



## Server Pools

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## Configuring Server Pools

### Server Pools

A server pool contains a set of servers. These servers typically share the same characteristics. Those characteristics can be their location in the chassis, or an attribute such as server type, amount of memory, local storage, type of CPU, or local drive configuration. You can manually assign a server to a server pool, or use server pool policies and server pool policy qualifications to automate the assignment.

If your system implements multitenancy through organizations, you can designate one or more server pools to be used by a specific organization. For example, a pool that includes all servers with two CPUs could be assigned to the Marketing organization, while all servers with 64 GB memory could be assigned to the Finance organization.

A server pool can include servers from any chassis in the system. A given server can belong to multiple server pools.

### Creating a Server Pool

#### Procedure

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- Step 1** In the **Navigation** pane, click **Servers**.
- Step 2** Expand **Servers > Pools**.
- Step 3** Expand the node for the organization where you want to create the pool.  
If the system does not include multi tenancy, expand the **root** node.
- Step 4** Right-click the **Server Pools** node and select **Create Server Pool**.
- Step 5** On the **Set Name and Description** page of the **Create Server Pool** wizard, complete the following fields:

Name	Description
Name field	The name of the server pool.  This name can be between 1 and 32 alphanumeric characters. You cannot use spaces or any special characters other than - (hyphen), _ (underscore), : (colon), and . (period), and you cannot change this name after the object is saved.
Description field	A user-defined description of the server pool.  Enter up to 256 characters. You can use any characters or spaces except ` (accent mark), \ (backslash), ^ (carat), " (double quote), = (equal sign), > (greater than), < (less than), or ' (single quote).

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

**Step 7** On the **Add Servers** page of the **Create Server Pool** wizard:

- Select one or more servers from the **Available Servers** table.
- Click the >> button to add the servers to the server pool.
- When you have added all desired servers to the pool, click **Finish**.

## Deleting a Server Pool

### Procedure

- Step 1** In the **Navigation** pane, click **Servers**.
- Step 2** Expand **Servers > Pools > Organization\_Name**.
- Step 3** Expand the **Server Pools** node.
- Step 4** Right-click the pool you want to delete and select **Delete**.
- Step 5** If a confirmation dialog box displays, click **Yes**.

## Adding Servers to a Server Pool

### Procedure

- Step 1** In the **Navigation** pane, click **Servers**.
- Step 2** Expand **Servers > Pools > Organization\_Name**.
- Step 3** Right-click the pool to which you want to add one or more servers and select **Add Servers to Server Pool**.
- Step 4** In the **Add Servers to Server Pool** dialog box, do the following:
  - In the **Servers** table, select the servers that you want to add to the server pool.  
  
You can use the **Shift** key or **Ctrl** key to select multiple entries.

- b) Click the >> button to move those servers to the **Pooled Servers** table and add them to the server pool.
  - c) Click **OK**.
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## Removing Servers from a Server Pool

### Procedure

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- Step 1** In the **Navigation** pane, click **Servers**.
  - Step 2** Expand **Servers > Pools > *Organization\_Name***.
  - Step 3** Right-click the pool from which you want to remove one or more servers and select **Add Servers to Server Pool**.
  - Step 4** In the **Add Servers to Server Pool** dialog box, do the following:
    - a) In the **Pooled Servers** table, select the servers that you want to remove from the server pool.  
You can use the **Shift** key or **Ctrl** key to select multiple entries.
    - b) Click the << button to move those servers to the **Servers** table and remove them from the server pool.
    - c) Click **OK**.
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## Configuring UUID Suffix Pools

### UUID Suffix Pools

A UUID suffix pool is a collection of SMBIOS UUIDs that are available to be assigned to servers. The first number of digits that constitute the prefix of the UUID are fixed. The remaining digits, the UUID suffix, are variable. A UUID suffix pool ensures that these variable values are unique for each server associated with a service profile which uses that particular pool to avoid conflicts.

If you use UUID suffix pools in service profiles, you do not have to manually configure the UUID of the server associated with the service profile.

## Creating a UUID Suffix Pool

### Procedure

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- Step 1** In the **Navigation** pane, click **Servers**.
- Step 2** Expand **Servers > Pools**.
- Step 3** Expand the node for the organization where you want to create the pool.  
If the system does not include multi tenancy, expand the **root** node.

