N through Z

packet (fabricpath-oam)

To specify packet flow and payload information in hexadecimal string format, use the **packet** command in FabricPath OAM profile flow configuration mode. To remove the packet information, use the **no** form of this command.

packet *hex-string*

no packet

Syntax Description

hex-string	Packet flow and payload information in hexadecimal string format. The maximum limit is 256 characters. **Note** Enter the packet information starting with the Ethernet header in hexadecimal string format. For example: 00156dc4274b5404a63ced2b8100000108004500002 83e8a400080069bd2c0a80260e

Command Default

Packet flow and payload information is not specified.

Command Modes

FabricPath OAM profile flow configuration (config-fp-oam-profile-flow)

Command History

Release	Modification
7.0(0)N1(1)	This command was introduced.

Usage Guidelines

You can specify a string value up to the maximum length of 256 characters. The string value is converted to a hex-string value. All characters beyond the maximum limit are treated as 0.

Examples

The following example shows how specify the value for packet flow and payload.

```
Device# configure terminal
Device(config)# fabricpath oam profile 100
Device(config-fb-oam-profile)# flow forward
Device(config-fb-oam-profile-flow)# packet
00156dc4274b5404a63ced2b8100000108004500002 83e8a400080069bd2c
```

Related Commands

Command	Description
fabricpath oam profile	Configures a FabricPath OAM profile.
flow (fabricpath-oam)	Configures the direction FabricPath OAM flow entropy.

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
7.0(0)N1(1)	This command was introduced.

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
```

Related Commands

Command	Description
define	Creates user-defined parameters for the specified parameter list.
instance	Configures a parameter list instance.

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
7.0(0)N1(1)	This command was introduced.

Examples

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

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

path (fabricpath-oam)

To configure the control plane forward or reverse path verification request, use the **path** command in FabricPath OAM profile configuration mode. To remove the path verification request, use the **no** form of this command.

path {**forward | reverse**} **ecmp** *ecmp-value* **switch-id** *switch-id-value*

no path {**forward | reverse**}

Syntax Description

forward	Configures the control plane forward path.
reverse	Configures the control plane reverse path.
ecmp *ecmp-value*	Configures the Equal-Cost Multipath (ECMP) value in hexadecimal values. The range is 0 to 255.
switch-id *switch-id-value*	Configures the switch ID. The range is from 1 to 65535.

Command Default

The control plane path verification request is not configured.

Command Modes

FabricPath OAM profile configuration (config-fb-oam-profile)

Command History

Release	Modification
7.0(0)N1(1)	This command was introduced.

Usage Guidelines

Use the **path** command to allow FabricPath OAM to carry a Type Length Value (TLV) with this request over the network, to query for the ECMP number and switch ID, and to return results.

To configure all ECMP, use 0xFF as the ECMP value.

Examples

The following example shows how to configure the control plane forward path verification request.

```
Device# configure terminal
Device(config)# fabricpath oam profile 100
Device(config-fb-oam-profile)# path forward ecmp 0xC0 switch-id 100
```

Related Commands

Command	Description
fabricpath oam profile	Configures a FabricPath OAM profile.

payload (fabricpath-oam)

To configure a FabricPath Operation, Administration, and Maintenance (OAM) payload pattern, use the **payload** command in FabricPath OAM profile configuration mode. To remove the FabricPath OAM payload pattern, use the **no** form of this command.

payload {**pad** *pad-value* | **test pattern-type** *pattern-id*}

payload {**pad** | **test pattern-type**}

Syntax Description

pad *pad-value*	Configures a FabricPath OAM payload pad value. The range is from 0x0 to 0xffff.
test	Configures FabricPath OAM payload test information.
pattern-type *pattern-id*	Configures a FabricPath OAM payload test pattern ID. The range is from 0 to 255.

Command Default

A fabricPath OAM payload pattern is not configured.

Command Modes

FabricPath oam profile configuration (config-fb-oam-profile)

Command History

Release	Modification
7.0(0)N1(1)	This command was introduced.

Usage Guidelines

The test patterns that are currently valid are 0, 1, 2, and 3.

The below table lists the various FabricPath OAM payload test patterns.

Table 1: Payload test patterns

Pattern ID	
0	Null signal without Cyclic Redundancy Check (CRC)-32.
1	Null signal with CRC-32.
2	Pseudo-Random Bit Sequence (PRBS) 2^31-1 without CRC-32.
3	PRBS 2^31-1 with CRC-32.

Pattern ID	
4-255	Reserved for future standardization.

Examples

The following example shows how to configure the forward flow entropy for FabricPath OAM.

```
Device# configure terminal
Device(config)# fabricpath oam profile 100
Device(config-fb-oam-profile)# payload test pattern-type 81
```

Related Commands

Command	Description
fabricpath oam profile	Configures a FabricPath OAM profile.

peer-type

To classify a neighbor as external to the Cisco Dynamic Fabric Automation (DFA) fabric and avoid advertising externally learned prefixes to fabric-internal neighbors, use the **peer-type** command. To return to the default, use the **no** form of this command.

peer-type {**fabric-border-leaf**| **fabric-external**}

no peer-type {**fabric-border-leaf**| **fabric-external**}

Syntax Description

fabric-border-leaf	Specifies that all border leaf switches on the Cisco DFA fabric are peers to other border-leaf switches.
fabric-external	Specifies that a neighbor is marked as fabric external

Command Default

A neighbor is classified as internal to the fabric.

Command Modes

BGP neighbor configuration (config-router-neighbor)

Command History

Release	Modification
7.0(0)N1(1)	This command was introduced.

Usage Guidelines

A Cisco DFA border-leaf switch always advertises all learned prefixes outside the Cisco DFA fabric, even those that are host-routes.

An external route is not advertised to the fabric-internal neighbors unless there an internal route that is less specific than the external route.

Use the **peer-type** command to classify a Border Gateway Protocol (BGP) neighbor as external to the fabric. The border leaf must specifically classify external neighbors in order to apply the appropriate rules of route exchange between internal and external neighbors and avoid advertising externally learned prefixes to fabric-internal neighbors through internal BGP. For example, when an update from a fabric-internal neighbor goes to an external neighbor, the virtual network identifier (VNI) is stripped and the fabric site of origin (SoO) extended community value in the BGP update message is attached. For routes coming from external neighbors, the fabric SoO is used to check for loops and to perform the appropriate filtering of routes from external neighbors to internal neighbors.

This command applies only to border-leaf switches.

This command is required on the border-leaf switch for external neighbors.

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

Examples

The following example shows how to configure the neighbor configuration on a border leaf-towards-Data Center Interconnect (DCI) node:

```
router bgp 1
  neighbor 30.1.1.1 remote-as 2
    description default vrf neighbor to DCI
    peer-type fabric-external
    send-community extended
```

Related Commands

Command	Description
fabric-soo	Configures the SoO for a fabric.

ping fabricpath

To test the FabricPath Operation, Administration, Maintenance reachability, use the **ping fabricpath** command in privileged EXEC mode.

ping fabricpath [**switch-id** *switch-id* [**profile** *profile-id*] [**interface** *interface-id*] [**ingress** *if-id*] {**vlan** *vlan-id* | **tag** *tag-id* | **dot1q** *dot1q-id intf-id*} **[use-host-vlan]** [**reply mode out-of-band** {**ipv4** *ipv4-addr* | **ipv6** *ipv6-addr* }] [**forward flow** *flow-entropy* [**l2** | **l3**]] [**hop** *hop-count*] [**topology** *topology-id*] [**size** *size* | **sweep** *min-size max-size*] [**payload** {**test pattern-type** *test-id* | **pad** *pad-val*}] [**repeat** *repeat-count*] **[validate] [verbose]** [**timeout** *timeout-val*] [**interval** *interval-val*] [**asynchronous** [**database** *database-id*] [**threshold** *threshold-val*]]]

Syntax Description

switch-id *switch-id*	(Optional) Sends a loopback request to the specified switch ID.
profile *profile-id*	(Optional) Specifies FabricPath OAM profile.
interface *interface-id*	(Optional) Name of the egress interface for FabricPath OAM ping. The allowed interfaces are Ethernet and Port Channel. The interface range is allowed for asynchronous ping so that multiple sessions per interface are created.
ingress *if-id*	(Optional) Name of the ingress interface. (Required for SVI when used for enhanced forwarding. The ingress SVI and IP address from flow entropy is used to determine which segment packet exits out of the device.)
vlan *vlan-id*	VLAN ID. The range is from 1 to 4094.
tag *tag-id*	FabricPath OAM tag. The range is from 4096 to 0x00FFFFFF.
dot1q *dot1q-id intf-id*	Specifies the FabricPath OAM 802.1Q interface ID. **Note** Dot1q option is not available on Cisco Nexus 5000 series and 6000 series switches and it's only applicable to N7k.
use-host-vlan	(Optional) Specifies that only VLAN input should be used. Use this keyword when enhanced forwarding is applied and you do not want to use translated VLAN. Use this option when you specify the ingress interface ID or when you specify the flow entropy through the **profile** keyword or through forward flow with IP address of customer traffic.

reply mode out-of-band	(Optional) Specifies that the FabricPath OAM reply mode is out of band. By default, FabricPath OAM is replied in band (on the FabricPath network). Use the **reply mode out-of-band** keyword to change the mode of reply to out of band for input IPv4 or IPv6 addresses. For routing, only default VRF is used.
ipv4 *ipv4-addr*	(Optional) Specifies the input IPv4 address for out-of-band reply.
ipv6 *ipv6-addr*	(Optional) Specifies the input IPv6 address for out-of-band reply.
forward flow *flow-entropy*	(Optional) Specifies input flow entropy (128 bytes) from actual user data traffic so that FabricPath OAM packet takes the same path as user traffic.
l2	(Optional) Specifies that the input flow entropy must be terminated until only Layer 2 entries are used. For example, MAC address, VLAN, and e-type. We recommend that you use only one string option.
l3	(Optional) Specifies that the input flow entropy must be terminated until only Layer 3 entries are used. **Note** Only IPv4 and IPv6 entries can be processed.
hop *hop-count*	(Optional) Specifies the FabricPath OAM ping hop count. Range is from 1 to 64. Default is 63.
topology *topology-id*	(Optional) Specifies the topology ID. Range is from 0 to 63. Default is 0.
size *size*	(Optional) Specifies the data padding size of data Type Length Value (TLV) or test TLV. The total size must not be greater than the MTU of the egress interface.
sweep *min-size max-size*	(Optional) Specifies the FabricPath OAM minimum or maximum data or test TLV size in a sweep scenario.
payload	(Optional) Specifies the FabricPath OAM payload pattern.
test pattern-type *test-id*	(Optional) Specifies the FabricPath OAM test pattern ID.

pad *pad-value*	(Optional) Specifies the padding of the packet with the specified data pattern. The range is from 0 to 0-0xFFFF.
repeat *repeat-count*	(Optional) Specifies the repeat value.
validate	(Optional) Validates the **ping** command.
verbose	(Optional) Displays additional information.
timeout *timeout-value*	(Optional) Specifies the timeout values in seconds. Range is from 1 to 36000.
interval *interval-val*	(Optional) Specifies the minimum send delay between requests, in milliseconds. The range is from 100 to 3600000. Default is 0 for synchronous ping, 1000 for asynchronous ping.
asynchronous *database-id*	(Optional) Specifies the database ID for storing asynchronous FabricPath OAM ping output.
threshold *threshold-value*	(Optional) Specifies the threshold for number of timeouts that can occur before the information is captured in syslogs or SNMP traps. The range is from 1 to 10.

Command Modes

Privileged EXEC (#)

Command History

Release	Modification
7.0(0)N1(1)	This command was introduced.

Usage Guidelines

For an synchronous ping, traceroute, or mtrace, if the profile has multiple interfaces only the first interface, is selected. Use the **interface** keyword to overwrite the selected interface. Only one session is created.

For Asynchronous ping, multiple sessions are automatically created for each interface option unless the you overwrite the inferface option using the **interface** keyword.

Examples

The following examples show how to ping a switch ID.

```
Device# ping fabricpath switch-id 10

sender handle: 1
Sending 5, 300-byte Loopback Request to switch-id 10,
              Timeout is 5 seconds, send interval is 0 msec:

Codes: '!' - success, 'Q' - request not sent, '.' - timeout,
  'D' – Destination Unreachable, 'X' - unknown return code,
```

```
  'V' – VLAN nonexistent, 'v' – VLAN in suspended state,
  'M' - malformed request, 'm' - unsupported tlvs, 'C' – Cross Connect Error,
  'U' – Unknown RBridge nickname, 'n' – Not AF,
  'E' –MTU mismatch, 'I' – Interface not in forwarding state,
  'S' – Service Tag nonexistent, 's' – Service Tag in suspended state
  't' – trace route in progress to get hop count'

Type escape sequence to abort.
!!!!!
Success rate is 100 percent (5/5), round-trip min/avg/max = 1/1/1 ms
    Total Time Elapsed 5 ms
```

The following examples show how to ping a switch ID with the keyword **verbose**.

```
Device# ping fabricpath switch-id 10 verbose
Sending 5, 300-byte Loopback Request to switch-id 10,
             Timeout is 5 seconds, send interval is 0 msec:

Codes: '!' - success, 'Q' - request not sent, '.' - timeout,
  'D' – Destination Unreachable, 'X' - unknown return code,
  'V' – VLAN nonexistent, 'v' – VLAN in suspended state,
  'm' - malformed request, 'C' – Cross Connect Error,
  'U' – Unknown RBridge nickname, 'n' – Not AF,
  'M' –MTU mismatch, 'I' – Interface not in forwarding state,
  'S' – Service Tag nonexistent, 's' – Service Tag in suspended state,
  't' – trace route in progress to get hop count

Type escape sequence to abort.
! size 300, reply switch-id 10
! size 300, reply switch-id 10
! size 300, reply switch-id 10
! size 300, reply switch-id 10
! size 300, reply switch-id 10
Success rate is 100 percent (5/5), round-trip min/avg/max = 1/1/1 ms
    Total Time Elapsed 5 ms
```

The following example shows how to ping FabricPath switch ID when data TLV is included.

