



## Storage Pools

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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

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:FF. All other WWN ranges are reserved. To ensure the uniqueness of the Cisco UCS WWNNs and WWPNS in the SAN fabric, Cisco recommends using the following WWN prefix for all blocks in a pool:  
20:00:00:25:B5:XX:XX:XX

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 WWPN 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 WWPN 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



### Important

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:FF. All other WWN ranges are reserved. To ensure the uniqueness of the Cisco UCS WWNNs and WWPNs in the SAN fabric, Cisco recommends using the following WWN prefix for all blocks in a pool:  
20:00:00:25:B5:XX:XX:XX

### Procedure

	Command or Action	Purpose
<b>Step 1</b>	UCSC# <b>connect policy-mgr</b>	Enters policy manager mode.
<b>Step 2</b>	UCSC(policy-mgr) # <b>scope org</b> <i>org-name</i>	Enters organization mode for the specified organization. To enter the root organization mode, type / as the <i>org-name</i> .
<b>Step 3</b>	UCSC(policy-mgr) /org # <b>create wwn-pool</b> <i>wwn-pool-name</i> { <b>node-and-port-wwn-assignment</b>   <b>node-wwn-assignment</b>   <b>port-wwn-assignment</b> }	Creates a WWN pool with the specified name and purpose, and enters organization WWN pool mode. This can be one of the following: <ul style="list-style-type: none"> <li>• <b>node-and-port-wwn-assignment</b>—Creates a WWxN pool that includes both world wide node names (WWNNs) and world wide port names (WWPNs).</li> <li>• <b>node-wwn-assignment</b>—Creates a WWNN pool that includes only WWNNs.</li> <li>• <b>port-wwn-assignment</b>—Creates a WWPN pool that includes only WWPNs.</li> </ul>
<b>Step 4</b>	UCSC(policy-mgr) /org/wwn-pool # <b>set descr</b> <i>description</i>	(Optional) Provides a description for the WWN pool.  <b>Note</b> 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 <b>show</b> command output.

	Command or Action	Purpose
<b>Step 5</b>	UCSC(policy-mgr)/org/wwn-pool # <b>set descr</b> <i>description</i>	(Optional) Provides a description for the WWN pool.  <b>Note</b> 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 <b>show</b> command output.
<b>Step 6</b>	UCSC(policy-mgr)/org/wwn-pool # <b>set max-ports-per-node</b> { <b>15-ports-per-node</b>   <b>3-ports-per-node</b>   <b>31-ports-per-node</b>   <b>63-ports-per-node</b>   <b>7-ports-per-node</b> }	For WWxN pools, specify the maximum number of ports that can be assigned to each node name in this pool. The default value is <b>3-ports-per-node</b> .  <b>Note</b> The pool size for WWxN pools must be a multiple of <i>ports-per-node</i> + 1. For example, if you specify <b>7-ports-per-node</b> , the pool size must be a multiple of 8. If you specify <b>63-ports-per-node</b> , the pool size must be a multiple of 64.
<b>Step 7</b>	UCSC(policy-mgr)/org/wwn-pool # <b>create block</b> <i>first-wwn last-wwn</i>	Creates a block (range) of WWNs, and enters organization WWN pool block mode. You must specify the first and last WWN in the block using the form <i>nn:nn:nn:nn:nn:nn:nn:nn</i> , with the WWNs separated by a space.  <b>Note</b> A WWN pool can contain more than one WWN block. To create multiple WWN blocks, you must enter multiple <b>create block</b> commands from organization WWN pool mode.
<b>Step 8</b>	UCSC(policy-mgr) /org/wwn-pool/block # <b>exit</b>	Exits organization WWN pool block mode.
<b>Step 9</b>	UCSC(policy-mgr) /org/iqn-pool/block # <b>commit-buffer</b>	Commits the transaction to the system configuration.  <b>Note</b> If you plan to create another pool, wait at least 5 seconds.

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

```
UCSC # connect policy-mgr
UCSC(policy-mgr) # scope org /
UCSC(policy-mgr) /org # create wwn-pool GPool1 node-wwn-assignment
UCSC(policy-mgr) /org/wwn-pool* # set descr "This is my WWNN pool"
UCSC(policy-mgr) /org/wwn-pool* # create block 20:00:00:25:B5:00:00:00 20:00:00:25:B5:00:00:01
UCSC(policy-mgr) /org/wwn-pool/block* # exit
UCSC(policy-mgr) /org/wwn-pool/initiator* # commit-buffer
UCSC(policy-mgr) /org/wwn-pool/initiator #
```

The following example shows how to create a WWxN pool named GPool1, provide a description for the pool, specify seven ports per node, specify a block of eight WWNs to be used for the pool, and commit the transaction:

```
UCSC # connect policy-mgr
UCSC(policy-mgr) # scope org /
UCSC(policy-mgr) /org # create wwn-pool GPool1 node-and-port-wwn-assignment
UCSC(policy-mgr) /org/wwn-pool* # set descr "This is my WWxN pool"
```

```
UCSC(policy-mgr) /org/wwn-pool* # set max-ports-per-node 7-ports-per-node
UCSC(policy-mgr) /org/wwn-pool* # create block 20:00:00:25:B5:00:00:00 20:00:00:25:B5:00:00:08
UCSC(policy-mgr) /org/wwn-pool/block* # commit-buffer
UCSC(policy-mgr) /org/wwn-pool/block #
```

### What to Do Next

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

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

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

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