**Step 4** Right-click **UUID Suffix Pools** and select **Create UUID Suffix Pool**.

**Step 5** In the **Define Name and Description** page of the **Create UUID Suffix Pool** wizard, complete the following fields:

Name	Description
<b>Name</b> field	The name of the UUID pool.  This name can be between 1 and 32 alphanumeric characters. You cannot use spaces or any special characters other than - (hyphen), _ (underscore), : (colon), and . (period), and you cannot change this name after the object is saved.
<b>Description</b> field	The user-defined description of the pool.  Enter up to 256 characters. You can use any characters or spaces except ` (accent mark), \ (backslash), ^ (carat), " (double quote), = (equal sign), > (greater than), < (less than), or ' (single quote).
<b>Prefix</b> field	This can be one of the following: <ul style="list-style-type: none"> <li>• <b>Derived</b>—The system creates the suffix.</li> <li>• <b>other</b>—You specify the desired suffix. If you select this option, Cisco UCS Manager GUI displays a text field where you can enter the desired suffix, in the format <code>XXXXXXXX-XXXX-XXXX</code>.</li> </ul>
<b>Assignment Order</b> field	This can be one of the following: <ul style="list-style-type: none"> <li>• <b>Default</b>—Cisco UCS Manager selects a random identity from the pool.</li> <li>• <b>Sequential</b>—Cisco UCS Manager selects the lowest available identity from the pool.</li> </ul>

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

**Step 7** In the **Add UUID Blocks** page of the **Create UUID Suffix Pool** wizard, click **Add**.

**Step 8** In the **Create a Block of UUID Suffixes** dialog box, complete the following fields:

Name	Description
<b>From</b> field	The first UUID in the block.
<b>Size</b> field	The number of UUIDs in the block.

**Step 9** Click **OK**.

**Step 10** Click **Finish** to complete the wizard.

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### What to do next

Include the UUID suffix pool in a service profile and/or template.

## Deleting a UUID Suffix Pool

If you delete a pool, Cisco UCS Manager does not reallocate any addresses from that pool that were assigned to vNICs or vHBAs. All assigned addresses from a deleted pool remain with the vNIC or vHBA to which they are assigned until one of the following occurs:

- The associated service profiles are deleted.
- The vNIC or vHBA to which the address is assigned is deleted.
- The vNIC or vHBA is assigned to a different pool.

### Procedure

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- Step 1** In the **Navigation** pane, click **Servers**.
- Step 2** Expand **Servers > Pools > Organization\_Name**.
- Step 3** Expand the **UUID Suffix Pools** node.
- Step 4** Right-click the pool you want to delete and select **Delete**.
- Step 5** If a confirmation dialog box displays, click **Yes**.
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## Configuring IP Pools

### IP Pools

IP pools are collections of IP addresses that do not have a default purpose. You can create IPv4 or IPv6 address pools in Cisco UCS Manager to do the following:

- Replace the default management IP pool **ext-mgmt** for servers that have an associated service profile. Cisco UCS Manager reserves each block of IP addresses in the IP pool for external access that terminates in the Cisco Integrated Management Controller (CIMC) on a server. If there is no associated service profile, you must use the **ext-mgmt** IP pool for the CIMC to get an IP address.
- Replace the management inband or out-of-band IP addresses for the CIMC.



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**Note** You cannot create iSCSI boot IPv6 pools in Cisco UCS Manager.

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You can create IPv4 address pools in Cisco UCS Manager to do the following:

- Replace the default iSCSI boot IP pool **iscsi-initiator-pool**. Cisco UCS Manager reserves each block of IP addresses in the IP pool that you specify.
- Replace both the management IP address and iSCSI boot IP addresses.



**Note** The IP pool must not contain any IP addresses that were assigned as static IP addresses for a server or service profile.

## Creating an IP Pool

### Procedure

- Step 1** In the **Navigation** pane, click **LAN**.
- Step 2** In the **LAN** tab, expand **LAN > Pools > Organization\_Name**.
- Step 3** Right-click **IP Pools** and select **Create IP Pool**.
- Step 4** In the **Define Name and Description** page of the **Create IP Pool** wizard, complete the following fields:

Name	Description
<b>Name</b> field	The name of the IP address pool.  This name can be between 1 and 32 alphanumeric characters. You cannot use spaces or any special characters other than - (hyphen), _ (underscore), : (colon), and . (period), and you cannot change this name after the object is saved.
<b>Description</b> field	The user-defined description of the IP address pool.  Enter up to 256 characters. You can use any characters or spaces except ` (accent mark), \ (backslash), ^ (carat), " (double quote), = (equal sign), > (greater than), < (less than), or ' (single quote).
<b>Assignment Order</b> field	This can be one of the following: <ul style="list-style-type: none"> <li>• <b>Default</b>—Cisco UCS Manager selects a random identity from the pool.</li> <li>• <b>Sequential</b>—Cisco UCS Manager selects the lowest available identity from the pool.</li> </ul>

- Step 5** Click **Next**.
- Step 6** In the **Add IPv4 Blocks** page of the **Create IP Pool** wizard, click **Add**.
- Step 7** In the **Create a Block of IPv4 Addresses** dialog box, complete the following fields:

Name	Description
<b>From</b> field	The first IPv4 address in the block.
<b>Size</b> field	The number of IP addresses in the pool.
<b>Subnet Mask</b> field	The subnet mask associated with the IPv4 addresses in the block.
<b>Default Gateway</b> field	The default gateway associated with the IPv4 addresses in the block.

