



Configuring Server-Related Pools

This chapter includes the following sections:

- [Configuring IP Pools, page 1](#)
- [Configuring IQN Pools, page 4](#)
- [Configuring UUID Suffix Pools, page 6](#)

Configuring IP Pools

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.

Creating an IP Pool

Procedure

	Command or Action	Purpose
Step 1	UCSC# connect policy-mgr	Enters policy manager mode.
Step 2	UCSC(policy-mgr)# scope org <i>org-name</i>	Enters organization mode for the specified organization. To enter the root organization mode, type / as the <i>org-name</i> .
Step 3	UCSC(policy-mgr) /org # create ip-pool <i>pool-name</i>	Creates an IP pool with the specified name, and enters organization IP pool mode.
Step 4	UCSC(policy-mgr) /org/ip-pool # set descr <i>description</i>	(Optional) Provides a description for the IP pool. Note If your description includes spaces, special characters, or punctuation, you must begin and end your description with quotation marks. The quotation marks will not appear in the description field of any show command output.
Step 5	UCSC(policy-mgr) /org/ip-pool # create block <i>first-ip-addr last-ip-addr</i> <i>gateway-ip-addr subnet-mask</i>	Creates a block (range) of IP addresses, and enters organization IP pool block mode. You must specify the first and last IP addresses in the address range, the gateway IP address, and subnet mask. Note An IP pool can contain more than one IP block. To create multiple blocks, enter multiple create block commands from organization IP pool mode.
Step 6	UCSC(policy-mgr) /org/ip-pool/block # set primdns <i>ip-address</i> secdns <i>ip-address</i>	Specifies the primary DNS and secondary DNS IP addresses.
Step 7	UCSC(policy-mgr) /org/ip-pool/block # set scope { private public }	Specifies whether the IP addresses is private or public.
Step 8	UCSC(policy-mgr) /org/ip-pool/block # commit-buffer	Commits the transaction to the system configuration. Note If you plan to create another pool, wait at least 5 seconds.

The following example shows how to create an IP pool named GPool1, provide a description for the pool, specify a block of IP addresses and a primary and secondary IP address to be used for the pool, set the pool to private, and commit the transaction:

```
UCSC# connect policy-mgr
UCSC(policy-mgr)# scope org /
UCSC(policy-mgr) /org # create ip-pool GPool1
UCSC(policy-mgr) /org/ip-pool* # set descr "This is IP pool GPool1"
UCSC(policy-mgr) /org/ip-pool* # create block 192.168.100.1 192.168.100.200 192.168.100.10
```

```

255.255.255.0
UCSC(policy-mgr) /org/ip-pool/block* # set primdns 192.168.100.1 secdns 192.168.100.20
UCSC(policy-mgr) /org/ip-pool/block* # set scope private
UCSC(policy-mgr) /org/ip-pool/block* # commit-buffer
UCSC(policy-mgr) /org/ip-pool/block #
    
```

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

	Command or Action	Purpose
Step 1	UCSC# connect policy-mgr	Enters policy manager mode.
Step 2	UCSC(policy-mgr)# scope org <i>org-name</i>	Enters organization mode for the specified organization. To enter the root organization mode, type / as the <i>org-name</i> .
Step 3	UCSC(policy-mgr) /org # delete ip-pool <i>pool-name</i>	Deletes the specified IP pool.
Step 4	UCSC(policy-mgr) /org # commit-buffer	Commits the transaction to the system configuration. Note If you plan to delete another pool, wait at least 5 seconds.

The following example shows how to delete the IP pool named GPool1 and commit the transaction:

```

UCSC# connect policy-mgr
UCSC(policy-mgr) # scope org /
UCSC(policy-mgr) /org # delete ip-pool GPool1
UCSC(policy-mgr) /org* # commit-buffer
UCSC(policy-mgr) /org #
    
```

Configuring IQN Pools

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



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.

Procedure

	Command or Action	Purpose
Step 1	UCSC# connect policy-mgr	Enters policy manager mode.
Step 2	UCSC(policy-mgr)# scope org <i>org-name</i>	Enters organization mode for the specified organization. To enter the root organization mode, type / as the <i>org-name</i> .
Step 3	UCSC(policy-mgr) /org # create iqn-pool <i>pool-name</i>	Creates an IQN pool with the specified name, and enters organization IQN pool mode. 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 has been saved.
Step 4	UCSC(policy-mgr) /org/iqn-pool # set iqn-prefix <i>prefix</i>	Specifies the prefix for the IQN block members. Unless limited by the adapter card, the prefix can contain up to 150 characters.
Step 5	UCSC(policy-mgr) /org/iqn-pool # set descr <i>description</i>	(Optional) Provides a description for the IQN 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), and ' (single quote). Note If your description includes spaces, special characters, or punctuation, you must begin and end your description with quotation marks. The quotation marks will not appear in the description field of any show command output.

	Command or Action	Purpose
Step 6	UCSC(policy-mgr) /org/iqn-pool # create block <i>suffix from to</i>	Creates a block (range) of IQNs, and enters organization IQN pool block mode. You must specify the base suffix, the starting suffix number, and the ending suffix number. The resulting IQN pool members are of the form <i>prefix:suffix:number</i> . The suffix can be up to 64 characters. Note An IQN pool can contain more than one IQN block. To create multiple blocks, enter multiple create block commands from organization IQN pool mode.
Step 7	UCSC(policy-mgr) /org/iqn-pool/block # commit-buffer	Commits the transaction to the system configuration. Note If you plan to create another pool, wait at least 5 seconds.

