N through Z

ngoam install acl

To install NGOAM access control list, use the **ngoam install acl** command in NGOAM profile configuration mode.

ngoam install acl

Syntax Description

This command has no arguments or keywords.

Command Modes

NGOAM profile configuration (config-ng-oam-profile)

Command History

Release	Modification
Cisco NX-OS 7.3(0)N1(1)	This command was introduced.
Cisco NX-OS 7.3(0)D1(1)	

Usage Guidelines

The access control list (ACL) matches the VXLAN OAM packets and sends the packets to the NGOAM module, else the ACL packets will be dropped by hardware.

Note ACL is only required for leaf nodes to handle the packets.

Examples

The following example shows how to install NGOAM access control list using the **ngoam install acl** command.

```
switch(config-ng-oam-profile)# ngoam install acl
```

ngoam profile

To create VXLAN operations, administration, and maintenance (OAM) profile, use the **ngoam profile** command in global configuration mode.

To disable VXLAN OAM profile, use the no form of this command.

ngoam profile *profile-id*

no ngoam profile *profile-id*

Syntax Description

profile-id	Enter the profile ID. The range is from 1 to 1023. There is no default value.

Command Modes

Global configuration (config)

Command History

Release	Modification
Cisco NX-OS 7.3(0)N1(1)	This command was introduced.
Cisco NX-OS 7.3(0)D1(1)	

Usage Guidelines

The NGOAM profiles provide a way to bundle the common NGOAM command parameters instead of specifying all the parameters in separate commands. For example, **ping nve** command. You can create these NGOAM profiles to store all the common parameters and specify the profile id instead of providing all the parameters in the command line.

Examples

The following example shows how to create a VXLAN OAM profile using the **ngoam profile** command.

```
ngoam profile 2
  oam-channel 2
  sport 12345, 54321
  payload pad 0x2
  flow forward
    ip source 209.165.201.1
    ip destination 209.165.201.11
```

nv overlay evpn

To enable the BGP EVPN control plane for VXLAN fabric, use the **nv overlay evpn** command in global configuration mode. To disable this feature, use the **no** form of the command.

nv overlay evpn

no nv overlay evpn

Syntax Description

This command has no arguments or keywords.

Command Default

BGP EVPN control plane is not enabled.

Command Modes

Global configuration (config)

Command History

Release	Modification
Cisco NX-OS 7.3(0)N1(1)	This command was introduced.
Cisco NX-OS 7.3(0)D1(1)	

Usage Guidelines

Use the **feature nv overlay** command to globally enable the VXLAN functionality, the default mode of operation for the switch is VXLAN flood and learn. The command **nv overlay evpn** changes the global operating mode to VXLAN EVPN, where the EVPN is used to distribute host-reachability across the fabric via MP-BGP.

Examples

The following example shows how to enable a BGP EVPN control plane for VXLAN fabric and the relevant protocols:

```
switch(config)# nv overlay evpn
switch(config)# feature bgp
switch(config)# feature pim
switch(config)# feature interface-vlan
switch(config)# feature vn-segment-vlan-based
switch(config)# feature lldp
switch(config)# feature nv overlay
```

param-list

To create a user-defined parameter list or to configure parameters and parameter list instances for an existing parameter list, use the **param-list** command in global configuration mode. To delete a user-defined parameter list, use the **no** form of this command.

param-list *parameter-list-name*

no param-list *parameter-list-name*

Syntax Description

parameter-list-name	Name of the parameter list.

Note The *parameter-list-name* argument can be used to create a new parameter list or configure parameters and parameter list instances for an existing parameter list. To view existing parameter lists, type **param-list ?** in global configuration mode.

Command Default

No parameter lists are predefined.

Command Modes

Global configuration (config)

Command History

Release	Modification
Cisco NX-OS 7.0(0)N1(1)	This command was introduced.
Cisco NX-OS 7.2(0)D1(1)	This command was integrated.

Usage Guidelines

When you create a parameter list using the **param-list** command, the device enters parameter list configuration mode (config-param-list). In parameter list configuration mode, you can:

- Create parameters for the specified parameter list using the **define** option.
- Create an instance of a parameter list using the **instance** option.

Note To view the **define** and **instance** options, type **?** in parameter list configuration mode.

To configure parameters and parameter list instances for an existing parameter list, use the **param-list** *parameter-list-name* command, where *parameter-list-name* corresponds to an existing parameter list.

Examples

The following example shows how to create a user-defined parameter list named List1 and create a parameter named param1 within the list:

```
Device# configure terminal
Device(config)# param-list List1
Device(config-param-list)# define param1 integer 100
Device(config-param-list)# exit
```

The following examples shows how to view existing parameter lists:

```
Device# configure terminal
Device(config)# param-list ?


WORD                Enter the name of the parameter list (Max Size 80)
List2 (no abbrev)
List3 (no abbrev)
```

In the above example, List2 and List3 are the existing parameter lists. The following example shows how to add a parameter named param2 to List2:

```
Device(config)# param-list List2
Device(config-param-list)# define param2 integer 100
Device(config-param-list)# exit
```

password secure-mode

To configure a password for the user, use the **password secure-mode** command in global configuration mode. To disable the password configuration, use the **no** form of this command.

password secure-mode

no password secure-mode

Syntax Description

This command has no arguments or keywords.

Command Default

No password is configured.

Command Modes

Global configuration (config)

Command History

Release	Modification
Cisco NX-OS 6.1.4	This command was introduced.
Cisco NX-OS 6.1(2)I2(2)	
Cisco NX-OS 7.0(0)N1(1)	This command was integrated.

Examples

This example shows how to enable secure mode while changing the password:

```
Device# configure terminal
Device(config)# password secure-mode
Device(config)# exit
```

pathtrace nve

To discover network virtualization endpoint's route, use the **pathtrace nve** command in privileged EXEC mode.

pathtrace nve {**ip** *ip-adddress* | **mac** *mac-adddress*} **profile** *id* [**vrf** | **vni count** *number*]

Syntax Description

ip *ip-adddress*	IP address of the destination host.
mac *mac-adddress*	MAC address of the destination host.
profile *id*	Name of the profile.
vrf	The tenant VRF, where this tenant IP-address reside.
vni	The valid VNI present in the VTEP.
count *number*	Value of the count.

Command Modes

Privileged EXEC (#)

Command History

Release	Modification
Cisco NX-OS 7.3(0)N1(1)	This command was introduced.
Cisco NX-OS 7.3(0)D1(1)	

Examples

The following example shows how to track the path in overlay and underlay traffic.

```
switch# pathtrace nve ip unknown vrf Org1:vrf1 payload ip 192.1.1.15 30.1.1.14 payload-end
 verbose

Path trace Request to peer ip 192.2.2.200 source ip 192.4.4.100
Sender handle: 106

Hop   Code   ReplyIP   IngressI/f  EgressI/f   State
=====================================================
  1 !Reply from 192.40.40.2, Po2     Eth1/1    UP / UP
  3 !Reply from 192.70.70.2, Eth1/1  Eth2/1    UP/UP
  2 !Reply from 192.2.2.200, Eth2/1  Unknown   UP / DOWN
```

ping nve

To ping to the destination IP address, use the **ping nve** command in privileged EXEC mode.

ping nve {**ip** *ip-adddress* | **mac** *mac-adddress*} **profile** *id* [**vrf** | **vni count** *number*]

Syntax Description

ip *ip-adddress*	IP address of the destination host.
mac *mac-adddress*	MAC address of the destination host.
profile *id*	Name of the profile.
vrf	The tenant VRF, where this tenant IP-address reside.
vni	The valid VNI present in the VTEP.
count *number*	Value of the count.

Command Modes

Privileged EXEC (#)

Command History

Release	Modification
Cisco NX-OS 7.2(0)D1(1)	This command was introduced.
Cisco NX-OS 7.3(0)N1(1)	This command was integrated.

Examples

The following example shows how to ping the destination and verify the paths.

```
switch# ping nve ip 192.0.2.0

Codes: '!' - success, 'Q' - request not sent, '.' - timeout,
'D' - Destination Unreachable, 'X' - unknown return code,
'm' - malformed request(parameter problem),
'c' - Corrupted Data/Test
Sender handle: 5
!!!!!
Success rate is 100 percent (5/5), round-trip min/avg/max = 4/8/15 ms
Total time elapsed 55 ms


switch# ping nve ip 192.0.1.1 profile 1 vni 31000 verbose
Codes: '!' - success, 'Q' - request not sent, '.' - timeout,
'D' - Destination Unreachable, 'X' - unknown return code,
'm' - malformed request(parameter problem),
'c' - Corrupted Data/Test
Sender handle: 4
! sport 47594 size 90,Reply from 12.0.1.1,time = 8 ms
! sport 47594 size 90,Reply from 12.0.1.1,time = 2 ms
! sport 47594 size 90,Reply from 12.0.1.1,time = 2 ms
```

```
! sport 47594 size 90,Reply from 12.0.1.1,time = 1 ms
! sport 47594 size 90,Reply from 12.0.1.1,time = 8 ms

Success rate is 100 percent (5/5), round-trip min/avg/max = 1/4/8 ms
Total time elapsed 46 ms


switch# ping nve ip 192.2.2.200 profile 3 vni 30000 verbose count 100000 asynchronous
Initiated 2 loopback asynchronous sessions with id from 76 to 77
76    Asynchronous           Running(No Error)
77    Asynchronous           Running(No Error)


switch# ping nve mac 74a2.e6e8.08d7 240 eth 1/27 profile 1 egress ethernet 1/21 vni 31000
count 2

Codes: '!' - success, 'Q' - request not sent, '.' - timeout,
'D' - Destination Unreachable, 'X' - unknown return code,
'm' - malformed request(parameter problem),
'c' - Corrupted Data/Test

Sender handle: 2
!!

Success rate is 100 percent (2/2), round-trip min/avg/max = 2/2/3 ms
Total time elapsed 13 ms
```

platform fabric database dot1q

To enable or disable data packet based auto detection for auto-config, use the **platform fabric database dot1q** command in global configuration mode.

platform fabric database dot1q [**enable** | **disable**]

Syntax Description

enable	Enables dot1q auto detection.
disable	Disables dot1q auto detection.

Command Default

By default, data packet based auto-configuration is enabled to keep it backward compatible and consistent with the earlier releases.

Command Modes

Global configuration (config)

Command History

Release	Modification
Cisco NX-OS 7.1(0)N1(1)	This command was introduced.

Examples

The following example shows how to override the default behavior by disabling data packet based auto-configuration using the **platform fabric database dot1q** command:

```
Device(config)# platform fabric database dot1q disable
```

rd auto

To automatically generate a route distinguisher (RD) for a virtual routing and forwarding (VRF) instance, use the **rd auto** command. To remove the route distinguisher, use the **no** form of this command.

rd auto

no rd auto

Syntax Description

This command has no arguments or keywords.

Command Default

No auto-generated RD is created.

Command Modes

VRF configuration (config-vrf)

Command History

Release	Modification
Cisco NX-OS 7.0(0)N1(1)	This command was introduced.
Cisco NX-OS 7.2(0)D1(1)	This command was integrated.

Usage Guidelines

A route distinguisher (RD) creates routing and forwarding tables and specifies the default RD for a virtual private network (VPN). The RD is added to the beginning of your IPv4 prefixes to change them into globally unique VPN IPv4 prefixes.

This command automatically generates a type-1 route distinguisher (RD) for the VRF that is being configured. The value of the generated RD is *router-id*:*vrf-id*. If either, or both, the router-ID or VRF-ID is invalid, automatic generation of the RD fails.

No license is required for this command.

Examples

The following example shows how to configure a generated RD for the VRF instance "vpn1:"

```
vrf context vpn1
     rd auto
```

reply mode out-of-band

To configure the fabricpath OAM out-of-band service reply mode, use the **reply mode out-of-band** command in fabricpath OAM profile configuration mode. To remove the out-of-band service reply mode, use the **no** form of this command.

reply mode out-of-band {**ipv4**| **ipv6**} *ip-address port-number*

no reply mode out-of-band

Syntax Description

ipv4	Specifies the IPv4 address.
ipv6	Specifies the IPv6 address.
ip-address	IPv4 or IPv6 address.
port-number	Port number. The range is from 0 to 65535.

Command Default

An out-of-band service reply mode is not configured.

Command Modes

Fabricpath OAM profile configuration (config-fp-oam-profile)

Command History

Release	Modification
Cisco NX-OS 7.0(0)N1(1)	This command was introduced.

Usage Guidelines

Use the **reply mode out-of-band** command to configure reply mode information.

Examples

```
Device(#) configure terminal
Device(config)# fabricpath oam profile 100
Devie(config-fp-oam-profile)# reply mode out-of-band ipv6 10.1.1.7 500
```

route-target

To export or import, or export and import, tenant VRF routes from a switch, use the **route-target** command in VRF address family configuration mode. To disable export, import or both operations, use the **no** form of the command.

route-target {**both** {**auto** | *route-target-ext-community*} | [**import** | **export**] *route-target-ext-community*}

no route-target {**both** {**auto** | *route-target-ext-community*} | [**import** | **export**] *route-target-ext-community*}

Syntax Description

export	Exports routing information to the target VPN extended community.
import	Imports routing information from the target VPN extended community.
both	Imports both import and export routing information to the target VPN extended community.
route-target-ext-community	The route-target extended community attributes to be added to the VRF's list of import, export, or both (import and export) route-target extended communities.

Command Default

No route-target extended community attributes associated with VRF.

Command Modes

VRF address family configuration mode (config-vrf-af)

Command History

Release	Modification
Cisco NX-OS 5.2(1)	This command was introduced.
Cisco NX-OS 6.1(2)I2(2)	This command was integrated.
Cisco NX-OS 7.3(0)N1(1)	

Usage Guidelines

In a VXLAN EVPN fabric, a tenant VRF (represented by a Layer-3 VNI) contains routes on different leaf switches (VTEPs). This command (along with the appropriate **route-target** command) ensures that all routes within a VRF are available with all the relevant VTEPs in the fabric.

Route-targets are used for enforcing appropriate policy with MP-BGP. Specifically, with explicit route-targets values attached to the prefixes from a given VRF, it is possible to control whether those prefixes should or should not be imported into the routing table of a remote leaf. Using the “route-target both auto evpn” command, route-target values are auto-generated for a given VRF, in the Cisco Programmable Fabric, using the autonomous sequence number and the Layer-3 VNI. The same route-target values for a VRF are shared by

all the leaf nodes. In this way, all route prefixes in a given VRF are automatically imported/exported into/out of the routing tables of all the leaf nodes within the fabric.

