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aaa group server radius

To create a RADIUS server group and enter RADIUS server group configuration mode, use the **aaa group server radius** command in global configuration mode. To delete a RADIUS server group, use the **no** form of this command.

aaa group server radius *group-name*

no aaa group server radius *group-name*

Syntax Description

group-name

RADIUS server group name. The name is alphanumeric and case-sensitive. The maximum length is 64 characters.

Command Default

A RADIUS server group is not configured.

Command Modes

Global configuration (config)

Command History

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

Examples

The following example shows how to create a RADIUS server group and enter RADIUS server configuration mode:

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

The following example shows how to delete a RADIUS server group:

```
Device# configure terminal
Device(config)# no aaa group server radius RadServer
```

address-family

To configure multicast VPN (MVPN) for IPv4 or IPv6, use the **address-family** command in router configuration mode or neighbor configuration mode. To disable MVPN configuration, use the **no** form of this command.

address-family {ipv4 | ipv6} **mvpn**

no address-family {ipv4 | ipv6} **mvpn**

Syntax Description

| | |
|-------------|-------------------------------------|
| ipv4 | Configures the IPv4 address-family. |
| ipv6 | Configures the IPv6 address-family. |
| mvpn | Configures Multicast VPN . |

Command Default

No MVPN provisioning support is enabled.

Command Modes

Router configuration (config-router)

Neighbor configuration (config-router-neighbor)

Command History

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

Usage Guidelines

This command places the router in address family configuration mode (prompt: config-router-af), from which you can configure routing sessions that support Multicast VPN provisioning for IPv4 or IPv6.

Examples

The following example shows how to configure multicast VPN for IPv4:

```
Device> enable
Device# configure terminal
Device(config)# router bgp 100
Device(config-router)# address-family ipv4 mvpn
Device(config-router-af)# exit
```

The following example shows how to configure multicast VPN for IPv6:

```
Device> enable
Device# configure terminal
Device(config)# router bgp 100
Device(config-router)# address-family ipv6 mvpn
Device(config-router-af)# exit
```

aggregate-address

To create a summary address in a Border Gateway Protocol (BGP) routing table, use the **aggregate-address** command. To remove the summary address, use the **no** form of this command.

```
aggregate-address address/length [ advertise-map map-name ][as-set][ attribute-map
map-name][summary-only][ suppress-map map-name]
```

```
no aggregate-address address/length [ advertise-map map-name ][as-set][ attribute-map
map-name][summary-only][ suppress-map map-name]
```

Syntax Description

| | |
|--------------------------------------|---|
| address/length | Specifies aggregate IP address and mask length. Valid values for length are as follows: <ul style="list-style-type: none"> IPv4 addresses from 1 to 32 IPv6 addresses from 1 to 128 |
| advertise-map <i>map-name</i> | (Optional) Specifies the name of the route map used to select attribute information from specific routes. |
| as-set | (Optional) Generates the autonomous system set path information and community information from the contributing paths. |
| attribute-map <i>map-name</i> | (Optional) Specifies the name of the route map used to set the attribute information for specific routes. The map-name is an alphanumeric string up to 63 characters. |
| summary-only | (Optional) Filters all more-specific routes from updates. |
| suppress-map <i>map-name</i> | (Optional) Specifies the name of the route map used to conditionally filter more specific routes. The map-name is an alphanumeric string up to 63 characters. |

Command Default

The atomic aggregate attribute is set automatically when an aggregate route is created with this command unless the **as-set** keyword is specified.

Command Modes

Address-family configuration mode
Neighbor address-family configuration mode
Router BGP configuration mode

Command History

| Release | Modification |
|---------|--|
| -- | This command was introduced in an earlier Cisco NX-OS release. |

Usage Guidelines

You can implement aggregate routing in BGP and mBGP either by redistributing an aggregate route into BGP or mBGP, or by using the conditional aggregate routing feature.

Using the **aggregate-address** command with no keywords will create an aggregate entry in the BGP or mBGP routing table if any more-specific BGP or mBGP routes are available that fall within the specified range. (A longer prefix which matches the aggregate must exist in the RIB.) The aggregate route will be advertised as coming from your autonomous system and will have the atomic aggregate attribute set to show that information might be missing. (By default, the atomic aggregate attribute is set unless you specify the **as-set** keyword.)

Using the **as-set** keyword creates an aggregate entry using the same rules that the command follows without this keyword, but the path advertised for this route will be an AS_SET consisting of all elements contained in all paths that are being summarized. Do not use this form of the **aggregate-address** command when aggregating many paths, because this route must be continually withdrawn and updated as autonomous system path reachability information for the summarized routes changes.

Using the **summary-only** keyword not only creates the aggregate route (for example, 192.*.*) but also suppresses advertisements of more-specific routes to all neighbors. If you want to suppress only advertisements to certain neighbors, you may use the **neighbor distribute-list** command, with caution. If a more-specific route leaks out, all BGP or mBGP routers will prefer that route over the less-specific aggregate you are generating (using longest-match routing).

Using the **suppress-map** keyword creates the aggregate route but suppresses advertisement of specified routes. You can use the match clauses of route maps to selectively suppress some more-specific routes of the aggregate and leave others unsuppressed. IP access lists and autonomous system path access lists match clauses are supported.

Using the **advertise-map** keyword selects specific routes that will be used to build different components of the aggregate route, such as AS_SET or community. This form of the **aggregate-address** command is useful when the components of an aggregate are in separate autonomous systems and you want to create an aggregate with AS_SET, and advertise it back to some of the same autonomous systems. You must remember to omit the specific autonomous system numbers from the AS_SET to prevent the aggregate from being dropped by the BGP loop detection mechanism at the receiving router. IP access lists and autonomous system path access lists match clauses are supported.

Using the **attribute-map** keyword allows attributes of the aggregate route to be changed. This form of the **aggregate-address** command is useful when one of the routes forming the AS_SET is configured with an attribute such as the community no-export attribute, which would prevent the aggregate route from being exported. An attribute map route map can be created to change the aggregate attributes.

