



# Global Pools

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This chapter includes the following sections:

- [Server Pools, page 1](#)
- [IP Pools, page 3](#)
- [IQN Pools, page 4](#)
- [UUID Suffix Pools, page 6](#)
- [MAC Pools, page 7](#)
- [WWN Pools, page 9](#)

## 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

A server can be added to the server pool, manually or you can choose to have the servers automatically added to the server pool. To add the servers automatically, one or more of the following resources should exist in the system:

- A minimum of one server pool
- Server pool policy qualification

- Server pool policy

How to create a server pool, a server pool policy qualification, and a server pool policy, is discussed below:

### Procedure

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- Step 1** On the menu bar, click **Servers**.
- Step 2** In the **Navigation** pane, expand **Server > Pools > Root**.
- Step 3** Right click the **Server Pools** , and select **Create Server Pool**.
- Step 4** In the **General** tab of the **Create Server Pool** dialog box, enter the **Name**, and an optional description.
- Step 5** Click **Next**.
- To add the server manually to the server pool, follow these steps:
- 1 In the **Create Server Pool** page, click **Search Server**.
  - 2 Check the check box of the server you want to add, and click **Select**.
  - 3 Click **Finish**.

To add the servers automatically to the server pool, follow these steps:

- Create a server policy qualification. For information on creating a server policy qualification, see [Creating Server Pool Policy Qualifications](#).
  - Create a server pool policy. For information on creating a server pool policy, see [Creating a Server Pool Policy](#).
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## Deleting a Server Pool

### Before You Begin

A minimum of one server pool must exist in the system.

### Procedure

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- Step 1** On the menu bar, click **Servers**.
- Step 2** In the **Navigation** pane, expand **Server > Pools > Root > Server Pool**
- Step 3** Right click the pool you want to delete and click **Delete**.  
You can analyze the impact of deleting a server pool by clicking **Estimate Impact** option. It enables the system to analyze the impact of the change. Depending upon the estimated impact, you can either **Apply Changes** or **Close** the dialog box
- Step 4** Click **Yes** to confirm.
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# IP Pools

IP pools are a collection of IP addresses. You can use IP pools in Cisco UCS Central in one of the following ways:

- For external management of Cisco UCS Manager servers.
- For iSCSI boot initiators.
- For both external management and iSCSI boot initiators in Cisco UCS Manager.

**Note**

The IP pool must not contain any IP addresses that have been assigned as static IP addresses for a server or service profile.

A fault is raised if the same IP address is assigned to two different Cisco UCS domains. If you want to use the same IP addresses, you can use the **scope** property to specify whether the IP addresses in the block are public or private:

- **public**—The IP addresses in the block can be assigned to one and only one registered Cisco UCS domain.
- **private**— The IP addresses in the block can be assigned to multiple Cisco UCS domains.

Cisco UCS Central creates public IP pools by default.

Global IP pools should be used for similar geographic locations. If the IP addressing schemes are different, the same IP pool can not be used for those sites.

Cisco UCS Central supports creating and deleting IPv4 and IPv6 blocks under IP pools. However, iSCSI boot initiators support only IPv4.

## Creating an IP Pool

### Procedure

- Step 1** On the menu bar, click **Network**.
- Step 2** In the **Network** tab, expand **Network > Pools > Root**.  
If you want to create or access a pool in a sub-organization, expand **Sub-Organizations > Organization\_Name**
- Step 3** Right-click **IP Pools** and select **Create IP Pool**.
- Step 4** In the **General** tab of the **Create IP Pool** dialog box, fill in the required fields.
- Step 5** In the **IP Blocks** tab of the **Create IP Pool** dialog box, click **Create a Block of IPv4 Addresses**.
- Step 6** To create a block of IPv6 addresses, in the **IP Blocks** tab of the **Create IP Pool** dialog box, click **Create a Block of IPv6 Addresses**.
- Step 7** In the respective **Create a Block of IP addresses (IPv4 or IPv6)** dialog box, complete the required fields.
- Step 8** Click **OK**.
- Step 9** Click **OK**.

**Note** If you plan to create another pool, wait at least 5 seconds.

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### What to Do Next

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

## Deleting an IP Pool

If you delete a pool, Cisco UCS Central does not reallocate any addresses from that pool that have been assigned to vNICs or vHBAs in Cisco UCS Manager. 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** On the menu bar, click **Network**.
- Step 2** In the **Network** tab, expand **Network > Pools > Root**.  
If you want to create or access a pool in a sub-organization, expand **Sub-Organizations > Organization\_Name**
- Step 3** Expand the **IP Pools** node.
- Step 4** Right-click the pool you want to delete and select **Delete**.  
If you want to delete an IPv4 or IPv6 block in the pool, right-click the block to delete it.
- Note** If you plan to delete another pool or block, wait at least 5 seconds.
- Step 5** If Cisco UCS Central GUI displays a confirmation dialog box, click **Yes**.
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## IQN Pools

An IQN pool is a collection of iSCSI Qualified Names (IQNs) for use as initiator identifiers by iSCSI vNICs in a Cisco UCS domain. IQN pools created in Cisco UCS Central can be shared between Cisco UCS domains.