Examples

The following example shows how to import and export tenant VRF routes from a switch:

```
switch(config-router)# VRF context vni-31000
switch(config-vrf)# vni 31000
switch(config-vrf)# rd auto
switch(config-vrf)# address-family ipv4 unicast
switch(config-vrf-af-ipv4)# route-target import 100:31000 evpn
switch(config-vrf-af-ipv4)# route-target export 100:31000 evpn
```

server protocol

To configure Lightweight Directory Access Protocol (LDAP) for a server group, use the **server protocol** command in fabric database configuration mode. To disable the configuration, use the **no** form of this command.

server protocol ldap {**ip** *ip-address*| **host** *hostname*} [**port** *port-number*] [**vrf** *vrf-name*]

no server protocol ldap {**ip** *ip-address*| **host** *hostname*} [**port** *port-number*] [**vrf** *vrf-name*]

Syntax Description

ldap	Specifies that LDAP is configured.
ip *ip-address*	Specifies the IP address of the server.
host *hostname*	Specifies the hostname and DNS names of the server.
port *port-number*	(Optional) Specifies the TCP or UDP port number on the server.
vrf *vrf-name*	(Optional) Specifies the virtual routing and forwarding context to use to connect to the server.

Command Default

The protocol for a server group is not configured.

Command Modes

Fabric database configuration (config-fabric-db)

Command History

Release	Modification
Cisco NX-OS 6.1(2)I2(2)	This command was introduced.
Cisco NX-OS 7.0(0)N1(1)	This command was integrated.
Cisco NX-OS 7.2(0)D1(1)	

Usage Guidelines

Use this command along with the **fabric database type** command to configure an external database.

Examples

The following example shows how to configure a profile database using LDAP:

```
Device(config)# fabric database type bl-dci
Device(config-fabric-db)# server protocol ldap ip 10.0.0.1
Device(config-fabric-db-server)# db-table ou=bl-dcis,dc=cisco,dc=com

Device(config)# fabric database type partition
Device(config-fabric-db)# server protocol ldap ip 10.0.0.1
Device(config-fabric-db-server)# db-table ou=partitions,dc=cisco,dc=com
```

```
Device(config)# fabric database type profile
Device(config-fabric-db)# server protocol ldap ip 10.0.0.1
Device(config-fabric-db-server)# db-table ou=profiles,dc=cisco,dc=com
```

Related Commands

Command	Description
fabric database type	Configures the external database.

set

To specify a value for a configured parameter, use the **set** command in parameter instance configuration mode.

set *param-name param-value*

Syntax Description

param-name	The name of the parameter. • The maximum number of characters is 80.
param-value	The value of the parameter. • The maximum number of characters is 80.

Command Default

No value is specified for the configured parameter.

Command Modes

Parameter instance configuration (config-param-inst)

Command History

Release	Modification
Cisco NX-OS 4.0(1)	This command was introduced.
Cisco NX-OS 6.1(2)I2(2)	This command was integrated.
Cisco NX-OS 7.0(0)N1(1)	

Examples

The following example shows how to specify a value for a configured parameter:

```
Device> enable
Device# configure terminal
Device(config)# param-list param-prof1-list
Device(config-param-list)# define ipaddr ipaddr
Device(config-param-list)# define prog1 string
Device(config-param-list)# define segid integer
Device(config-param-list)# define vlan_num integer
Device(config-param-list)# instance param-prof1-inst1
Device(config-param-inst)# set ipaddr 192.0.2.1/24
Device(config-param-inst)# set prog1 vrf-300
Device(config-param-inst)# set segid 6300
Device(config-param-inst)# set vlan_num 300
Device(config-param-inst)# end
```

show bgp l2vpn evpn

To display Border Gateway Protocol (BGP) information for Layer-2 Virtual Private Network (L2VPN) Ethernet Virtual Private Network (EVPN) address family, use the **show bgp l2vpn evpn** command in privileged EXEC mode.

show bgp l2vpn evpn

Syntax Description

This command has no arguments or keywords.

Command Modes

Privileged EXEC (#)

Command History

Release	Modification
Cisco NX-OS 4.0(1)	This command was introduced.
Cisco NX-OS 6.1(2)I2(2)	This command was integrated.
Cisco NX-OS 7.3(0)N1(1)	This command was modified.

Examples

The following is sample output from the**show bgp l2vpn evpn** command.

```
Switch# show bgp l2vpn evpn

BGP routing table information for VRF default, address family L2VPN EVPN
BGP table version is 198, local router ID is 10.1.1.54
Status: s-suppressed, x-deleted, S-stale, d-dampened, h-history, *-valid, >-best
Path type: i-internal, e-external, c-confed, l-local, a-aggregate, r-redist, I-injected
Origin codes: i - IGP, e - EGP, ? - incomplete, | - multipath, & - backup

   Network            Next Hop            Metric     LocPrf     Weight Path
Route Distinguisher: 10.1.1.54:32967    (L2VNI 30000)
*>l[2]:[0]:[0]:[48]:[2010.0000.0010]:[0]:[0.0.0.0]/216
                      10.1.1.54                              100      32768 i
*>i[2]:[0]:[0]:[48]:[2010.0000.0011]:[0]:[0.0.0.0]/216
                      10.1.1.56                              100          0 I

Route Distinguisher: 10.1.1.54:3        (L3VNI 50000)
*>i[2]:[0]:[0]:[48]:[2010.0000.0011]:[32]:[209.165.202.144]/272
                      10.1.1.56                              100          0 i
*>i[2]:[0]:[0]:[48]:[2010.0000.0012]:[32]:[209.165.202.141]/272
                      10.1.1.74                              100          0 i
*>i[2]:[0]:[0]:[48]:[2010.0000.0013]:[32]:[209.165.202.143]/272
                      10.1.1.56                              100          0 i
*>l[5]:[0]:[0]:[24]:[209.165.202.130]:[0.0.0.0]/224
                      10.1.1.54                0             100      32768 ?
* i                    10.1.1.56                0             100          0 ?
```

The table below describes the significant fields shown in the example.

Table 1: show bgp l2vpn evpn all Field Descriptions

Field	Description
Next Hop	IP address of the next system that is used when forwarding a packet to the destination network. An entry of 0.0.0.0 indicates that the device has some non-BGP routes to this network.
Metric	If shown, the value of the interautonomous system metric.
LocPrf	Local preference value as set with the set local-preference route-map configuration command. The default value is 100.
Weight	Weight of the route as set via autonomous system filters.
Path	Autonomous system paths to the destination network. There can be one entry in this field for each autonomous system in the path.
Route Distinguisher	Route distinguisher that identifies a set of routing and forwarding tables used in virtual private networks.
[5]:[0]:[0]:[24]:[209.165.202.130]:[0.0.0.0]	• [5]: Route type: 5 - IP prefix • [0]: Ethernet segment identifier • [0]: Ethernet tag identifier • [24]: IP prefix length • [209.165.202.130]: IP prefix • [0.0.0.0]: Gateway IP address

show bridge-domain

To display information about the bridge-domain details configured on a switch, use the **show bridge-domain** command in privileged EXEC mode.

show bridge-domain

Syntax Description

This command has no arguments or keywords.

Command Modes

Privileged EXEC (#)

Command History

Release	Modification
Cisco NX-OS 6.2.2	This command was introduced.

Examples

The following example shows how to display information about the bridge-domain details configured on a switch, using the **show bridge-domain** command.

```
Device# show bridge-domain

Bridge-domain 2  (1 ports in all)
Name:: Bridge-Domain2
 Administrative State: UP              Operational State: UP
        vni5000
        Eth4/7

Bridge-domain 10  (3 ports in all)
Name:: Bridge-Domain10
 Administrative State: UP              Operational State: UP
        VSI-Eth4/8.4040
        vni10010
        VSI-Eth4/6.3968
        Eth4/7

Bridge-domain 11  (3 ports in all)
Name:: Bridge-Domain11
 Administrative State: UP              Operational State: UP
        VSI-Eth4/8.4040
        vni10011
        VSI-Eth4/6.3968
        Eth4/7
```

show config-profile

To display details of created and applied profiles, use the **show config-profile** in privileged EXEC mode.

show config-profile

Syntax Description

This command has no arguments or keywords.

Command Modes

Privileged EXEC (#)

Command History

Release	Modification
Cisco NX-OS 7.0(0)N1(1)	This command was introduced.
Cisco NX-OS 7.2(0)D1(1)	This command was integrated.

Usage Guidelines

Use the **configure profile** command to create profiles and to assign a list of commands to the profile in the device. Once a profile is created with a valid parameter list and parameter instances, apply the profile using the **apply profile** command. Use > to redirect the configuration profile to a file and >> to redirect it to a file in append mode.

Examples

The following sample output from the **show config-profile** command displays details of the param-prof1 profile:

```
Device(config)# show config-profile GoldP

config-profile GoldP
  vlan $vlan
   vn-segment $segment
include profile any
applied: <i1, v1-a(vrf-prof)>
applied: <i2, v1-a(vrf-prof)>
```

show evb

To display information associated with Edge Virtual Bridging (EVB), use the **show evb** command in privileged EXEC mode.

show evb [[**hosts**| **vsi**] [**detail**| **summary**] [**interface ethernet** *slot-number*] [**ip** *ipv4-address*] [**ipv6** *ipv6-address*] [**mac** *mac-address*] [**vlan** *vlan-id*] [**vni** *vni-id*]]

Syntax Description

hosts	(Optional) Displays information about hosts in an EVB session.
vsi	(Optional) Displays information about Virtual Station Interface (VSI) in an EVB session.
detail	(Optional) Displays detailed information about hosts or VSI in an EVB session.
summary	(Optional) Displays summarized information about hosts or VSI in an EVB session.
interface	(Optional) Displays information about hosts or VSI by the interface in an EVB session.
ethernet *slot-number*	(Optional) Specifies information about the Ethernet IEEE 802.3z interface.
ip *ipv4-address*	(Optional) Displays information about hosts or VSI by the IPv4 address in an EVB session.
ipv6 *ipv6-address*	(Optional) Displays information about hosts or VSI by the IPv6 address in an EVB session.
mac *mac-address*	(Optional) Displays information about hosts or VSI by the MAC address in an EVB session.
vlan *vlan-id*	(Optional) Displays information about hosts or VSI by the VLAN in an EVB session.
vni *vni-id*	(Optional) Displays information about hosts or VSI by the Virtual Network Identifier (VNI) in an EVB session.

Command Default

None

Command Modes

Privileged EXEC (#)

Command History

Release	Modification
Cisco NX-OS 7.0(0)N1(1)	This command was introduced.
Cisco NX-OS 7.2(0)D1(1)	This command was integrated.

Usage Guidelines

Use the **feature evb** command to enable the EVB session. This, in turn, enables the **evb** keyword in the **show** command on the device.

Examples

The following is sample output from the **show evb** command:

```
Device# show evb

EVB (Edge Virtual Bridge)

Role                            : VDP bridge
VDP MAC address                 : 0180.c200.0000 (Nearest Bridge)
                                  0123.4567.89ab (User)
Resource wait init              : 21 (~ 20 sec)
Keep-alive init                 : 21 (~ 20 sec)
No. received vdpdu              : 0
No. dropped  vdpdu              : 0
No. received tlv                : 0
No. received mgr tlv            : 0
No. received assoc tlv          : 0
No. received cmd                : 0
```

show fabric database dci

To display information about all, some, or a specified virtual routing and forwarding (VRF) that is auto configured via Cisco Data Center Interconnect (DCI) auto configuration, use the **show fabric database dci** command in privileged EXEC mode.

show fabric database dci [*vrf <vrf-name>*]

Syntax Description

vrf-name	(Optional) Name of the VRF that is extended on the Edge Router.

Command Modes

Privileged EXEC (#)

Command History

Release	Modification
Cisco NX-OS 7.1(0)N1(1)	This command was introduced.
Cisco NX-OS 7.2(0)D1(1)	This command was integrated.

Usage Guidelines

Use this command to display the following information about all, some, or a specified VRF auto configuration:

- Number of VRFs on each Edge Router
- Errors, if any
- Time of instantiation
- Configuration parameters

No license is required for this command.

Examples

The following is sample output from the **show fabric database dci** command.

```
Device#show fabric database dci

Active DCI Entries
flags: L - Locally inserted, R - Recovered
VRF NAME             STATE           FLAGS PROFILE(INSTANCE)
Org1:vrf3            Profile Active  L
bl_ipv4_and_ipv6_two_box(instance_dci_Org1:vrf3_10.1.1.11_0.0.0.0_1)Key:
```

show fabric database host

To show the current status of all the auto-configured profiles, use the **show fabric database host** command in privileged EXEC mode.

show fabric database host

Syntax Description

This command has no arguments or keywords.

Command Modes

Privileged EXEC (#)

Command History

Release	Modification
Cisco NX-OS 7.1(0)N1(1)	This command was introduced.
Cisco NX-OS 7.2(0)D1(1)	This command was integrated.

Usage Guidelines

After the profile is applied and acknowledged by the clients, the state becomes active.

Examples

The following is sample output from the **show fabric database host** command:

```
Device# show fabric database host

Active Host Entries
flags: L - Locally inserted, V - vPC+ inserted, R - Recovered
VNI      VLAN  STATE           FLAGS PROFILE(INSTANCE)
31230    3000  Profile Active  L     defaultNetworkIpv4EfProfile(instance_vni_31230_2)
Active Host Entries
flags: L - Locally inserted, V - vPC+ inserted, R - Recovered
VLAN  VNI      STATE           FLAGS PROFILE(INSTANCE)
77    30077    Profile Active  L     defaultNetworkIpv4EfProfile(instance_def_77_1)
```

Table 2: Description of flags for show fabric database host Command

Flags	Description
L - Locally inserted	Profile was locally learned via a host trigger or inserted via DCNM.
V - vPC+ inserted	Profile was synced from the vPC peer.
R - Recovered	Profile was recovered after a reload/process restart.
X - xlated Vlan	Source VLAN was translated before Profile application.

show fabric database host detail

To display fabric database host details, use the **show fabric database host detail** command in privileged EXEC mode.

show fabric database host detail

Syntax Description

This command has no arguments or keywords.

Command Modes

Privileged EXEC (#)

Command History

Release	Modification
Cisco NX-OS 7.1(0)N1(1)	This command was introduced.
Cisco NX-OS 7.2(0)D1(1)	This command was integrated.