```
Device# ping fabricpath switch-id 3570 vlan 10 size 100 payload pad 0xAABB repeat 1 verbose

Codes: '!' - success, 'Q' - request not sent, '.' - timeout,
'D' - Destination Unreachable, 'X' - unknown return code,
'V' - VLAN nonexistent, 'v' - VLAN in suspended state,
'm' - malformed request, 'C' - Cross Connect Error,
'U' - Unknown RBridge nickname, 'n' - Not AF,
'*' - Success, Optional Tlv incomplete,
'I' - Interface not in forwarding state,
'S' - Service Tag nonexistent, 's' - Service Tag in suspended state,
'c' - Corrupted Data/Test

Sender handle: 6
! size 274, reply switch-id 3570


Success rate is 100 percent (1/1), round-trip min/avg/max = 5/5/5 ms
Total time elapsed 6 ms
```

The following example shows how to ping FabricPath switch ID with enhanced forwarding.

```
Device# ping fabricpath switch-id 3570 ingress vlan 20 vlan 10 repeat 1

Codes: '!' - success, 'Q' - request not sent, '.' - timeout,
'D' - Destination Unreachable, 'X' - unknown return code,
'V' - VLAN nonexistent, 'v' - VLAN in suspended state,
'm' - malformed request, 'C' - Cross Connect Error,
'U' - Unknown RBridge nickname, 'n' - Not AF,
'*' - Success, Optional Tlv incomplete,
'I' - Interface not in forwarding state,
'S' - Service Tag nonexistent, 's' - Service Tag in suspended state,
'c' - Corrupted Data/Test
```

```
Sender handle: 7
!

Success rate is 100 percent (1/1), round-trip min/avg/max = 3/3/3 ms
Total time elapsed 5 ms
```

The following example shows interactive ping with control plane forward and control plane reverse verification request.

```
Device# ping fabricpath

Switch-id(1-65535) [1] 3570
Repeat count(1-429967295) [5]
Timeout in seconds [2]
Interval in ms [1000]
Extended command(y/n) [n] y
OAM Profile(1-1023) [none]
Interface [none]
Ingress Interface [none]
Forward Flow entropy [n]
Reverse Flow entropy [n]
Reply mode out of band [n]
Verbose [n]
Hop count(1-63) [63]
Topology id [0]
Use host vlan [n]
Vlan(vlan id or none) [1] 10
Control path forward request [n] y
Control path forward ecmp [1]
Control path forward switch-id(1-65535) [1] 3570
Control path reverse request [n] y
Control path reverse ecmp [1]
Control path reverse switch-id(1-65535) [1] 2021

Codes: '!' - success, 'Q' - request not sent, '.' - timeout,
'D' - Destination Unreachable, 'X' - unknown return code,
'V' - VLAN nonexistent, 'v' - VLAN in suspended state,
'm' - malformed request, 'C' - Cross Connect Error,
'U' - Unknown RBridge nickname, 'n' - Not AF,
'*' - Success, Optional Tlv incomplete,
'I' - Interface not in forwarding state,
'S' - Service Tag nonexistent, 's' - Service Tag in suspended state,
'c' - Corrupted Data/Test

Sender handle: 8
!!!!!

Success rate is 100 percent (5/5), round-trip min/avg/max = 3/7/19 ms
Total time elapsed 4071 ms
```

The following example shows how to ping FabricPath switch ID when flow entropy is specified.

```
Device# ping fabricpath switch-id 3570 forward flow 00112222111100222222333381000000A8904
repeat 1

Codes: '!' - success, 'Q' - request not sent, '.' - timeout,
'D' - Destination Unreachable, 'X' - unknown return code,
'V' - VLAN nonexistent, 'v' - VLAN in suspended state,
'm' - malformed request, 'C' - Cross Connect Error,
'U' - Unknown RBridge nickname, 'n' - Not AF,
'*' - Success, Optional Tlv incomplete,
'I' - Interface not in forwarding state,
'S' - Service Tag nonexistent, 's' - Service Tag in suspended state,
'c' - Corrupted Data/Test

Sender handle: 10
!

Success rate is 100 percent (1/1), round-trip min/avg/max = 14/14/14 ms
Total time elapsed 15 ms
```

Related Commands

Command	Description
mtrace fabricpath	Traces the path from a source to a destination branch for FabricPath OAM.
traceroute fabricpath	Discovers the FabricPath route.

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
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
```

port (fabricpath-oam)

To configure a destination or source flow port address, use the **port** command in FabricPath OAM profile flow configuration mode. To remove the configured address for source or destination port, use the **no** form of this command.

port {**destination** | **source**} *port-number*

no port {**destination** | **source**}

Syntax Description

destination	Specifies the destination flow port address.
source	Specifies the source flow port address.
port-number	The source or destination port address. The range is from 0 to 65535.

Command Default

A flow port address is not configured.

Command Modes

FabricPath OAM profile flow configuration (config-fp-oam-profile-flow)

Command History

Release	Modification
7.0(0)N1(1)	This command was introduced.

Examples

The following example shows how to configure the FabricPath OAM flow destination port address.

```
Device# configure terminal
Device(config)# fabricpath oam profile 100
Device(config-fb-oam-profile)# flow forward
Device(config-fb-oam-profile-flow)# port destination 300
```

Related Commands

Command	Description
fabricpath oam profile	Configures a FabricPath OAM profile.
flow (fabricpath-oam)	Configures the direction FabricPath OAM flow entropy.

protocol (fabricpath-oam)

To configure the FabricPath Operation, Administration, and Maintenance (OAM) flow protocol number, use the **protocol** command in FabricPath OAM profile flow configuration mode. To remove the flow protocol number, use the **no** form of this command.

protocol *protocol-number*

no protocol

Syntax Description

protocol-number	Flow protocol number. The range is from 0 to 255.

Command Default

A flow protocol number is not configured.

Command Modes

FabricPath OAM profile flow configuration (config-fp-oam-profile-flow)

Command History

Release	Modification
7.0(0)N1(1)	This command was introduced.

Usage Guidelines

The only protocol numbers implemented are 6 and 17 (TCP and UDP).

Examples

The following example shows how to configure the flow protocol number.

```
Device# configure terminal
Device(config)# fabricpath oam profile 100
Device(config-fb-oam-profile)# flow forward
Device(config-fb-oam-profile-flow)# protocol 6
```

Related Commands

Command	Description
fabricpath oam profile	Configures a FabricPath OAM profile.
flow (fabricpath-oam)	Configures the direction FabricPath OAM flow entropy.

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
7.0(0)N1(1)	This command was introduced.

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
```

redistribute hmm route-map

To enable redistribution of IPv4 and IPv6 Host Mobility Manager (HMM) routes through specified route maps, use the **redistribute hmm route-map** command in address-family configuration mode. To disable redistribution of HMM routes through specified route maps, use the **no** form of this command.

redistribute hmm route-map *map-name*

no redistribute hmm route-map *map-name*

Syntax Description

map-name	Route-map name. **Note** Redistribution does not work if an access list is used as a match option in route-maps.

Command Default

HMM routes are redistributed by default.

Command Modes

Address-family configuration (config-router-af)

Command History

Release	Modification
7.0(0)N1(1)	This command was introduced.

Examples

The following example shows how to enable redistribution of HMM IPv4 routes filtered through route-map1:

```
Device# configure terminal
Device(config)# router bgp 100
Device(config-router)# address-family ipv4 unicast
Device(config-router-af)# redistribute hmm route-map route-map1
Device(config-router-af)# exit
```

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
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
```

Related Commands

Command	Description
fabricpath oam profile	Configures a FabricPath OAM profile.

restart fabric_mcast

To restart the fabric multicast process in a controlled way, use the **restart fabric_mcast** in privileged EXEC mode.

restart fabric_mcast

Syntax Description

This command has no arguments or keywords.

Command Modes

Privileged EXEC (#)

Command History

Release	Modification
7.0(0)N1(1)	This command was introduced.

Usage Guidelines

You can restart the fabric multicast process only if the process is already running. You can start the fabric multicast process using the **ipv4 multicast fabric-forwarding** or **ipv6 multicast fabric-forwarding** command.

Examples

The following example shows how to restart a fabric multicast process:

```
Device# restart fabric_mcast
```

route-reflector-group affinity

To specify the route reflector group affinity to peer with, use the **route-reflector-group affinity** command in router configuration mode.

route-reflector-group affinity *group-id*

Syntax Description

group-id	Route reflector group ID. The range is from 1 to 65535.

Command Default

The route reflector group affinity is not configured.

Command Modes

Router configuration (config-router)

Command History

Release	Modification
7.0(0)N1(1)	This command was introduced.

Examples

The following example shows how to configure a route reflector group affinity:

```
Device# configure terminal
Device(config)# router bgp 100
Device(config-router)# route-reflector-group affinity 100
```

Related Commands

Command	Description
feature-set fabric	Enables configuring host mobility-specific commands.

route-target both auto

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

route-target both auto

no route-target both auto

Syntax Description

This command has no arguments or keywords.

Command Default

No auto-generated RT is created.

Command Modes

VPN address family configuration (config-router-af)

Command History

Release	Modification
7.0(0)N1(1)	This command was introduced.

Usage Guidelines

This command automatically generates an import and export route-target (RT) based on the local autonomous system number (ASN) and the virtual network identifier (VNI) of the VRF instance that is being configured. Only 2-byte ASNs can be used to generate the route targets automatically. If the VNI for the VRF is not configured, the automatic generation of the RTs fails.

This command does not require a license.

Examples

The following example shows how to configure this command to generate and export an RT for the VRF instance "vpn1:"

```
vrf context vpn1
     vni 5000
     address-family ipv4 mvpn
       route-target both auto
     address-family ipv4 mvpn
       route-target both auto
```

Related Commands

Command	Description
vni	Configures the virtual network identifier.

server protocol

To configure Lightweight Directory Access Protocol (LDAP) or Extensible Messaging and Presence Protocol (XMPP) 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 | xmpp**} {**ip** *ip-address* | **host** *hostname*} [**port** *port-number*] [**vrf** *vrf-name*]

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

Syntax Description

ldap	Specifies that LDAP is configured.
xmpp	Specifies that XMPP 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
7.0(0)N1(1)	This command was introduced.

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.

Related Commands

Command	Description
db-jid	Configures the Jabber ID of the database using XMPP.
fabric database type	Configures the external database.
user-jid	Configures the Jabber ID and password of the switch that is used to connect to the server.

server protocol radius

To configure a RADIUS server protocol for a an authentication, authorization, and accounting (AAA) server group, use the **server protocol radius** command in fabric database configuration mode. To remove the configuration, use the **no** form of this command.

server protocol radius group *group-name*

no server protocol radius group *group-name*

Syntax Description

group *group-name*	Specifies a RADIUS protocol using an authentication, authorization, and accounting (AAA) server group.

Command Default

The RADIUS server protocol for a AAA server group is not configured.

Command Modes

Fabric database configuration (config-fabric-db)

Command History

Release	Modification
7.0(0)N1(1)	This command was introduced.

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 an network database using RADIUS:

```
Device(config)# fabric database type network
Device(config-fabric-db)# server protocol radius group group1
Device(config-fabric-db-server)# key-type 2
```

Related Commands

Command	Description
fabric database type	Configures the external database.

service tag (fabricpath-oam)

To configure a FabricPath OAM service, use the **service tag** command in FabricPath OAM profile configuration mode. To remove the FabricPath OAM service, use the **no** form of this command.

service tag *tag-id*

no service tag *tag-id*

Syntax Description

tag-id	Service tag ID. The range is from 4096 to 16777215.

Command Default

A FabricPath OAM service is not configured.

Command Modes

FabricPath OAM profile configuration (config-fb-oam-profile)

Command History

Release	Modification
7.0(0)N1(1)	This command was introduced.

Usage Guidelines

The service tag identifies the segment ID.

Examples

The following example shows how to configure the flow service.

```
Device# configure terminal
Device(config)# fabricpath oam profile 100
Device(config-fb-oam-profile)# service tag 4096
```

Related Commands

Command	Description
fabricpath oam profile	Configures a FabricPath OAM profile.

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
7.0(0)N1(1)	This command was introduced.

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
```

Related Commands

Command	Description
define	Creates user-defined parameters for the specified parameter list.
instance	Configures a parameter list instance.

show bfd neighbors fabricpath

To display information about Bidirectional Forwarding Detection (BFD) neighbors, use the **show bfd neighbors fabricpath** command in privileged EXEC mode.

show bfd neighbors fabricpath

Syntax Description

This command has no arguments or keywords.

Command Modes

Privileged EXEC (#)

Command History

Release	Modification
7.0(0)N1(1)	The fabricpath keyword was added.
6.0(2)N1(1)	This command was introduced.

Examples

The following is sample output form the **show bfd neighbors fabricpath** command. The fields in the example are self-explanatory.

```
Device# show bfd neighbors fabricpath

OurAddr            NeighAddr          LD/RD                 RH/RS     Holdown(mult)
State       Int
002a.6a68.87c1     002a.6a35.9841     1090519042/1090519043 Up        594(3)            Up
          Po56
```

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

Table 2: show bfd neighbors fabricpath field descriptions

Field	Description
OurAddr	System ID of the interface for which the show bfd neighbors command was entered.
NeighAddr	System ID of the BFD adjacency or neighbor.
LD/RD	Local discriminator and remote discriminator being used for the session.
RH/RS	Remote Heard, indicates that the remote BFD neighbor has been heard.
Holdown(mult)	Detect timer multiplier that is used for this session.

Field	Description
State	State of the interface, either Up or Down.
Int	Interface type and slot or port.

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
7.2(0)D1(1)	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 clock

To display the clock configuration, use the **show clock** command in any command mode.

show clock [detail]

Syntax Description

detail	(Optional) Displays the summer-time (daylight saving time) offset configuration.

Command Default

Displays all configured command alias variables.

Command Modes

Any command mode

Command History

Release	Modification
—	This command was introduced in a release earlier than Cisco NX-OS Release 7.0(0)N1(1).

Usage Guidelines

This command does not require a license.

Examples

This example shows how to display the clock setting:

```
Device# show clock

Fri Jun 13 02:19:20 PDT 2008
```

This example shows how to display the clock setting and the summer-time (daylight saving time) configuration:

```
Device# show clock detail

Fri Jun 13 02:19:20 PDT 2008

summer-time configuration:
--------------------------
timezone name: PDT
starts       : 1 Sunday March at 02:00 hours
Ends         : 1 Sunday November at 02:00 hours
Minute offset: 60
```

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
7.0(0)N1(1)	This command was introduced.

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)>
```

Related Commands

Command	Description
apply profile	Applies a configuration profile to configure hosts.
configure profile	Configures a profile.
verify profile	Verifies if all configurations are correct for a configured profile.

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
7.0(0)N1(1)	This command was introduced.

