



Network Pools

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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 multitenancy, 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

	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 mac-pool <i>pool-name</i>	Creates a MAC pool with the specified name, and enters organization MAC pool mode.

	Command or Action	Purpose
Step 4	UCSC(policy-mgr) /org/mac-pool # set descr <i>description</i>	(Optional) Provides a description for the MAC 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/mac-pool # create block <i>first-mac-addr</i> <i>last-mac-addr</i>	Creates a block (range) of MAC addresses, and enters organization MAC pool block mode. You must specify the first and last MAC addresses in the address range using the form <i>nn:nn:nn:nn:nn:nn</i> , with the addresses separated by a space. Note A MAC pool can contain more than one MAC address block. To create multiple MAC address blocks, you must enter multiple create block commands from organization MAC pool mode.
Step 6	UCSC(policy-mgr) /org/mac-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 MAC pool named GPool1
- Provide a description for the pool
- Specify a block of suffixes to be used for the pool

```
UCSC# connect policy-mgr
UCSC(policy-mgr) # scope org /
UCSC(policy-mgr) /org # create mac-pool GPool1
UCSC(policy-mgr) /org/mac-pool* # set descr "This is MAC pool GPool1"
UCSC(policy-mgr) /org/mac-pool* # create block 00:A0:D7:42:00:01 00:A0:D7:42:01:00
UCSC(policy-mgr) /org/mac-pool/block* # commit-buffer
UCSC(policy-mgr) /org/mac-pool/block #
```

What to Do Next

Include the MAC pool in a vNIC template.

Deleting a MAC Pool

If you delete a pool, 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

	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 mac-pool <i>pool-name</i>	Deletes the specified MAC 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 MAC pool named GPool1:

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