IQN pool members are of the form *prefix:suffix:number*, where you can specify the prefix, suffix, and a block (range) of numbers.

An IQN pool can contain more than one IQN block, with different number ranges and different suffixes, but sharing the same prefix.

## Creating an IQN Pool



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**Note** In most cases, the maximum IQN size (prefix + suffix + additional characters) is 223 characters. When using the Cisco UCS NIC M51KR-B adapter, you must limit the IQN size to 128 characters.

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### Procedure

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- Step 1** On the menu bar, click **Storage**.
- Step 2** In the **Storage** tab, expand **Storage > Pools > Root**.  
If you want to create or access a pool in a sub-organization, expand **Sub-Organizations > Organization\_Name**
- Step 3** Right-click **IQN Pools** and select **Create IQN Pool**.
- Step 4** In the **General** tab of the **Create IQN Pool** dialog box, fill in the required pools.
- Step 5** In the **IQN Blocks** tab of the **Create IQN Pool** dialog box, click **Create a Block of IQN Suffixes**.
- Step 6** In the **Create a Block of IQN** dialog box, fill in the required fields.
- Step 7** Click **OK**.
- Step 8** Click **OK**.
- Note** If you plan to create another pool, wait at least 5 seconds.
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### What to Do Next

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

## Deleting an IQN Pool

If you delete a pool, Cisco UCS Central does not reallocate any addresses from that pool that have been assigned to vNICs or vHBAs in Cisco UCS Manager. 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** On the menu bar, click **Storage**.
- Step 2** In the **Storage** tab, expand **Storage > Pools > Root**.  
If you want to create or access a pool in a sub-organization, expand **Sub-Organizations > Organization\_Name**

- Step 3** Expand the **IQN Pools** node.
- Step 4** Right-click the pool you want to delete and select **Delete**.
- Note** If you plan to delete another pool, wait at least 5 seconds.
- Step 5** If Cisco UCS Central GUI displays a confirmation dialog box, click **Yes**.
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## 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. Assigning global UUID suffix pools from Cisco UCS Central to service profiles in Cisco UCS Central or Cisco UCS Manager allows them to be shared across Cisco UCS domains.

## Creating a UUID Suffix Pool

### Procedure

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- Step 1** On the menu bar, click **Servers**.
- Step 2** In the **Servers** tab, expand **Servers > Pools > Root**.  
If you want to create or access a pool in a sub-organization, expand **Sub-Organizations > Organization\_Name**
- Step 3** Right-click **UUID Suffix Pools** and select **Create UUID Suffix Pool**.
- Step 4** In the **General** tab of the **Create UUID Suffix Pool** dialog box, fill in the required fields.
- Step 5** In the **UUID Blocks** tab of the **Create UUID Suffix Pool** dialog box, click **Create a Block of UUID Suffixes**.
- Step 6** In the **Create a Block of UUID** dialog box, fill in the required fields.
- Step 7** Choose a Block Qualification Policy.  
If the Block Qualification Policy is not available, you can also create a Block Qualification Policy from this panel.
- Step 8** Click **OK**.
- Step 9** Click **OK**.
- Note** If you plan to create another pool, wait at least 5 seconds.
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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 Central does not reallocate any addresses from that pool that have been assigned to vNICs or vHBAs in Cisco UCS Manager. 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** On the menu bar, click **Servers**.
- Step 2** In the **Servers** tab, expand **Servers > Pools > Root**.  
If you want to create or access a pool in a sub-organization, expand **Sub-Organizations > Organization\_Name**
- Step 3** Expand the **UUID Suffix Pools** node.
- Step 4** Right-click the pool you want to delete and select **Delete**.  
**Note** If you plan to delete another pool, wait at least 5 seconds.
- Step 5** If Cisco UCS Central GUI displays a confirmation dialog box, click **Yes**.
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## MAC Pools

A MAC pool is a collection of network identities, or MAC addresses, that are unique in their layer 2 environment and are available to be assigned to vNICs on a server. MAC pools created in Cisco UCS Central can be shared between Cisco UCS domains. If you use MAC pools in service profiles, you do not have to manually configure the MAC addresses to be used by the server associated with the service profile.

In a system that implements multi-tenancy, you can use the organizational hierarchy to ensure that MAC pools can only be used by specific applications or business services. Cisco UCS Central uses the name resolution policy to assign MAC addresses from the pool.

To assign a MAC address to a server, you must include the MAC pool in a vNIC policy. The vNIC policy is then included in the service profile assigned to that server.

You can specify your own MAC addresses or use a group of MAC addresses provided by Cisco.