Examples

The following is sample output from the **show fabric database host detail** command. The fields in the example are self-explanatory.

```
Device# show fabric database host detail

Active Host Entries
flags: L - Locally inserted, V - vPC+ inserted, R - Recovered
VNI      VLAN  STATE           FLAGS PROFILE(INSTANCE)
31230    3000  Profile Active  L     defaultNetworkIpv4EfProfile(instance_vni_31230_2)
Displaying VDP hosts
Interface      Encap      Flags State           VSI-ID
Eth101/1/2     3000       L     Profile Active  00000000000000079FE005056B77983

aActive Host Entries
flags: L - Locally inserted, V - vPC+ inserted, R - Recovered
VLAN  VNI      STATE           FLAGS PROFILE(INSTANCE)
77    30077    Profile Active  L     defaultNetworkIpv4EfProfile(instance_def_77_1)
Displaying Data Snooping Ports
Interface      Encap      Flags State
Eth101/1/1     77         L     Profile Active
```

Table 3: Description of flags for show fabric database host detail command

Flags	Description
L - Locally inserted	Profile was locally learned via a host trigger or inserted via DCNM.
V - vPC+ inserted	Profile was synced from the vPC peer.
R - Recovered	Profile was recovered after a reload/process restart.

Flags	Description
X - xlated Vlan	Source VLAN was translated before Profile application.

show fabric database host dot1q

To display Address Resolution Protocol (ARP), DHCP, and Neighbor Discovery-triggered information, use the **show fabric database host dot1q** command in privileged EXEC mode. This command is used for "VLAN" instantiated hosts.

show fabric database host dot1q *vlan-id*

Syntax Description

vlan-id	The VLAN ID. The range is from 2 to 4095, except for the VLANs reserved for internal switch use.

Command Modes

Privileged EXEC (#)

Command History

Release	Modification
Cisco NX-OS 7.1(0)N1(1)	This command was introduced.
Cisco NX-OS 7.2(0)D1(1)	This command was integrated.

Examples

The following is sample output from the **show fabric database host dot1q** command. The fields in the example are self-explanatory.

```
Device# show fabric database host dot1q 23

Got Local originated vlan type trigger at 17:02:32
Number of associated interfaces: 1
Sent to Database Manager at 17:02:32
Received Parameters from Database Manager at 17:02:32
Displaying parameters for profile defaultNetworkIpv4EfProfile and instance instance_def_77_1
parameter 0: $gatewayIpAddress=10.1.1.1
parameter 1: $netMaskLength=24
parameter 2: $vlanId=77
parameter 3: $segmentId=30077
parameter 4: $vrfName=DCNM-ORG:RED
parameter 5: $gatewayIpAddress=10.1.1.1
parameter 6: $netMaskLength=24
parameter 7: $dhcpServerAddr=12.0.100.40
parameter 8: $include_vrfSegmentId=50000
parameter 9: $vlanId=77
parameter 10: $asn=65000
Sent Apply to Configuration Manager at 17:02:32
Completed executing all commands at 17:02:33
Displaying Data Snooping Ports
Interface      Encap      Flags State
Eth101/1/1     77         L     Profile Active
```

show fabric database host statistics

To display fabric database host statistics, use the **show fabric database host statistics** command in privileged EXEC mode.

show fabric database host statistics

Syntax Description

This command has no arguments or keywords.

Command Modes

Privileged EXEC (#)

Command History

Release	Modification
Cisco NX-OS 7.1(0)N1(1)	This command was introduced.
Cisco NX-OS 7.2(0)D1(1)	This command was integrated.

Examples

The following is sample output from the **show fabric database host statistics** command, where statistics for all the databases are displayed. The fields in the example are self-explanatory.

```
Device# show fabric database host statistics

Data Snoop Triggers            6
Data Snoop Deletes             2
VDP Association Requests       9
VDP DeAssociation Requests     8
Duplicate add: Existing Host   3
Existing Profile: New Host     11
Profile Apply from vPC peer    4
Profile Un-apply from vPC peer 3
Host Apply from vPC peer       10
Host Un-apply from vPC peer    8
ADBM Requests                  4
ADBM Responses                 3
ADBM Error Responses           1
Profile Apply Received         3
Profile vPC Queued             0
Profile Local Apply Queued     0
Profile Local UnApply Queued   0
Profile Apply Sent             2
Profile Apply Responses        38
Profile Apply Success          2
Profile UnApply Success        2
Profile Commands               20
Profile UnApply Sent           2
Profile Top Queue adds         1
Profile High Queue adds        2
Profile Low Queue adds         2
Outstanding vlan requests      0
Outstanding adbm requests      0
Outstanding Profile Applies    0
Outstanding vPC Profile Applies 0
Device#
```

show fabric database host summary

To display the relevant auto-configuration timers along with the number of Virtual Station Interface (VSI) Discovery and Configuration Protocol (VDP) hosts and auto-configuration tenants that are instantiated, use the **show fabric database host summary** command in privileged EXEC mode.

show fabric database host summary

Syntax Description

This command has no arguments or keywords.

Command Modes

Privileged EXEC (#)

Command History

Release	Modification
Cisco NX-OS 7.0(1)N1(1)	This command was introduced.
Cisco NX-OS 7.2(1)D1(1)	This command was integrated.

Usage Guidelines

Use this command to display information such as the number of instances, VDP hosts, and timer values.

Examples

The following is sample output from the **show fabric database host summary** command. The fields in the example are self-explanatory.

```
Device# show fabric database host summary

Number of instances applied :    6
Number of VDP hosts         :    4
Recovery Timeout Value      :    30 minutes
Cleanup Timeout Value       :    15 minutes
VDP Add Suppression Timeout :    3 minutes
Profiles checked for aging  :    30 minutes
```

Related Commands

Command	Description
fabric database timer	Configures fabric database timers.

show fabric database host vni

To display fabric database host virtual network identifier (VNI) information, use the **show fabric database host vni** command in privileged EXEC mode.

show fabric database host vni *vni-id*

Syntax Description

vni-id	Information about hosts or virtual network ID for virtual routing and forwarding (VRF). The range is from 4096 to 16777215.

Command Modes

Privileged EXEC (#)

Command History

Release	Modification
Cisco NX-OS 7.1(0)N1(1)	This command was introduced.
Cisco NX-OS 7.2(0)D1(1)	This command was integrated.

Examples

The following is sample output from the **show fabric database host vni** command. The fields in the example are self-explanatory.

```
Device# show fabric database host vni 31230

Got Local originated vdp type trigger at 17:09:57
Number of VDP Hosts: 1
Sent to Database Manager at 17:09:57
Received Parameters from Database Manager at 17:09:57
Displaying parameters for profile defaultNetworkIpv4EfProfile and instance
instance_vni_31230_2
parameter 0: $gatewayIpAddress=10.10.99.254
parameter 1: $netMaskLength=24
parameter 2: $vlanId=
parameter 3: $segmentId=31230
parameter 4: $vrfName=DCNM-ORG:RED
parameter 5: $gatewayIpAddress=10.10.99.254
parameter 6: $netMaskLength=24
parameter 7: $dhcpServerAddr=192.168.100.254
parameter 8: $include_vrfSegmentId=50000
parameter 9: $segmentId=31230
parameter 10: $vlanId=3000
parameter 11: $asn=65000
Got VLAN allocated from vlan manager at 17:09:57
Sent Apply to Configuration Manager at 17:09:57
Completed executing all commands at 17:09:58
Displaying VDP hosts
Interface      Encap      Flags State           VSI-ID
Eth101/1/2     3000       L     Profile Active  00000000000000079FE005056B77983
```

show fabric database profile-map global

To display profile mapping details, use the **show fabric database profile-map global** command in privileged EXEC mode.

show fabric database profile-map global

Syntax Description

This command has no arguments or keywords.

Command Modes

Privileged EXEC (#)

Command History

Release	Modification
Cisco NX-OS 7.1(0)N1(1)	This command was introduced.
Cisco NX-OS 7.2(0)D1(1)	This command was integrated.

Examples

The following is sample output from the **show fabric database profile-map global** command. The fields in the example are self-explanatory.

```
Device# show fabric database profile-map global

Flags: ? - Static profile not configured

Global Profile Map
(apply to all interfaces)

Map      Proto      VNI       DOT1Q     Flags  Profile Name
-------- ---------- --------- --------- ------ --------------------
global   ether-tag  default                    (dynamic)
global   ether-tag            default          (dynamic)
global   vdp        22222                      Static-22222
global   vdp        22223                      Static-22223
global   vdp        33333                      Static-33333
global   vdp        default                    (dynamic)
global   vdp                  222              static-222
global   vdp                  333              static-333
```

Related Commands

Command	Description
fabric database profile-map	Configures the fabric database profile map.

show fabric database statistics

To display fabric database statistics, use the **show fabric database statistics** command in privileged EXEC mode.

show fabric database statistics [**type** | {**network**| **cabling**| **profile**}]

Syntax Description

type	(Optional) Defines the type of statistics to display.
network	(Optional) Displays statistics of network databases.
cabling	(Optional) Displays statistics of cabling databases.
profile	(Optional) Displays statistics of profile databases.

Command Default

Displays statistics of all databases.

Command Modes

Privileged EXEC (#)

Command History

Release	Modification
Cisco NX-OS 7.0(0)N1(1)	This command was introduced.
Cisco NX-OS 7.2(0)D1(1)	This command was integrated.

Examples

The following is sample output from the **show fabric database statistics** command where statistics for all databases are displayed. The fields are self-explanatory.

```
Device# show fabric database statistics
Global Stats:
DB-Type         Requests    Dispatched  Not dispatched  Re-dispatched
------------------------------------------------------------------------
Network                3             1               2              0
Cabling                0             0               0              0
Profile                1             1               0              0
------------------------------------------------------------------------
TOTAL                  4             2               2              0

Per Database stats:
T Prot Server/DB                          Reqs     OK  NoRes    Err  TmOut   Pend
-------------------------------------------------------------------------------
N LDAP host91                                1      0      1      0      0      0
       ou=segments,dc=cisco,dc=com
P LDAP host91                                1      1      0      0      0      0
       ou=profiles,dc=cisco,dc=com
Legend:
  T-Type (N-Network, C-Cabling, P-Profile)
```

show fabric forwarding

To display information about the host databases and configuration of the host mobility manager (HMM) component, use the **show fabric forwarding** command in privileged EXEC mode.

show fabric forwarding {**host-db** {**vrf** [**all** | **default**]} | **internal** {**af** | **buffers** | **clients** | **debug** | **event-history** {**auto-config** | **errors** | **events** | **msgs** | **packets** | **periodic** | **trace**} | **intf** {**local-host-db** | **remote-host-db**} | **mac-bd local-host-db** | **mem-stats** | **migration-vips** | **state** | **svi-info** | **work-info**} | {**ip** | **ipv6**} {**aggregate-subnet-prefix** | **local-host-db** | **remote-host-db**} {**vrf** [**all** | **default**] [*v4-prefix* | *v6-prefix*]}}

Syntax Description

host-db	Displays host database information.
internal	Displays internal HMM information.
af	Displays address family information.
buffers	Displays the internal buffer state maintained by HMM.
clients	Displays RPM clients.
debug	Displays internal debug information maintained by HMM.
event-history	Displays HMM event logs.
auto-config	Displays auto-configuration events of the HMM process.
errors	Displays HMM error logs.
events	Displays HMM process events.
msgs	Displays HMM message logs.
packets	Displays HMM process packet events.
periodic	Displays HMM process periodic events.
trace	Displays processing logs of HMM commands.
intf	Displays interface on which local host is learnt.
local-host-db	Displays HMM local host database information.
remote-host-db	Displays HMM remote host database information.
mac-bd	Displays MAC-Bridge Domain information.
mem-stats	Displays dynamic memory statistics.
migration-vips	Displays HMM VIPs database for migration.

state	Displays internal state information maintained by HMM.
svi-info	Displays switched virtual interface (SVI) information.
work-info	Displays internal HMM worker thread information.
ip	Displays IP information.
ipv6	Displays IPv6 information.
aggregate-subnet-prefix	Displays HMM aggregate subnet prefix information.
vrf	Displays virtual routing and forwarding (VRF) information of HMM component.
all	Displays information pertaining to all VRFs.
default	Displays the default VRF name.
v4-prefix	IPv4 address.
v6-prefix	IPv6 address.

Command Modes

Privileged EXEC (#)

Command History

Release	Modification
Cisco NX-OS 7.0(0)N1(1)	This command was introduced.
Cisco NX-OS 7.2(0)D1(1)	This command was integrated.

Examples

The following command shows how to display host database information:

```
Device# show fabric forwarding host-db
```

The following command shows how to display host database VRF information:

```
Device# show fabric forwarding host-db vrf all
```

The following command shows how to display address family information:

```
Device# show fabric forwarding internal af
Number of URIB buffers in use/xid   : 0/0
Number of U6RIB buffers in use/xid  : 0/0
Number of VRFs in Update RIB List   : 0
Update RIB event signalled count    : 0
Update RIB thread wake up count     : 0
```

The following command shows how to display the internal buffer state maintained by HMM:

```
Device# show fabric forwarding internal buffers
HMM buffers information
```

The following command shows how to display RPM clients:

```
Device# show fabric forwarding internal clients
Name            Uuid       Sap        Flags      Stats(R/A/N/F)
mrib            0x113      256        0x40       1/1/0/0
arp             0x10c      279        0xce80     1/1/0/0
adjmgr          0x108      252        0x680      1/1/0/0
fwm             0x28c      602        0x7aa2     1/1/0/0
ISIS_L2MP       0x118      432        0x1ff0     1/1/0/0
IP              0x221      263        0xc3a0     1/1/0/0
ICMPv6          0x10e      282        0xcec0     1/1/0/0
```

The following command shows how to display internal debug information maintained by HMM:

```
Device# show fabric forwarding internal debug
HMM Debug information
Debug Flags                    : Off
Debug-filters                  : Off
```

The following command shows how to display auto-configuration events of the HMM process:

```
Device# show fabric forwarding internal event-history auto-config
Process auto-config logs of HMM
1) Event:E_DEBUG, length:65, at 382460 usecs after Mon Dec 23 10:53:29 2013
    [126] [10937]: Decrement outstanding PPM request (1/10) -> (0/10)

2) Event:E_DEBUG, length:65, at 376938 usecs after Mon Dec 23 10:53:29 2013
    [126] [10937]: Decrement outstanding PPM request (2/10) -> (1/10)

3) Event:E_DEBUG, length:65, at 375093 usecs after Mon Dec 23 10:53:29 2013
    [126] [10937]: Decrement outstanding PPM request (3/10) -> (2/10)

4) Event:E_DEBUG, length:65, at 373241 usecs after Mon Dec 23 10:53:29 2013
    [126] [10937]: Decrement outstanding PPM request (4/10) -> (3/10)
...
```

The following command shows how to display HMM error logs:

```
Device# show fabric forwarding internal event-history errors
Error events for HMM Process
```

