



## WWN Pools

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## WWN Pools

A World Wide Name (WWN) pool is a collection of WWNs for use by the Fibre Channel vHBAs in a Cisco UCS domain. You create separate pools for the following:

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



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### 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:00:FF:FF:FF:FF:FF or from 50:00:00:00:00:00:00:00 to 5F:FF:00:FF:FF:FF:FF:FF. All other WWN ranges are reserved. When fibre channel traffic is sent through the Cisco UCS infrastructure, the source WWPNS is converted to a MAC address. You cannot use WWPNS pool which can translate to a source multicast MAC address. 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 must be a multiple of *ports-per-node* + 1. For example, if you specify 7 ports per node, the pool size must be a multiple of 8. If you specify 63 ports per node, the pool size must be a multiple of 64.

You can use a WWxN pool whenever you select a WWNN or WWPN pool. The WWxN pool must be created before it can be assigned.

- For WWNN pools, the WWxN pool is displayed as an option in the **WWNN Assignment** drop-down list.
- For WWPN pools, choose **Derived** in the **WWPN Assignment** drop-down list.

## 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 to 20:FF:00:FF:FF:FF:FF or from 50:00:00:00:00:00:00 to 5F:FF:00:FF:FF:FF:FF. All other WWN ranges are reserved. When fibre channel traffic is sent through the Cisco UCS infrastructure, the source WWPN is converted to a MAC address. You cannot use WWPN pool which can translate to a source multicast MAC address. 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>	UCS-A# <b>scope org</b> <i>org-name</i>	Enters the organization mode for the specified organization. To enter the root organization mode, enter / as the <i>org-name</i> .
<b>Step 2</b>	UCS-A /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>

	Command or Action	Purpose
		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>Step 3</b>	(Optional) UCS-A /org/wwn-pool # <b>set descr</b> <i>description</i>	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 4</b>	UCS-A /org/wwn-pool # <b>set assignmentorder</b> { <b>default</b>   <b>sequential</b> }	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>
<b>Step 5</b>	UCS-A /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 6</b>	UCS-A /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 7</b>	UCS-A /org/wwn-pool/block # <b>exit</b>	Exits organization WWN pool block mode.

	Command or Action	Purpose
<b>Step 8</b>	UCS-A /org/wwn-pool # <b>create initiator</b> <i>wwn</i> <i>wwn</i>	Creates a single initiator for a WWNN or WWPN pool, and enters organization WWN pool initiator mode. You must specify the initiator using the form <i>nn:nn:nn:nn:nn:nn:nn</i> .  <b>Note</b> A WWNN or WWPN pool can contain more than one initiator. To create multiple initiators, you must enter multiple <b>create initiator</b> commands from organization WWN pool mode.
<b>Step 9</b>	UCS-A /org/wwn-pool/initiator # <b>commit-buffer</b>	Commits the transaction to the system configuration.

### Example

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

```
UCS-A# scope org /
UCS-A /org # create wwn-pool sanpool node-wwn-assignment
UCS-A /org/wwn-pool* # set descr "This is my WWNN pool"
UCS-A /org/wwn-pool* # create block 20:00:00:25:B5:00:00:00 20:00:00:25:B5:00:00:01
UCS-A /org/wwn-pool/block* # exit
UCS-A /org/wwn-pool* # create initiator 23:00:00:05:AD:1E:02:00
UCS-A /org/wwn-pool/initiator* # commit-buffer
UCS-A /org/wwn-pool/initiator #
```

The following example shows how to create a WWxN pool named sanpool, 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:

```
UCS-A# scope org /
UCS-A /org # create wwn-pool sanpool node-and-port-wwn-assignment
UCS-A /org/wwn-pool* # set descr "This is my WWxN pool"
UCS-A /org/wwn-pool* # set max-ports-per-node 7-ports-per-node
UCS-A /org/wwn-pool* # create block 20:00:00:25:B5:00:00:00 20:00:00:25:B5:00:00:08
UCS-A /org/wwn-pool/block* # commit-buffer
UCS-A /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, 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

	Command or Action	Purpose
<b>Step 1</b>	UCS-A# <b>scope org</b> <i>org-name</i>	Enters the organization mode for the specified organization. To enter the root organization mode, enter / as the <i>org-name</i> .
<b>Step 2</b>	UCS-A /org # <b>delete wwn-pool</b> <i>pool-name</i>	Deletes the specified WWN pool.
<b>Step 3</b>	UCS-A /org # <b>commit-buffer</b>	Commits the transaction to the system configuration.

### Example

The following example shows how to delete the WWN pool named pool4 and commit the transaction:

```
UCS-A# scope org /
UCS-A /org # delete wwn-pool pool4
UCS-A /org* # commit-buffer
UCS-A /org #
```

