



Autonomous Fabric IDs

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Information About Autonomous Fabric IDs

You can configure AFIDs individually for VSANs, or you can set the default AFIDs for all VSANs on a switch. If you configure an individual AFID for a subset of the VSANs on a switch that has a default AFID, that subset uses the configured AFID while all other VSANs on that switch use the default AFID.

You can only use an AFID configuration when the VSAN topology is in IVR auto topology mode. In IVR manual topology mode, the AFIDs are specified in the VSAN topology configuration itself and a separate AFID configuration is not needed.



Note

Two VSANs with the same VSAN number but different AFIDs are counted as two VSANs out of the total 128 VSANs allowed in the fabric.

When devices attached to multiple switches belong to one VSAN, they cannot communicate with each other by configuring the regular zone set because the AFIDs are different. You can consider that the different AFIDs are different fabrics; therefore, the three switches represent three separate fabrics.

If we specify the IVR VSAN topology as shown below, IVR will set up the connection between the devices across the switches even though they have the same VSAN.

```
switch# show ivr vsan-topology
AFID  SWITCH  WWN                Active  Cfg.   VSANS
-----
  1   20:00:00:0d:ec:27:6b:c0  yes    yes    1
  2   20:00:00:0d:ec:27:6c:00  yes    yes    1
  3   20:00:00:0d:ec:27:6c:40  yes    yes    1
```

Total: 3 entries in active and configured IVR VSAN-Topology

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Licensing Requirements

Product	License
Cisco Nexus 7000 Series.	IVR requires the FCoE license for each F-series module. FCoE enabled in a storage VDC does not require the Advanced Services License. IVR also requires the Storage Enterprise License. For a complete explanation of the Cisco NX-OS licensing scheme and how to obtain and apply licenses, see the <i>Cisco NX-OS Licensing Guide</i> .

Guidelines and Limitations

IVR has the following guidelines and limitations:

- All border switches in the fabric must be Cisco SAN switches. Other switches in the fabric can be non-Cisco switches.
- IVR must be enabled in the storage VDC.

Default Settings

Parameters	Default
IVR feature	Disabled
IVR NAT	Disabled
IVR distribution	Disabled
IVR Autotopology	Disabled
IVR VSANs	Not added to virtual domains
QoS for IVR Zones	Low

Configuring AFIDs

Configuring Default AFIDs

SUMMARY STEPS

1. `autonomous-fabric-id database`
2. `switch-wwn wwndefault-autonomous-fabric-id afid`

DETAILED STEPS

	Command or Action	Purpose
Step 1	autonomous-fabric-id database Example: <code>switch(config)# autonomous-fabric-id database</code> <code>switch(config-afid-db)#</code>	Enters AFID database configuration mode.
Step 2	switch-wwn <i>wwn</i>default-autonomous-fabric-id <i>afid</i> Example: <code>switch(config-afid-db)# switch-wwn</code> <code>20:00:00:0c:91:90:3e:80 default-autonomous-fabric-id</code> <code>5</code>	Configures the default AFID for all VSANs not explicitly associated with an AFID. The valid range for the default AFID is 1 to 64.

Configuring an Individual AFID

SUMMARY STEPS

1. `autonomous-fabric-id database`
2. `switch-wwn wwn autonomous-fabric-id afid vsan-ranges range`

DETAILED STEPS

	Command or Action	Purpose
Step 1	autonomous-fabric-id database Example: <code>switch(config)# autonomous-fabric-id database</code> <code>switch(config-afid-db)#</code>	Enters AFID configuration mode.

	Command or Action	Purpose
Step 2	switch-wnn <i>wnn</i> autonomous-fabric-id <i>afid</i> vsan-ranges <i>range</i> Example: <pre>switch(config-afid-db)# switch-wnn 20:00:00:0c:91:90:3e:80 autonomous-fabric-id 10 vsan-ranges 1,2,5-8</pre>	Configures an AFID and VSAN range for a switch. The valid range for AFIDs is 1 to 64.

Verifying IVR Configuration

To display the IVR configuration, perform one of the following tasks:

Command	Purpose
show ivr	Displays the status for the IVR configuration.
show ivr diagnostics	Displays information about IVR diagnostics.
show ivr merge status	Displays information the last IVR merge event.
show ivr pending	Displays information about the IVR pending database.
show ivr pending-diff	Displays the differences between the pending database and the config database.
show ivr vsan-topology [active configured]	Displays the IVR VSAN topology.
show ivr session status	Displays information about IVR CFS session.
show ivr virtual-domains	Displays information about IVR virtual domains for all local VSANs.
show ivr zone	Displays information about IVR zones.
show ivr zoneset	Displays information about IVR zone sets.
show ivr service-group active	Displays information about the active service group.

Command	Purpose
<code>show ivr service-group configured</code>	Displays information about the configured service group.
<code>show autonomous-fabric-id database</code>	Displays information about the AFIDs.
<code>show ivr virtual-fcdomain-add-status</code>	Displays the status of the IVR virtual domain configuration.

Related Topics

- [Information about IVR Zones and Zonesets](#)
- [Configuring IVR Zones](#)
- [Configuring IVR Zone Sets](#)

Feature History

Table 1: Feature History IVR

Feature Name	Releases	Feature Information
IVR	5.2(1)	This feature was introduced.