The following command shows how to display HMM process events:

```
Device# show fabric forwarding internal event-history events
Process Event logs of HMM
1) Event:E_DEBUG, length:58, at 788428 usecs after Sun Jan 12 09:44:36 2014
    [117] [10937]: Received L3_PROTOCOL_STATE change msg, num 1
2) Event:E_DEBUG, length:58, at 786919 usecs after Sun Jan 12 09:44:36 2014
    [117] [10937]: Received L3_PROTOCOL_STATE change msg, num 1
3) Event:E_DEBUG, length:58, at 784142 usecs after Sun Jan 12 09:44:36 2014
    [117] [10937]: Received L3_PROTOCOL_STATE change msg, num 1
4) Event:E_DEBUG, length:51, at 777076 usecs after Sun Jan 12 09:44:36 2014
    [117] [10937]: Received IF_CREATED change msg, num 1
...
```

The following command shows how to display HMM message logs:

```
Device# show fabric forwarding internal event-history msgs
Msg events for HMM Process
1) Event:E_DEBUG, length:45, at 602003 usecs after Mon Jan 13 05:14:48 2014
    [100] [32706]: nvdb: transient thread created

2) Event:E_DEBUG, length:83, at 601402 usecs after Mon Jan 13 05:14:48 2014
    [100] [10944]: comp-mts-rx opc - from sap 27057 cmd hmm_show_internal_event_
hist_cmd
3) Event:E_DEBUG, length:42, at 918941 usecs after Mon Jan 13 05:14:15 2014
    [100] [32699]: nvdb: terminate transaction

4) Event:E_DEBUG, length:45, at 896918 usecs after Mon Jan 13 05:14:15 2014
    [100] [32699]: nvdb: transient thread created
...
```

The following command shows how to display HMM process packet events:

```
Device# show fabric forwarding internal event-history packets
Process packet logs of HMM
```

The following command shows how to display HMM process periodic events:

```
Device# show fabric forwarding internal event-history periodic
Process periodic event logs of HMM
1) Event:E_DEBUG, length:44, at 786068 usecs after Mon Jan 13 05:16:01 2014
    [123] [10942]: HMM cleanup thread in progress
2) Event:E_DEBUG, length:44, at 785935 usecs after Mon Jan 13 05:15:56 2014
    [123] [10942]: HMM cleanup thread in progress
3) Event:E_DEBUG, length:43, at 62257 usecs after Mon Jan 13 05:15:55 2014
    [123] [10936]: Invoke profile bookkeeping...
4) Event:E_DEBUG, length:44, at 785801 usecs after Mon Jan 13 05:15:51 2014
    [123] [10942]: HMM cleanup thread in progress
...
```

The following command shows how to display processing logs of HMM commands:

```
Device# show fabric forwarding internal event-history trace
Trace logs of HMM
1) Event:E_DEBUG, length:58, at 210400 usecs after Mon Dec 23 10:53:29 2013
    [119] [10935]: mts data queue bind success dynamic_sap=3137
```

The following command shows how to display HMM local host database information:

```
Device# show fabric forwarding internal intf local-host-db
```

The following command shows how to display HMM remote host database information:

```
Device# show fabric forwarding internal intf remote-host-db
```

The following command shows how to display MAC-BD information:

```
Device# show fabric forwarding internal mac-bd local-host-db
```

The following command shows how to display dynamic memory statistics:

```
Device# show fabric forwarding internal mem-stats
Mem stats for HMM Process

Private Mem stats for UUID : Malloc track Library(103) Max types: 5
-------------------------------------------------------------------------------
Curr alloc: 1728 Curr alloc bytes: 120844(118k)


Private Mem stats for UUID : Non mtrack users(0) Max types: 161
-------------------------------------------------------------------------------
Curr alloc: 740 Curr alloc bytes: 75035(73k)


Private Mem stats for UUID : libsdwrap(115) Max types: 22
-------------------------------------------------------------------------------
Curr alloc: 34 Curr alloc bytes: 2441304(2384k)


Private Mem stats for UUID : Associative_db library(175) Max types: 14
-------------------------------------------------------------------------------
Curr alloc: 156 Curr alloc bytes: 4400(4k)


Private Mem stats for UUID : Event sequence library(158) Max types: 4
-------------------------------------------------------------------------------
Curr alloc: 0 Curr alloc bytes: 0(0k)

...
```

The following command shows how to display the HMM VIPs database for migration:

```
Device# show fabric forwarding internal migration-vips
```

The following command shows how to display internal state information maintained by HMM:

```
Device# show fabric forwarding internal state
HMM Internal Global State

Start reason                   : configuration
Sup state                      : Active
Restart type                   : Stateless
All core components up         : Yes
      Comp       Uuid       Up         Dynamic    Init
      clis       261        True       False      True
      ifmgr      318        True       False      True
      adjmgr     264        True       False      True
      arp        268        True       False      True
      icmpv6     270        True       False      True
      netstack   545        True       False      True
      l3vm       445        True       False      True
      urib       273        True       False      True
      u6rib      274        True       False      True
      unknown    652        True       False      True
      rpm        305        True       False      True
      unknown    593        False      True       False
      bgp        283        False      True       False
      unknown    406        False      True       False
      unknown    68         False      True       False
      pktmgr     263        True       False      True
      unknown    1210       True       True       True
      unknown    704        True       True       True
Libraries registered           : IP IPv6
HMM thread                     : 0x68b2cb90
Debug Flags                    : Off
```

The following command shows how to display SVI information:

```
Device# show fabric forwarding internal svi-info
HMM Global config information
Fabric id                      : 0
Conversational Learning        : False
Urib/U6rib Conv Aging Timeout  : 1800/1800 (secs)
Switch role                    : leaf
Anycast Gateway mac            : 0000.0000.0000
Fabric control segment/Notify  : -/False
Migration count                : 0
Migration                      : False
Port tracking                  : -


HMM SVI information
AM thread halted/count         : No/0
#RARP on Mgmt intf             : 407
#Recvd non Ether pkts          : 0
#Recvd non RARP pkts           : 0
#Hosts with same mac-bd        : 0
```

The following command shows how to display internal HMM worker thread information:

```
Device# show fabric forwarding internal work-info
HMM Worker information

Work in Progress                        : False
Remote Hosts cleanup pending/progress   : False/False
Fabric ID change pending/progress       : False/False
#Worker walk                            : 0
#No work                                : 0
#Signal worker thread                   : 0
```

The following command shows how to display IP HMM aggregate subnet prefix information:

```
Device# show fabric forwarding ip aggregate-subnet-prefix
```

The following command shows how to display IP HMM local host database information:

```
Device# show fabric forwarding ip local-host-db
```

The following command shows how to display IP HMM local host database VRF information:

```
Device# show fabric forwarding ip local-host-db vrf all
```

The following command shows how to display IP HMM remote host database information:

```
Device# show fabric forwarding ip remote-host-db
```

The following command shows how to display IP HMM remote host database VRF information:

```
Device# show fabric forwarding ip remote-host-db vrf all
```

The following command shows how to display IPv6 HMM aggregate subnet prefix VRF information:

```
Device# show fabric forwarding ip aggregate-subnet-prefix vrf all
```

The following command shows how to display IPv6 HMM aggregate subnet prefix information:

```
Device# show fabric forwarding ipv6 aggregate-subnet-prefix
```

The following command shows how to display IPv6 HMM local host database information:

```
Device# show fabric forwarding ipv6 local-host-db
```

The following command shows how to display IPv6 HMM local host database VRF information:

```
Device# show fabric forwarding ipv6 local-host-db vrf all
```

The following command shows how to display IPv6 HMM remote host database information:

```
Device# show fabric forwarding ipv6 remote-host-db
```

show fabric oam traceroute

To display information about FabricPath Operation, Administration, and Maintenance (OAM), use the **show fabricpath oam traceroute** command in privileged EXEC mode.

show fabricpath oam traceroute {**database** [**session** *session-handle*]| **statistics** [**summary**]}

Syntax Description

database	Displays information about FabricPath OAM traceroute database.
session *session-handle*	(Optional) Displays information about for FabricPath OAM traceroute for a specific session.
statistics	Displays information about FabricPath OAM traceroute statistics.
summary	(Optional) Displays FabricPath OAM traceroute statistics summary.

Command Modes

Privileged EXEC (#)

Command History

Release	Modification
Cisco NX-OS 7.0(0)N1(1)	This command was introduced.
Cisco NX-OS 7.2(0)D1(1)	This command was integrated.

Usage Guidelines

When a **traceroute** command returns errors and the details are not available in the command output, you can use the **show fabricpath OAM traceroute database** command to see the details.

A session is an auto-generated identifier for a proactive traceroute request.

Examples

The following is sample output from the **show fabricpath OAM traceroute statistics** command.

```
Device# show fabricpath OAM traceroute statistics

Last Clear of Statistics: Never
Traceroute Reply/notification return code distribution
    V – VLAN nonexistent (0)                    - 0
    v – VLAN in suspended state  (1)            - 0
    C – Cross Connect Error (2)                 - 0
    U – Unknown RBridge nickname (3)            - 0
    n – Not AF (4)                              - 0
    M – MTU mismatch (5)                        - 0
```

```
    I – Interface not in forwarding state  (6) - 0
    S – Service Tag nonexistent (7)            - 0
    s – Service Tag in suspended state (8)     - 0
    ! - success                                - 5
   m – malformed request                       - 0
   Q – request not sent                        - 0
    . – timeout                                - 0
   D – Destination unreachable                 - 0
   X – Unknown return code                     - 0
Path Trace Requests: sent (5)/received (0)/timedout (0)/unsent (0)
Path Trace Replies: sent (0)/received (5)/unsent (0)
```

The following is sample output from the **show fabricpath OAM traceroute statistics summary** command.

```
Device# show fabricpath OAM traceroute statistics summary

Path Trace Requests: sent (5)/received (0)/timeout (0)/unsent (0)
Path Trace Replies: sent (0)/received (5)/unsent (0)
```

The following is sample output from the **show fabricpath OAM traceroute database** command.

```
Device# show fabricpath OAM traceroute database

Sender handle: 2
Path Trace Request from switch-id 10

Id: sent: 5 timeout: 0 unsent: 0 Interface: NA
Hop limit: 2 Flags: 0 switch-id: 10
Forward Flow Entropy: Default
Reverse Flow Entropy: NA
Service Tag: NA Vlan: 10 out of band: No
Reverse Path Req(ecmp/nickname): NA
Control Plane Verification Req(ecmp/nickname):NA
Reply: received (5)
Reverse Resp (ecmp cnt: 1, (ecmp id: 0xFFFF, ifindex: 32, slot:0, port:0, state:10,
state:fwd))
Forward Resp (ecmp cnt: 1, (ecmp id: 0xFFFF, ifindex: 32, slot:0, port:0, state:10,
state:fwd))
```

show interface status err-disabled

To display information about interfaces that are in error-disabled state, use the **show interface status err-disabled** command in privileged EXEC mode.

show interface status err-disabled

Syntax Description

This command has no arguments or keywords.

Command Modes

Privileged EXEC (#)

Command History

Release	Modification
Cisco NX-OS 4.0	This command was introduced.
Cisco NX-OS 6.0(2)N3(1)	This command was integrated.
Cisco NX-OS 6.1(2)I2(2)	

Usage Guidelines

Miscabling interfaces, or interfaces in error-disabled state, prevent all traffic from leaving these interfaces. Error disabling is one way of bringing down an interface via software.

Examples

The following is sample output from the **show interface status err-disabled** command:

```
Device# show interface status err-disabled

--------------------------------------------------------------------------------
Port         Name               Status             Reason
--------------------------------------------------------------------------------
Eth2/1        --                down               fabric tier-mismatch
```

show ip arp statistics

To view Address Resolution Protocol (ARP) statistics, use the **show ip arp statistics** command in privileged EXEC mode.

show ip arp statistics [**ethernet** *interface-number* [**.***sub-interface-number*] | **loopback** *interface-number* | **mgmt** *management-interface-number*] [**interface-all**] [**vrf** {*vrf-name* | **all** | **default** | **management**}]

Syntax Description

ethernet *interface-number*	(Optional) Displays ARP statistics for the specified ethernet interface.
.*sub-interface-number*	(Optional) Subinterface number for which ARP statistics will be displayed. **Note** The period (.) needs to precede the *sub-interface-number* argument value.
loopback *interface-number*	(Optional) Displays ARP statistics for the specified loopback interface.
mgmt *management-interface-number*	(Optional) Displays ARP statistics for the specified management interface.
interface-all	(Optional) Displays ARP statistics for all interfaces.
vrf *vrf-name*	(Optional) Displays ARP statistics for the specified VRF instance.
vrf all	(Optional) Displays ARP statistics for all VRF instances.
vrf default	(Optional) Displays ARP statistics for the default VRF instance.
vrf management	(Optional) Displays ARP statistics for the management VRF instance.

Command Modes

Privileged EXEC (#)

Command History

Release	Modification
Cisco NX-OS 6.1(2)I2(2)	This command was introduced.
Cisco NX-OS 7.0(0)N1(1)	This command was integrated.

Examples

The following sample output shows ARP statistics for an Ethernet subinterface:

```
Device# show ip arp statistics ethernet 2/1.1

 ARP packet statistics for interface: Ethernet2/1.1

 Sent:
```

```
  Total 0, Requests 0, Replies 0, Requests on L2 0, Replies on L2 0,

  Gratuitous 0, Tunneled 0, Dropped 0 from Server Port 0, from Fabric
Port 0,

  fixup core 0, fixup server 0, fixup rarp 0, modified anycast glean 0

  Send packet drops details:

       MBUF operation failed : 0

       Context not yet created : 0

       Invalid context : 0

       Invalid ifindex : 0

       Invalid SRC IP : 0

       Invalid DEST IP : 0

       Destination is our own IP : 0

       Unattached IP : 0

       Adjacency Couldn't be added : 0

       Null Source IP : 0

       Null Source MAC : 0

       Client Enqueue Failed : 0

       Dest. not reachable for proxy arp : 0

       Dest. unreachable for enhanced proxy: 0

       Dest. on L2 port being tracked : 0

       Invalid Local proxy arp : 0

       Invalid proxy arp : 0

       VIP is not active : 0


  Received:

   Total 0, Requests 0, Replies 0, Requests on L2 0, Replies on L2 0

   Proxy arp 0, Local-Proxy arp 0, Enhanced Proxy arp 0, Anycast proxy
Proxy arp 0,  L2 Port-track Proxy arp 0,  Tunneled 0,
   Fastpath 0, Snooped 0, Dropped 0, on Server Port 0

   Received packet drops details:

       Appeared on a wrong interface : 0

       Incorrect length : 0
```

```
Invalid protocol packet : 0
Invalid context : 0
Context not yet created : 0
Invalid layer 2 address length : 0
Invalid layer 3 address length : 0
Invalid source IP address : 0
Source IP address is our own : 0
No mem to create per intf structure : 0
Source address mismatch with subnet : 0
Directed broadcast source : 0
Invalid destination IP address : 0
Non-local destination IP address : 0
Non-active FHRP dest IP address. Learn and drop : 0
Invalid source MAC address : 0
Source MAC address is our own : 0
Received before arp initialization : 0
```

show ip arp suppression-cache

To display ARP suppression cache information, use the **show ip arp suppression-cache** command in privileged EXEC mode.

show ip arp suppression-cache [**detail** | **local** | **remote** | **statistics** | **summary** | **vlan** *vlan-id*]

Syntax Description

detail	Displays detailed ARP suppression cache information.
local	Displays local entries.
remote	Displays remote entries.
statistics	Displays ARP suppression cache statistics information.
summary	Displays ARP suppression cache summary information.
vlan *vlan-id*	Displays ARP suppression cache information for the specified VLAN . The VLAN ID range is from 1 to 3967 and 4050 to 4093.