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
```

Related Commands

Command	Description
feature evb	Enables the EVB session on a device.

show fabric access connections

To display the connection status of a device or a user in the fabric access network, use the **show fabric access connections** command in privileged EXEC mode.

show fabric access connections

Syntax Description

This command has no arguments or keywords.

Command Default

None

Command Modes

Privileged EXEC (#)

Command History

Release	Modification
7.0(0)N1(1)	This command was introduced.

Usage Guidelines

Use the **show fabric access connections** command to view the status of devices and users in the fabric access network. The fabric access ping parameters include status, interval, response time, and retry.

Examples

This example shows how to display the connection status of the device and user in the fabric access network:

```
Device# show fabric access connections

XMPP Ping :
  Status = Enabled
  Interval = 60 second(s)
  Response = 10 second(s)
  Retry = 5 time(s)
Device Connection :
  JID      = device1@host1.com
  State    = CLOSED
```

The following table describes the significant fields shown in the display.

Table 3: show fabric access connections Field Description

Field	Descriptions
Status	Specifies whether the fabric access connection is reachable or unreachable.
Interval	Specifies how often fabric access ping messages are sent out to the server.
Response	Specifies the expected response time to receive a ping response from the server.

Field	Descriptions
Retry	Specifies the number of ping messages sent without receiving a successful response from the server before declaring the server dead.
Device Connection:	Specifies the details of a device.
JID	Specifies the Jabber ID details.
State	Specifies the state of the device connection.

Related Commands

Command	Description
show fabric access group	Displays the groups that a device or user is currently subscribed to or a list of members existing in a particular group.
show fabric access statistics	Checks which remote devices failed to respond to the CLI requests sent through the single point of management feature.

show fabric access group

To display the groups that a device or user is currently subscribed to or a list of members existing in a particular group, use the **show fabric access group** command in privileged EXEC mode.

show fabric access group [**device** | **members** *group-name* | **user**]

Syntax Description

device	(Optional) Lists the groups that the currently logged-in device belongs to.
members *group-name*	(Optional) Lists the members belonging to a group.
user	(Optional) Lists the groups that the currently logged-in user belongs to.

Command Default

None

Command Modes

Privileged EXEC (#)

Command History

Release	Modification
7.0(0)N1(1)	This command was introduced.

Usage Guidelines

The **show fabric access group** command is part of the single point of management feature and helps the device or user find the names of existing groups to join. You can also create a group in the Extensible Messaging and Presence Protocol (XMPP) server using the **fabric access create group** *group-name* command.

Examples

The following sample output from the **show fabric access group** command displays all the groups that the device or user is currently subscribed to:

```
Device# show fabric access group

group1
group2
group3
group4
group5
Total 5 groups
```

The following sample output from the **show fabric access group device** command displays the groups that the currently logged-in device is subscribed to:

```
Device# show fabric access group device
```

```
group3
group4
```

The following sample output from the **show fabric access group members** command displays the members belonging to group2:

```
Device# show fabric access group members group2

admin@host-1.com
device3@host-2.com
Total 2 members
```

Related Commands

Command	Description
fabric access login	Logs in to a fabric access server.
show fabric access group	Displays the groups that a device or user is currently subscribed to or a list of members existing in a particular group.
show fabric access statistics	Checks which remote devices failed to respond to the CLI requests sent through the single point of management feature.

show fabric access statistics

To check which remote devices failed to respond to the CLI requests sent through the single point of management feature, use the **show fabric access statistics** command in privileged EXEC mode.

show fabric access statistics

Syntax Description

This command has no arguments or keywords.

Command Default

None

Command Modes

Privileged EXEC (#)

Command History

Release	Modification
7.0(0)N1(1)	This command was introduced.

Usage Guidelines

Use the **fabric access attach** command or the **fabric access send** command to send CLI requests to a specified device or group.

Examples

The following sample output from the **show users** command displays the remote device "spom2-test2@host1.com" that did not respond to the **show users** command.

```
Device# show fabric access statistics

Device not replied(1) to CLI "sh users" on 2013-04-18 18:27:53
    spom2-test2@host1.com/(fabric-access-device)
```

Related Commands

Command	Description
fabric access send device	Sends a command to a host device or a list of host devices without entering the fabric access group chat mode.
fabric access send group	Sends a CLI command to a group of devices without entering fabric access group chat mode.
show fabric access connections	Displays the connection status of a device or a user that is connected in the fabric access network.

show fabric connectivity cable-plan

To display the cable plan available in the system memory, use the **show fabric connectivity cable-plan** command in privileged EXEC mode.

show fabric connectivity cable-plan

Syntax Description

This command has no arguments or keywords.

Command Modes

Privileged EXEC (#)

Command History

Release	Modification
6.0(2)N3(1)	This command was introduced.

Usage Guidelines

This command displays information specific to the cable plan that is imported. The cable plan information includes the location of the imported file, mismatch delay configuration values, cable-plan-check enable values, and details of all entries that are related to the device.

If no cable plan is imported, the output of the command will not display anything.

Configure the **feature lldp** command before enabling cable management.

The following table provides a list of cable plan status codes:

Table 4: Cable Plan Status Codes

Status Code	Description
Ok	Everything works as per the configured cable plan checks; the cable-plan check is a success.
Unkn	Unable to determine the status. Usually happens when a cable plan is not enforced or there is no link between peers.
ErrC	The port is error-disabled due to a mismatch (the peer does not match the entry in the cable plan).
S	Specified at the end of a status. Usually happens when the port is stale in the device because the neighboring port interface is in an error-disabled mode.
Enp	An entry is not present in the cable plan. Usually happens when there is no cable plan record; however, there is a link between peers.

Examples

The following is sample output from the **show fabric connectivity cable-plan** command:

```
Device# show fabric connectivity cable-plan

--------------------------------------------------------------------------------
Cable-Plan Enforce:     Enforced       File:                          No File
Mismatch Delay Config:  Disabled       Mismatch Delay Timeout:              0
DeviceID:           host1.spine1       Last Deployed:
Md5:                                   Size:                                0
--------------------------------------------------------------------------------
         Codes: (Ok) Normal, (ErrC) Cabling Plan error, (S) Stale entry
                (Unkn) Unknown, (Enp) Entry not present in Cable-Plan
Current Cable-Plan:
--------------------------------------------------------------------------------
lChassisId              lPortId     rChassisId              rPortId     Status
```

The following example shows how to enable cable management and import a cable plan from the local location. If a cable plan is not imported the output of the **show fabric connectivity cable-plan** will not display anything:

```
Device# configure terminal
Device(config)# feature lldp
Device(config)# feature cable-management
Device(config)# exit
Device# fabric connectivity cable-plan import bootflash:cp.xml

Success: Imported cable-plan: /bootflash/cp.xml
Device#
```

Related Commands

Command	Description
fabric connectivity cable-plan import	Imports a cable plan from a local or a remote location.

show fabric connectivity neighbors

To display cache information about fabric connectivity neighbors, use the **show fabric connectivity neighbors** command in privileged EXEC mode.

show fabric connectivity neighbors [**errors** | **interface** {**ethernet** *slot*/*chassis* | **mgmt** *interface-number*}| **tier** {**lower | upper** }]

Syntax Description

errors	(Optional) Displays information about neighbors that are in cabling error state.
interface	(Optional) Displays the list of neighbors connected to an interface.
ethernet *slot*/*chassis*	(Optional) Displays information about the specified Ethernet 802.3z interface. The range for the *slot*/*chassis* argument is from 1 to 253.
mgmt *interface-number*	(Optional) Displays information about the specified management interface.
tier	(Optional) Displays the neighbors connected to an adjacent tier.
lower	(Optional) Displays the neighbors connected to an adjacent lower tier.
upper	(Optional) Displays the neighbors connected to an adjacent upper tier.

Command Modes

Privileged EXEC (#)

Command History

Release	Modification
6.0(2)N3(1)	This command was introduced.

Usage Guidelines

This command displays the data received by a device via the Link Layer Discovery Protocol (LLDP) type, length, values (TLVs). The command also displays the local chassis and port IDs, remote chassis and port ID, the tier levels of the remote chassis, the expected cable-plan entry, and status of the configuration.

Examples

The following is sample output from the **show fabric connectivity neighbors** command:

```
Device# show fabric connectivity neighbors

------------------------------------------------------------------------------
Local System:
Device Tier Config:          Enabled       Device Tier Level:               2
Mismatch Delay Config:       Disabled      Mismatch Delay Timeout:          0
Cable-Plan Enforce:          Enabled
DeviceID:  host1                           ChassisID:  000a.0001.0008
------------------------------------------------------------------------------
         Codes: (Ok) Normal, (ErrT) Tier error , (ErrC) Cable-Plan error,
```

```
                (V) VPC Peer connection, (S) Stale entry, (Unkn) Unknown,
                (Enp) Entry not present in Cable-Plan, (Tl) Tier level
Neighbor Table:
--------------------------------------------------------------------------------
Local      DeviceID              PortID     Tl  Cable-Plan            Status
Intf                                           Entry

Eth2/1     leaf0                 Eth2/2     Unk Unkn                  Ok
Eth2/2     leaf1                 Eth2/2     Unk Unkn                  Ok
Eth2/3     leaf2                 Eth2/2     Unk Unkn                  Ok,S
Eth2/4     stewong-1             Eth2/2     Unk Unkn                  Ok
Eth2/5     leaf4                 Eth2/2     Unk Unkn                  Ok
Eth2/6     leaf5                 Eth2/2     Unk Unkn                  Ok
Eth2/7     leaf6                 Eth2/2     Unk Unkn                  Ok,S
Eth2/8     leaf7                 Eth2/2     Unk Unkn                  Ok

Total entries displayed: 8
```

Related Commands

Command	Description
clear fabric connectivity neighbors	Clears all information about neighbors from the neighbor cache.

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
7.1(0)N1(1)	This command was introduced.

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:
```

Related Commands

Command	Description
fabric database auto-pull dci	Triggers the Node to pull an entry from LDAP.

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
7.1(0)N1(1)	This command was introduced.

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 5: 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
7.1(0)N1(1)	This command was introduced.

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  000000000000000079FE005056B77983

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)
Displaying Data Snooping Ports
Interface      Encap      Flags State
Eth101/1/1     77         L     Profile Active
```

Table 6: 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
7.1(0)N1(1)	This command was introduced.

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
7.1(0)N1(1)	This command was introduced.

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
7.0(1)N1(1)	This command was introduced.

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
7.1(0)N1(1)	This command was introduced.

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  000000000000000079FE005056B77983
```

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
7.1(0)N1(1)	This command was introduced.

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
7.0(0)N1(1)	This command was introduced.

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)
```

Related Commands

Command	Description
fabric database type	Configures the external database.

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
7.0(0)N1(1)	This command was introduced.

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
```

Related Commands

Command	Description
feature-set fabric	Enables configuring host mobility-specific commands.

show fabric multicast

To display routes of the fabric multicast process, use the **show fabric multicast** command in privileged EXEC mode.

show fabric multicast {**ipv4 | ipv6**} {**mroute | rp-grange | ssm-range**} **vrf** {*vrf-name* **| all | default | management**}

Syntax Description

ipv4	Displays IPv4 information.
ipv6	Displays IPv6 information.
mroute	Displays fabric multicast routes.
rp-grange	Displays rendezvous point (RP) group ranges.
ssm-range	Displays source specific multicast (SSM) ranges.
vrf	Displays VRF information.
vrf-name	VRF name.
all	Displays information about all VRFs learnt by the fabric multicast process.
default	Displays information about the default VRFs learnt by the fabric multicast process.
management	Displays information about the management learnt by the fabric multicast process.

Command Modes

Privileged EXEC (#)

Command History

Release	Modification
7.0(0)N1(1)	This command was introduced.

Usage Guidelines

The fabric multicast process has three kind of routes: multicast routes, RP group ranges, and SSM ranges.

Examples

The following is sample output from the **show fabric multicast ipv4 mroute vrf all** command:

```
Device# show fabric multicast ipv4 mroute vrf all

Fabric mroute Database for VRF "default" VNI: 0
```

```
Fabric Mroute: (*, *)
  Interested Fabric Nodes:
    1.1.0.5 (real)

Fabric mroute Database for VRF "vpn1" VNI: 5002

Fabric Mroute: (*, *)
  Interested Fabric Nodes:
    This node
    1.1.0.1 (real)

Fabric Mroute: (*, 0.0.0.1/32)
  Interested Fabric Nodes:
    1.1.0.1 (aggr)

Fabric Mroute: (18.18.18.18/32, 0.0.0.1/32)
  Interested Fabric Nodes:
    1.1.0.1 (real)

Fabric mroute Database for VRF "vpn2" VNI: 5003

Fabric Mroute: (*, *)
  Interested Fabric Nodes:
    This node
    1.1.0.1 (real)

Fabric mroute Database for VRF "vpn3" VNI: 5004

Fabric Mroute: (*, *)
  Interested Fabric Nodes:
    This node
    1.1.0.1 (real)


Fabric mroute Database for VRF "vpn4" VNI: 5005

Fabric Mroute: (*, *)
  Interested Fabric Nodes:
    This node
    1.1.0.1 (real)
```

The following is sample output from the **show fabric multicast ipv4 rp-grange vrf all** command:

```
Device# show fabric multicast ipv4 rp-grange vrf all

RP Grange Database for VRF "default" VNI: 0

RP Grange Database for VRF "vpn1" VNI: 5002

RP: 18.18.18.18 Group Range: 238.0.0.0/16
RP: 19.19.19.19 Group Range: 239.0.0.0/16
RP Grange Database for VRF "vpn2" VNI: 5003

RP Grange Database for VRF "vpn3" VNI: 5004

RP Grange Database for VRF "vpn4" VNI: 5005
```

The following is sample output from the **show fabric multicast ipv4 ssm-range vrf all** command:

```
Device# show fabric multicast ipv4 ssm-range vrf all

SSM Range Database for VRF "default" VNI: 0

SSM Group Range: 232.0.0.0/8
SSM Range Database for VRF "vpn1" VNI: 5002

SSM Group Range: 232.0.0.0/8
SSM Range Database for VRF "vpn2" VNI: 5003

SSM Group Range: 232.0.0.0/8
SSM Range Database for VRF "vpn3" VNI: 5004

SSM Group Range: 232.0.0.0/8
```

```
SSM Range Database for VRF "vpn4" VNI: 5005
SSM Group Range: 232.0.0.0/8
```

Related Commands

Command	Description
ip multicast fabric-forwarding	Enables multicast enhanced fabric forwarding for a particular VRF.
show fabric multicast globals	Displays the global state associated with the fabric multicast process.
show fabric multicast vrf	Displays the VRFs learned by the fabric multicast process and VNIs configured under the VRFs.

show fabric multicast globals

To display the global state associated with the fabric multicast process, use the **show fabric multicast globals** command in privileged EXEC mode.

show fabric multicast globals

This command has no arguments or keywords.