This command requires the Enterprise Services license.

Examples

AS-Set Example

In This example, an aggregate BGP address is created in router configuration mode. The path advertised for this route will be an AS_SET consisting of all elements contained in all paths that are being summarized.

```
Device(config)# router bgp 64496
Device(config-router)# aggregate-address 10.0.0.0 255.0.0.0 as-set
Summary-Only Example
```

In This example, an aggregate BGP address is created in address family configuration mode and applied to the multicast database (SAFI) under the IP Version 4 address family. Because the **summary-only** keyword is configured, more-specific routes are filtered from updates.

```
Device(config)# router bgp 64496
Device(config-router)# address-family ipv4 multicast
Device(config-router-af)# aggregate-address 10.0.0.0 255.0.0.0 summary-only
```

Conditional Aggregation Example

In This example, a route map called MAP-ONE is created to match on an as-path access list. The path advertised for this route will be an AS_SET consisting of elements contained in paths that are matched in the route map.

```
Device(config)# ip as-path access-list 1 deny ^1234_
Device(config)# ip as-path access-list 1 permit .*
Device(config)# !
Device(config)# route-map MAP-ONE
Device(config-route-map)# match ip as-path 1
Device(config-route-map)# exit
Device(config)# router bgp 64496
Device(config-router)# address-family ipv4
Device(config-router-af)# aggregate-address 10.0.0.0 255.0.0.0 as-set advertise-map MAP-ONE
Device(config-router-af)# end
```

apply profile

To apply a configuration profile to configure hosts, use the **apply profile** command in global configuration mode. To remove the configuration profile use the **no** form of this command.

apply profile *profile-name* [**include-instance** *include-instance*] [**param-instance** *instance-name*]

no apply profile *profile-name* [**include-instance** *include-instance*] [**param-instance** *instance-name*]

Syntax Description

| | |
|---|---|
| <i>profile-name</i> | Name of the profile that is created using the configure profile command. |
| include-instance <i>include-instance</i> | (Optional) Specifies the include instance name. |
| param-instance <i>instance-name</i> | (Optional) Specifies the parameter instance name. |

Command Default

The port profile is not applied.

Command Modes

Global configuration (config)

Command History

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

Usage Guidelines

Configuration profiles provide an infrastructure to configure hosts based on a set of user-defined templates. You can define different templates for different types of hosts and enable them appropriately based on an event, such as host discovery. You can apply different profiles to different hosts and apply different values for the configuration for different hosts.

Use the **apply profile** command to apply a configuration profile on a host.

Use the **configure profile** command to create a configuration profile and add a parameter list and a parameter-list instance. You can either create one parameterized profile for each host or create one profile with parameterized argument and apply it with host-specific arguments. The parameter-list instance provides the actual values that are added in the configuration profile before the profile is applied. The parameter name in the instance must match the parameter name in the profile.

Examples

The following example shows how to create a configuration profile and apply it to a host instance, named HOST-1, to expand the profile and configure a new host:

```
Device(config)# configure profile sample
Device(conf-profile)# vlan $vlanId
Device(conf-profile-vlan)# vn-segment $segmentId
Device(conf-profile-vlan)# interface vlan $vlanId
```

```
Device(conf-profile-if-verify)# ip address $ipv4addr/$netmask1
Device(conf-profile-if-verify)# ipv6 address $ipv6addr/$netmask2
Device(conf-profile-if-verify)# ip access-group $aclnum out
Device(conf-profile-if-verify)# configure terminal
Device(config)# apply profile sample param-instance HOST-1
Device(config)# end
```

Related Commands

| Command | Description |
|-----------------------------------|-----------------------|
| configure profile | Configures a profile. |

autodiscovery bgp signaling ldp

To enable autodiscovery using Label Distribution Protocol (LDP) in a Layer 2 virtual forwarding interface (VFI), use the **autodiscovery bgp signaling ldp** command in L2 VFI configuration mode. To disable autodiscovery, use the **no** form of this command.

autodiscovery bgp signaling ldp

no autodiscovery bgp signaling ldp

This command has no arguments or keywords.

Command Default Layer 2 VFI autodiscovery is disabled.

Command Modes L2 VFI configuration (config-vfi)

| Command History | Release | Modification |
|-----------------|---------|--|
| | -- | This command was introduced in an earlier Cisco NX-OS release. |

Examples The following example shows how to enable Layer 2 VFI as having BGP autodiscovered pseudowire members and specify that LDP signaling should be used for autodiscovery:

```
Device(config)# l2vpn vfi context vfi1
Device(config-vfi)# vpn id 100
Device(config-vfi)# autodiscovery bgp signaling ldp
Device(config-vfi-autodiscovery)#
```

bfd fabricpath authentication

To configure SHA-1 Bidirectional Forwarding Detection (BFD) authentication parameters on the interface, use the **bfd fabricpath authentication** command in interface configuration mode. To disable SHA-1 BFD authentication on the interface, use the **no** form of this command.

```
bfd fabricpath authentication keyed-SHA1 key-id id {hex-key hex-key | key ascii-key}
no bfd fabricpath authentication
```

Syntax Description

| | |
|------------------|--|
| key-id | Specifies the key ID to use in BFD frames. |
| <i>id</i> | Key ID value. The range is from 1 to 255. |
| hex-key | Specifies the HEX binary SHA-1 secret value. |
| <i>hex-key</i> | HEX binary SHA-1 secret value. A hex key can be any case-sensitive, alphanumeric string up to 40 characters. |
| key | Specifies the ASCII SHA-1 secret value. |
| <i>ascii-key</i> | SHA-1 secret value. An ASCII key can be any case-sensitive, alphanumeric string up to 20 characters. |

Command Default

None

Command Modes

Interface configuration (config-if)

Command History

| Release | Modification |
|-------------|-----------------------------------|
| 7.0(0)N1(1) | The fabricpath keyword was added. |
| 6.0(2)N2(1) | This command was introduced. |

Usage Guidelines

Configures SHA-1 authentication for all BFD sessions on the interface. The *ascii_key* string is a secret key shared among BFD peers. The *id* value, a number between 1 and 255, is assigned to this particular ASCII key. BFD packets specify the key by ID, allowing the use of multiple active keys.

