **Physical Accounts** page, click **Bare Metal Agents**.
- Step 4** Click the row for the Bare Metal Agent account for which you want to configure the DHCP server.
- Step 5** Click **Service Status** to verify that services for the Bare Metal Agent account are stopped.
- Step 6** Click **Configure DHCP**.
- Step 7** On the **Configure DHCP** screen, complete the following fields and click **Submit**.

- **DHCP Subnet**
- **DHCP Netmask**
- **DHCP Start IP**
- **DHCP End IP**
- **Router IP Address**

The DHCP IP address assignments are updated, and the DHCP service is restarted.

- Step 8** Click the row for the Bare Metal Agent account and click **Start Services**.
- Step 9** After the services have started, do the following:
- Verify that the status of the account in the **Status** column is Active.
 - Verify that the **Enabled Services** column shows that all services are running. If this status indicates that one or more services are stopped, verify the configuration of your DHCP server and try again.
 - Click **Service Status** to verify that the status of all expected services is up:
 - Network Services status in the Bare Metal Agent appliance
 - Database connectivity status from the Bare Metal Agent appliance

Note When there is no dedicated PXE boot network configured in the Bare Metal Agent and only one Management interface is used for PXE boot, then the DHCP Server IP range should be different from the IP range used in MGMT IP pool for cluster creation in Cisco UCS Director Express for Big Data.

What to do next

Set up PXE boot requests.

Associating a Bare Metal Agent to Cisco UCS Director

To establish a connection between the Bare Metal Agent and Cisco UCS Director, you need to associate the Bare Metal Agent to Cisco UCS Director.

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- Step 1** Log in to Cisco UCS Director deployed with the compatible version of the Bare Metal Agent.
- Note** For Cisco UCS Director Release 6.7(2.0), we recommend you to upgrade both Cisco UCS Director and Bare Metal Agent to Release 6.7(2.0).
- Important** This release of Cisco UCS Director 6.6(1.0), as part of password encryption enhancement, ensure that both the Cisco UCS Director and Bare Metal Agent are on the same version. You should update the Bare Metal Agent to 6.6(1.0) version in order to be compatible with Cisco UCS Director.
- Step 2** Choose **Administration > Physical Accounts**.
- Step 3** On the **Physical Accounts** page, click **Bare Metal Agents**.
- Step 4** Add a Bare Metal Agent account. See [Adding a Bare Metal Agent Account, on page 1](#).
- Step 5** Click the row for the Bare Metal Agent account and click **Start Services**. It might take around two minutes for the services to start.
- Step 6** After the services have started, verify that the status of the account in the **Status** column is Active. It might take two minutes for the status to reflect as Active. When status of the BMA service is active, the BMA is ready for use.
- Note** Only when the BMA services are started from the Cisco UCS Director UI, the dbkeys and dbcreds files are copied to a specific location in the BMA appliance to establish successful connectivity to the Cisco UCS Director.
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Configuring the Interface for the PXE Network

You can use this to change or add an IP address for the PXE network used by Bare Metal Agent.

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- Step 1** Choose **Administration > Physical Accounts**.
- Step 2** On the **Physical Accounts** page, click **Bare Metal Agents**.
- Step 3** Click the row for the Bare Metal Agent account for which you want to configure the interface for the PXE network.
- Step 4** Click **Configure Interface**.
- Step 5** On the **Configure PXE Interface** screen, complete the following fields:
- From the **Interface Name** drop-down list, choose the interface that you want to use for the PXE network.
 - Enter the IP address and subnet mask for the PXE network.
 - Click **Submit**.
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Adding an NFS Mount Point

- Step 1** Choose **Administration > Physical Accounts**.
- Step 2** On the **Physical Accounts** page, click **Bare Metal Agents**.
- Step 3** Click the row for the Bare Metal Agent account for which you want to view PXE service requests.
- Step 4** Click **View Details**.
- Step 5** Click **NFS Mount Point**.
- Step 6** Click **Add**.
- Step 7** On the **Add NFS Mount Point** screen, do the following:
- In the **NFS Server IP Address** field, enter the IP address of the NFS server where you plan to store the OS images for Bare Metal Agent to use.
 - In the **NFS Server Path** field, enter the location on the NFS server where the OS images are stored.
 - Click **Submit**.

After you add the NFS mount point, all content in the `imageRepository` folder in the NFS server is available under the `/mnt/external` folder. You include this path in the `isoExtractor.sh` file when you create a non-Windows image template.