Command Modes

Privileged EXEC (#)

Command History

Release	Modification
7.0(0)N1(1)	This command was introduced

Usage Guidelines

Use this command to display the global state of the fabric multicast process of the device.

Examples

The following is sample output from the **show fabric multicast global** command:

```
Device# show fabric multicast globals

`show fabric multicast globals`
Pruning: segment-based
Switch role: border
Fabric Control Seg: Vlan1
```

Related Commands

Command	Description
ip multicast fabric-forwarding	Enables multicast enhanced fabric forwarding for a particular VRF.

show fabric multicast vrf

To display the virtual routing and forwarding (VRFs) learned by the fabric multicast process and virtual network identifiers (VNI) configured under the VRFs, use the **show fabric multicast vrf** command in privileged EXEC mode.

show fabric multicast vrf [*vrf-name* | **all** | **default** | **management**]

Syntax Description

vrf-name	(Optional) VRF name.
all	(Optional) Displays all VRFs learned by the fabric multicast process and the VNIs configured under the VRFs.
default	(Optional) Displays VNIs configured under the default VRF.
management	(Optional) Displays VNIs configured under the management VRF.

Command Modes

Privileged EXEC (#)

Command History

Release	Modification
7.0(0)N1(1)	This command was introduced.

Examples

The following is sample output from the **show fabric multicast vrf all** command:

```
Device> enable
Device# show fabric multicast vrf all

VRF Name                VRF       VN-Seg
                        ID        ID
default                 1         0
vpn1                    4         5002
vpn2                    5         5003
vpn3                    6         5004
vpn4                    7         5005
```

Related Commands

Command	Description
ip multicast fabric-forwarding	Enables multicast enhanced fabric forwarding for a particular VRF.
show fabric multicast	Displays routes of the fabric multicast process.
show fabric multicast globals	Displays the global state associated with the fabric multicast process.

show global-mobility-domain

To display information about global mobility domains, use the **show global-mobility-domain** command in privileged EXEC mode.

show global-mobility-domain detectable-vlans *vlan-id-or-range*

Syntax Description

vlan-id-or-range	Specifies the device-wide global mobility domain. The VLAN ID range from 1 to 4094. The VLAN range is 1-5, 10, 2-5, and 7-19.

Command Modes

Privileged EXEC (#)

Command History

Release	Modification
7.1(0)N1(1)	This command was introduced.

Usage Guidelines

Detectable VLANs are the global, detectable VLANs configured on a switch. The VLANs that are present within the detectable range can be detected on all the interface that belong to the default (global) mobility domain. While the translate VLANs range is empty, VLANs configured in the global mobility domain range cannot be translated. By default, all the ports belong to the default mobility domain until the configured with explicit mobility domain.

Examples

The following example displays global mobility domain information and the detectable VLAN range:

```
Device# show global-mobility-domain

Detectable VLANs: 200-998
Translate VLANs:
Interfaces: Eth1/1, Eth1/2, Eth101/1/1 Eth101/1/4
```

show fabricpath isis

To display information about FabricPath Intermediate System-to-Intermediate System (IS-IS), use the **show fabricpath isis** command in privileged EXEC or global configuration mode.

show fabric isis

Syntax Description

This command has no arguments or keywords.

Command Modes

Privileged EXEC (#)

Global configuration (config)

Command History

Release	Modification
6.0(2)N1(1)	This command was introduced.
7.0(0)N1(1)	This command was modified in Cisco NX-OS Release 7.0(0)N1(1). The following fields were included in the display: • Graceful Restart Holding • LSP Lifetime • L1 LSP GEN interval • L1 SPF Interval • Max-Path

Usage Guidelines

This command displays information about FabricPath IS-IS, including information about the fabric control SVI (with IP and MAC addresses), if configured.

This command requires an Enhanced Layer 2 license.

You can store the output of the command in an external file by including the **>** symbol after the command, followed by the name of the file and the type of storage location. You can add the output from the command to an existing file using the **>>** symbol.

Examples

The following example shows how to display information about FabricPath IS-IS in privileged EXEC mode.

```
Device(config)# show fabricpath isis

Fabricpath IS-IS domain : default
  System ID : 547f.eea9.f73c  IS-Type : L1 Fabric-Control SVI: Unknown
  SAP : 432  Queue Handle : 11
  Maximum LSP MTU: 1492
  Graceful Restart enabled. State: Inactive
  Last graceful restart status : none
```

```
Graceful Restart holding time:60
Metric-style : advertise(wide), accept(wide)
Start-Mode: Complete [Start-type configuration]
Area address(es) :
  00
Process is up and running
CIB ID: 1
Interfaces supported by Fabricpath IS-IS :
Level 1
Authentication type and keychain not configured
Authentication check specified
LSP Lifetime: 1200
L1 LSP GEN interval- Max:8000 Initial:50      Second:50
L1 SPF Interval- Max:8000     Initial:50      Second:50
MT-0 Ref-Bw: 400000
      Max-Path: 16
Address family Swid unicast :
  Number of interface : 0
  Distance : 115
L1 Next SPF: Inactive
```

show fabricpath isis interface

To display information about the FabricPath Intermediate System-to-Intermediate System (IS-IS) interface, use the **show fabricpath isis interface** command in privileged EXEC or global configuration mode.

show fabric isis interface {**brief** | **ethernet** *slot/port* | **port-channel** *channel-number*}

Syntax Description

brief	Displays brief information about the IS-IS interface.
ethernet	Displays information about the Ethernet interface.
slot/	Slots from 1 to 8. • Slots 1 to 4 are fixed Linecard Expansion Modules (LEMs). • Slots 5 to 8 are hot-swappable LEMs.
port	Port number within a particular slot. Range is from 1 to 128.
port-channel	Displays the information about port-channel interface.
channel-number	Port-channel number. Range is from 1 to 4096.

Command Modes

Privileged EXEC (#)

Global configuration (config)

Command History

Release	Modification
6.0(2)N1(1)	This command was introduced.
7.0(0)N1(1)	This command was modified in Cisco NX-OS Release 7.0(0)N1(1). The *QSFP-module* argument was removed.

Usage Guidelines

The **show fabricpath isis interface** command requires an Enhanced Layer 2 license. You can store the output of the command in an external file by including the > symbol after the command, followed by the name of the file and the type of storage location. You can add the output from the command to an existing file using the >> symbol.

Examples

This example shows how to display brief information about the FabricPath IS-IS interface:

```
Device# show fabricpath isis interface brief

Interface    Type  Idx State        Circuit   MTU  Metric  Priority  Adjs/AdjsUp
```

```
--------------------------------------------------------------------------------
Ethernet7/1  P2P   1     Up/Ready   0x01/L1   1500 400      64          1/1
Ethernet7/13 P2P   2     Up/Ready   0x01/L1   1500 400      64          1/1
Ethernet7/18 P2P   3     Up/Ready   0x01/L1   1500 40       64          1/1
```

show fabricpath oam loopback

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

show fabricpath OAM loopback {**database** | **statistics** [**summary**]| **status**} [**session** *session-handle*]

Syntax Description

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

Command Modes

Privileged EXEC (#)

Command History

Release	Modification
7.0(0)N1(1)	This command was introduced.

Usage Guidelines

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

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

Examples

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

```
Device# show fabricpath OAM loopback statistics

Sender Handle: 10
Last Clear of Statistics: Never
Loopback 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
```

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

```
Device# show fabricpath OAM loopback statistics 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 fabricpath OAM loopback status** command.

```
Device(#) show fabricpath OAM loopback status

Sender Handle                          Type                          State
1                                   on demand                     completed
10                                 Asynchronous                running(No Error)
```

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

```
Device(#) show fabricpath OAM loopback database

Loopback Request from switch-id 10

Sender handle: 1
Last Clear of Statistics: Never
Start time: 00:00:10
End time: NA
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))
```

Related Commands

Command	Description
clear fabricpath oam loopback	Clears statistics for FabricPath OAM loopback.
fabricpath oam profile	Configures a FabricPath OAM profile.
ping fabricpath	Tests the FabricPath OAM reachability.

show fabricpath oam mtrace

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

show fabricpath oam mtrace {**database** | **statistics** [**summary**]}

Syntax Description

database	Displays information about fabricpath OAM mtrace database.
statistics	Displays fabricpath OAM mtrace statistics.
summary	(Optional) Displays fabricpath OAM mtrace statistics summary.

Command Modes

Privileged EXEC (#)

Command History

Release	Modification
7.0(0)N1(1)	This command was introduced.

Usage Guidelines

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

Examples

The following is sample output from the **show fabricpath oam mtrace statistics** command.

```
Device(#) show fabricpath OAM mtrace statistics

Mtrace 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
Mtrace Requests: sent (5)/received (0)/timedout (0)/unsent (0)
Mtrace Replies: sent (0)/received (25)/unsent (0)
```

The following is sample output from the **show fabricpath oam mtrace statistics summary** command.

```
Device(#) show fabricpath OAM mtrace statistics summary

Mtrace Requests: sent (5)/received (0)/timeout (0)/unsent (0)
Mtrace Replies: sent (0)/received (25)/unsent (0)
```

The following is sample output from the **show fabricpath oam mtrace database** command.

```
Device(#) show fabricpath OAM mtrace database

Sender handle: 2
Mtrace request from switch-id 10

Id: sent: 1 timeout: 0 unsent: 0
Tree ID: 1 Vlan : 5 Hop limit: 2
Forward Flow Entropy: Default
Reverse Flow Entropy: NA
Service Tag: NA Vlan: 10 out of band: No
Control Plane Verification Req(ecmp/nickname):1/15
Reply: received (2)
Control Plane Resp from switch-id 112
    2 next hop Rbridges
    Switch-id   11 ifindex 0x00010023 Slot 3 Port  5  Speed 10M State – forwarding no error

    Switch-id 789 ifindex 0x00230782 Slot 5 Port 11 Speed    1G State – forwarding no error

    ecmp cnt: 1, (ecmp id: 0xFFFF, ifindex: 32, slot:0, port:0, state:10, state:fwd)
Control Plane Resp from switch-id 13
    ecmp cnt: 1, (ecmp id: 0xFFFF, ifindex: 32, slot:0, port:0, state:10, state:fwd)
```

Related Commands

Command	Description
clear FabricPath oam mtrace	Clears statistics for FabricPath OAM mtrace.
fabricpath oam profile	Configures a FabricPath OAM profile.
mtrace fabricpath	Traces the path from a source to a destination branch for FabricPath OAM.

show fabricpath oam notification

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

show fabricpath oam notification {**database** | **statistics**}

Syntax Description

database	Displays information about the FabricPath OAM notification database.
statistics	Displays information about FabricPath OAM notification statistics.

Command Modes

Privileged EXEC (#)

Command History

Release	Modification
7.0(0)N1(1)	This command was introduced.

Examples

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

```
Device(#) show fabricpath OAM notification statistics

Last Clearing of Statistics: Never
Notfication Received: 0
Time Expiry: 0
Destination Unreachable: 0
Parameter Problem: 0
```

Related Commands

Command	Description
clear fabripath oam notification	Clears statistics for FabricPath OAM notification.
fabricpath oam profile	Configures a FabricPath OAM profile.

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
7.0(0)N1(1)	This command was introduced.

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))
```

Related Commands

Command	Description
clear fabricpath oam traceroute	Clears statistics for FabricPath OAM traceroute.
fabricpath oam profile	Configures a FabricPath OAM profile.
traceroute fabricpath	Discovers the FabricPath route.

show interface ethernet

To display the Energy Efficient Ethernet (EEE) status on an interface, use the **show interface ethernet** command.

show interface ethernet *slot/chassis*

Syntax Description

slot/chassis	Slot or chassis number. The range is from 1 to 253.

Command Modes

Any command mode

Supported User Roles

network-admin

network-operator

vdc-admin

vdc-operator

Command History

Release	Modification
6.0(2)N3(1)	This command was introduced in an earlier NX-OS release.

Usage Guidelines

This command does not require a license.

Examples

The following sample output shows the EEE status on an interface:

```
Device#  show interface ethernet 2/6

Ethernet2/6 is down (Link not connected)
admin state is up, Dedicated Interface
  Hardware: 10000 Ethernet, address: 0022.5579.de41 (bia 001b.54c1.af5d)
  MTU 1500 bytes, BW 10000000 Kbit, DLY 10 usec
  reliability 255/255, txload 1/255, rxload 1/255
  Encapsulation ARPA, medium is broadcast
  auto-duplex, auto-speed, media type is 10G
  Beacon is turned off
  Auto-Negotiation is turned off
  Input flow-control is off, output flow-control is off
  Auto-mdix is turned off
  Rate mode is shared
  Switchport monitor is off
  EtherType is 0x8100
  EEE (efficient-ethernet) : n/a
  Last link flapped never
  Last clearing of "show interface" counters never
  0 interface resets
  30 seconds input rate 0 bits/sec, 0 packets/sec
```

```
  30 seconds output rate 0 bits/sec, 0 packets/sec
  Load-Interval #2: 5 minute (300 seconds)
    input rate 0 bps, 0 pps; output rate 0 bps, 0 pps
  L3 in Switched:
    ucast: 0 pkts, 0 bytes - mcast: 0 pkts, 0 bytes
.
.
.
```

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
6.0(2)N3(1)	This command was introduced.