Examples

The following example shows how to configure SHA-1 authentication for all BFD sessions on an interface:

```
Device(config)# interface ethernet 3/1
Device(config-if)# bfd fabricpath authentication keyed-SHA1 key-id 1 key cisco123
```

**Note**

This **bfd fabricpath authentication** command can be applied if the interface is in the fabricpath mode. The BFD fabricpath commands can configure parameters for fabricpath BFD sessions.

Related Commands

| Command | Description |
|----------------------------------|-----------------------------------|
| bfd fabricpath interval | Configures BFD session intervals. |
| bfd fabricpath slow-timer | Configures BFD slow-timers. |

bfd fabricpath interval

To configure a Bidirectional Forwarding Detection (BFD) session parameters, use the **bfd fabricpath interval** command in global configuration mode. To return to the default setting, use the **no** form of this command.

bfd fabricpath interval *mintx* **min_rx** *msec* **multiplier** *value*

no bfd fabricpath interval

Syntax Description

| | |
|--------------------------------|--|
| <i>mintx</i> | Rate, in milliseconds (ms), at which BFD control packets are sent to BFD neighbors. The default BFD interval is 50. |
| min_rx <i>msec</i> | Specifies the rate, in ms, at which BFD control packets are expected to be received from BFD neighbors. The default value is 50. |
| multiplier <i>value</i> | Specifies the number of consecutive BFD control packets that must be missed from a BFD neighbor before BFD declares that the neighbor is unavailable, and the BFD neighbor is informed of the failure. The default is 3. |

Command Default

None

Command Modes

Global configuration (config)

Command History

| Release | Modification |
|-------------|-----------------------------------|
| 7.0(0)N1(1) | The fabricpath keyword was added. |
| 6.0(2)N2(1) | This command was introduced. |

Usage Guidelines

BFD session parameters configured at the interface level take precedence over the globally configured BFD session parameters.



Note

Use the optional FabricPath keyword to configure the global parameters for FabricPath BFD sessions.

Examples

The following example shows how to configure a BFD session parameters:

```
Device(config)# bfd fabricpath interval 50 min_rx 50 multiplier 3
```

bfd fabricpath slow-timer

To configure the Bidirectional Forwarding Detection (BFD) slow timer value that is used in the echo function, use the **bfd fabricpath slow-timer** command in global configuration mode. To return to the default setting, use the **no** form of this command.

bfd fabricpath slow-timer *milliseconds*

no bfd fabricpath slow-timer

Syntax Description

| | |
|---------------------|---|
| <i>milliseconds</i> | BFD slow timer value, in milliseconds (ms). The range is from 1000 to 30000. The default is 2000. |
|---------------------|---|

Command Default

None

Command Modes

Global configuration (config)

Command History

| Release | Modification |
|-------------|-----------------------------------|
| 7.0(0)N1(1) | The FabricPath keyword was added. |
| 6.0(2)N2(1) | This command was introduced. |

Usage Guidelines

The slow-timer value determines how fast BFD starts a new session and what speed the asynchronous sessions use for BFD control packets when the echo function is enabled. The slow-timer value is used as the new control packet interval, while the echo packets use the configured BFD intervals. The echo packets are used for link failure detection, while the control packets at the slower rate maintain the BFD session.

Examples

The following example shows how to configure the BFD slow timer value to 7000 ms for FabricPath sessions on an interface:

```
Device(config)# bfd fabricpath slow-timer 7000
```

Related Commands

| Command | Description |
|--------------------------------------|-----------------------------------|
| bfd fabricpath authentication | Configures SHA-1 BFD parameters. |
| bfd fabricpath interval | Configures BFD session intervals. |

bfd fabricpath vlan

To configure fabricpath vlan to use for fabricpath sessions, use the **bfd fabricpath vlan** command in global configuration mode.

bfd fabricpath vlan *vlan-id*

Syntax Description

| | |
|----------------|---|
| <i>vlan-id</i> | Specifies the VLAN ID. The range is from 1 to 4094 except for the VLANs reserved for internal switch use. |
|----------------|---|

Command Default

Fabricpath vlan value is 1.

Command Modes

Global configuration (config)

Command History

| Release | Modification |
|-------------|-----------------------------------|
| 7.1(0)N1(1) | The fabricpath keyword was added. |

Examples

The following example shows how to configure the BFD fabricpath vlan:

```
Device(config)# bfd fabricpath vlan 1
```

boot poap

To reboot a device and apply the changes after you configure the device or install a new image, use the **boot poap** command in global configuration mode. To avoid rebooting the device, use the **no** form of this command.

boot poap [enable]

no boot poap

Syntax Description

| | |
|---------------|--|
| enable | (Optional) Enables the boot POAP (Power On Auto Provisioning) functionality. |
|---------------|--|

Command Modes

Global configuration (config)

Command History

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

Usage Guidelines

Rebooting the device is required in the following situations:

- If the configuration is supported only on the new image.
- If you configure the device after rebooting it.

You can avoid rebooting the device in the following situations:

- If there is no change in the image or in the configuration of device.
- If you want to apply only specific configuration updates on the device.