Name	Description
Primary DNS field	The primary DNS server that this block of IPv4 addresses should access.
Secondary DNS field	The secondary DNS server that this block of IPv4 addresses should access.

**Step 8****Step 9**

Click **Next**.

**Step 10**

In the **Add IPv6 Blocks** page of the **Create IP Pool** wizard, click **Add**.

**Step 11**

In the **Create a Block of IPv6 Addresses** dialog box, complete the following fields:

Name	Description
From field	The first IPv6 address in the block.
Size field	The number of IP addresses in the pool.
Prefix	The network address prefix associated with the IPv6 addresses in the block.
Default Gateway field	The default gateway associated with the IPv6 addresses in the block.
Primary DNS field	The primary DNS server that this block of IPv6 addresses should access.
Secondary DNS field	The secondary DNS server that this block of IPv6 addresses should access.

**Step 12**

Click **OK**.

**Step 13**

Click **Finish** to complete the wizard.

**What to do next**

Include the IP pool in a service profile and template.

## Adding a Block to an IP Pool

You can add blocks of IPv4 or IPv6 addresses to IP pools.

**Procedure**

- Step 1** In the **Navigation** pane, click **LAN**.
- Step 2** In the **LAN** tab, expand **LAN > Pools > Organization\_Name**.
- Step 3** Expand the **IP Pools** node.
- Step 4** Right-click the desired IP pool and select one of:

- Create Block of IPv4 Addresses
- Create Block of IPv6 Addresses

**Step 5** Complete the fields in the appropriate dialog box.

a) In the **Create a Block of IPv4 Addresses** dialog box, complete the following fields:

Name	Description
Name column	The range of IPv4 addresses assigned to the block.
From column	The first IPv4 address in the block.
To column	The last IPv4 address in the block.
Subnet column	The subnet mask associated with the IPv4 addresses in the block.
Default Gateway column	The default gateway associated with the IPv4 addresses in the block.
Primary DNS column	The primary DNS server that this block of IPv4 addresses should access.
Secondary DNS column	The secondary DNS server that this block of IPv4 addresses should access.

b) In the **Create a Block of IPv6 Addresses** dialog box, complete the following fields:

Name	Description
Name column	The range of IPv6 addresses assigned to the block.
From column	The first IPv6 address in the block.
To column	The last IPv6 address in the block.
Prefix column	The network address prefix associated with the IPv6 addresses in the block.
Default Gateway column	The default gateway associated with the IPv6 addresses in the block.
Primary DNS column	The primary DNS server that this block of IPv6 addresses should access.
Secondary DNS column	The secondary DNS server that this block of IPv6 addresses should access.

**Step 6** Click **OK**.

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## Deleting a Block from an IP Pool

### Procedure

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- Step 1** In the **Navigation** pane, click **LAN**.
- Step 2** In the **LAN** tab, expand **LAN > Pools > Root** .
- Step 3** Expand the **IP Pools** node.
- Step 4** Expand the pool for which you want to delete a block of IP addresses.
- Step 5** Right-click the IP address block that you want to delete and select **Delete**.
- Step 6** If a confirmation dialog box displays, click **Yes**.
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## Deleting an IP Pool

If you delete a pool, Cisco UCS Manager does not reallocate any addresses from that pool that were assigned to vNICs or vHBAs. All assigned addresses from a deleted pool remain with the vNIC or vHBA to which they are assigned until one of the following occurs:

- The associated service profiles are deleted.
- The vNIC or vHBA to which the address is assigned is deleted.
- The vNIC or vHBA is assigned to a different pool.

### Procedure

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- Step 1** In the **Navigation** pane, click **LAN**.
- Step 2** In the **LAN** tab, expand **LAN > Pools > Organization\_Name** .
- Step 3** Expand the **IP Pools** node.
- Step 4** Right-click the IP pool you want to delete and select **Delete**.
- Note** You cannot delete the default pools **ext-mgmt** and **iscsi-initiator-pool**.
- Step 5** If a confirmation dialog box displays, click **Yes**.
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