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
```

Related Commands

Command	Description
errdisable detect cause	Enables error-disable detection for an application.
errdisable recovery cause	Enables automatic recovery of an application from an error-disabled state.
errdisable recovery interval	Configures the error disable recovery timer.

show ip arp internal event-history

To view Address Resolution Protocol (ARP) event log messages, use the **show ip arp internal event-history** command in privileged EXEC mode.

show ip arp internal event-history {**cli** | **client-errors** | **client-event** | **control** | **errors** | **event** | **ha** | **ip-sync-event** | **lcache** | **lcache-errors** | **msgs** | **packet** | **snmp** | **sync-event**}

Syntax Description

cli	Displays ARP CLI-related event log messages.
client-errors	Displays ARP client error log messages.
client-event	Displays ARP client event log messages.
control	Displays ARP control event log messages.
errors	Displays ARP error log messages.
event	Displays ARP event log messages.
ha	Displays ARP High Availability (HA)-related log messages.
ip-sync-event	Displays ARP-related layer 3 (L3) routing traffic over virtual port channel (vPC) event log messages.
lcache	Displays ARP lcache log messages.
lcache-errors	Displays ARP lcache error log messages.
msgs	Displays ARP log messages.
packet	Displays ARP packet log messages.
snmp	Displays Simple Network Management Protocol (SNMP) log messages.
sync-event	Displays ARP-related Cisco Fabric Services (CFS) and multichassis EtherChannel Manager (MCECM) log messages.

Command Modes

Privileged EXEC (#)

Command History

Release	Modification
7.0(0)N1(1)	This command was introduced.

Examples

The following sample output displays ARP error log messages:

```
Device# show ip arp internal event-history errors


 1)Event :E_DEBUG, length:40, at 763259 usecs after Wed Oct 9 16:37:49
2013

  [120] [4174]: Zero Ip on iod Ethernet2/1

 2)Event:E_DEBUG, length:40, at 755456 usecs after Wed Oct 9 16:37:48
2013

  [120] [4174]: Zero Ip on iod Ethernet2/2

 3)Event:E_DEBUG, length:34, at 52925 usecs after Wed Oct 9 16:21:37 2013


  [120] [4174]: Zero Ip on iod mgmt0
```

Related Commands

Command	Description
show ip arp internal event-history buffer-size	Displays current buffer size of ARP event log message types.
show ip arp statistics	Displays ARP statistics.

show ip arp internal event-history buffer-size

To view the current buffer size of Address Resolution Protocol (ARP) event log message types, use the **show ip arp internal event-history buffer-size** command in privileged EXEC mode.

show ip arp internal event-history buffer-size {**all** | **cli** | **client-errors** | **client-event** | **control** | **errors** | **event** | **ha** | **ip-sync-event** | **lcache** | **lcache-errors** | **packet** | **snmp** | **sync-event**}

Syntax Description

all	Displays the current buffer size for all ARP event log message types.
cli	Displays the current buffer size for the ARP CLI-related event log messages.
client-errors	Displays the current buffer size for the ARP client error log messages.
client-event	Displays the current buffer size for the ARP client event log messages.
control	Displays the current buffer size for the ARP control event log messages.
errors	Displays the current buffer size for the ARP error log messages.
event	Displays the current buffer size for the ARP event log messages.
ha	Displays the current buffer size for the ARP High Availability (HA)-related log messages.
ip-sync-event	Displays the current buffer size for the ARP-related layer 3 (L3) routing traffic over virtual port channel (vPC) event log messages.
lcache	Displays the current buffer size for the ARP lcache log messages.
lcache-errors	Displays the current buffer size for the ARP lcache error log messages.
packet	Displays the current buffer size for the ARP packet log messages.
snmp	Displays the current buffer size for the Simple Network Management Protocol (SNMP) log messages.
sync-event	Displays the current buffer size for the ARP-related Cisco Fabric Services (CFS) and multichassis EtherChannel Manager (MCECM) log messages.

Command Modes

Privileged EXEC (#)

Command History

Release	Modification
7.0(0)N1(1)	This command was introduced.

Examples

The following sample output displays the buffer size for all ARP event log message types:

```
Device# show ip arp internal event-history buffer-size all


packet buffer size = 16384
errors buffer size = 16384
event buffer size = 8388608
CFS and MCEC event buffer size = 8388608
Layer peering  buffer size = 0
ARP control event buffer size = 8388608
ha buffer size = 16384
snmp buffer size = 16384
lcache buffer size = 16384
lcache error buffer size = 16384
cli buffer size = 16384
client-event buffer size = 16384
client error buffer size = 16384
```

Related Commands

Command	Description
show ip arp internal event-history	Displays ARP event log messages.
show ip arp statistics	Displays ARP statistics.

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
7.0(0)N1(1)	This command was introduced.

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
```

Related Commands

Command	Description
show ip arp internal event-history	Displays ARP event log messages.
show ip arp internal event-history buffer-size	Displays current buffer size of ARP event log message types.

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
7.0(0)N1(1)	This command was introduced.

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)
```

Related Commands

Command	Description
feature evb	Enables the EVB session on a device.
logging level evb	Enables the system log (syslog) filter level for an Edge Virtual Bridging (EVB) session

show logging logfile

To display messages in the log file that were timestamped within the configured time duration, use the **show logging logfile** command.

show logging logfile [**start-time** *yyyy mmm dd hh:mm:ss*] [**end-time** *yyyy mmm dd hh:mm:ss*]

Syntax Description

start-time	(Optional) Enter a start time to log messages in the format *yyyy mmm dd hh:mm:ss*. Use three characters for the month (*mmm)* field, digits for the year (*yyyy*) and day (*dd*) fields, and digits separated by colons for the time (*hh:mm:ss*) field.
end-time	(Optional) Enter an end time to log messages in the format *yyyy mmm dd hh:mm:ss*. Use three characters for the month (*mmm*) field, digits for the year (*yyyy*) and day (*dd*) fields, and digits separated by colons for the time (*hh:mm:ss*) field.

Command Modes

Any command mode

Supported User Roles

network-admin

network-operator

vdc-admin

vdc-operator

Command History

Release	Modification
6.0(2)N3(1)	This command was introduced in an earlier Cisco NX-OS release.

Usage Guidelines

If you do not enter an end time, the current time is used.

This command does not require a license.

Examples

This example shows how to display the messages in the log file that were timestamped within the span shown:

```
Device# show logging logfile start-time 2008 mar 11 12:10:00
Device#
```

show mobility-domain

To display information about mobility domains, use the **show mobility-domain** command in privileged EXEC mode.

show mobility-domain *md-name*

Syntax Description

md-name	Mobility domain name, up to 128 characters.

Command Modes

Privileged EXEC (#)

Command History

Release	Modification
7.1(0)N1(1)	This command was introduced.

Usage Guidelines

Detectable VLANs are the VLANs configured under the mobility domain, for example, md1. VLANs that are present in detectable range can be detected on the interfaces. Configured with mobility domain md1. Translate VLANs are the VLANs that can be translated for this mobility domain md1.

Examples

The following example shows how to display, mobility domain information and the detectable VLAN range:

```
Device# show mobility-domain md1

Detectable VLANs: 1,100-110,500,1000-1008
Translate VLANs: 100-110,1001-1008
Interfaces: Po5, Eth1/3, Eth101/1/2 Eth101/1/10
```

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
7.0(0)N1(1)	This command was introduced.

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
```

Related Commands

Command	Description
instance	Configures a parameter list instance.
show running-config param-list	Displays the statistical information about the running configuration of a parameter list.
show startup-config param-list	Displays the statistical information about the startup configuration of a parameter list.

show platform fwm info qinq-xlate-table

To identify the hardware bridge-domain, which is derived from the QinQ in the Ingress (Ig) Direction, use the **show platform fwm info qinq-xlate-table** command in privileged EXEC mode.

show platform fwm info qinq-xlate-table<*asic id*><*vlan id*>

Syntax Description

asic-id	The Asic number range is from 0 to 100.
vlan-id	The VLAN ID range is from 1 to 4094.

Command Modes

Privileged EXEC (#)

Command History

Release	Modification
7.0(2)N1(1)	This command was introduced.

Examples

The following is sample output from the **show platform fwm info qinq-xlate-table** command. The fields are self-explanatory.

```
Device# show platform fwm info qinq-xlate-table 1 | grep " 200 "
Number of xlate containers pending PSS: 0
Dir  Xlate-idx Key-vlan Res-vlan Ref-count Masked Location     is_l2_if
Eg   17        199      20000    1         no     1.3024.0     1
Ig   17        20000    199      1         no     1.3189.0     1
```

show platform fwm info xlate-vlan-table

To identify the hardware bridge-domain, which is derived from the VLAN when frame is received from workload, use the **show platform fwm info xlate-vlan-table** command in privileged EXEC mode.

show platform fwm info xlate-vlan-table<*asic id*><*vlan id*>

Syntax Description

asic-id	The Asic number range is from 0 to 100.
vlan-id	The VLAN ID range is from 1 to 4094.

Command Modes

Privileged EXEC (#)

Command History

Release	Modification
7.0(2)N1(1)	This command was introduced.

Examples

The following is sample output from the **show platform fwm info xlate-vlan-table** command. The fields are self-explanatory.

```
Device# show platform fwm info xlate-vlan-table 1 | grep " 200 "
Dir  Xlate-idx Key-vlan Res-vlan Ref-count Masked Location     is_l2_if
Ig   17        200      199      1         no     1.784.0      1
Eg   17        199      200      1         no     1.3262.0     1
```

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
6.0(2)N1(1)	This command was introduced.

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
7.0(0)N1(1)	This command was introduced.

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
```

Related Commands

Command	Description
feature evb	Enables the EVB session on a device.

show running-config fabric multicast

To display the running configurations made for the fabric multicast process, use the **show running-config fabric multicast** command in privileged EXEC mode.

show running-config fabric multicast [**all**]

Syntax Description

all	(Optional) Display all configurations made for the fabric multicast process.

Command Modes

Privileged EXEC (#)

Command History

Release	Modification
7.0(0)N1(1)	This command was introduced.

Examples

The following is sample output from the **show running-config fabric multicast** command:

```
Device# show running-config fabric multicast all

!Command: show running-config fabric multicast all
!Time: Tue Oct 22 02:17:35 2013

version 6.2(1)
feature fabric multicast
ip multicast fabric-forwarding
```

Related Commands

Command	Description
ip multicast fabric-pruning	Sets the multicast fabric-pruning to a desired level.

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
7.0(0)N1(1)	This command was introduced.

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
```

Related Commands

Command	Description
define	Creates user-defined parameters for the specified parameter list.
show param-list	Displays all user-defined parameter lists configured in a device.

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
7.0(0)N1(1)	This command was introduced.

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
```

Related Commands

Command	Description
feature evb	Enables the EVB session on a device.

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
7.0(0)N1(1)	This command was introduced.

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
```

Related Commands

Command	Description
define	Creates user-defined parameters for the specified parameter list.
show param-list	Displays all user-defined parameter lists configured in a device.

show system internal bfd event-history session

To display events for Bidirectional Forwarding Detection (BFD) sessions (both L3 and FabricPath-BFD), use the **show system internal bfd event-history session** command in privileged EXEC mode.

show system internal bfd event-history session

Syntax Description

This command has no arguments or keywords.

Command Modes

Privileged EXEC (#)

Command History

Release	Modification
7.1(0)N1(1)	This command was introduced.

Examples

The following is sample output from the **show system internal bfd event-history session** command. The fields in the example are self-explanatory.

```
Device# show system internal bfd event-history session

Start of errors for session 0x41000001
1:0  582607 usecs after Wed Dec  3 20:09:06 2014
        : Code 0x1 0x0 0x0 0x0

End of errors for session 0x41000001

Start of Logs for session 0x41000001
1:0  740262 usecs after Wed Dec  3 23:00:21 2014
        : Session Destroyed if 0x9010001 iod 7 (Vlan1) src 1.1.1.5, dst 1.1.1.6
2:0  740104 usecs after Wed Dec  3 23:00:21 2014
        : Session state changed: 0(AdminDown) -> 1(Down), New diag: 0(No Diagnos
tic), After: 0 secs
3:0  739786 usecs after Wed Dec  3 23:00:21 2014
        : Session state changed: 1(Down) -> 0(AdminDown), New diag: 7(Administra
tively Down), After: 10275 secs
4:0  591798 usecs after Wed Dec  3 20:09:18 2014
        : ACL installed
5:0  591715 usecs after Wed Dec  3 20:09:18 2014
        : Session installed on LC 1
6:0  582733 usecs after Wed Dec  3 20:09:06 2014
        : Session Created if 0x9010001 iod 7 (Vlan1) src 1.1.1.5, dst 1.1.1.6
7:0  582605 usecs after Wed Dec  3 20:09:06 2014
        : Code 0x1 0x0 0x0 0x0

End of Logs for session 0x41000001

Start of app-events for session 0x41000001
1:0  739371 usecs after Wed Dec  3 23:00:21 2014
        : Client Remove type 1, 283 in state 14
2:0  582768 usecs after Wed Dec  3 20:09:06 2014
        : Client Add type 1, 283 in state 10
3:0  582604 usecs after Wed Dec  3 20:09:06 2014
        : Code 0x1 0x0 0x0 0x0

End of app-events for session 0x41000001
```

```
Start of errors for session 0x41000002
1:0  156930 usecs after Wed Dec  3 20:51:19 2014
        : Code 0x1 0x0 0x0 0x0

End of errors for session 0x41000002

Start of Logs for session 0x41000002
1:0  888097 usecs after Wed Dec  3 21:25:18 2014
        : Session active params changed: State 3(Up), TX(250000), RX(250000), Mu
lt(3)
2:0  30311 usecs after Wed Dec  3 21:25:14 2014
        : Session active params changed: State 3(Up), TX(500000), RX(500000), Mu
lt(3)
3:0  30349 usecs after Wed Dec  3 20:52:37 2014
        : Session active params changed: State 3(Up), TX(500000), RX(500000), Mu
lt(3)
4:0  526162 usecs after Wed Dec  3 20:52:36 2014
        : Session Up
5:0  525999 usecs after Wed Dec  3 20:52:36 2014
        : Session state changed: 1(Down) -> 3(Up), New diag: 0(No Diagnostic), A
fter: 77 secs
6:0  525950 usecs after Wed Dec  3 20:52:36 2014
        : Session active params changed: State 1(Down), TX(500000), RX(500000),
Mult(3)
7:0  5927 usecs after Wed Dec  3 20:52:35 2014
        : Session remote disc changed: 0(0x0) -> 1090519043(0x41000003)
8:0  162672 usecs after Wed Dec  3 20:51:19 2014
        : ACL installed
9:0  162581 usecs after Wed Dec  3 20:51:19 2014
        : Session installed on LC 1
10:0  156935 usecs after Wed Dec  3 20:51:19 2014
        : L2 Session Created if 0x16000037 iod 14 (Po56)
11:0  156930 usecs after Wed Dec  3 20:51:19 2014
        : Code 0x1 0x0 0x0 0x0

End of Logs for session 0x41000002

Start of app-events for session 0x41000002
1:0  380674 usecs after Wed Dec  3 20:51:24 2014
        : Client Add type 1, 1090519619 in state 14
2:0  156942 usecs after Wed Dec  3 20:51:19 2014
        : Client Add type 1, 1090519619 in state 10
3:0  156929 usecs after Wed Dec  3 20:51:19 2014
        : Code 0x1 0x0 0x0 0x0

End of app-events for session 0x41000002
```

show system internal bfd sess-store

To display the FabricPath Bidirectional Forwarding (BFD) sessions bootstrapped by the FabricPath IS-IS module, use the **show system internal bfd sess-store** command in privileged EXEC mode.

show system internal bfd sess-store

Syntax Description

This command has no arguments or keywords.