Examples

This example shows how to reboot a device after configuring the device or installing a new image:

```
Device# configure terminal
Device(config)# boot poap enable
```

Related Commands

| Command | Description |
|---------------------------------------|--|
| copy scheduled-config | Configures a file that contains CLI commands and applies on the next reboot of the device. |

bridge-domain

To enter bridge-domain configuration mode and configure a bridge domain, use the **bridge-domain** command. To remove the bridge-domain configurations, use the **no** form of this command.

bridge-domain *domain-id*

no bridge-domain *domain-id*

Syntax Description

| | |
|------------------|---|
| <i>domain-id</i> | Specifies the Bridge-domain ID. The range is defined by the system-bridge-domain configuration. |
|------------------|---|

Command Default

None

Command Modes

Global configuration mode

Command History

| Release | Modification |
|---------|--|
| -- | This command was introduced in an earlier Cisco NX-OS release. |

Usage Guidelines

Removing the bridge-domain configuration does not remove the underlying VLAN. If a VLAN is associated with a bridge domain, you cannot remove the VLAN without first removing the bridge domain. To remove the underlying VLAN, use the no vlan command after you remove the bridge domain. This command requires the MPLS Services license.

Examples

This example shows how to enter bridge-domain configuration mode and configure a bridge domain:

```
Device# configure terminal
Device(config)# bridge-domain 200
Device(config)#
```

checkpoint

To configure the rollback checkpoint, use the **checkpoint** command. To delete the checkpoint, use the **no** form of this command.

checkpoint {*name* | **description** *description* | **file** *name*}

no checkpoint

Syntax Description

| | |
|---------------------------------------|--|
| <i>name</i> | Specifies the checkpoint name that is used in the checkpoint database. The name can contain any alphanumeric string up to 80 characters, without any spaces. |
| description <i>description</i> | Specifies the checkpoint description. The description can contain up to 80 alphanumeric characters, including space. |
| file <i>name</i> | Specifies the filename that is used to save the checkpoint. |

Command Modes

Any command mode

Supported User Roles

network-admin

network-operator

vdc-admin

vdc-operator

Command History

| Release | Modification |
|---------|--|
| -- | This command was introduced in an earlier Cisco NX-OS release. |

Usage Guidelines

If you use the **checkpoint** command without a name, Cisco NX-OS software creates the file with the name auto-x, where x is a decimal number that increments each time you create an unnamed checkpoint file.

This command does not require a license.

Examples

This example shows how to configure the rollback checkpoint:

```
Device# checkpoint stable
```

This example shows how to delete the checkpoint file:

```
Device# no checkpoint
```

clear evb

To clear information associated with Edge Virtual Bridging (EVB), use the **clear evb** command in global configuration mode.

```
clear evb {hosts|vsi} [force-standby] [interface ethernet slot-number] [ip ipv4-address] [ipv6 ipv6-address]
[mac mac-address] [vlan vlan-id] [vni vni-id]
```

Syntax Description

| | |
|--|---|
| hosts | Clears information about hosts in an EVB session. |
| vsi | Clears information about the Virtual Station Interface (VSI) in an EVB session. |
| force-standby | (Optional) Forces to clear standby entries in an EVB session. |
| interface ethernet <i>slot-number</i> | (Optional) Clears hosts or VSI entries by filtering interface. |
| ip <i>ipv4-address</i> | (Optional) Clears information about hosts or the VSI by filtering the IPv4 address. |
| ipv6 <i>ipv6-address</i> | (Optional) Clears information about hosts or the VSI by filtering the IPv6 address. |
| mac <i>mac-address</i> | (Optional) Clears information about hosts or the VSI by filtering the MAC address. |
| vlan <i>vlan-id</i> | (Optional) Clears information about hosts or the VSI by filtering the VLAN. |
| vni <i>vni-id</i> | (Optional) Clears information about hosts or the VSI by filtering the Virtual Network Identifier (VNI). |

Command Default

None

Command Modes

Global configuration (config)

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.

Examples

This example shows how to clear information associated with an EVB session:

```
Device(config)# feature evb
Device(config)# clear evb hosts ip 192.0.2.1
```

Related Commands

| Command | Description |
|--------------------------------------|--|
| feature evb | Enables the EVB session on a device. |
| clear evb statistics | Clears Edge Virtual Bridge (EVB) statistic counters. |

clear evb statistics

To clear Edge Virtual Bridge (EVB) statistic counters, use the **clear evb statistics** command in global configuration mode.

clear evb statistics

Syntax Description This command has no arguments or keywords.

Command Default None

Command Modes Global configuration (config)

| 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 command does not require a license.

Examples This example shows how to clear an EVB statistic counter:

```
Device(config)# feature evb
Device(config)# clear evb statistics
```

| Related Commands | Command | Description |
|------------------|-----------------------------|---|
| | clear evb | Clears information associated with Edge Virtual Bridging (EVB). |
| | feature evb | Enables the EVB session on a device. |

clear fabric access

To clear specific user sessions and disconnect specific user from the Extensible Messaging and Presence Protocol (XMPP) server, or to clear fabric access statistics, use the **clear fabric access** command in privileged EXEC mode.

```
clear fabric access {statistics | user username}
```

Syntax Description

| | |
|-----------------------------|---|
| statistics | Clears user statistics such as ping parameters. |
| user <i>username</i> | Clears the specified user connection. |

Command Default

No statistics are cleared, and no session is cleared.

Command Modes

Privileged EXEC (#)

Command History

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

Examples

The following example show how to clear access statistics of the XMPP server:

```
Device# clear fabric access statistics
```

The following example show how to clear specific user sessions and disconnect a user specified as "spines":

```
Device# clear fabric access user spines
```

Related Commands

| Command | Description |
|---|---|
| fabric access attach device | Attaches a remote device in the fabric network to an XMPP server. |
| fabric access attach group | Attaches a group of devices in the fabric network to an XMPP server. |
| fabric access create group | Creates one or more groups of devices on the fabric access network using the XMPP server. |

clear fabric connectivity cable-plan

To clear the current cable plan, use the **clear fabric connectivity cable-plan** command in privileged EXEC mode.

clear 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

Before you import a new cable plan, use this command to clear the existing one.

To clear a cable plan that is already saved to the startup configuration, specify this command and then configure the **copy running-config startup-config** command.