Uploading an OS Image File

- Step 1** Choose **Administration > Physical Accounts**.
- Step 2** On the **Physical Accounts** page, click **Bare Metal Agents**.
- Step 3** Click the row for the Bare Metal Agent account for which you want to upload the OS image.
- Step 4** From the **More Actions** drop-down list, click **View Details**.
- Step 5** Click **Image Repository**.
- Step 6** Click **Upload Image**.
- Step 7** On the **Image Upload** screen, complete the following fields:

| Name | Description |
|-----------------------------------|--|
| Image Name field | The name of the OS image. |
| OS Type drop-down list | Choose the OS image type that you want to install on the server. The drop-down list includes all OS types supported by the Bare Metal Agent. |
| Upload Type drop-down list | Choose one of the following: <ul style="list-style-type: none"> Desktop File The web server path that is reachable by the Cisco UCS Director Bare Metal Agent to upload remote software to Bare Metal Agent. |

| Name | Description |
|---------------------------|--|
| File field | This field is displayed when you choose the Desktop File option in the Upload Type drop-down list. To upload the file, you can either drag and drop the required file or click Select and click Submit . |
| Web URL field | This field is displayed when you choose the Web Server Path option in the Upload Type drop-down list. Enter the web server path where the ISO images are stored and click Submit . |
| MD5 Checksum field | This field is displayed when you choose the Web Server Path option in the Upload Type drop-down list. (Optional) Enter the MD5 checksum value of the downloaded file which is used to verify the data integrity. |

- Step 8** Click **Submit**. The details of the uploaded image is displayed.
- Step 9** Click the row for the OS image for which you want to view the upload log details.
- Step 10** Click **Show Upload Log**. The upload log details of the image is displayed.

Viewing and Editing the OS Configuration File Details

- Step 1** Choose **Administration > Physical Accounts**.
- Step 2** On the **Physical Accounts** page, click **Bare Metal Agents**.
- Step 3** Click the row for the Bare Metal Agent account.
- Step 4** From the **More Actions** drop-down list, click **View Details**.
- Step 5** Click **OS Catalogs**.
- Step 6** Click the row for the OS catalog for which you want to view the configuration details.
- Step 7** Click **View Configuration Files**.
- Step 8** On the **View Configuration Files** screen, choose a file. The configuration details for the file are displayed.
- Step 9** Click the row for the OS catalog for which you want to edit the configuration details and click **Edit Configuration Files**.
- Step 10** On the **Modify Configuration Files** screen, choose the required file from the **Select the file** drop-down list and make the necessary changes.
- Step 11** Click **Submit**.
- You can delete the configuration details by clicking **View Configuration Files**.

Cloning an OS Configuration File

- Step 1** Choose **Administration > Physical Accounts**.
 - Step 2** On the **Physical Accounts** page, click **Bare Metal Agents**.
 - Step 3** Click the row for the Bare Metal Agent account.
 - Step 4** From the **More Actions** drop-down list, click **View Details**.
 - Step 5** Click **OS Catalogs**.
 - Step 6** Click the row for the OS catalog for which you want to clone the configuration details.
 - Step 7** Click **Clone Configuration Files**.
 - Step 8** On the **Clone Configuration Files** screen, do the following:
 - a) Choose a file from the **Select the file** drop-down list.
 - b) Enter a unique name for the file.
 - c) Click **Submit**.
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Swapping the OS Configuration File Details

- Step 1** Choose **Administration > Physical Accounts**.
 - Step 2** On the **Physical Accounts** page, click **Bare Metal Agents**.
 - Step 3** Click the row for the Bare Metal Agent account.
 - Step 4** From the **More Actions** drop-down list, click **View Details**.
 - Step 5** Click **OS Catalogs**.
 - Step 6** Click the row for the OS catalog for which you want to swap the configuration details.
 - Step 7** Click **Swap Configuration Files**.
 - Step 8** On the **Swap Configuration Files** screen, choose the files whose details need to be swapped.
 - Step 9** Click **Submit**.
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Provisioning an OS Image

- Step 1** Choose **Administration > Physical Accounts**.
- Step 2** On the **Physical Accounts** page, click **Bare Metal Agents**.
- Step 3** Click the row for the Bare Metal Agent account for which you want to upload the OS image.
- Step 4** From the **More Actions** drop-down list, click **View Details**.
- Step 5** Click **Image Repository**.

Step 6 Click the row for the OS image that you want to provision.

Step 7 Click **Provision Image**.

Step 8 On the **Provision Image Catalog** screen, complete the following fields:

| Name | Description |
|------------------------|---|
| OS Type drop-down list | Choose the OS image type that needs to be provisioned in the Bare Metal Agent. The drop-down list includes all the available OS types with details such as version and update number. |
| Catalog Name field | Enter the catalog name. |

Step 9 Click **Provision Image**.