Command Modes

Privileged EXEC (#)

Command History

Release	Modification
7.1(0)N1(1)	This command was introduced.

Examples

The following is sample output from the **show system internal bfd sess-store** command. The fields in the example are self-explanatory.

```
Device# show system internal bfd sess-store

No of sessions:      1
0x41000002 - 0x41000003 Hosting LC: 1 002a.6a68.87c1 -> 002a.6a35.9841
 BFD_SESS_ST_SESSION_UP for 0 days 2:17:2 556
02 0F FF 00 0F FF 02 0F FF 00 0F FF 89 03 00 01 01 80 C2 00 00 42 00 2A 6A 68 87
 C1 81 00 E0 01 89 46 00 02 00 00
  Po56 [4 0x16000037:0x14 0:1 0x16000037 0x16000037]
  SMAC: 002a.6a68.87c1 DMAC: 0180.c200.0042
  Local  TX/RX/ST(ms): 250/250/2000000 Mult: 3   Ver:1 Flags(0x8):  Auth(0 0 0)
  Active TX/RX/ST(ms): 250/250/2000000 Mult: 3   State: 3 Diag: 0x0 Flags: 0xb35
0000 Auth(0 0 0)
  Spray DIs: 2
        (0): 0x1a007000
        (1): 0x1a009000
 Port-Lcs:
  Module 1 has 2 links
 Applications:
   (1) isis_fabricpath [0x1:0x41000243 flags 0x0]
     App Data   : [356a2a00419800]
     Description:  N6K6
     MTS Dest 0xfe000001:0x1b0
 No-Host reason: 0x0(SUCCESS)
 Counters:
   Retries: LC remove(0), ACL Inst/Rem(0/0), Redisc(0)
```

show system internal bfd transition-history

To display transitions for Bidirectional Forwarding Detection (BFD) sessions (both L3 and FabricPath-BFD), use the **show system internal bfd transition-history** command in privileged EXEC mode.

show system internal bfd transition-history

Syntax Description

This command has no arguments or keywords.

Command Modes

Privileged EXEC (#)

Command History

Release	Modification
7.1(0)N1(1)	This command was introduced.

Examples

The following is sample output from the **show system internal bfd transition-history** command. The fields in the example are self-explanatory.

```
Device# show system internal bfd transition-history

>>>>FSM: <Proto  Sess 0x41000002> has 6 logged transitions<<<<<

1) FSM:<Proto  Sess 0x41000002> Transition at 157325 usecs after Wed Dec  3 20:5
1:19 2014
    Previous state: [BFD_SESS_ST_INIT]
    Triggered event: [BFD_SESS_EV_INTERFACE]
    Next state: [BFD_SESS_ST_INSTALLING_SESSION]

2) FSM:<Proto  Sess 0x41000002> Transition at 162553 usecs after Wed Dec  3 20:5
1:19 2014
    Previous state: [BFD_SESS_ST_INSTALLING_SESSION]
    Triggered event: [BFD_SESS_EV_SESSION_INSTALL_SUCCESS]
    Next state: [BFD_SESS_ST_INSTALLING_ACL]

3) FSM:<Proto  Sess 0x41000002> Transition at 162669 usecs after Wed Dec  3 20:5
1:19 2014
    Previous state: [BFD_SESS_ST_INSTALLING_ACL]
    Triggered event: [BFD_SESS_EV_ACL_INSTALL_SUCCESS]
    Next state: [BFD_SESS_ST_SESSION_DOWN]

4) FSM:<Proto  Sess 0x41000002> Transition at 380565 usecs after Wed Dec  3 20:5
```

show system trunk dynamic status

To display the status of the globally configured dynamic Virtual Port (dVP) feature or the dynamic logical interface (LI) feature on Layer-2 trunk ports or port-channel interfaces, use the **show system trunk dynamic status** command.

show system trunk dynamic status [**enabled-interfaces**| **interface** *slot*/*port*[**,***port*][**-***last-port*][*port-channel*]]

Syntax Description

enabled-interfaces	(Optional) Displays a list of all the Layer-2 trunk interfaces and ports on which the dynamic logical interface feature is enabled.
interface	(Optional) Displays the status of the dynamic logical interface feature on the specified interface.
slot/*port*	Slot and port number of the port for which the status is to be displayed.
,*port*	(Optional) List of nonconsecutive port numbers on the specified port. Each *port-number* in the list must be separated by a comma (**,**).
-*last-port*	(Optional) Set of consecutive port numbers on the specified port. The (first) *port* and the *last-port* on the specified Layer-2 trunk port must be separated by a hyphen (**-**).
-*port-channel*	(Optional) Set the port channel on the specified port. Port-channel number range is from 1 to 4096.

Command Modes

EXEC (#)

Global configuration (config)

Command History

Release	Modification
7.1(0)N1(1)	This command was introduced.

Usage Guidelines

Use this command with no keywords or arguments to display the configured and operational status of the dVP feature for leaf switches in a Cisco Dynamic Fabric Automation (DFA) deployment.

Use this command with the **enabled-interfaces** keyword or the **interface** keyword to display the configured and operational status of the dynamic logical interface feature on input interfaces.

Examples

The following examples show how to display the configured (Disabled or Enabled) and operational (Disabled or Enabled) status of the dVP feature.

The following is sample output from the **system default trunk allocate vlan dynamic** command, and displays the status of the dVP feature after the command is run and before the switch is rebooted.

```
switch(config)# show system trunk dynamic status

Global Status
-------------
Configured  : Enabled
Operational : Enabled
Number of operationally enabled dynamic logical interfaces   : 12
```

The following is sample that shows how to display a list of all input interfaces on which the dynamic logical interface create and delete capabilities are operational:

```
switch# show system trunk dynamic status enabled-interfaces

Interface   Status
---------   ------
Eth1/3      Enabled
```

The following example shows how to display the configured and operational status for the dynamic logical interface feature of the specified input interfaces on a Layer-2 trunk:

```
switch# show system trunk dynamic status interface e1/1-6

Interface   Status
---------   ------
Eth1/1      Not-Applicable
Eth1/2      Not-Applicable
Eth1/3      Enabled
Eth1/4      Disabled
Eth1/5      Not-Applicable
Eth1/6      Enabled  -- Port is not up
Eth1/7      Disabled -- Port is not up
```

Table 7: show system trunk dynamic interface Command field descriptions

Field	Description
Disabled	The dynamic logical interface create and delete capability is disabled and the trunk is operationally off.
Enabled	The dynamic logical interface create and delete capability is enabled and the trunk is operationally on.
Not-Applicable	The dynamic logical interface create and delete capability is neither enabled nor disabled. This status is also shown for ports or port channels that do not support the dynamic allocation feature, such as a FEX fabric interface.
Disabled—Port is not up	The dynamic logical interface create and delete capability is disabled and the trunk is operationally off.
Enabled—Port is not up	The dynamic logical interface create and delete capability is enabled and the trunk is operationally on.

Related Commands

Command	Description
switchport trunk allocate vlan dynamic	Starts dynamic LI creation/deletion on Layer-2 trunk port.
system default trunk allocate vlan dynamic	Globally configure the dVP feature for Cisco DFA leaf switches.

show tech-support fabric multicast

To display all **show** commands and event histories associated with fabric multicast process, use the **show tech-support fabric multcast** command in virtual services configuration mode.

show tech-support fabric_mcast

Syntax Description

This command has no arguments or keywords.

Command Modes

Privileged EXEC (#)

Command History

Release	Modification
7.0(0)N1(1)	This command was introduced.

Examples

The following is sample output from the **show tech-support fabric multicast** command:

```
Device# show tech-support fabric multicast

`show running-config fabric multicast`

!Command: show running-config fabric multicast
!Time: Tue Oct 22 16:42:32 2013

version 6.2(1)
feature fabric multicast

ip multicast fabric-forwarding


`show system internal sysmgr service name fabric_mcast`
Service "fabric_mcast" ("fabric_mcast", 119):
        UUID = 0x4B3, PID = 14139, SAP = 1241
        State: SRV_STATE_HANDSHAKED (entered at time Tue Oct 22 16:42:03 2013).
        Restart count: 2
        Time of last restart: Tue Oct 22 16:42:03 2013.
        The service never crashed since the last reboot.
        Tag = N/A
        Plugin ID: 1

`show system internal feature-mgr feature state | include fabric_mcast`
fabric_mcast          0x000004b3  enabled   SUCCESS
`show processes threads fabric_mcast`
Thread-name                    Pid      Stack-base Stack-size Bytes used MaxTime
`show fabric multicast vrf all`
Note:  process currently not running
`show fabric multicast globals`
Note:  process currently not running
`show fabric multicast ipv4 mroute vrf all`
Note:  process currently not running
`show fabric multicast ipv6 mroute vrf all`
Note:  process currently not running
`show fabric multicast ipv4 ssm-range vrf all`
Note:  process currently not running
`show fabric multicast ipv6 ssm-range vrf all`
Note:  process currently not running
```

```
`show fabric multicast ipv4 rp-grange vrf all`
Note:  process currently not running
`show fabric multicast ipv6 rp-grange vrf all`
Note:  process currently not running
`show system internal fabric multicast ipv4 nexthop mapping`
Note:  process currently not running
`show system internal fabric multicast ipv6 nexthop mapping`
Note:  process currently not running
`show fabric multicast internal txlist detail vrf all`
Note:  process currently not running
`show fabric multicast internal client-buffers`
Note:  process currently not running
`show fabric multicast internal statistics`
Note:  process currently not running
`show fabric multicast internal event-history errors`
Note:  process currently not running
`show fabric multicast internal event-history msgs`
```

show vlan internal info

To display information about the dynamic Virtual Port (dVP) VLAN details configured on a switch, use the **show vlan internal info** command in privileged EXEC mode.

show vlan internal info

Syntax Description

This command has no arguments or keywords.

Command Modes

Privileged EXEC (#)

Command History

Release	Modification
7.1(0)N1(1)	This command was introduced.

Examples

The following example shows how to display information about the dynamic Virtual Port (dVP) VLAN details configured on a switch, using the **show vlan internal info** command:

```
Device# show vlan internal info

vlan mgr to ethpm mts counters
------------------------------
23555 23581 23585 23588 23592
----- ----- ----- ----- -----
0     1     0     11    0

VP add/del/ignore total counters
--------------------------------
Total VP add count = 0
Total VP del count = 0
Total VP ign count = 0
----

VP add/del/ignore vlan 1 counters
---------------------------------
VLAN-ID VPADD VPDEL VPIGN
-----   ----- ----- -----
1        0     0     0
```

Table 8: Field Descriptions for the show vlan internal info Command

Field	Description
VLAN mgr to ethpm MTS counters	Displays the total number of MTS messages sent out by the VLAN mgr to ethpm for respective opcodes.
VP add/del/ignore counters	Displays the total number of VP add/delete/duplicate messages are received by VLAN manager from HMM.

Field	Description
VP add/del/ignore VLAN counters	Displays the total number of VP add/delete/duplicate messages are received by VLAN manager from HMM for specific VLAN ID.
Dynamic logical interface list	Displays the Dynamic VP list brought up dynamically by dVP feature for a specific port.

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
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
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
```

show vpc brief

To display information about the virtual Port Channel (vPC), use the **show vpc brief** command in global configuration mode.

show vpc brief

Syntax Description

This command has no arguments or keywords.

Command Modes

Global configuration (config)

Command History

Release	Modification
7.1(0)N1(1)	This command was introduced.

Examples

The following example shows how to display information about vPC details, using the **show vpc brief** command:

```
Device(config)# show vpc brief

Legend:
                (*) - local vPC is down, forwarding via vPC peer-link

vPC domain id                     : 50
vPC+ switch id                    : 50
Peer status                       : peer adjacency formed ok
vPC keep-alive status             : peer is alive
vPC fabricpath status             : peer is reachable through fabricpath
Configuration consistency status  : success
Per-vlan consistency status       : success
Type-2 consistency status         : success
vPC role                          : primary
Number of vPCs configured         : 52
Peer Gateway                      : Disabled
Dual-active excluded VLANs        : -
Graceful Consistency Check        : Enabled
Auto-recovery status              : Enabled (timeout = 240 seconds)

vPC Peer-link status
---------------------------------------------------------------------
id   Port   Status Active vlans
--   ----   ------ --------------------------------------------------
1    Po24   up     1

vPC status
----------------------------------------------------------------------------
id     Port        Status Consistency Reason       Active vlans vPC+ Attrib
--     ----------  ------ ----------- ------       ------------ -----------
101    Po101       up     success     success      -            DF: Partial,
                                                                FP MAC:
                                                                50.0.0
501    Po501       up     success     success      1            DF: Partial,
                                                                FP MAC:
                                                                50.0.0
502    Po502       up     failed      Mobility     1            DF: Yes, FP
                                      domain                    MAC: 50.0.0
```

```
                                          related
                                          inconsistenc
                                          y
503     Po503       down*  success     success      -            DF: No, FP
                                                                 MAC: 50.0.0
```

show vpc consistency-parameters int

To display information about virtual Port Channel (vPC) parameters, use the **show vpc consistency-parameters int** command in privileged EXEC mode.

show vpc consistency-parameters int [**port-channel** *channel-number*]

Syntax Description

port-channel *channel-number*	Displays information about the port-channel interface. Port-channel number range is from 1 to 4096.

Command Modes

Privileged EXEC (#)

Command History

Release	Modification
7.1(0)N1(1)	This command was introduced.

Examples

The following example show how to display vPC parameter details:

```
Device# show  vpc consistency-parameters int port-channel 501

Legend:
        Type 1 : vPC will be suspended in case of mismatch

Name                        Type  Local Value            Peer Value
-------------               ----  ---------------------- -----------------------
Shut Lan                    1     No                     No
STP Port Type               1     Default                Default
STP Port Guard              1     None                   None
STP MST Simulate PVST       1     Default                Default
mode                        1     on                     on
Speed                       1     1000 Mb/s              1000 Mb/s
Duplex                      1     full                   full
Port Mode                   1     trunk                  trunk
Native Vlan                 1     1                      1
MTU                         1     1500                   1500
Admin port mode             1     trunk                  trunk
Detectable VLANs            1     20-100                 20-100
Mobility Domain             1     MD1                    MD1
vPC+ Switch-id              1     50                     50
vPC card type               1     Empty                  Empty
Allowed VLANs               -     1                      1
Local suspended VLANs       -     -                      -
```

show vrf

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

show vrf detail

Syntax Description

This command has no arguments or keywords.

Command Modes

Privileged EXEC (#)

Command History

Release	Modification
7.2(0)D1(1)	This command was introduced.

Examples

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