Examples

The following example shows how to clear an existing cable plan:

```
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# clear fabric connectivity cable-plan
```

clear fabric connectivity neighbors

To clear all information about neighbors or subset of neighbors from the neighbor cache, use the **clear fabric connectivity neighbors** command in privileged EXEC mode.

```
clear fabric connectivity neighbors [interface {ethernet slot-number/port-number | mgmt interface-number}]
stale]
```

Syntax Description

| | |
|-------------------------------------|---|
| interface | (Optional) Clears cache of neighbors connected to an interface. |
| ethernet | (Optional) Specifies the Ethernet interface. |
| <i>slot-number/port-number</i> | (Optional) Slot number and port number. |
| mgmt <i>interface-number</i> | (Optional) Specifies the management interface and the interface number. |
| stale | (Optional) Clears neighbor cache information for stale or purged neighbors. |

Command Modes

Privileged EXEC (#)

Command History

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

Usage Guidelines

Use this command to delete a single entry, all entries, or all error entries from the network neighbor cache. You should manually clear an already secured port in the neighbor cache if recabling is desired to immediately remove old or stale entries. If you have a switch that was previously in the network but has since gone stale (because it was removed or taken down), the only way to completely remove it from the neighbor cache is by using this command. You have to enable the cable management feature using the **feature cable-management** command to be able to use the **clear fabric connectivity neighbors** command.

Examples

The following example shows how to clear neighbor cache from the Ethernet interface:

```
Device# clear fabric connectivity neighbors interface ethernet 1/1
```

Related Commands

| Command | Description |
|---|--|
| errdisable recovery cause | Enables automatic recovery of an application from an error-disabled state. |
| fabric connectivity cable-plan import | Imports a cable plan from a local or a remote location. |

| Command | Description |
|---|--|
| fabric connectivity mismatch action delay | Delays the port error-disable action on detecting cabling errors for a specified time. |
| fabric connectivity tier | Configures the tier level of a device. |

clear fabric database dci

To clear the connectivity outside fabric from a Border Leaf to an Edge Router on a tenant, use the **clear fabric database dci** command.

```
clear fabric database dci vrf vrf-name node-id ipaddr peer-id ipaddr
```

Syntax Description

| | |
|------------------------------|---|
| vrf <i>vrf-name</i> | Deletes the VRF from the node identified by node ID and associated interface and BGP configurations, which were created by the auto-pull command. |
| node-id <i>ipaddr</i> | Identifies the node ID (usually management IP address) of the node on which the command is issued. |
| peer-id <i>ipaddr</i> | Identifies the peer ID of the node specified by node ID. |

Command Modes

Global configuration (config)

Command History

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

Examples

The following sample shows how to clear connectivity outside fabric using the **clear fabric database dci** command:

```
Device(config)# clear fabric database dci vrf VRF1 node-id 1.1.1.1 peer-id 2.2.2.2
```

clear fabric database statistics

To clear the external database statistics such as number of messages sent or received, pending requests, access errors, and access timeouts, use the **clear fabric database statistics** command in privileged EXEC mode.

Using LDAP or RADIUS

```
clear fabric database statistics [type {network | cabling | profile}] [server-proto {ldap | radius}] {host
hostname | ip ip-address} [port port-number]]]
```

Using XMPP

```
clear fabric database statistics [type {network | cabling | profile}] [server-proto xmpp {host hostname |
ip ip-address}] [port port-number] db-jid jid]]]
```

Syntax Description

| | |
|-------------------------|--|
| type | (Optional) Specifies the type of database. |
| network | (Optional) Specifies a network database. |
| cabling | (Optional) Specifies a cable management database. |
| profile | (Optional) Specifies a port or switch profile database. |
| server-proto | (Optional) Specifies a database protocol. |
| ldap | (Optional) Specifies the use of Lightweight Directory Access Protocol (LDAP). |
| radius | (Optional) Specifies the use of RADIUS. |
| xmpp | (Optional) Specifies the use of Extensible Messaging and Presence Protocol (XMPP). |
| host hostname | (Optional) Specifies the hostname of the server. |
| ip ip-address | (Optional) Specifies the IP address of the server. |
| port port-number | (Optional) Specifies the port number of the server. |
| db-jid jid | (Optional) Specifies the Jabber ID of the database. |

Command Default

None

Command Modes

Privileged EXEC (#)

Command History

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

Usage Guidelines

The **clear fabric database statistics** command is used to reset the database statistics counters to zero. But this command does not delete existing statistics memory. You can use the **show fabric database statistics** command to display per-server statistics including number of messages sent or received, pending requests, access errors, and timeouts.

Examples

The following example shows how to clear the database statistics of Jabber ID db@domain.com from the XMPP server:

```
Device# clear fabric database statistics type network server-proto xmpp db-jid db@domain.com
```

Related Commands

| Command | Description |
|---|--------------------------------------|
| show fabric database statistics | Displays fabric database statistics. |

clear fabricpath oam loopback

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

clear fabricpath oam loopback {**database** [**session** *session-handle*] | **session** *session-handle* | **statistics** [**session** *session-handle* | **summary**]}

Syntax Description

| | |
|--------------------------------------|--|
| database | Clears information about FabricPath OAM loopback database. |
| session <i>session-handle</i> | Clears information about the FabricPath OAM loopback for a specific session. |
| statistics | Clears information about FabricPath OAM loopback statistics. |
| summary | Clears summary information about fabricpath OAM loopback statistics. |

Command Modes

Privileged EXEC (#)

Command History

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

Usage Guidelines

To clear statistics for all sessions, use the **clear fabricpath oam loopback statistics** command. To clear statistics for a particular session, use the **clear fabricpath oam loopback statistics session** command. To clear summary statistics, use the **clear fabricpath oam loopback statistics summary** command.