Command Modes

Privileged EXEC (#)

Command History

Release	Modification
Cisco NX-OS 6.1(2)I2(2)	This command was introduced.
Cisco NX-OS 7.3(0)N1(1)	This command was integrated.
Cisco NX-OS 7.3(0)D1(1)	

Examples

The following is sample output from the **show ip arp suppression-cache detail** command.

```
Device# show ip arp suppression-cache detail

Flags: + - Adjacencies synced via CFSoE/vPC peer
       R - Remote Adjacency
       L2 - Learnt over L2 interface

Total number of entries: 2

Address     Age       MAC Address     Vlan    Physical Interface    Flags

172.16.0.1  00:01:02  0026.980c.1ec2  100     Ethernet2/6
172.16.0.2  00:01:03  0026.980c.1ec3  100                           R
```

The following is sample output from the **show ip arp suppression-cache local** command.

```
Device# show ip arp suppression-cache local

Flags: + - Adjacencies synced via CFSoE
       L - Local Adjacency
       R - Remote Adjacency
       L2 - Learnt over L2 interface

Ip Address     Age      Mac Address       Vlan Physical-ifindex    Flags
172.16.0.1     00:01:02  0026.980c.1ec2    100  Ethernet2/6
172.16.0.2     00:01:03  0026.980c.1ec3    100                      R
```

The following is sample output from the **show ip arp suppression-cache remote** command.

```
Device# show ip arp suppression-cache remote

Flags: + - Adjacencies synced via CFSoE
       L - Local Adjacency
       R - Remote Adjacency
       L2 - Learnt over L2 interface

Ip Address      Age       Mac Address     Vlan    Physical-ifindex    Flags
172.16.0.1      00:01:02  0026.980c.1ec2  100     Ethernet2/6
172.16.0.2      00:01:03  0026.980c.1ec3  100                         R
```

The following is sample output from the **show ip arp suppression-cache summary** command.

```
Device# show ip arp suppression-cache summary

IP ARP suppression-cache Summary

  Remote              : 1
  Synced via vpc peer : 0
  Local               : 1
  Total               : 2
```

The following is sample output from the **show ip arp suppression-cache statistics** command.

```
Device# show ip arp suppression-cache statistics

ARP packet statistics for suppression-cache

Supressed:
Total 0, Requests 0, Replies 0, Requests on L2 0, Replies on L2 0,
Request on core port 0, Reply on core port 0, Gratuitous 0

Sent:
 Total 7, Requests 4, Replies 1, Requests on L2 0, Replies on L2 0,
 Request on core port 0, Reply on core port 0, Gratuitous 2,

Dropped 0
 Send packet drops details:
    MBUF operation failed              : 0
    Invalid ifindex                    : 0
    Invalid SRC IP                     : 0
    Invalid DEST IP                    : 0
    Destination is our own IP          : 0
    Unattached IP                      : 0
    Cache add failed                   : 0

Received:
 Total 3, Requests 1, Replies 2, Requests on L2 0, Replies on L2 0,
 Reply on core port 0, Request on core port 0, Dropped 0
 Received packet drops details:
    Incorrect length                   : 0
    Invalid protocol packet            : 0
    Invalid layer 2 address length     : 0
    Invalid layer 3 address length     : 0
    Invalid source IP address          : 0
    No mem to create per intf structure : 0
```

```
    No mem to create cache entry        : 0
    Source address mismatch with subnet : 0
    Directed broadcast source           : 0
    Invalid destination IP address      : 0
    L2RIB add failed                    : 0

ARP suppression-cache entry statistics

 Adds 1, Deletes 0, Timeouts 0
```

The following is sample output from the **show ip arp suppression-cache vlan** *vlan-id* command.

```
Device# show ip arp suppression-cache vlan 100

Flags: + - Adjacencies synced via CFSoE/vPC peer
       R - Remote Adjacency
       L2 - Learnt over L2 interface
Total number of entries: 1

Address         Age       MAC Address     Vlan         Physical Interface   Flags
172.16.0.1      00:01:02  0026.980c.1ec2  100          Ethernet2/6          R
```

show lldp fabric auto-config

To display the lldp fabric auto-configuration information, use the **show lldp fabric auto-config** command in privileged EXEC mode.

show lldp fabric auto-config

Syntax Description

This command has no arguments or keywords.

Command Modes

Privileged EXEC (#)

Command History

Release	Modification
Cisco NX-OS 7.3(0)N1(1)	This command was introduced.
Cisco NX-OS 7.3(0)D1(1)	

Examples

The following is sample output from the **show lldp fabric auto-config** command. The fields in the example are self-explanatory.

```
switch# show lldp fabric auto-config

Interface     PORT-CHANNEL   Mac-Address     VNI    VLAN   Port-Mode  Status
-------------------------------------------------------------------------------
Ethernet1/30  Po100          8478.ac1b.70c4  40000  200    native     ADD SUCCESS
Ethernet1/29  NA             8478.ac1b.70c1  -      100    native     ADD SUCCESS
```

show logging level evb

To display the system log (syslog) filter level for an Edge Virtual Bridging (EVB) session, use the **show logging level evb** command in privileged EXEC mode.

show logging level evb

Command Default

None

Command Modes

Privileged EXEC (#)

Command History

Release	Modification
Cisco NX-OS 4.0(1)	This command was introduced.
Cisco NX-OS 6.1(2)I2(2)	This command was integrated.
Cisco NX-OS 7.0(0)N1(1)	

Usage Guidelines

Use the **feature evb** command to enable the EVB session. This, in turn, enables the **evb** keyword in the **logging level** command and the **show logging level** command on the device. Use the **show logging level evb** command to identify the default and the current severity levels of the EVB session.

Examples

The following is sample output from the **show logging level evb** command in which, for an EVB session, the default severity level is 5 and the user-defined syslog filter level is 4:

```
Device# show logging level evb

Facility        Default Severity        Current Session Severity
--------        ----------------        ------------------------
evb                     5                       4

0(emergencies)          1(alerts)       2(critical)
3(errors)               4(warnings)     5(notifications)
6(information)          7(debugging)
```

show l2route evpn mac

To view MAC and IP address information learnt by the switch in the EVPN control plane, use the **show l2route evpn mac** command in privileged EXEC mode.

show l2route evpn mac [**all** | **evi** *vlan-id*]

Syntax Description

all	Displays all routes information without filtering.
evi *vlan-id*	Displays route information learnt for a specific EVPN instance by the switch in the EVPN control plane, The VLAN ID range is from 2 to 4096.

Command Modes

Privileged EXEC (#)

Command History

Release	Modification
Cisco NX-OS 7.3(0)N1(1)	This command was introduced.
Cisco NX-OS 7.3(0)D1(1)	

Examples

The following is sample output from the **show l2route evpn mac all** command.

```
Device# show l2route evpn mac all
Topology ID Mac Address    Producer (ID) Next Hop(s)  Label     Seq Number
----------- -------------- ------------- ----------   -------   ----------
 10         a.a.a          Local   (003) 1.1.1.1       N/A        0
 10         b.b.b          BGP     (005) 5.5.5.5       N/A        20
 20         c.c.c          Local   (003) 0.0.0.0       N/A        0
 20         d.d.d          Local   (003) 0.0.0.0       N/A        0
```

The following is sample output from the **show l2route evpn mac evi 10** command.

```
Device# show l2route evpn evi 10
Topology ID Mac Address    Producer (ID) Next Hop(s)  Label     Seq Number
----------- -------------- ------------- ----------   -------   ----------
 10         a.a.a          Local   (003) 1.1.1.1       N/A        0
 10         b.b.b          BGP     (005) 5.5.5.5       N/A        20
```

show l2route topology

To display Layer-2 route topology information, use the **show l2route topology** command in privileged EXEC mode.

show l2route topology [**detail**]

Syntax Description

detail	Displays detailed Layer-2 route topology information.

Command Modes

Privileged EXEC (#)

Command History

Release	Modification
Cisco NX-OS 7.3(0)N1(1)	This command was introduced.
Cisco NX-OS 7.3(0)D1(1)	

Examples

The following is sample output from the **show l2route topology** command.

```
Device# show l2route topology
Topology ID   Topology Name   Attributes
-----------   -------------   ----------
2             Vxlan-100002    VNI
3             Vxlan-100003    VNI
6             Vxlan-100006    VNI
23            Vxlan-100023    VNI
26            Vxlan-100026    VNI
```

The following is sample output from the **show l2route topology detail** command.

```
Device# show l2route topology detail
Topology ID   Topology Name   Attributes
-----------   -------------   ----------
2             Vxlan-100002    VNI: 100002
                              Encap:0 IOD:0 IfHdl:1224736769
                              VTEP IP: 172.0.0.18
                              Emulated 172.0.0.23
                              TX-ID: 8 (Rcvd Ack: 0)
                              RMAC: 0000.0000.0000, VRFID: 0
                              Flags: 0x1, Prev_Flags: 0x0
3             Vxlan-100003    VNI: 100003
                              Encap:0 IOD:0 IfHdl:1224736769
                              VTEP IP: 172.0.0.19
                              Emulated IP: 172.0.0.24
                              TX-ID: 9 (Rcvd Ack: 0)
                              RMAC: 0000.0000.0000, VRFID: 0
                              Flags: 0x1, Prev_Flags: 0x0
```

show ngoam loopback

To display information about the NGOAM loopback information, use the **show ngoam loopback** command in Privileged EXEC mode.

show ngoam loopback {**statistics** {**session** {*session-handle* | **all**} | **summary**} | **status** {**session** {*session-handle* | **all**}}

Syntax Description

statistics	Displays NGOAM loopback statistics.
session *session-handle*	(Optional) Displays information about NGOAM loopback for a specific session. The range is from 1 to 65535.
session *all*	(Optional) Displays results for all ping/loopback sessions.
summary	(Optional) Displays NGOAM loopback statistics summary.
status	Displays NGOAM loopback status.

Command Modes

Privileged EXEC (#)

Command History

Release	Modification
Cisco NX-OS 7.3(0)N1(1)	This command was introduced.
Cisco NX-OS 7.3(0)D1(1)	

Examples

The following is sample output from the **show ngoam loopback statistics** command.

```
switch# show ngoam loopback statistics session 10

Sender Handle: 10
Last Clear of Statistics: Never
Loopback Reply/notification return code distribution:
    C – Cross Connect Error (2)                                  - 0
    ! - success                                                  - 5
    m – malformed request                                        - 0
    Q – request not sent                                         - 0
    . – timeout                                                  - 0
   D – Destination unreachable                                   - 0
   X – Unknown return code                                       - 0
Loopback Requests: sent (5)/ timedout (0)/unsent (0)
Loopback Replies: received (5)
Summary
Loopback Requests: sent (5)/received (0)/timeout (0)/unsent (0)
```

```
Loopback Replies: sent (0)/received (5)/unsent (0)
```

The following is sample output from the **show ngoam loopback statistics summary** command.

```
switch# show ngoam loopback statistics summary

Loopback Requests: sent (5)/received (0)/timeout (0)/unsent (0)
Loopback Replies: sent (0)/received (5)/unsent (0)
```

show ngoam pathtrace

To display the NGOAM path trace information, use the **show ngoam pathtrace** command in privileged EXEC mode.

show ngoam pathtrace {**database session** {*session-handle* | **all**} [**detail**] | **statistics** {**session** {*session-handle* | **all**} |**summary**}}

Syntax Description

database	Displays information about the NGOAM loopback database.
statistics	Displays NGOAM loopback statistics.
session *session-handle*	(Optional) Displays information about NGOAM loopback for a specific session. The range is from 1 to 65535.
session *all*	(Optional) Displays results for all ping/loopback sessions.
summary	(Optional) Displays NGOAM loopback statistics summary.
status	Displays NGOAM loopback status.

Command Modes

Privileged EXEC (#)

Command History

Release	Modification
Cisco NX-OS 7.3(0)N1(1)	This command was introduced.
Cisco NX-OS 7.3(0)D1(1)	

Examples

The following is sample output from the **show ngoam pathtrace statistics** command.

```
switch# show ngoam pathtrace statistics session 4

Sender Handle: 4
Last Clear of Statistics: Never
! - success                              : 2
c - Corrupted Data/Test                  : 0
* - Success, Optional Tlv incomplete     : 0
I - Interface not in forwarding state    : 0
m - malformed request                    : 0
Q - request not sent                     : 0
. - timeout                              : 0
D - Destination unreachable              : 0
X - Unknown return code                  : 0
```

The following is sample output from the **show ngoam pathtrace statistics summary** command.

```
switch# show ngoam traceroute statistics summary

Last Clear of Summary Statistics: Never
Pathtrace Requests: sent (2)/received (2)/timeout (0)/unsent (0)
Pathtrace Replies: sent (2)/received (2)/unsent (0)
```

show ngoam traceroute

To display information about the NGOAM trace route, use the **show ngoam traceroute** command in Privileged EXEC mode.

show ngoam traceroute statistics {**session** {*session-handle* | **all**} |**summary**}

Syntax Description

statistics	Displays NGOAM loopback statistics.
session *session-handle*	(Optional) Displays information about NGOAM loopback for a specific session. The range is from 1 to 65535.
session *all*	(Optional) Displays results for all ping/loopback sessions.
summary	(Optional) Displays NGOAM loopback statistics summary.

