



Distributing Device Alias Services

All switches in the Cisco MDS 9000 Family support Distributed Device Alias Services (device alias) on a per VSAN basis and on a fabric-wide basis.

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About Device Aliases

When the port WWN of a device must be specified to configure different features (zoning, QoS, port security) in a Cisco MDS 9000 Family switch, you must assign the right device name each time you configure these features. An inaccurate device name may cause unexpected results. You can circumvent this problem if you define a user-friendly name for a port WWN and use this name in all the configuration commands as required. These user friendly names are referred to as *device aliases*

adapters (HBAs) between VSANs without manually reentering alias names.

Device Alias Features

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[Chapter 5, “Using the CFS Infrastructure”](#)).

When you configure zones, IVR zones, or QoS features using device aliases, and if you display these configuration, you will automatically see that the device aliases are displayed along with their respective pWWNs.

Device Alias Requirements

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- Ensure that the mapping between the pwwn and the device alias to which it is mapped has a one to one relationship. A pWWN can be mapped to only one device alias and vice versa.
- A device alias name is restricted to 64 alphanumeric characters and may include one or more of the following characters:
 -
 -
 - - (hyphen) and _ (underscore)
 - \$ and ^

Zone Aliases Versus Device Aliases

Table 20-1 Comparison Between Zone Aliases and Device Aliases

Zone-Based Aliases	Device Aliases



Comparison Between Zone Aliases and Device Aliases (continued)

Modifying the Device Alias Database

- Effective database—The database currently used by the fabric.
- Pending database—Your subsequent device alias configuration changes are stored in the pending database.

If you modify the device alias configuration, you need to commit or discard the changes as the fabric remains locked during this period.

Locking The Fabric

-
-

abort

	Command	Purpose
Step 1	switch# config t switch(config)#	
Step 2	switch(config)# device-alias database switch(config-device-alias-db)#	
Step 3	switch(config-device-alias-db)# name x pwwn 21:01:00:e0:8b:2e:80:93	
	no device-alias name Doc	

Committing Changes

- 1.
- 2.
- 3.

<code>config t</code>	
<code>device-alias commit</code>	

Discarding Changes

- 1.
- 2.
- 3.

<code>config t</code>	
<code>device-alias abort</code>	

Fabric Lock Override



Tip

The changes are only available in the volatile directory and are subject to being discarded if the switch is restarted.

To use administrative privileges and release a locked device alias session, use the **clear device-name session** command in EXEC mode.

```
clear device-alias session
```

	Command	Purpose
Step 1		Enters configuration mode.
Step 2	<code>device-alias distribute</code>	
	<code>no device-alias distribute</code>	

Legacy Zone Alias Configuration Conversion

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-
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Tip

<code>config t</code>	
<code>vsan 3</code>	<code>device-alias import fcalias</code>

Database Merge Guidelines

[“CFS Merge Support” section on page 5-7](#) for detailed concepts.

Verify that the combined number of the device aliases in both databases does not exceed 8191 (8K). For example, if Database N has 6000 device aliases and Database M has 2192 device aliases, this merge operation will fail.

Device Alias Statistics Cleanup

Device Alias Configuration Verification

`show device-alias`

Example 20-1 *Displays All Configured Device Aliases from the Effective Database*

```
show device-alias database
device-alias name SampleName pwn 21:00:00:e0:8b:0b:66:56
device-alias name x pwn 21:01:00:e0:8b:2e:80:93
```

Total number of entries = 2

Displays the Specified Device Name

Example 20-3 *Displays the Pending Database with No Modifications*

Example 20-4 *Displays the Pending Database with Modifications*

```
device-alias name y pwn 21:00:00:20:37:39:ab:5f
device-alias name z pwn 21:00:00:20:37:39:ac:0d
```

Total number of entries = 4

Example 20-5 *Displays the Specified Device Name in the Pending Database*

```
switch#
device-alias name x pwn 21:01:00:e0:8b:2e:80:93
```