## Creating a MAC Pool

### Procedure

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- Step 1** On the menu bar, click **Network**.
- Step 2** In the **Network** tab, expand **Network > Pools > Root**.  
If you want to create or access a pool in a sub-organization, expand **Sub-Organizations > Organization\_Name**
- Step 3** Right-click **MAC Pools** and select **Create MAC Pool**.
- Step 4** In the **General** tab of the **Create MAC Pool** dialog box, fill in the following fields:
- Step 5** In the **MAC Blocks** tab of the **Create MAC Pool** dialog box, click **Create a Block of MAC Addresses**.
- Step 6** In the **Create a Block of MAC Addresses** dialog box, fill in the required fields.
- Step 7** Click **OK**.
- Step 8** Click **OK**.
- Note** If you plan to create another pool, wait at least 5 seconds.
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### What to Do Next

Include the MAC pool in a vNIC template.

## Deleting a MAC Pool

If you delete a pool, Cisco UCS Central does not reallocate any addresses from that pool that have been assigned to vNICs or vHBAs in Cisco UCS Manager. 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** On the menu bar, click **Network**.
- Step 2** In the **Network** tab, expand **Network > Pools > Root**.  
If you want to create or access a pool in a sub-organization, expand **Sub-Organizations > Organization\_Name**
- Step 3** Expand the **MAC Pools** node.
- Step 4** Right-click the pool you want to delete and select **Delete**.  
**Note** If you plan to delete another pool, wait at least 5 seconds.
- Step 5** If Cisco UCS Central GUI displays a confirmation dialog box, click **Yes**.
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# WWN Pools

A WWN pool is a collection of WWNs for use by the Fibre Channel vHBAs in a Cisco UCS domain. WWN pools created in Cisco UCS Central can be shared between Cisco UCS domains. You create separate pools for the following:

- WW node names assigned to the server
- WW port names assigned to the vHBA
- Both WW node names and WW port names

**Important**

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A WWN pool can include only WWNNs or WWPNS in the ranges from 20:00:00:00:00:00:00:00 to 20:FF:FF:FF:FF:FF:FF:FF:FF or from 50:00:00:00:00:00:00:00 to 5F:FF:FF:FF:FF:FF:FF:FF. All other WWN ranges are reserved. To ensure the uniqueness of the Cisco UCS WWNNs and WWPNS in the SAN fabric, we recommend that you use the following WWN prefix for all blocks in a pool:  
20:00:00:25:B5:XX:XX:XX

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If you use WWN pools in service profiles, you do not have to manually configure the WWNs that will be used by the server associated with the service profile. In a system that implements multi-tenancy, you can use a WWN pool to control the WWNs used by each organization.

You assign WWNs to pools in blocks.

**WWNN Pools**

A WWNN pool is a WWN pool that contains only WW node names. If you include a pool of WWNNs in a service profile, the associated server is assigned a WWNN from that pool.

**WWPN Pools**

A WWPNS pool is a WWN pool that contains only WW port names. If you include a pool of WWPNS in a service profile, the port on each vHBA of the associated server is assigned a WWPNS from that pool.

**WWxN Pools**

A WWxN pool is a WWN pool that contains both WW node names and WW port names. You can specify how many ports per node are created with WWxN pools. The pool size for WWxN pools must be a multiple of  $ports-per-node + 1$ . For example, if there are 7 ports per node, the pool size must be a multiple of 8. If there are 63 ports per node, the pool size must be a multiple of 64.

## Creating a WWN Pool

### Procedure

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- Step 1** On the menu bar, click **Storage**.
- Step 2** In the **Storage** tab, expand **Storage > Pools > Root**.  
If you want to create or access a pool in a sub-organization, expand **Sub-Organizations > Organization\_Name**
- Step 3** Right-click **WWN Pools** and select **Create WWN Pool**.
- Step 4** In the **General** tab of the **Create WWN Pool** dialog box, fill in the required fields.
- Step 5** In the **WWN Initiator Blocks** tab of the **Create WWN Pool** dialog box, click **Create Block**.
- Step 6** In the **Create Block** dialog box, fill in the required pools.
- Step 7** Click **OK**.
- Note** If you plan to create another pool, wait at least 5 seconds.
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### What to Do Next

- Include the WWPN pool in a vHBA template.
- Include the WWNN pool in a service profile and/or template.
- Include the WWxN pool in a service profile and/or template.

## Deleting a WWN Pool

If you delete a pool, Cisco UCS Central does not reallocate any addresses from that pool that have been assigned to vNICs or vHBAs in Cisco UCS Manager. 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** On the menu bar, click **Storage**.
- Step 2** In the **Storage** tab, expand **Storage > Pools > Root**.  
If you want to create or access a pool in a sub-organization, expand **Sub-Organizations > Organization\_Name**
- Step 3** Expand the **WWN Pools** node.
- Step 4** Right-click the pool you want to delete and select **Delete**.
- Note** If you plan to delete another pool, wait at least 5 seconds.

**Step 5** If Cisco UCS Central GUI displays a confirmation dialog box, click **Yes**.

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