Examples

The following example shows how to clear the FabricPath OAM loopback statistics.

```
Device# clear fabricpath oam loopback statistics
```

Related Commands

| Command | Description |
|--|---|
| show fabricpath oam loopback | Shows statistics for FabricPath OAM loopback. |

clear FabricPath oam mtrace

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

```
clear fabricpath oam mtrace {database [session session-handle] | statistics [summary]}
```

Syntax Description

| | |
|--------------------------------------|---|
| database | Clears information about the FabricPath OAM mtrace database. |
| session <i>session-handle</i> | (Optional) Clears information about the FabricPath OAM mtrace for a specific session. |
| statistics | Clears FabricPath OAM mtrace statistics. |
| summary | (Optional) Clears FabricPath OAM mtrace statistics summary. |

Command Modes

Privileged EXEC (#)

Command History

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

Examples

The following example shows how to clear the FabricPath OAM mtrace statistics command.

```
Device# clear fabricpath OAM mtrace statistics
```

Related Commands

| Command | Description |
|--|---|
| show fabricpath oam mtrace | Shows statistics for fabricpath OAM mtrace. |

clear fabricpath oam notification

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

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

Syntax Description

| | |
|-------------------|--|
| database | Clears information about FabricPath OAM notification database. |
| statistics | Clears 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 example shows how to clear the FabricPath OAM notification statistics command.

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

Related Commands

| Command | Description |
|--|--|
| show fabricpath oam notification | Shows information about for FabricPath OAM notification. |

clear fabricpath oam traceroute

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

```
clear fabricpath oam traceroute {database [session session-handle] | statistics [summary]}
```

Syntax Description

| | |
|--------------------------------------|---|
| database | Clears information about FabricPath OAM traceroute database. |
| session <i>session-handle</i> | (Optional) Clears information about for FabricPath OAM traceroute for a specific session. |
| statistics | Clears FabricPath OAM traceroute statistics. |
| summary | (Optional) Clears FabricPath OAM traceroute statistics summary. |

Command Modes

Privileged EXEC (#)

Command History

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

Examples

The following example shows how to clear the FabricPath OAM traceroute statistics command.

```
Device# clear fabricpath OAM traceroute statistics
```

Related Commands

| Command | Description |
|--|---|
| show fabric oam traceroute | Shows statistics for FabricPath OAM traceroute. |

configure profile

To configure a profile, use the **configure profile** command in privileged EXEC mode. To remove a configured profile, use the **no** form of this command.

configure profile *profile-name*

no configure profile *profile-name*

Syntax Description

| | |
|---------------------|---------------------------------------|
| <i>profile-name</i> | Name of the profile to be configured. |
|---------------------|---------------------------------------|

Command Default

A profile is not configured.

Command Modes

Privileged EXEC (#)

Command History

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

Usage Guidelines

You can specify a maximum of 80 characters for the *profile-name* argument. Once you configure a profile name, this profile is available in the list of profiles that can be used to configure profile parameters. Use the **show running-config** command to display all configured profiles and their parameters.

When you configure a profile, the command mode changes to configuration profile mode. You can configure profile parameters into a template in the configuration profile mode.

Use the **show config-profile** command to view the list of configured profiles.

Examples

The following example shows how to configure a profile named pname:

```
Device# configure profile pname
Device(config-profile)#
```

The following example shows how to configure profile parameters in the configuration profile mode:

```
Device# configure profile sample
Device(config-profile)# vrf context sample-vrf
Device(config-profile-vrf)# end
```

copy scheduled-config

To configure a file containing CLI commands that you want to apply on the next reboot of the device, use the **copy scheduled-config** command in any command mode.

copy *filename* **scheduled-config**

Syntax Description

| | |
|-------------------------|--|
| <i>filename</i> | Name of the configuration file . |
| scheduled-config | Specifies the schedule of the configuration at the specified source to apply on the next reboot of the device. |

Command Default

None

Command Modes

Any command mode

Supported User Roles

network-admin

vdc-admin

Command History

| Release | Modification |
|---------|--|
| -- | This command was introduced in an earlier Cisco NX-OS release. |

Usage Guidelines

The **copy scheduled-config** command specifies the schedule of the configuration at the specified source to apply on the next reboot of the device. This command must be called explicitly within the POAP (Power On Auto Provisioning) script to allow the POAP boot process to continue at the next reboot. When PowerOn Auto Provisioning (POAP) is in progress, any important information or errors are displayed over the serial console, aiding the administrator to troubleshoot in case of problems.

This command does not require a license.



Note

This command is used in POAP script.

Examples

This example shows how to specify that the abc file to be applied to the running configuration when the device next reloads:

```
Device# configure terminal
```

```
Device (config)# copy abc scheduled-config
```

db-jid

To configure the Jabber ID of the database using Extensible Messaging and Presence Protocol (XMPP), use the **db-jid** command in fabric database server configuration mode. To remove the Jabber ID of the database, use the **no** form of this command.

db-jid *jid* [**key-type** *key-type-value*]

no db-jid *jid* [**key-type** *key-type-value*]

Syntax Description

| | |
|---------------------------------------|---|
| <i>jid</i> | Jabber ID of the database. |
| key-type <i>key-type-value</i> | (Optional) Specifies the key type for the database queries. The valid value is 1. |

Command Default

Jabber ID of the database is 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

You can specify the Jabber ID to which the database manager sends search queries by using the **db-jid** command.

Examples

The following example shows how to configure the Jabber ID db@domain.com using XMPP:

```
Device# configure
Device(config)# fabric database type network
Device(config-fabric-db)# server protocol xmpp host host1
Device(config-fabric-db-server)# db-jid db@domain.com key-type 1
```

Related Commands

| Command | Description |
|--------------------------|--|
| db-table | Configures a database table using LDAP. |
| user-jid | Configures the Jabber ID and password of the switch that is used to connect to the server. |

db-security

To configure a database security, use the **db-security** command in fabric database server configuration mode.

db-table user *username* **password** *password* [**shared-secret** *name*]

no db-table user *username* **password** *password* [**shared-secret** *name*]

Syntax Description

| | |
|----------------------------------|----------------|
| user <i>username</i> | User ID. |
| password <i>password</i> | Password. |
| shared-secret <i>name</i> | Shared secret. |

Command Default

The database security is 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

You can specify the database security mechanism by using the **db-security** command.