Command Modes

Privileged EXEC (#)

Command History

Release	Modification
Cisco Nexus 7.3(0)N1(1)	This command was introduced.
Cisco Nexus 7.3(0)D1(1)	

Examples

The following is sample output from the **show ngoam traceroute statistics** command.

```
switch# show ngoam traceroute statistics session 6

Sender Handle: 6
Last Clear of Statistics: Never
! - success                          : 3
c - Corrupted Data/Test              : 0
* - Success, Optional Tlv incomplete : 0
I - Interface not in forwarding state : 0
m - malformed request                : 0
Q - request not sent                 : 0
. - timeout                          : 0
D - Destination unreachable          : 0
X - Unknown return code              : 0
```

The following is sample output from the **show ngoam traceroute statistics summary** command.

```
switch# show ngoam traceroute statistics summary

Last Clear of Summary Statistics: Never
Traceroute Requests: sent (3)/received (0)/timeout (0)/unsent (0)
Traceroute Replies: sent (0)/received (3)/unsent (0)
```

show nve peers

To display information about the network virtualization endpoint (NVE) peers configured on the Cisco Nexus device, use the **show nve peers** command in privileged EXEC mode.

show nve peers [**control-plane** [**detail**] | **control-plane-vni** [**peer-ip** *ip-address* | **VNI** *ID*] | **data-plane** [**detail**] | **detail** | **interface nve** *number* [**detail**] | **peer-ip** *ip-address*]]

Syntax Description

control-plane	(Optional) Displays details about NVE peers that are learned through the control plane.
control-plane detail	(Optional) Displays detailed information about NVE peers that are learned through the control plane.
control-plane-vni peer-ip *ip-address*	(Optional) Displays information about specific peer.
control-plane-vni VNI *ID*	(Optional) VNI that is mapped to an NVE interface. The range is from 4096 to 16777215.
data-plane	(Optional) Displays NVE peers that are learned through the data plane.
data-plane detail	(Optional) Displays details about NVE peers that are learned through the data plane.
detail	(Optional) Displays detailed information about NVE peers.
interface nve *number*	(Optional) Displays information about NVE interface.
peer-ip *ip-address*	(Optional) Displays information about specific peer.

Command Modes

Privileged EXEC (#)

Command History

Release	Modification
Cisco NX-OS 6.1(2)I2(2)	This command was introduced.
Cisco NX-OS 7.1(0)N1(1)	This command was integrated.
Cisco NX-OS 7.2(0)D1(1)	

Examples

The following is sample output from the **show nve peers data-plane** command:

```
switch# show nve peers data-plane
Interface Peer-IP          State LearnType Uptime   Router-Mac
--------- ---------------  ----- --------- -------- -----------------
nve1      172.16.0.2       Up    CP        1w0d     n/a
```

The following is sample output from the **show nve peers data-plane detail** command:

```
switch# show nve peers data-plane detail
Details of nve Peers:
---------------------------------------
Peer-Ip: 172.16.0.2
    NVE Interface       : nve1
    Peer State          : Up
    Learn Type          : CP
    Peer Uptime         : 1w0d
    Router-Mac          : n/a
    Peer First VNI      : 0
    Time since Create   : 1w0d
    Configured VNIs     : 30000-30001,50000
    Provision State     : add-complete
    Route-Update        : Yes
    Peer Flags          : None
    Learn Src           : VPC
    Learnt CP VNIs      : --
    Peer-ifindex-resp   : Yes
---------------------------------------
```

The following is sample output from the **show nve peers interface nve 1** command:

```
switch# show nve peers interface nve 1
Interface Peer-IP          State LearnType Uptime   Router-Mac
--------- ---------------  ----- --------- -------- -----------------
nve1      172.16.0.2       Up    CP        1w0d     n/a
```

The following is sample output from the **show nve peers peer-ip 172.16.0.2** command:

```
switch# show nve peers peer-ip 172.16.0.2
Interface Peer-IP          State LearnType Uptime   Router-Mac
--------- ---------------  ----- --------- -------- -----------------
nve1      172.16.0.2       Up    CP        1w0d     n/a
```

show nve vni

To display information about one or all of the network virtualization endpoint (NVE) VNIs configured on the switch, use the **show nve vni** command in privileged EXEC mode.

show nve vni [**control-plane** | **data-plane** | **interface** {**nve** *number*} | **summary**]

Syntax Description

control-plane	(Optional) Displays only the NVE VNIs that are learned through the control plane.
data-plane	(Optional) Displays only the NVE VNIs that are learned through the data plane.
interface nve *number*	(Optional) Displays information about the VNIs that are assigned to the specified NVE interface. The value of the number *argument* is the unique identifier for the NVE interface that you configured by using the **interface nve** command.
summary	(Optional) Displays summarized information about NVE VNI.

Command Modes

Privileged EXEC (#)

Command History

Release	Modification
Cisco NX-OS 6.1(2)I2(2)	This command was introduced.
Cisco NX-OS 7.1(0)N1(1)	This command was integrated.
Cisco NX-OS 7.2(0)D1(1)	

Examples

The following is sample output from the **show nve nvi** command.

```
switch# show nve vni
Codes: CP - Control Plane        DP - Data Plane
       UC - Unconfigured         SA - Suppress ARP
       SU - Suppress Unknown Unicast

Interface VNI      Multicast-group   State Mode Type [BD/VRF]      Flags
--------- -------- ----------------- ----- ---- ------------------ -----
nve1      13201    n/a               Up    CP   L3 [vpn1]
nve1      13221    n/a               Up    CP   L3 [vpn2]
nve1      13231    n/a               Up    CP   L3 [vpn3]
nve1      13241    n/a               Up    CP   L3 [vpn4]
```

The following is sample output from the **show nve nvi control-plane** command.

```
switch# show nve vni control-plane
Codes: CP - Control Plane        DP - Data Plane
       UC - Unconfigured         SA - Suppress ARP
```

```
       SU - Suppress Unknown Unicast

Interface VNI      Multicast-group   State Mode Type [BD/VRF]      Flags
--------- -------- ----------------- ----- ---- ------------------ -----
nve1      13201    n/a               Up    CP   L3 [vpn1]
nve1      13221    n/a               Up    CP   L3 [vpn2]
nve1      13231    n/a               Up    CP   L3 [vpn3]
nve1      13241    n/a               Up    CP   L3 [vpn4]
```

The following is sample output from the **show nve nvi data-plane** command.

```
switch# show nve vni data-plane
Codes: CP - Control Plane        DP - Data Plane
       UC - Unconfigured         SA - Suppress ARP
       SU - Suppress Unknown Unicast

Interface VNI      Multicast-group   State Mode Type [BD/VRF]      Flags
--------- -------- ----------------- ----- ---- ------------------ -----
nve1      13201    n/a               Up    CP   L3 [vpn1]
nve1      13221    n/a               Up    CP   L3 [vpn2]
nve1      13231    n/a               Up    CP   L3 [vpn3]
nve1      13241    n/a               Up    CP   L3 [vpn4]
```

The following is sample output from the **show nve nvi interface nve 1** command.

```
switch# show nve vni interface nve 1
Codes: CP - Control Plane        DP - Data Plane
       UC - Unconfigured         SA - Suppress ARP
       SU - Suppress Unknown Unicast

Interface VNI      Multicast-group   State Mode Type [BD/VRF]      Flags
--------- -------- ----------------- ----- ---- ------------------ -----
nve1      100056   230.0.0.1         Up    CP   L2 [56]
nve1      100053   230.0.0.1         Up    CP   L2 [53]
nve1      100046   230.0.0.1         Up    CP   L2 [46]
nve1      100043   230.0.0.1         Up    CP   L2 [43]
```

The following is sample output from the **show nve vni summary** command.

```
switch# show nve vni summary
Total CP VNIs: 16   [Up: 16, Down: 0]
Total DP VNIs: 0    [Up: 0, Down: 0]
Total UC VNIs: 0
```

show nve vrf

To display Virtual Routing and Forwarding (VRF) instances and their Virtual Network Identifier (VNI) associations, use the **show nve vrf** command in privileged EXEC mode.

show nve vrf

Syntax Description

This command has no arguments or keywords.

Command Modes

Privileged EXEC (#)

Command History

Release	Modification
Cisco NX-OS 7.1(0)N1(1)	This command was introduced.
Cisco NX-OS 7.2(0)D1(1)	This command was integrated.

Examples

The following is the sample output from the **show nve vrf** command.

```
switch# show nve vrf
VRF-Name     VNI         Interface Gateway-MAC
------------ ----------- --------- -----------------
vpn1         13201       nve1      002a.6ab2.0781
vpn2         13221       nve1      002a.6ab2.0781
vpn3         13231       nve1      002a.6ab2.0781
```

show param-list

To display all user-defined parameter lists configured in a device, use the **show param-list** command in privileged EXEC mode.

show param-list [**param-list-name** *list-name*] **[show-instance]**

Syntax Description

param-list-name *list-name*	(Optional) Displays details of a specific user-defined parameter.
show-instance	(Optional) Displays details of instances created for user-defined parameters.

Command Modes

Privileged EXEC (#)

Command History

Release	Modification
Cisco NX-OS 7.0(0)N1(1)	This command was introduced.
Cisco NX-OS 7.2(0)D1(1)	This command was integrated.

Usage Guidelines

The **show param-list** command displays all parameter lists configured in the device. To view the instances of all the parameter lists, use the **show param-list show-instance** command. To view the instances of a specific user-defined parameter list, use the **show param-list param-list-name** *list-name* **show-instance** command.

Examples

The following sample output from the **show param-list** command displays all parameter lists configured in the device:

```
Device(config)# show param-list

Param List Name : param-prof1-list
        Name : ipaddr   Type : ipaddr
        Name : prog1    Type : string
        Name : segid    Type : integer
        Name : vlan_num Type : integer
Param List Name : param-prof2-list
        Name : l2-segid Type : integer
        Name : l3-segid Type : integer
        Name : ipv4addr Type : ipaddr
        Name : ipv6addr Type : ipaddr
```

The following sample output from the **show param-list show-instance** command displays instances of all parameter lists available in the device:

```
Device(config)# show param-list show-instance

Param List Name : param-prof1-list
        Name : ipaddr   Type : ipaddr
```

```
        Name : prog1    Type : string
        Name : segid    Type : integer
        Name : vlan_num Type : integer
        Param Instance Name : param-prof1-inst1
        Name : ipaddr   Value : 192.0.2.12
        Name : prog1    Value : vrf-300
        Name : segid    Value : 6300
        Name : vlan_num Value : 300
        Param Instance Name : param-prof1-inst2
        Name : ipaddr   Value : 192.0.2.10
        Name : prog1    Value : 330-vrf-2
        Name : segid    Value : 6301
        Name : vlan_num Value : 301
Param List Name : param-prof2-list
        Name : l2-segid Type : integer
        Name : l3-segid Type : integer
        Name : ipv4addr Type : ipaddr
        Name : ipv6addr Type : ipaddr
        Param Instance Name : param-prof2-inst1
        Name : l2-segid Value : 6305
        Name : l3-segid Value : 6306
        Name : ipv4addr Value : 192.0.2.5
        Name : ipv6addr Value : 2001:DB8::1
        Param Instance Name : param-prof2-inst2
        Name : l2-segid Value : 6307
        Name : l3-segid Value : 6308
        Name : ipv4addr Value : 192.0.2.8
        Name : ipv6addr Value : 2001:DB8::1
```

The following sample output from the **show param-list param-list-name** *list-name* **show-instance** command displays instances of the param-prof1-list parameter list:

```
Device(config)# show param-list param-list-name param-prof1-list show-instance

Param List Name : param-prof1-list
        Name : ipaddr   Type : ipaddr
        Name : prog1    Type : string
        Name : segid    Type : integer
        Name : vlan_num Type : integer
        Param Instance Name : param-prof1-inst1
        Name : ipaddr   Value : 192.0.2.12
        Name : prog1    Value : vrf-300
        Name : segid    Value : 6300
        Name : vlan_num Value : 300
        Param Instance Name : param-prof1-inst2
        Name : ipaddr   Value : 192.0.2.10
        Name : prog1    Value : 330-vrf-2
        Name : segid    Value : 6301
        Name : vlan_num Value : 301
```

show running-config bfd

To display the currently running configuration of Bidirectional Forwarding Detection (BFD), use the **show running-config bfd** command in privileged EXEC mode.

show running-config bfd

Syntax Description

This command has no arguments or keywords.

Command Modes

Privileged EXEC (#)

Command History

Release	Modification
Cisco NX-OS 6.0(2)N1(1)	This command was introduced.
Cisco NX-OS 6.1(2)I2(2)	This command was integrated.
Cisco NX-OS 7.2(0)D1(1)	

Examples

The following is sample output from the **show running-config bfd** command. The fields in the example are self-explanatory.

```
Device# show running-config bfd

!Command: show running-config bfd
!Time: Thu Dec  4 03:16:11 2014

version 7.1(0)N1(1)
feature bfd

bfd fabricpath interval 50 min_rx 50 multiplier 3
bfd fabricpath slow-timer 2000

interface port-channel56
  bfd fabricpath interval 50 min_rx 50 multiplier 3
  bfd fabricpath authentication Keyed-SHA1 key-id 1 hex-key 636973636F313233
  fabricpath isis bfd
fabricpath domain default
  bfd
```

show running-config evb

To display the currently running configuration of an Edge Virtual Bridging (EVB) session, use the **show running-config evb** command in privileged EXEC mode.

show running-config evb [**all**]

Syntax Description

all	(Optional) Displays the currently running configuration of an EVB session including all defaults.

Command Default

Displays the current configuration of the EVB session without any defaults.

Command Modes

Privileged EXEC (#)

Command History

Release	Modification
Cisco NX-OS 7.0(0)N1(1)	This command was introduced.
Cisco NX-OS 7.2(0)D1(1)	This command was integrated.

Usage Guidelines

Use the **feature evb** command to enable the EVB session. This, in turn, enables the **evb** keyword in the **show running-config** command on the device.

Examples

The following is sample output from the **show running-config evb** command in an EVB session:

```
Device# show running-config evb

!Command: show running-config evb
!Time: Thu Oct 10 20:26:42 2013

version 6.2(1)
feature evb

logging level evb 6

evb reinit-keep-alive 21
evb resource-wait-delay 21
evb mac 0123.4567.89AB
```

show running-config param-list

To display the configurations of a parameter list saved to the running configuration file of a configured parameter list, use the **show running-config param-list** command in privileged EXEC mode.

show running-config param-list [*param-list-name*]

Syntax Description

param-list-name	(Optional) The name of the parameter list. • The maximum number of characters is 80.

Command Modes

Privileged EXEC (#)

Command History

Release	Modification
Cisco NX-OS 7.0(0)N1(1)	This command was introduced.
Cisco NX-OS 7.2(0)D1(1)	This command was integrated.

Usage Guidelines

Use this command to display configured commands in the running configuration of a parameter list.