Example 20-6 Displays the Specified pWWN in the Pending Database**Example 20-7 Displays the Difference between the Pending and Effective Databases**

```
- device-alias name Doc pwwn 21:01:02:03:00:01:01:01
+ device-alias name SampleName pwwn 21:00:00:e0:8b:0b:66:56
```

Example 20-8 Displays the Specified pWWN**Example 20-9 Displays a Successful Device Alias Status**

```
Fabric Distribution: Enabled <-----Distribution is enabled
Database:-Device Aliases 24
Locked By:-User "Test" SWWN 20:00:00:0c:cf:f4:02:83<-Lock holder's user name and switch ID
Pending Database:- Device Aliases 24
Status of the last CFS operation issued from this switch:
=====
Operation: Enable Fabric Distribution
Status: Success
```

Displays a Failed Device Alias Status

```
show device-alias status
```

```
Operation: Commit
Status: Failed (Reason: Operation is not permitted as the fabric distribution is
currently disabled.)
```

```
show device-alias status
Enabled
```

```
Operation: Abort
Status: Success
```

```
show device-alias status
Fabric Distribution: Enabled
Database:- Device Aliases 24
Status of the last CFS operation issued from this switch:
=====
Operation: Clear Session <-----Lock released by administrator
<-----Successful status of the operation
```

Displays the Device Alias Status When Distribution Is Disabled

Example 20-14 Displays the Device Alias in the FLOGI Database

```
INTERFACE  VSAN    FCID          PORT NAME          NODE NAME
-----
fc2/9      1      0x670100     21:01:00:e0:8b:2e:80:93  20:01:00:e0:8b:2e:80:93
[ ]
fc2/12     1      0x670200     21:00:00:e0:8b:0b:66:56  20:00:00:e0:8b:0b:66:56
[           ]
```

Total number of flogi = 2

switch#

VSAN 1:

```
-----
FCID      TYPE  PWWN          (VENDOR)          FC4-TYPE:FEATURE
-----
0x670100  N     21:01:00:e0:8b:2e:80:93 (Qlogic)          scsi-fcp:init
[ ]
0x670200  N     21:00:00:e0:8b:0b:66:56 (Qlogic)          scsi-fcp:init
[           ]
```

Total number of entries = 2

switch#

```
28 bytes from 21:01:00:e0:8b:2e:80:93 time = 358 usec
28 bytes from 21:01:00:e0:8b:2e:80:93 time = 226 usec
28 bytes from 21:01:00:e0:8b:2e:80:93 time = 372 usec
```

switch#

```
Route present for : 21:01:00:e0:8b:2e:80:93
20:00:00:05:30:00:4a:e2(0xfffc67)
```



```
switch# show zoneset
```

```
pwwn 21:01:00:e0:8b:2e:80:93 [x] <-----Device alias displayed for each pWWN.
```

```
* fcid 0x670100 [pwwn 21:01:00:e0:8b:2e:80:93] [x]
  pwwn 21:00:00:20:37:39:ab:5f [y]

zone name z2 vsan 1
* fcid 0x670200 [pwwn 21:00:00:e0:8b:0b:66:56] [SampleName]
  pwwn 21:00:00:20:37:39:ac:0d [z]
```

```
switch#
      Device Alias Statistics
=====
Lock requests sent: 2
Database update requests sent: 1
Unlock requests sent: 1
Lock requests received: 1
Database update requests received: 1
Unlock requests received: 1
Lock rejects sent: 0
Database update rejects sent: 0
Unlock rejects sent: 0
Lock rejects received: 0
Database update rejects received: 0
Unlock rejects received: 0
Merge requests received: 0
Merge request rejects sent: 0
Merge responses received: 2
Merge response rejects sent: 0
Activation requests received: 0
Activation request rejects sent: 0
Activation requests sent: 2
Activation request rejects received: 0
```

Table 20-2 lists the default settings for device alias parameters.

Parameters	Default