Examples

```
device# configure
device(config)# fabric database type network
device(config-fabric-db)# server protocol ldap host host1
device(config-fabric-db-server)# db-table ou=networks,dc=host,dc=com key-type 1
device(config-fabric-db-server)# db-security user cn=admin,dc=cisco,dc=com password cisco123
```

Related Commands

| Command | Description |
|--------------------------|--|
| db-jid | Configures the Jabber ID of the database using XMPP. |
| db-table | Configures a database table using LDAP. |

db-table

To configure a database table using Lightweight Directory Access Protocol (LDAP), use the **db-table** command in fabric database server configuration mode. To remove the database table, use the **no** form of this command.

db-table *table-name* [**key-type** *key-type-value*]

no db-table *table-name* [**key-type** *key-type-value*]

Syntax Description

| | |
|---------------------------------------|---|
| <i>table-name</i> | Name of the database table. |
| key-type <i>key-type-value</i> | (Optional) Specifies the key type for the database queries. The valid value is 1. |

Command Default

The database table is 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

You can specify the database table name to which the database manager sends search queries by using the **db-table** command.

Examples

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

```
Device# configure terminal
Device(config)# fabric database type network
Device(config-fabric-db)# server protocol ldap host host1
Device(config-fabric-db-server)# db-table ou=networks,dc=host,dc=com key-type 1
```

Related Commands

| Command | Description |
|------------------------|--|
| db-jid | Configures the Jabber ID of the database using XMPP. |

debug evb

To enable debugging of events associated with an Edge Virtual Bridging (EVB) session, use the **debug evb** command in privileged EXEC mode. To disable debugging, use the **no** form of this command.

debug evb {all | cli | errors | events | ha | periodic | pss | trace | verbose}

no debug evb {all | cli | errors | events | ha | periodic | pss | trace | verbose}

Syntax Description

| | |
|-----------------|--|
| all | Enables debugging of all events in an EVB session. |
| cli | Enables debugging of CLI command processing events only. |
| errors | Enables debugging of only errors in an EVB session. |
| events | Enables debugging of only general events in an EVB session. |
| ha | Enables debugging of only High Availability (HA) related events in an EVB session. |
| periodic | Enables debugging of only periodic events in an EVB session. |
| pss | Enables debugging of only persistent storage service (PSS) related events in an EVB session. |
| trace | Enables debugging of detailed processing traces in an EVB session. |
| verbose | Enables debugging of verbose mode in an EVB session. |

Command Default

Debugging of events in an EVB session is disabled.

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 **debug evb** command on the device.

Examples

The following example shows how to enable debugging of detail processing traces in an EVB session:

```
Device# configure terminal  
Device(config)# feature evb  
Device(config)# end  
Device# debug evb errors events
```

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

```
Device# show debug evb  
Debugs Enabled: errors events
```

default-information originate (BGP)

To configure a Border Gateway Protocol (BGP) routing process to distribute a user-defined default route, use the **default-information originate** command. To disable the advertisement of a default route, use the **no** form of this command.

default-information originate always rd *rd-value* route-target *rt*

no default-information originate always rd *rd-value* route-target *rt*

Syntax Description

| | |
|-------------------------------------|--|
| always | Generates the default route if the route is not in the BGP routing information base (RIB). |
| rd <i>rd-value</i> | <p>Specifies a value for the route distinguisher (RD). The format of the <i>rd-value</i> argument is one of the following formats:</p> <ul style="list-style-type: none"> • <i>16-bit autonomous-system-number:arbitrary 32-bit number</i>, such as 101:3. • <i>32-bit IPaddress:arbitrary 16-bit number</i>, such as 192.02.0.15:1. <p>The colon (:) is required.</p> |
| route-target <i>rt-value</i> | <p>Specifies a value for the route target (RT). The format of the <i>rt-value</i> argument is one of the following formats:</p> <ul style="list-style-type: none"> • <i>16-bit autonomous-system-number:arbitrary 32-bit number</i>, such as 101:3. • <i>IPaddress:arbitrary 16-bit number</i>, such as 192.02.0.15:1. <p>The colon (:) is required.</p> |

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 is used to configure a BGP routing process to advertise a default route with a user-specified route distinguisher (RD) and export route target (RT). This route is only advertised to fabric-internal peers.

Because no Multiprotocol Label Switching (MPLS) label is allocated for this route, it does not get advertised to fabric-external peers.

This command does not require a license.

Examples

The following example shows how to originate and redistribute a default route in BGP for a border leaf switch:

```
router bgp 100
  address-family ipv4 unicast
    default-information originate always rd 192.02.0.15:1 route-target 192.02.0.15:1
  address-family ipv6 unicast
    default-information originate always rd 192.02.0.15:1 route-target 192.02.0.15:1
```

To enable a leaf switch to import the configured default route into a leaf-switch VRF, you must use the **route-target import** command in the VRF address family configuration mode to configure a matching import RT. The following example shows how to redistribute a default route in BGP for a leaf switch:

```
vrf context foo
  address-family ipv4 unicast
    route-target import 192.02.0.15:1
```

Related Commands

| Command | Description |
|--------------------------------|---------------------------|
| address-family | Configures multicast VPN. |

define

To create user-defined parameters for a parameter list, use the **define** command in parameter list configuration mode. To remove user-defined parameters from a parameter list, use the **no** form of this command.

define *parameter-name* [**integer**|**ipaddr**|**ipv6addr**|**mac-addr**|**string**] [*value*]

no define *parameter-name* [**integer**|**ipaddr**|**ipv6addr**|**mac-addr**|**string**] [*value*]

Syntax Description

| | |
|-----------------------|---|
| <i>parameter-name</i> | Parameter name. |
| integer | (Optional). Specifies the data type as an integer. |
| ipaddr | (Optional). Specifies the address as an IPv4 address. |
| ipv6addr | (Optional). Specifies the address as an IPv6 address. |
| mac-addr | (Optional). Specifies the address as a MAC address. |
| string | (Optional). Specifies the data type as a string. |
| <i>value</i> | (Optional). Parameter data type or address type value or parameter description. <ul style="list-style-type: none"> Use the <i>value</i> argument with the parameter name to describe the parameter. Use the <i>value</i> argument with a data type or address type to assign a value. |

Command Default

User-defined parameters are not created.