Examples

The following is sample output from the **show running-config param-list** command after configuring a parameter list:

```
! Configuring a Parameter list
Device> enable
Device# configure terminal
Device(config)# param-list param-prof1-list
Device(config-param-list)# define ipaddr ipaddr
Device(config-param-list)# define prog1 string
Device(config-param-list)# define segid integer
Device(config-param-list)# define vlan_num integer
Device(config-param-list)# instance param-prof1-inst1
Device(config-param-inst)# set ipaddr 192.0.2.1/24
Device(config-param-inst)# set prog1 vrf-300
Device(config-param-inst)# set segid 6300
Device(config-param-inst)# set vlan_num 300
Device(config-param-inst)# instance param-prof1-inst2
Device(config-param-inst)# set ipaddr 192.0.2.2/24
Device(config-param-inst)# set prog1 330-vrf-2
Device(config-param-inst)# set segid 6301
Device(config-param-inst)# set vlan_num 301
Device(config-param-inst)# exit
Device(config-param-list)# exit

! Displaying the running configuration of a parameter list
Device(config)# show running-config param-list param-prof1-list

!Command: show running-config param-list param-prof1-list
```

```
!Time: Thu Nov 28 00:37:25 2013

version 6.2(1)
param-list param-prof1-list
  define ipaddr ipaddr
  define prog1 string
  define segid integer
  define vlan_num integer
  instance param-prof1-inst1
    set ipaddr 192.0.2.1/24
    set prog1 vrf-300
    set segid 6300
    set vlan_num 300
  instance param-prof1-inst2
    set ipaddr 192.0.2.2/24
    set prog1 330-vrf-2
    set segid 6301
    set vlan_num 301


Device(config)# end
```

show startup-config evb

To display the configuration of an Edge Virtual Bridging (EVB) session stored in the NVRAM that will be used at the next device startup, use the **show startup-config evb** command in privileged EXEC mode.

show startup-config evb [**all**]

Syntax Description

all	(Optional) Displays the configuration of an EVB session from the NVRAM, including all defaults.

Command Default

Displays the configuration of the EVB session from the NVRAM without any defaults.

Command Modes

Privileged EXEC (#)

Command History

Release	Modification
Cisco NX-OS 7.0(0)N1(1)	This command was introduced.
Cisco NX-OS 7.2(0)D1(1)	This command was integrated.

Usage Guidelines

Use the **feature evb** command to enable the EVB session. This, in turn, enables the **evb** keyword in the **show startup-config** command on the device.

Examples

The following is sample output from the **show startup-config evb** command in an EVB session:

```
Device# show startup-config evb

!Command: show startup-config evb
!Time: Thu Oct 10 20:28:36 2013
!Startup config saved at: Thu Oct 10 20:24:00 2013

version 6.2(1)
feature evb

logging level evb 6

evb reinit-keep-alive 21
evb resource-wait-delay 21
evb mac 0123.4567.89AB
```

show startup-config param-list

To display the configurations of a parameter list saved to the startup configuration file of a configured parameter list, use the **show startup-config param-list** command in privileged EXEC mode.

show startup-config param-list [*param-list-name*]

Syntax Description

param-list-name	(Optional) The name of the parameter list. • The maximum number of characters is 80.

Command Modes

Privileged EXEC (#)

Command History

Release	Modification
Cisco NX-OS 7.0(0)N1(1)	This command was introduced.
Cisco NX-OS 7.2(0)D1(1)	This command was integrated.

Usage Guidelines

Use this command to display configured parameters saved to the startup configuration of a parameter list.

Examples

The following is sample output from the **show startup-config param-list** command after configuring a parameter list:

```
! Configuring a Parameter list
Device> enable
Device# configure terminal
Device(config)# param-list param-prof1-list
Device(config-param-list)# define ipaddr ipaddr
Device(config-param-list)# define prog1 string
Device(config-param-list)# define segid integer
Device(config-param-list)# define vlan_num integer
Device(config-param-list)# instance param-prof1-inst1
Device(config-param-inst)# set ipaddr 192.0.2.1/24
Device(config-param-inst)# set prog1 vrf-300
Device(config-param-inst)# set segid 6300
Device(config-param-inst)# set vlan_num 300
Device(config-param-inst)# instance param-prof1-inst2
Device(config-param-inst)# set ipaddr 192.0.2.2/24
Device(config-param-inst)# set prog1 330-vrf-2
Device(config-param-inst)# set segid 6301
Device(config-param-inst)# set vlan_num 301
Device(config-param-inst)# exit
Device(config-param-list)# exit
Device(config)#  copy running-config startup-config
[########################################] 100%
Copy complete.

! Displaying the startup configuration of a parameter list
```

```
Device(config)# show startup-config param-list param-prof1-list

!Command: show startup-config param-list param-prof1-list
!Time: Thu Nov 28 02:51:51 2013
!Startup config saved at: Thu Nov 28 02:51:30 2013

version 6.2(1)
param-list param-prof1-list
  define ipaddr ipaddr
  define prog1 string
  define segid integer
  define vlan_num integer
  instance param-prof1-inst1
    set ipaddr 192.0.2.1/24
    set prog1 vrf-300
    set segid 6300
    set vlan_num 300
  instance param-prof1-inst2
    set ipaddr 192.0.2.2/24
    set prog1 330-vrf-2
    set segid 6301
    set vlan_num 301

Device(config)# end
```

show vmtracker fabric auto-config

To display the VM Tracker auto-configuration information, use the **show vmtracker fabric auto-config** command in privileged EXEC mode.

show vmtracker fabric auto-config [**interface** | **status** | **vlan**]

Syntax Description

interface	Displays vmtracker interface information.
status	Displays auto-configuration status.
vlan	Displays VLAN Id information.

Command Modes

Privileged EXEC (#)

Command History

Release	Modification
Cisco NX-OS 7.3(0)N1(1)	This command was introduced.

Examples

The following is sample output from the VM Tracker auto-configuration feature enabled. The fields in the example are self-explanatory.

```
switch# show vmtracker fabric auto-config

Fabric Auto Configuration is enabled
Auto Configure Retry Time left: 107 seconds
Switch Device: SAL1833YM0V
--------------------------------------------------------------------------------
Port                Port-Channel            Vlan     Status
--------------------------------------------------------------------------------
Ethernet1/3         port-channel13          50       Pending
Ethernet1/3         port-channel13          56       Pending
```

The following is sample output from the VM Tracker auto-configuration feature enabled on an interface. The fields in the example are self-explanatory.

```
switch# show vmtracker fabric auto-config interface e1/48

Fabric Auto Configuration is enabled
Auto Configure Retry Time left: 88 seconds
Switch Device: FOC1646R06F
--------------------------------------------------------------------------------
Port               Port-Channel              Vlan     Status
--------------------------------------------------------------------------------
Ethernet1/48        -                         50       Failure
```

The following is sample output from the VM Tracker auto-configuration feature enabled to check the **Failure**, **Pending**, **Skipped** or **Success** status. The fields in the example are self-explanatory.

```
switch# show vmtracker fabric auto-config status failure
```

```
Fabric Auto Configuration is enabled
Auto Configure Retry Time left: 77 seconds
Switch Device: FOC1646R07F
------------------------------------------------------------------------------
Port               Port-Channel              Vlan     Status
------------------------------------------------------------------------------
Ethernet1/50        -                        40       Failure
```

The following is sample output from the VM Tracker auto-configuration feature enabled to check the VLAN ID information. The fields in the example are self-explanatory.

```
switch# show vmtracker fabric auto-config vlan 30

Fabric Auto Configuration is enabled
Auto Configure Retry Time left: 66 seconds
Switch Device: FOC1646R05F
------------------------------------------------------------------------------
Port               Port-Channel              Vlan     Status
------------------------------------------------------------------------------
Ethernet1/47        -                        30       Success
```

show vni

To display information about the dynamic Virtual Station Interface (VSI) details configured on a switch, use the **show vni** command in privileged EXEC mode.

show vni

Syntax Description

This command has no arguments or keywords.

Command Modes

Privileged EXEC (#)

Command History

Release	Modification
Cisco NX-OS 7.2(0)D1(1)	This command was introduced.

Examples

The following example shows how to display information about the dynamic Virtual Station Interface (VSI) details configured on a switch, using the **show vni** command. The fields in the example are self-explanatory.

```
Device# show vni

VNI     Status   BD     VSI
-----------------------------------------------
6000     Up     121     VSI-Ethernet2/3.4095
7000     Up     122     VSI-Ethernet2/4.4095, VSI-Ethernet2/3.4095
8000     Up     123     VSI-Ethernet2/2.4095
```

show vni dynamic

To display information about the deployment of dynamic Virtual Station Interface (VSI) details configured on a switch, use the **show vni dynamic** command in privileged EXEC mode.

show vni dynamic {**vdp**| **frame-snoop**} [**vni** <*vni*>] [**interface** <*intf-name*>]

Syntax Description

vni *vni id*	(Optional) Displays the Virtual Network Identifier (VNI).
interface *interface name*	(Optional) Displays the name of the interface.

Command Modes

Privileged EXEC (#)

Command History

Release	Modification
Cisco NX-OS 7.2(0)D1(1)	This command was introduced.

Examples

The following example shows how to display information about the dynamic Virtual Station Interface (VSI) details configured on a switch, using the **show vni dynamic** command. The fields in the example are self-explanatory.

```
Device# show vni dynamic

   VSI-Ethernet2/2.4095
   ====================
   Vni           dot1q tag
   -----------------------------
   7000           101
   8000           102

   VSI-Ethernet2/3.4095
   ====================
   Vni           dot1q tag
   -----------------------------
   7000           200
   8000           201
   6200           300

Device# show vni dynamic vdp or frame-snoop vni 7000

   VSI-Ethernet2/2.4095
   ====================
   Vni           dot1q tag
   -----------------------------
   7000           101


   VSI-Ethernet2/3.4095
   ====================
   Vni           dot1q tag
   -----------------------------
```

```
   7000           200

Device# show vni dynamic vdp or frame-snoop vni 7000 interface eth2/2

   VSI-Ethernet2/2.4095
   ================
   Vni            dot1q tag
   ---------------------------
   7000           101

Device# show vni dynamic vdp or frame-snoop interface eth2/2

   VSI-Ethernet2/2.4095
   ================
   Vni            dot1q tag
   ---------------------------
   7000           101
   8000           102
```

suppress-arp

To suppress ARP requests at the leaf switch or ToR layer and minimize flooding in the VXLAN EVPN fabric, use the **suppress-arp** command in the NVE VNI interface configuration mode. To remove the ARP suppression function on a leaf switch, use the **no** form of the command.

suppress-arp

no suppress-arp

Syntax Description

This command has no arguments or keywords.

Command Default

ARP requests are not suppressed.

Command Modes

NVE VNI interface configuration (config-if-nve-vni)

Command History

Release	Modification
Cisco NX-OS 7.3(0)N1(1)	This command was introduced.
Cisco NX-OS 7.3(0)D1(1)	

Usage Guidelines

ARP suppression is an enhanced function configured under the layer-2 VNI using this command. Essentially, the IP-MACs learnt locally via ARP as well as those learnt over BGP-EVPN are stored in a local ARP suppression cache at each ToR. An ARP request sent from an end host is trapped at the source ToR. A lookup is performed in the ARP suppression cache with the destination IP as the key. If there is a HIT, then the ToR proxies on behalf of the destination with the destination MAC.

In case the lookup results in a MISS, when the destination is unknown or a silent end host, the ToR re-injects the ARP request received from the requesting end host and broadcasts it within the layer-2 VNI, across the fabric. Assuming that the destination is alive, the ARP request will reach the destination ToR, which in turn will send out an ARP response toward the sender. In addition, the destination IP/MAC is advertised over BGP-EVPN to all ToRs.

Examples

The following example shows how to suppress ARP requests in a VXLAN EVPN fabric:

```
switch(config)# interface nve 1
switch(config-if-nve)# member vni 6001
switch(config-if-nve-vni)# suppress-arp
```

suppress-unknown-unicast

To restrict flooding of unknown unicast packets from an end host to other end host ports that are local to the attached ToR/leaf switch, and ensure that the packets are not flooded into the VXLAN fabric, use the **suppress-unknown-unicast** command in the NVE VNI interface configuration mode.

To remove the unknown unicast suppression function on the ToR switch, use the **no** form of the command.

suppress-unknown-unicast

no suppress-unknown-unicast

Syntax Description

This command has no arguments or keywords.

Command Default

Unknown unicast packets are not restricted from flooding the VXLAN EVPN fabric.

Command Modes

NVE VNI interface configuration (config-if-nve-vni)

Command History

Release	Modification
Cisco NX-OS 7.3(0)N1(1)	This command was introduced.
Cisco NX-OS 7.3(0)D1(1)	

Usage Guidelines

The suppress unknown unicast function is supported on ToRs/VTEPs in a VXLAN EVPN fabric. Unknown unicast traffic from an end host is by default flooded in the (Layer 2 VNI associated?) VLAN. It is possible to avoid the flooding of this traffic to the overlay network without affecting the flooding of this traffic on local host/sever ports attached to the ToR switch. This is achieved by enabling this command.

The suppress unknown unicast function allows flooding of traffic within the attached switch by including local host/server ports attached to the ToR switch in the output interface index flood list (OIFL) and excluding overlay L3 ports in the (should I include a mention of L2 ports, since bridging unknown unicast packets is also restricted? Or is my understanding incorrect?) hardware. So, an ARP request is not sent at all in this case? Right?

Examples

The following example shows how to restrict flooding of unknown unicast packets to other end host ports that are local to the attached ToR/leaf switch:

```
switch(config)# interface nve 1
switch(config-if-nve)# member vni 6001
switch(config-if-nve-vni)# suppress-unknown-unicast
```

system fabric core-vlans

To define the core-facing set of dynamic allocatable VLANs for Cisco Programmable Fabric, use the **system fabric core-vlans** command in global configuration mode. To remove the VLAN reservation, use the **no** form of this command.

system fabric core-vlans {*vlan-id*| *vlan-range*}

no system fabric core-vlans

Syntax Description

vlan-id	Unique identifier (ID) for a core VLAN. The range is from 1 to 4094.
vlan-range	Range of VLAN IDs for core VLANs. The *vlan-range* argument can any of the following: • A list of VLAN IDs separated by commas (,) • A range of VLAN IDs separated by a hyphen (-), such as *vlan-id* - *vlan-id* • A combination of VLAN IDs and VLAN ranges Multiple entries must be separated by a comma (,).

Command Default

Range of core-facing dynamic VLANs for Cisco Programmable Fabric are undefined.

Command Modes

Global configuration (config)

Command History

Release	Modification
Cisco NX-OS 7.0(0)N1(1)	This command was introduced.

Usage Guidelines

The core-VLAN range is a subset of VLANs from the dynamic-VLAN range. Core VLANs are used by Cisco Programmable Fabric auto configuration to map the virtual network identifier (VNI) that is configured under virtual routing and forwarding (VRF). Cisco Programmable Fabric dynamically chooses a VLAN from the core-VLAN range to create the core- facing SVI for the tenant VRF. The VNI-to-VLAN mapping is one to one.

Use this command to identify the set of VLANs that are to be used for core-facing interfaces. The range must be large enough to accommodate the number of tenant VRFs that you expect to deploy.