```
Device# show vrf detail

VRF-Name: Cisco:vrf1, VRF-ID: 3, State: Up
    VPNID: unknown
    RD: 254.254.254.4:3
    VNI: 20000
    Max Routes: 0  Mid-Threshold: 0
    Table-ID: 0x80000009, AF: IPv6, Fwd-ID: 0x80000009, State: Up
    Table-ID: 0x00000009, AF: IPv4, Fwd-ID: 0x00000009, State: Up

VRF-Name: default, VRF-ID: 1, State: Up
    VPNID: unknown
    RD: 0:0
    VNI: 5000
    Max Routes: 0  Mid-Threshold: 0
    Table-ID: 0x80000003, AF: IPv6, Fwd-ID: 0x80000003, State: Up
    Table-ID: 0x00000003, AF: IPv4, Fwd-ID: 0x00000003, State: Up

VRF-Name: management, VRF-ID: 2, State: Up
    VPNID: unknown
    RD: 0:0
    VNI: 0
    Max Routes: 0  Mid-Threshold: 0
    Table-ID: 0x80000004, AF: IPv6, Fwd-ID: 0x80000004, State: Up
    Table-ID: 0x00000004, AF: IPv4, Fwd-ID: 0x00000004, State: Up
```

switchport mobility-domain

To assign a Layer 2 switchport in the trunk or access to a (non-global) mobility domain, use the **switchport mobility-domain** command in interface configuration mode. To associate the interface to a global mobility domain, use the **no** form of this command.

switchport mobility-domain *md-name*

no switchport mobility-domain

Syntax Description

md-name	Mobility domain, name up to 128 characters.

Command Default

The interface belongs to the global mobility domain.

Command Modes

Interface configuration (config-if)

Command History

Release	Modification
7.1(0)N1(1)	This command was introduced.

Usage Guidelines

All Layer-2 switchport:

- in access mode can only belong to the global mobility domain
- in trunk mode can only belong to any mobility domain

Examples

The following example shows how to associate a mobility domain to an interface:

```
Device(config-if)# switchport mobility-domain md7
```

Related Commands

Command	Description
show global mobility domain	Displays global mobility domain information.

switchport trunk allocate vlan dynamic

To start the dynamic logical interface (LI) creation and deletion feature on a Layer-2 trunk port, use the **switchport trunk allocate vlan dynamic** command. To disable the dynamic logical interface creation and deletion feature on a Layer-2 trunk port, use the **no** form of this command.

switchport trunk allocate vlan dynamic

no switchport trunk allocate vlan dynamic

Syntax Description

This command has no arguments or keywords.

Command Default

Dynamic logical interface creation and deletion is enabled on a Layer-2 trunk port.

Command Modes

Interface configuration (config-if)

Command History

Release	Modification
7.1(0)N1(1)	This command was introduced.

Usage Guidelines

This command is operational only if the Dynamic Virtual Port (dVP) feature is operational. See the system default trunk allocate vlan dynamic, on page 129 command for more information.

The **system default trunk allocate vlan dynamic** configuration is the default state on all Layer-2 trunk ports. However, the default state has no significance if the dVP feature is nonoperational.

You can configure the **system default trunk allocate vlan dynamic** command on Layer-2 ports whether the port is in the access, FEX, or fabric mode. However, the configuration is effective in trunk mode only.

Use this command to start the dynamic logical interface feature after the feature has been explicitly disabled at the interface level.

No license is required for this command.

Related Commands

Command	Description
show system trunk dynamic status	Displays the status of the global dVP feature or the dynamic logical interface feature for Layer-2 trunk port.
system default trunk allocate vlan dynamic	Globally configure the dVP feature for Cisco DFA leaf switches.

system default trunk allocate vlan dynamic

To globally configure the dynamic virtual port (dVP) feature for creating dynamic virtual ports on a single trunk port for a VLAN and trunk PO that are already created, use the **system default trunk allocate vlan dynamic** command. To return to the default, use the **no** form of this command. The changes will take effect only after a system reboot.

system default trunk allocate vlan dynamic

no system default trunk allocate vlan dynamic

Syntax Description

This command has no arguments or keywords.

Command Default

When there is traffic on the ingress trunk ports or port channels, virtual ports will come up on all of the created VLANs that are in the allowed VLAN list. For virtual ports created in ingress trunk ports or port-channels needs traffic, else virtual port is not created if there is no ingress traffic.

Command Modes

Global configuration (config)

Command History

Release	Modification
7.1(0)N1(1)	This command was introduced.

Usage Guidelines

This command is supported only on the leaf switches in a Cisco Dynamic Fabric Automation (DFA) deployment.

Note The CLI configuration is saved after you issue this command, but the dVP feature is (operationally) enabled or disabled only after the switch configuration is saved and the switch is rebooted.

A logical interface (LI) is created when a VLAN is activated on the port of a switchport. Whenever a VLAN is created in the system, it brings up virtual ports on all the access and trunk switchports. On access ports, a single virtual port comes up if the created VLAN is configured as the access VLAN of a port. However, the default behavior for trunk ports is to bring the virtual port up on all of the created VLANs that are in the allowed VLAN list.

For example, assume there are 10 trunks. By default, configuring the **vlan 300-400** command creates virtual ports for VLAN 300 to 400 on all the 10 trunks. In a typical Cisco DFA deployment with up to 1500 VLANs (including core, server, and other VLANs) and 100 trunks, the scalability limits for (port, vlan) on the switch can be exceeded. The dVP feature limits the created virtual ports to a trunk port or port channel on which traffic is received in the system, and eliminates this risk on a leaf switch in a Cisco DFA deployment.

Note The CLI configuration is saved after you issue the **system default trunk allocate vlan dynamic** command, but the dVP feature is (operationally) enabled or disabled only after the switch configuration is saved and the switch is rebooted.

No license is required for this command.

Examples

The following example shows how to configure the dVP feature:

```
switch(config-term)# system default trunk allocate vlan dynamic
```

The following sample output from the **system default trunk allocate vlan dynamic** command shows that the dVP feature is not yet operational. The feature will be operational only after the switch configuration is saved and the switch is rebooted.

```
switch# show system trunk dynamic status

Global Status
-------------
Configured  : Enabled  (Will take effect on reboot)
Operational : Disabled
Number of operationally enabled dynamic logical interfaces   : 0
```

Related Commands

Command	Description
show system trunk dynamic status	Displays the status of the global dVP feature or the dynamic logical interface feature for Layer-2 trunk port.
switchport trunk allocate vlan dynamic	Starts dynamic LI creation/deletion on Layer-2 trunk port.

system fabric core-vlans

To define the core-facing set of dynamic allocatable VLANs for Cisco Dynamic Fabric Automation (DFA), 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 DFA are undefined.

Command Modes

Global configuration (config)

Command History

Release	Modification
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 DFA auto configuration to map the virtual network identifier (VNI) that is configured under virtual routing and forwarding (VRF). Cisco DFA 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 DFA Layer 3 leaf switch in your Cisco DFA 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 DFA Layer 3 leaf switches only. This command is not supported on Cisco Nexus 5500 Series switches configured as DFA Layer 2-only leaf switches.

Examples

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

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

Related Commands

Command	Description
feature fabric	Enables fabric network services
feature-set fabric	Enables configuring host mobility-specific commands.
system fabric dynamic-vlans	Reserves a global set of dynamic VLANs for Cisco DFA.

system fabric dynamic-vlans

To define a global set of dynamic allocatable VLANs for Cisco Dynamic Fabric Automation (DFA), 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 DFA are undefined.

Command Modes

Global configuration (config)

Command History

Release	Modification
7.0(0)N1(1)	This command was introduced.

Usage Guidelines

Cisco DFA 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 DFA for the server and core provisioning. The VLANs to be used for the SVIs must be specified. There are two VLAN ranges for Cisco DFA:

- The dynamic-VLAN range is the global set of server, host, and core VLANs. Cisco DFA dynamically chooses a VLAN from the dynamic-VLAN range to map the virtual network identifier (VNI) to both the FabricPath VLAN on a leaf switch and the corresponding server-facing SVI. The VNI-to-VLAN mapping is one to one.

- 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 Dynamic Fabric Automation (DFA), 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 DFA Layer 3 leaf switches only. This command is not supported on Cisco Nexus 5500 Series switches configured as DFA Layer 2-only leaf switches.

Examples

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

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

Related Commands

Command	Description
feature fabric	Enables fabric network services
feature-set fabric	Enables configuring host mobility-specific commands.
system fabric core-vlans	Reserves a set of core-facing dynamic VLANs for Cisco DFA.

system fabric global-mobility-domain

To create a mobility domain for a specified range of VLANs that are subject to auto detection on the mobility domain, use the **system fabric global-mobility-domain** command in global configuration mode. You must create the global-mobility-domain before any other mobility-domain. To delete use the **no** form of this command. The global mobility domain can only be removed if there are no other mobility domains.

system fabric {**global-mobility-domain** | **mobility-domain** *md-name*} **detectable-vlans** { *vlan-id-or-range* | **default**}

no system fabric {**global-mobility-domain** | **mobility-domain** *md-name*} **detectable-vlans** { *vlan-id-or-range* | **default**}

Syntax Description

vlan-id-or-range	Specifies the device-wide global mobility domain. The VLAN IDs from 1 to 4094. The VLAN ID range is from 1-5, 10 or 2-5, and 7-19.
md-name	Mobility domain name, up to 128 characters.
default	Specifies the default range, including global VLANs and translate VLANs. • For global-mobility-domain, the detectable vlans are the whole global vlan range, that is 4096 vlans - (dynamic vlans - reserved vlans - translate vlans) • For non-global-mobility-domain, the detectable vlans are the global vlan range and translate vlan range, that is 4096 vlans - (dynamic vlans - reserved vlans)

Command Default

No mobility domain exists. If the **system fabric global-mobility-domain detectable-vlans xxx** is not issued, the default global mobility domain is still available on the switch, and the auto-detection behavior is same as in previous releases.

Command Modes

Global configuration (config)

Command History

Release	Modification
7.1(0)N1(1)	This command was introduced.

Usage Guidelines

Use the **system fabric global-mobility-domain** command to configure detectable VLANs on a switch for which auto-configuration can be done. Detectable VLANs configured under this range can be auto-detected on all interface, which belongs to default (global) mobility domain. The global mobility domain must be configured before any of the other mobility domains. All L2 CE access/trunk ports become part of this mobility domain automatically.

The mobility domain commands must be issued only if multiple mobility domains are required on the switch. If a single mobility domain (the global mobility domain) is adequate to meet the deployment needs, issuing the **system fabric global-mobility-domain detectable-vlans** is optional and should be considered only when fine control on the set of VLANs that can be auto-detected is needed. The detectable VLANs set must include the trunk native VLANs for correct switch operation.

Examples

The following example shows how to create global mobility domain by specifying a VLAN ID using the **system fabric global-mobility-domain** command:

```
Device(config)# system fabric global-mobility-domain detectable-vlans 200-998
```

The following sample shows how to create mobility domain by specifying a VLAN ID using the **system fabric mobility-domain** command:

```
Device(config)# system fabric mobility-domain md2 detectable-vlans 1-110,1005-1010
```

system fabric translate-vlans

To specify a range of original VLANs in this VLAN range that are subject to translation, use the **system fabric translate-vlans** command in global configuration mode. To specify no VLANs subject to translation, use the **no** form of this command.

system fabric translate-vlans *vlan-id-or-range*

no system fabric translate-vlans *vlan-id-or-range*

Syntax Description

vlan-id-or-range	VLAN IDs or range that are detectable. The VLAN ID range is from 1 to 4094. The VLAN range is from 1-5, 10 or 2-5, and 7-19.

Command Default

No VLAN is subject to translation.

Command Modes

Global configuration (config)

Command History

Release	Modification
7.1(0)N1(1)	This command was introduced.

Usage Guidelines

The VLAN ID specified in this range cannot be created in the switch. Also do not overlap with dynamic VLAN range.

Examples

The following example shows how to specify a VLAN range that is detectable by using the **system fabric translate-vlan** command:

```
Device(config)# system fabric translate-vlans 100-110,1001-1499,3501-3502
```

Related Commands

Command	Description
system fabric core-vlans	Reserves a set of core-facing dynamic VLANs for Cisco DFA.
system fabric dynamic-vlans	Specifies the VLAN IDs or the complete range of core and server or host-facing VLANs for a device.

topology (fabricpath-oam)

To configure a FabricPath Operation, Administration, and Maintenance (OAM) service topology identifier, use the **topology** command in FabricPath OAM profile configuration mode. To remove the service topology, use the **no** form of this command.

topology *topology-id*

no topology

Syntax Description

topology-id	Topology identifier. The range is from 0 to 63.

Command Default

A FabricPath OAM service topology identifier is not configured.

Command Modes

FabricPath oam profile configuration (config-fb-oam-profile)

Command History

Release	Modification
7.0(0)N1(1)	This command was introduced.

Examples

The following example shows how to configure a FabricPath OAM topology identifier.