The following example shows how to create an IQN pool named GPool1, provide a description for the pool, specify a prefix and a block of suffixes to be used for the pool, and commit the transaction:

```
UCSC# connect policy-mgr
UCSC(policy-mgr) # scope org /
UCSC(policy-mgr) /org # create iqn-pool GPool1
UCSC(policy-mgr) /org/iqn-pool* # set iqn-prefix iqn.alpha.com
UCSC(policy-mgr) /org/iqn-pool* # set descr "This is IQN pool GPool1"
UCSC(policy-mgr) /org/iqn-pool* # create block beta 3 5
UCSC(policy-mgr) /org/iqn-pool/block* # commit-buffer
UCSC(policy-mgr) /org/iqn-pool/block #
```

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

	Command or Action	Purpose
Step 1	UCSC# connect policy-mgr	Enters policy manager mode.

	Command or Action	Purpose
Step 2	UCSC(policy-mgr)# scope org <i>org-name</i>	Enters organization mode for the specified organization. To enter the root organization mode, type / as the <i>org-name</i> .
Step 3	UCSC(policy-mgr) /org # delete iqn-pool <i>pool-name</i>	Deletes the specified IQN pool.
Step 4	UCSC(policy-mgr) /org # commit-buffer	Commits the transaction to the system configuration. Note If you plan to delete another pool, wait at least 5 seconds.

The following example shows how to delete the IQN pool named GPool1 and commit the transaction:

```
UCSC# connect policy-mgr
UCSC(policy-mgr)# scope org /
UCSC(policy-mgr) /org # delete iqn-pool GPool1
UCSC(policy-mgr) /org* # commit-buffer
UCSC(policy-mgr) /org #
```

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. 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

	Command or Action	Purpose
Step 1	UCSC# connect policy-mgr	Enters policy manager mode.
Step 2	UCSC(policy-mgr)# scope org <i>org-name</i>	Enters organization mode for the specified organization. To enter the root organization mode, type / as the <i>org-name</i> .

	Command or Action	Purpose
Step 3	UCSC(policy-mgr) /org # create uuid-suffix-pool <i>pool-name</i>	Creates a UUID suffix pool with the specified name, and enters organization UUID suffix pool mode.
Step 4	UCSC(policy-mgr) /org/uuid-suffix-pool # set descr <i>description</i>	(Optional) Provides a description for the UUID suffix pool. Note If your description includes spaces, special characters, or punctuation, you must begin and end your description with quotation marks. The quotation marks will not appear in the description field of any show command output.
Step 5	UCSC(policy-mgr) /org/uuid-suffix-pool # create block <i>first-uuid last-uuid</i>	Creates a block (range) of UUID suffixes, and enters organization UUID suffix pool block mode. You must specify the first and last UUID suffixes in the block using the form <i>nnnn-nnnnnnnnnnnn</i> , with the UUID suffixes separated by a space. Note A UUID suffix pool can contain more than one UUID suffix block. To create multiple UUID suffix blocks, you must enter multiple create block commands from organization UUID suffix pool mode.
Step 6	UCSC(policy-mgr) /org/uuid-suffix-pool/block # commit-buffer	Commits the transaction to the system configuration. Note If you plan to create another pool, wait at least 5 seconds.

The following example shows how to create a UUID suffix pool named GPool1, provide a description for the pool, specify a block of UUID suffixes to be used for the pool, and commit the transaction:

```
UCSC# connect policy-mgr
UCSC(policy-mgr) # scope org /
UCSC(policy-mgr) /org # create uuid-suffix-pool GPool1
UCSC(policy-mgr) /org/uuid-suffix-pool* # set descr "This is UUID suffix pool GPool1"
UCSC(policy-mgr) /org/uuid-suffix-pool* # create block 1000-000000000001 1000-000000000010
UCSC(policy-mgr) /org/uuid-suffix-pool/block* # commit-buffer
UCSC(policy-mgr) /org/uuid-suffix-pool/block #
```

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

	Command or Action	Purpose
Step 1	UCSC# connect policy-mgr	Enters policy manager mode.
Step 2	UCSC(policy-mgr)# scope org <i>org-name</i>	Enters organization mode for the specified organization. To enter the root organization mode, type / as the <i>org-name</i> .
Step 3	UCSC(policy-mgr) /org # delete uuid-suffix-pool <i>pool-name</i>	Deletes the specified UUID suffix pool.
Step 4	UCSC(policy-mgr) /org # commit-buffer	Commits the transaction to the system configuration. Note If you plan to delete another pool, wait at least 5 seconds.

The following example shows how to delete the UUID suffix pool named GPool1 and commit the transaction:

```
UCSC# connect policy-mgr
UCSC(policy-mgr)# scope org /
UCSC(policy-mgr) /org # delete uuid-suffix-pool GPool1
UCSC(policy-mgr) /org* # commit-buffer
UCSC(policy-mgr) /org #
```