This command must be configured on each Cisco Programmable Fabric Layer-3 leaf switch in your Cisco Programmable Fabric deployment.

The number of VLANs in the set of core VLANs can be modified (expanded or reduced) by using this command, and the **no** form of this command, as long as there are no active VLANs in the VLAN range being configured.

All VLANs that you specify by using this command must be a subset of the dynamic VLANs that you defined by using the **system fabric dynamic-vlans** command.

System-fabric core VLANs must never be used on host-facing switch ports and cannot be used for a mobility domain.

The **no** version of this command removes the reservation, not the VLANs. The **no system fabric core-vlans** command can remove the reservation only if there are no active VLANs in the range of VLANs. Delete all active VLANs that are in the VLAN range before removing the reservation.

Before using this command, you must first enable fabric network services on the device by using the **feature fabric forwarding** command.

This command is supported on Cisco Programmable Fabric Layer-3 leaf switches only. This command is not supported on Cisco Nexus 5500 Series switches configured as Cisco Programmable Fabric Layer-2-only leaf switches.

Examples

The following example shows how to specify the dynamic core-VLAN range:

```
switch> enable
switch# configure terminal
switch(config)# install feature-set fabric
switch(config)# feature-set fabric
switch(config)# feature fabric forwarding
switch(config)# system fabric dynamic-vlans 2500-3500
switch(config)# system fabric core-vlans 2900-2999
```

system fabric dynamic-vlans

To define a global set of dynamic allocatable VLANs for Cisco Programmable Fabric, use the **system fabric dynamic-vlans** command in global configuration mode. To remove the reservation, use the **no** form of this command.

system fabric dynamic-vlans {*vlan-id*| *vlan-range*}

no system fabric dynamic-vlans

Syntax Description

vlan-id	Unique identifier (ID) for a dynamic VLAN. The range is from 1 to 4094.
vlan-range	Range of VLAN IDs for dynamic VLANs. The *vlan-range* argument can any of the following: • A list of VLAN IDs separated by commas (,) • A range of VLAN IDs separated by a hyphen (-), such as *vlan-id* - *vlan-id* • A combination of VLAN IDs and VLAN ranges Multiple entries must be separated by a comma (,). **Note** The dynamic-VLAN range need not be contiguous, however, we recommend that it is.

Command Default

Range of dynamic VLANs for Cisco Programmable Fabric are undefined.

Command Modes

Global configuration (config)

Command History

Release	Modification
Cisco NX-OS 7.0(0)N1(1)	This command was introduced.

Usage Guidelines

Cisco Programmable Fabric dynamically provisions server- and host-facing, and core-facing switch virtual interfaces (SVIs) for tenants. VSI Discovery and Configuration Protocol (VDP) dynamically-derived VLANs are used by Cisco Programmable Fabric for the server and core provisioning. The VLANs to be used for the SVIs must be specified. There are two VLAN ranges for Cisco Programmable Fabric:

- The dynamic-VLAN range is the global set of server, host, and core VLANs.
- The core-VLAN range is a subset of VLANs from the dynamic-VLAN range. The core VLANs are for the core SVIs. For information, see the **system fabric core-vlans**.

Use this command to identify the complete range of dynamic allocatable VLANs for Cisco Programmable Fabric, including server- and host-facing VLANs and core-facing VLANs.

Do not configure internal VLANs and active or already-created VLANs as dynamic VLANs.

VLANs used in a mobility domain cannot be part of the dynamic-VLAN range.

The number of VLANs in the set of dynamic VLANs can be modified (expanded or reduced) by using this command, and the **no** form of this command, as long as there are no active VLANs in the VLAN range being configured.

If you have already configured the **system fabric core-vlans** command, the range of VLANs that you configure by using this command must be a superset of the core-VLAN range.

The **no** version of this command removes the reservation, not the VLANs. The **no system fabric dynamic-vlans** command can remove the reservation only if there are no active VLANs in the range of VLANs. Delete all active VLANs that are in the VLAN range before removing the reservation.

Before using this command, you must first enable fabric network services on the device by using the **feature fabric forwarding** command.

This command is supported on Cisco Programmable Fabric Layer-3 leaf switches only. This command is not supported on Cisco Nexus 5500 Series switches configured as Cisco Programmable Fabric Layer-2-only leaf switches.

Examples

The following example shows how to reserve a set of dynamic VLANs:

```
switch> enable
switch# configure terminal
switch(config)# install feature-set fabric
switch(config)# feature-set fabric
switch(config)# feature fabric forwarding
switch(config)# system fabric dynamic-vlans 2500-3500
```

traceroute nve

To discover the network virtualization endpoint's route, use the **traceroute nve** command in privileged EXEC mode.

traceroute nve {**ip** *ip-adddress* | **mac** *mac-adddress*} **profile** *id* [**vrf** | **vni count** *number*]

Syntax Description

ip *ip-adddress*	IP address of the destination host.
mac *mac-adddress*	MAC address of the destination host.
profile *id*	Name of the profile.
vrf	The tenant VRF, where this tenant IP-address reside.
vni	The valid VNI present in the VTEP.
count *number*	Value of the count.

Command Modes

Privileged EXEC (#)

Command History

Release	Modification
Cisco NX-OS 7.3(0)N1(1)	This command was introduced.

Examples

The following example shows how to trace the path to the host.

```
switch# traceroute nve 192.0.2.0 vrf vni-31000 verbose
Codes: '!' - success, 'Q' - request not sent, '.' - timeout,
'D' - Destination Unreachable, 'X' - unknown return code,
'm' - malformed request(parameter problem),
'c' - Corrupted Data/Test

Traceroute Request to peer ip 192.0.1.1 source ip 192.0.2.1
Sender handle: 8
  1 !Reply from 192.1.2.1,time = 1 ms
  2 !Reply from 192.0.1.1,time = 1 ms
  3 !Reply from 192.0.2.0,time = 1 ms
```

use-vrf

To specify a virtual routing and forwarding instance (VRF) name for a RADIUS, TACACS+, or LDAP server group, use the **use-vrf** command in the appropriate command mode. To remove the VRF name, use the **no** form of this command.

use-vrf *vrf-name*

no use-vrf *vrf-name*

Syntax Description

vrf-name	VRF name. The name is case sensitive.

Command Default

No VRF name is specified.

Command Modes

RADlUS server group configuration (config-radius)

TACACS+ server group configuration (config-tacacs+)

LDAP server group configuration (config-ldap)

Command History

Release	Modification
Cisco NX-OS 6.1(2)I2(2)	This command was introduced in an earlier Cisco NX-OS release.

Usage Guidelines

You can configure only one VRF instance for a server group.

Use the **aaa group server radius** command to enter RADIUS server group configuration mode, the **aaa group server tacacs+** command to enter TACACS+ server group configuration mode, or the **aaa group server ldap** command to enter LDAP server group configuration mode.

If the server is not found, use the **radius-server host** command, the **tacacs-server host** command, or the **ldap-server host** command to configure the server.

Note You must use the **feature tacacs+** command before you configure TACACS+ or the **feature ldap** command before you configure LDAP.

This command does not require a license.

Examples

This example shows how to specify a VRF name for a RADIUS server group:

```
Device# configure terminal
Device(config)# aaa group server radius RadServer
Device(config-radius)# use-vrf vrf1
```

This example shows how to specify a VRF name for a TACACS+ server group:

```
Device(config)# feature tacacs+
Device(config)# aaa group server tacacs+ TacServer
Device(config-tacacs+)# use-vrf vrf2
```

This example shows how to remove the VRF name from a TACACS+ server group:

```
Device(config)# feature tacacs+
Device(config)# aaa group server tacacs+ TacServer
Device(config-tacacs+)# no use-vrf vrf2
```

This example shows how to specify a VRF name for an LDAP server group:

```
Device(config)# feature ldap
Device(config)# aaa group server ldap LdapServer
Device(config-ldap)# use-vrf vrf3
```

This example shows how to remove the VRF name from an LDAP server group:

```
Device(config)# feature ldap
Device(config)# aaa group server ldap LdapServer
Device(config-ldap)# no use-vrf vrf3
```

vdc switch

To create or specify a virtual device context (VDC) for a switch and enter VDC configuration mode, use the **vdc switch** command.

vdc switch [**id 1** | **type storage**]

Syntax Description

id 1	(Optional) Forces the VDC into a specific ID 1.
type storage	(Optional) Specifies a VDC for storage.

Command Default

No VDC is specified.

Command Modes

Global configuration (config)

Command History

Release	Modification
Cisco NX-OS 6.1(2)I2(2)	This command was introduced.
Cisco NX-OS 7.0(0)N1(1)	This command was integrated.

Usage Guidelines

You can use the **vdc switch** command only with the specific Virtual Device Context (VDC) identifier value of 1. The VDC type storage cannot be the default VDC, and it can be only one of the VDCs. You cannot have two type storage VDCs on the device. When you create or specify a VDC, the Cisco NX-OS software allocates the internal resources for the VDC. This process can take a few minutes to complete depending on the amount of internal resource you have requested for the VDC.

Examples

The following example shows how to specify a Virtual Device Context (VDC) for a switch:

```
Device> enable
Device# configure terminal
Device (config)# vdc switch
Device(config-vdc)# end
```

The following example shows how to force a VDC into a specific ID <1>:

```
Device> enable
Device# configure terminal
Device (config)#  vdc switch id 1
Device(config-vdc)# end
```

The following example shows how to force a VDC into a specific ID <1>:

```
Device> enable
```

```
Device# configure terminal
Device(config)# vdc switch type storage
Device(config)# end
```

verify profile

To verify a configured profile, use the **verify profile** command in parameter instance configuration mode.

verify profile *profile-name*

Syntax Description

profile-name	The name of the configured profile. • The maximum number of characters is 80.

Command Modes

Parameter instance configuration (config-param-inst)

Command History

Release	Modification
Cisco NX-OS 6.1(2)I2(2)	This command was introduced.
Cisco NX-OS 7.0(0)N1(1)	This command was integrated.
Cisco NX-OS 7.2(0)D1(1)	

Usage Guidelines

If the profile configurations are incorrect, the **verify profile** command displays an error.

Examples

The following example shows how to verify a profile using the **verify profile** command after configuring a profile:

```
! Configuring a profile
Device> enable
Device# configure terminal
Device(config)# configure profile Profile1
Device(config-profile)# bridge-domain 10
Device(config-profile-bdomain)# vlan 1-5
Device(config-profile-vlan)# end

! Verifying a configured profile
Device# configure terminal
Device(config)# param-list Marksheet
Device(config-param-list)# instance Instance1
Device(config-param-inst)# verify profile Profile1
Device(config-param-inst)# end
```

vmtracker fabric auto-config

To enable VM Tracker auto configuration trigger, use the **vmtracker fabric auto-config** command in global configuration mode.

To disable the VM Tracker auto configuration trigger, use the no form of this command.

vmtracker fabric auto-config

no vmtracker fabric auto-config

Syntax Description

This command has no arguments or keywords.

Command Modes

Global configuration (config)

Command History

Release	Modification
Cisco NX-OS 7.3(0)N1(1)	This command was introduced.

Examples

The following example shows how to enable VM Tracker auto configuration trigger:

```
Switch(config)# vmtracker fabric auto-config  //Enable vmtracker auto-config trigger//
switch(config)# vmtracker connection v229  //Enter vmtracker connection for the name
specified//
switch(config-vmt-conn)# remote ip address  209.165.200.229 port 80 vrf management //Configure
 remote ip parameters//
switch(config-vmt-conn)# username John password abc1234  //Verify credentials to connect
to vCenter//
switch(config-vmt-conn)# connect  //Connects to vCenter//
```

vni

To configure the virtual network identifier (VNI), use the **vni** command in global configuration or VRF configuration mode. To remove the VNI, use the **no** form of this command.

vni [*vni-id* | [*-vni-id*]]

no vni [*vni-id* | [*-vni-id*]]

Syntax Description

vni-id	(Optional) Configures the unique identifier. The range is from 4096 to 16773119.
- vni-id	(Optional) Configures the unique identifier range. The range is from 4096 to 16773119. **Note** You can specify a single ID or a range. For example, 4099, 5000-5005.

Command Default

Virtual network identifier is not configured.

Command Modes

For spine devices—Global configuration (config)

For leaf devices—VRF configuration (config-vrf)

Command History

Release	Modification
Cisco NX-OS 6.1(2)I2(2)	This command was introduced.
Cisco NX-OS 6.2(6)	This command was modified. Support for this command on a Cisco Nexus 7000 Series switch as a Cisco Programmable Fabric spine switch was added.
Cisco NX-OS 7.0(0)N1(1)	This command was integrated.

Examples

This example shows how to configure VNI on a spine device:

```
switch(config)# vni 4099
```

This example shows how to configure VNI on a leaf device:

```
switch(config)# vrf context testvrf
switch(config-vrf)# vni 5000
```

vni l2

To associate a Layer-2 VNI to an EVPN instance, use the **vni l2** command in EVPN configuration mode. To remove a Layer-2 VNI association with an EVPN instance, use the **no** form of the command.

vni *Id* **l2**

no vni *Id* **l2**

Syntax Description

Id	Layer-2 VNI that is being associated with an EVPN instance.

Command Default

A Layer-2 VNI is not associated with an EVPN instance.

Command Modes

EVPN configuration (config-evpn)

Command History

Release	Modification
Cisco NX-OS 7.2(0)D1(1)	This command was introduced.
Cisco NX-OS 7.3(0)N1(1)	This command was integrated.

Examples

The following example shows how to associate a Layer-2 VNI to an EVPN instance:

```
switch(config)# evpn
switch(config-evpn)# vni 6001 l2        //l2 refers to Layer-2//
switch(config-evpn-evi)# rd auto
switch(config-evpn-evi)# route-target import auto
switch(config-evpn-evi)# route-target export auto
```

vn-segment

To configure the virtual network (VN) segment ID of the virtual LAN (VLAN), use the **vn-segment** command in VLAN configuration mode. To remove a configured VN segment ID, use the **no** form of this command.

vn-segment *segment-id*

no vn-segment

Syntax Description

segment-id	Configures the VN segment identifier of the VLAN. The range is from 4096 to 16773119.

Command Default

The virtual network segment identifier is not configured.

Command Modes

VLAN configuration (config-vlan)

Command History

Release	Modification
Cisco NX-OS 6.1(2)I2(2)	This command was introduced.
Cisco NX-OS 7.0(0)N1(1)	This command was integrated.

Usage Guidelines

You must enable feature-set fabricpath and VLAN-based VN segment features on the device before configuring the VN segment ID.

Examples

This example shows how to configure the VN segment ID of the VLAN on a device:

```
Device(config)# feature-set fabricpath
Device(config)# feature vn-segment-vlan-based
Device(config)# vlan 10
Device(config-vlan)# vn-segment 4099
```