```
Device# configure terminal
Device(config)# fabricpath oam profile 100
Device(config-fb-oam-profile)# topology 15
```

Related Commands

Command	Description
fabricpath oam profile	Configures a FabricPath OAM profile.

traceroute fabricpath

To discover the FabricPath Operation, Administration, and Maintenance (OAM) route, use the **traceroute fabricpath** in privileged EXEC mode.

traceroute fabricpath switch-id *switch-id* [**interface** *interface-id*] [**vlan** *vlan-id* | **tag** *tag-id* | **dot1q** *dot1q-id intf-id*] **[use-host-vlan]** [**reply mode out-of-band** {**ipv4** *ipv4-addr* | **ipv6** *ipv6-addr*}] [**forward flow** *flow-entropy* {**l2 | l3**}] [**hop** *hop-count*] [**topology** *topology-id*] **verbosetimeout** *timeout-value*

Syntax Description

switch-id *switch-id*	Sends a loopback request to the specified switch ID.
interface *interface-id*	(Optional) Name of the egress interface for FabricPath OAM traceroute.
vlan *vlan-id*	VLAN ID. The range is from 1 to 4094.
tag *tag-id*	FabricPath OAM tag. The range is from 4096 to 0x00FFFFFF.
dot1q *dot1q-id intf-id*	Specifies the FabricPath OAM 802.1Q interface ID. **Note** The Dot1q option is not available on Cisco Nexus 5000 series and 6000 series switches; it is available only on the Cisco Nexus 7000 series.
use-host-vlan	(Optional) Specifies that only VLAN input should be used. Use this keyword when enhanced forwarding is applied and you do not want to use the translated VLAN. Use this option when you specify the ingress interface ID or when you specify the flow entropy through the **profile** keyword or through forward flow with the IP address of customer traffic.
reply mode out-of-band	(Optional) Specifies that the FabricPath OAM reply mode is out of band. By default, FabricPath OAM is replied in band (on the FabricPath network). Use the **reply mode out-of-band** keyword to change the mode of reply to out of band for input IPv4 or IPv6 addresses. For routing, only the default VRF is used.
ipv4 *ipv4-addr*	(Optional) Specifies the input IPv4 address for out-of-band reply.
ipv6 *ipv6-addr*	(Optional) Specifies the input IPv6 address for out-of-band reply.

forward flow *flow-entropy*	(Optional) Specifies input flow entropy (128 bytes) from actual user data traffic so that the FabricPath OAM packet takes the exact same path as the user traffic.
l2	(Optional) Specifies that the input flow entropy must be terminated until only Layer 2 entries are used. For example, MAC address, VLAN, and e-type. We recommend that you use only one string option.
l3	(Optional) Specifies that the input flow entropy must be terminated until only Layer 3 entries are used. **Note** Only IPv4 and IPv6 entries can be processed.
hop *hop-count*	(Optional) Specifies the FabricPath OAM ping hop count. Range is from 1 to 64. Default is 63.
topology *topology-id*	(Optional) Specifies the topology ID. Range is from 0 to 63. Default is 0.
verbose	(Optional) Displays additional information.
timeout *timeout-value*	(Optional) Specifies the timeout values. Range is from 1 to 36000.

Command Modes

Privileged EXEC (#)

Command History

Release	Modification
7.0(0)N1(1)	This command was introduced.

Usage Guidelines

For a synchronous ping, traceroute, or mtrace, if the profile has multiple interfaces, only the first interface is selected. Use the **interface** keyword to overwrite the selected interface. Only one session is created.

Examples

The following example shows how to discover the route for FabricPath OAM packets.

```
Device# traceroute fabricpath switch-id 10

Sender handle: 3
Tracing fabricpath switch-id 10

Codes: '!' - success, 'Q' - request not sent, '.' - timeout,
  'D' – Destination Unreachable, 'X' - unknown return code,
  'V' – VLAN nonexistent, 'v' – VLAN in suspended state,
  'm' - malformed request, 'C' – Cross Connect Error,
```

```
  'U' – Unknown RBridge nickname, 'n' – Not AF,
  'M' –MTU mismatch, 'I' – Interface not in forwarding state,
  'S' – Service Tag nonexistent, 's' – Service Tag in suspended state,

Type escape sequence to abort.
0 5 Rcvd on Eth10/23, Next hop RBID – 10(fwd)[1ms]
! 10 [1ms]
```

The following example shows how to discover the route for FabricPath OAM packets with for a specific switch ID when the keyword **verbose** is included.

```
Device#  traceroute fabricpath switch-id 3570 verbose

Codes: '!' - success, 'Q' - request not sent, '.' - timeout,
'D' - Destination Unreachable, 'X' - unknown return code,
'V' - VLAN nonexistent, 'v' - VLAN in suspended state,
'm' - malformed request, 'C' - Cross Connect Error,
'U' - Unknown RBridge nickname, 'n' - Not AF,
'*' - Success, Optional Tlv incomplete,
'I' - Interface not in forwarding state,
'S' - Service Tag nonexistent, 's' - Service Tag in suspended state,
'c' - Corrupted Data/Test

Sender handle: 1
Hop Code SwitchId Interface State TotalTime PathId DwnSwId Intf State
================================================================================
1 ! 3570 Rcvd on Eth1/3 fwd 3ms


!!!!!specify customer flow entropy
```

The following example shows how to discover the route for FabricPath OAM packets with for a specific switch ID for forward flow.

```
Device#  traceroute fabricpath switch-id 3570 forward flow
00112222111100112222222281000000A8903

Codes: '!' - success, 'Q' - request not sent, '.' - timeout,
'D' - Destination Unreachable, 'X' - unknown return code,
'V' - VLAN nonexistent, 'v' - VLAN in suspended state,
'm' - malformed request, 'C' - Cross Connect Error,
'U' - Unknown RBridge nickname, 'n' - Not AF,
'*' - Success, Optional Tlv incomplete,
'I' - Interface not in forwarding state,
'S' - Service Tag nonexistent, 's' - Service Tag in suspended state,
'c' - Corrupted Data/Test

Sender handle: 2
Hop Code SwitchId Interface State TotalTime PathId
============================================================
1 ! 3570 Rcvd on Eth1/3 fwd 3ms


!!!!Interactive traceroute with user specified layer 2 flow entropy
```

The following example shows interactive traceroute with user specified layer 2 flow entropy

```
Device#  traceroute fabricpath

Switch-id(1-65535) [1] 3570
Timeout in seconds [2]
Extended command(y/n) [n] y
OAM Profile(1-1023) [none]
Interface [none]
Ingress Interface [none]
Forward Flow entropy [n] y
Forward Flow entropy type L2/L3 [L2]
Forward Flow source mac address(aaaa.bbbb.cccc) [0001.ccaa.aabb]
Forward Flow destination mac address(aaaa.bbbb.cccc) [0001.ccaa.3abb]
Forward Flow vlan(vlan id or none) [1] 10
Forward Flow stag(1-0xFFFFFF) [none]
Forward Flow ether type [0x9100]
```

```
Reverse Flow entropy [n]
Reply mode out of band [n]
Verbose [n]
Hop count(1-63) [63]
Topology id [0]
Use host vlan [n]
Vlan(vlan id or none) [1] 10
Control path forward request [n]
Control path reverse request [n]

Codes: '!' - success, 'Q' - request not sent, '.' - timeout,
'D' - Destination Unreachable, 'X' - unknown return code,
'V' - VLAN nonexistent, 'v' - VLAN in suspended state,
'm' - malformed request, 'C' - Cross Connect Error,
'U' - Unknown RBridge nickname, 'n' - Not AF,
'*' - Success, Optional Tlv incomplete,
'I' - Interface not in forwarding state,
'S' - Service Tag nonexistent, 's' - Service Tag in suspended state,
'c' - Corrupted Data/Test

Sender handle: 3
Hop Code SwitchId Interface State TotalTime PathId
============================================================
1 ! 3570 Rcvd on Eth1/3 fwd 3ms
```

Related Commands

Command	Description
mtrace fabricpath	Traces the path from a source to a destination branch for FabricPath OAM.
ping fabricpath	Tests the FabricPath OAM reachability.

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
—	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
```

Related Commands

Command	Description
aaa group server radius	Creates a RADIUS server group and enters RADIUS server group configuration mode.

user-jid

To configure Jabber ID and password of the switch that is used to connect to the server, use the **user-jid** command in fabric database server configuration mode. To remove the Jabber ID and password, use the **no** form of this command.

user-jid *jid* **password** *password*

no user-jid *jid* **password** *password*

Syntax Description

jid	Jabber ID of the switch.
password *password*	Specifies the password for the Jabber ID.

Command Default

The Jabber ID and password are not configured.

Command Modes

Fabric database server configuration (config-fabric-db-server)

Command History

Release	Modification
7.0(0)N1(1)	This command was introduced.

Usage Guidelines

Use the **user-jid** command to configure the Jabber ID and password for the switch that is used to connect to the Extensible Messaging and Presence Protocol (XMPP) server. Use this command with the **fabric database type network** command to configure the external database using Extensible Markup Language (XML) and XMPP.

Examples

The following example shows how to configure a Jabber ID and password:

```
Device(config)# fabric database type network
Device(config-fabric-db)# server protocol xmpp host xcp-server.cisco.com
Device(config-fabric-db-server)# db-jid network-db@cisco.com key-type 1
Device(config-fabric-db-server)# user-jid leaf1@cisco.com password pwd
```

Related Commands

Command	Description
db-jid	Configures the Jabber ID of the database using XMPP.
fabric database type	Configures the external database.

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
7.0(0)N1(1)	This command was introduced.

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
7.0(0)N1(1)	This command was introduced.

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
```

Related Commands

Command	Description
configure profile	Configures a profile.
instance	Configures a parameter list instance.
show config-profile	Displays details of created and applied profiles.

vlan (fabricpath-oam)

To configure the FabricPath Operation, Maintenance, and Administration (OAM) VLAN, use the **vlan** command in FabricPath OAM profile configuration mode. To remove the VLAN configuration, use the **no** form of this command.

vlan *vlan-id*

no vlan

Syntax Description

vlan-id	VLAN identifier. Range is from 1 to 3967.

Command Default

A FabricPath OAM VLAN is not configured.

Command Modes

FabricPath oam profile configuration (config-fb-oam-profile)

Command History

Release	Modification
7.0(0)N1(1)	This command was introduced.

Examples

The following example shows how to configure the a FabricPath OAM VLAN.

```
Device# configure terminal
Device(config)# fabricpath oam profile 100
Device(config-fb-oam-profile)# vlan 100
```

Related Commands

Command	Description
fabricpath oam profile	Configures a FabricPath OAM profile.

vlan access-map

To create a new VLAN access-map entry or to configure an existing VLAN access-map entry on a device, use the **vlan access-map** command in global configuration mode. To remove a VLAN access-map entry, use the **no** form of this command.

vlan access-map *map-name*

no vlan access-map *map-name*

Syntax Description

map-name	Name of the VLAN access map that you want to create or configure. The *map-name* argument can be up to 64 alphanumeric, case-sensitive characters.

Command Default

A VLAN access-map is not configured.

Command Modes

Global configuration (config)

Command History

Release	Modification
—	This command was introduced in a release earlier than Cisco NX-OS Release 7.0(0)N1(1).
7.0(0)N1(1)	This command was modified. The *sequence-number* argument was removed.

Usage Guidelines

Each VLAN access-map entry can include one **action** command and one or more **match** commands. Use the **statistics per-entry** command to configure the device to record statistics for a VLAN access-map entry.

Use the **vlan access-map** command to enter the access-map configuration mode (config-access-map) to enable receiving of packets on any port on the switch. PowerOn Auto Provisioning (POAP) uses access control 3ists (ACL) to selectively receive packets. All line cards supported by N7K support Layer 2 ports. Therefore, for the purpose of PoAP, all ports are configured as Layer 2 ports. To simplify configuration of ACLs, a common VLAN is allowed on all the ports and the VLAN ACL (VACL) configured on this common VLAN.

The VACL is configured in two phases. Initially, the VACL will be configured to permit just the DHCP requests and responses and redirect these to the supervisor. All other packets will be dropped. The permit rules match DHCP requests and responses. They make use of the fact that DHCP uses UDP and fixed L4 port numbers for the server (67) and client (68). Once the PoAP process receives the appropriate DHCP packets and an IP address is assigned to the switch, the VACL will be modified to permit all packets destined to the newly assigned IP address.

This command does not require a license.

Examples

The following example shows how to enable and configure a VLAN access-map entry:

```
Device> enable
Device# configure terminal
Device(config)# ip access-list testacl
Device(config-acl)# 20 permit udp any any eq 67
Device(config-acl)# 30 permit udp any any eq 68
Device(config-acl)# 40 permit udp any eq 67 any
Device(config-acl)# 50 permit udp any eq 68 any
Device(config-acl)# 60 deny ip any any
Device(config-acl)# exit
Device(config)# vlan access-map poapvacl
Device(config-access-map)# match ip address testacl
Device(config-access-map)# end
```

Related Commands

Command	Description
vlan filter	Applies a VLAN access map to one or more VLANs.

vlan filter

To apply a VLAN access map to one or more VLANs, use the **vlan filter** command in global configuration mode. To unapply a VLAN access map, use the **no** form of this command.

vlan filter *map-name* **vlan-list** *vlan-list*

no vlan filter *map-name* **vlan-list** *vlan-list*

Syntax Description

map-name	Name of the VLAN access map that you want to create or configure.
vlan-list *vlan-list*	Specifies the ID of one or more VLANs that the VLAN access map filters. Valid VLAN IDs are from 1 to 3967. Use a hyphen (-) to separate the beginning and ending IDs of a range of VLAN IDs; for example, use 70-100. Use a comma (,) to separate individual VLAN IDs and ranges of VLAN IDs; for example, use 20,70-100,142. **Note** When you use the **no** form of this command, the VLAN-list argument is optional. If you omit this argument, the device removes the access map from all VLANs where the access map is applied.

Command Default

None

Command Modes

Global configuration (config)

Command History

Release	Modification
—	This command was introduced in a release earlier than Cisco NX-OS Release 7.0(0)N1(1).

Usage Guidelines

You can apply a VLAN access map to one or more VLANs. You can apply only one VLAN access map to a VLAN.

The **no** form of this command enables you to unapply a VLAN access map from all or part of the VLAN list that you specified when you applied the access map. To unapply an access map from all VLANs where it is applied, you can omit the *vlan-list* argument. To unapply an access map from a subset of the VLANs where it is currently applied, use the *vlan-list* argument to specify the VLANs where the access map should be removed.

This command does not require a license.

Examples

The following example shows how to specify access control for packets on a VLAN access control list (VACL):

```
Device> enable
Device# configure terminal
Device(config)# ip access-list testacl
Device(config-acl)# 20 permit udp any any eq 67
Device(config-acl)# 30 permit udp any any eq 68
Device(config-acl)# 40 permit udp any eq 67 any
Device(config-acl)# 50 permit udp any eq 68 any
Device(config-acl)# 60 deny ip any any
Device(config-acl)# exit
Device(config)# vlan access-map poapvacl
Device(config-access-map)# match ip address testacl
Device(config-access-map)# exit
Device(config)# vlan filter poapvacl vlan-list 1
Device(config)# end
```

Related Commands

Command	Description
vlan access-map	Creates and configures VLAN access-map entry on a device.

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
7.0(0)N1(1)	This command was introduced.

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
```

Related Commands

Command	Description
feature vn-segment-vlan-based	Enables a VLAN-based VN segment on a device.

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
6.2(6)	Support for this command on a Cisco Nexus 7000 Series switch as a Cisco DFA spine switch was added.
7.0(0)N1(1)	This command was introduced.

Examples

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

```
Device(config)# vni 4099
```

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

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

Related Commands

Command	Description
feature vn-segment-vlan-based	Enables a VLAN-based VN segment on a device.
vn-segment	Configures the segment identifier of the VLAN.