Command Modes

Parameter list configuration (config-param-list)

Command History

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

Usage Guidelines

User-defined parameters that you create using the **define** command are associated with a parameter list. A parameter list can be created using the **param-list** command.

You can use existing user-defined parameters and associate values (such as integer, IP address, and MAC address) to them.

Examples

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

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

Related Commands

| Command | Description |
|--------------------------|---------------------------------------|
| instance | Configures a parameter list instance. |

description (fabricpath-oam)

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

description *description*

no description

Syntax Description

| | |
|--------------------|--|
| <i>description</i> | The description for the FabricPath OAM profile. The range is 1 to 64 characters. |
|--------------------|--|

Command Default

A description for the FabricPath OAM profile 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. |

Examples

The following shows how to configure a description for a FabricPath OAM profile.

```
Device(config)# fabricpath oam profile 100
Device (config-fp-oam-profile)# description profile-description
```

Related Commands

| Command | Description |
|--|--------------------------------------|
| fabricpath oam profile | Configures a FabricPath OAM profile. |

dot1q (fabricpath-oam)

To specify that a FabricPath Operation, Administration, and Maintenance (OAM) flow profile must include a dot1q tag, use the **dot1q** command in FabricPath oam flow profile configuration mode. To remove the dot1q tag, use the **no** form of this command.

dot1q *vlan-id* [*cos service-value*]

no dot1q

Syntax Description

| | |
|--------------------------|--|
| <i>vlan-id</i> | Specifies the flow profile VLAN ID. |
| <i>cos service-value</i> | (Optional) Specifies the class of service (CoS). The range is from 0 to 7. |

Command Default

Dot1q tag is not included in the FabricPath OAM flow profile.

Command Modes

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

Command History

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

Usage Guidelines

802.1Q tunneling enables service providers to use a single VLAN to support customers who have multiple VLANs, while preserving customer VLAN IDs and keeping traffic in different customer VLANs segregated. Use this command to enter 802.1Q or 802.1ad configuration with CoS value.

Examples

The following example shows how to configure a FabricPath OAM flow profile and specify a 802.1Q tag.

```
Device(config)# fabricpath oam profile 100
Device (config-fp-oam-profile)# flow forward
Device (config-fp-oam-profile-flow)# dot1q 100 cos 5
```

Related Commands

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

encapsulation dot1Q

To enable IEEE 802.1Q encapsulation of traffic on a specified subinterface in a virtual LAN (VLAN), use the **encapsulation dot1q** command. To disable encapsulation, use the **no** form of this command.

encapsulation dot1Q *vlan-id*

no encapsulation dot1Q *vlan-id*

Syntax Description

| | |
|----------------|--|
| <i>vlan-id</i> | Specifies the VLAN to set when the interface is in access mode. The range is from 1 to 4094 except for the VLANs reserved for internal switch use. |
|----------------|--|

Command Default

No encapsulation

Command Modes

Subinterface configuration mode

Command History

| Release | Modification |
|---------|--|
| -- | This command was introduced in an earlier Cisco NX-OS release. |

Usage Guidelines

IEEE 802.1Q encapsulation is configurable on Ethernet interfaces. IEEE 802.1Q is a standard protocol for interconnecting multiple switches and routers and for defining VLAN topologies.

Use the **encapsulation dot1q** command in subinterface range configuration mode to apply a VLAN ID to the subinterface.

This command does not require a license.

Examples

This example shows how to enable dot1Q encapsulation on a subinterface for VLAN 30:

```
Device(config-if)# interface fastethernet 4/1.100
Device(config-subif)# encapsulation dot1q 30
```

errdisable detect cause

To enable error-disable (errdisable) detection for an application, use the **errdisable detect cause** command in global configuration mode. To disable error-disable detection, use the **no** form of this command.

errdisable detect cause {acl-exception | all | link-flap | loopback | miscabling}

no errdisable detect cause {acl-exception | all | link-flap | loopback | miscabling}

Syntax Description

| | |
|----------------------|--|
| acl-exception | Enables error-disabled detection for access-list installation failures. |
| all | Enables error-disabled detection for all causes. |
| link-flap | Enables error-disabled detection on link-state flapping. |
| loopback | Enables error-disabled detection on loopback detected by unidirectional link detection (UDLD). |
| miscabling | Enables error-disabled detection on a miscabled port. |

Command Default

Error-disable detection is enabled.

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 miscabling keyword was added. |

Examples

The following example shows how to disable error-disabled detection on a miscabled port:

```
Device# configure terminal
Device(config)# no errdisable detect cause miscabling
```

Related Commands

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

| Command | Description |
|---|---|
| fabric connectivity cable-plan import | Imports a cable plan from a local or a remote location. |
| show interface status err-disabled | Displays information about interfaces that are in error-disabled state. |

errdisable recovery cause

To enable automatic recovery of an application from an error-disabled (errdisable) state, use the **errdisable recovery cause** command in global configuration mode. To return to the default setting, use the **no** form of this command.

```
errdisable recovery cause {all | bpduguard | failed-port-state | link-flap | loopback | miscabling |
psecure-violation | security-violation | storm-control | udd | vpc-peerlink}
```

```
errdisable recovery cause {all | bpduguard | failed-port-state | link-flap | loopback | miscabling |
psecure-violation | security-violation | storm-control | udd | vpc-peerlink}
```

Syntax Description

| | |
|---------------------------|---|
| all | Enables the timer to recover from all causes. |
| bpduguard | Enables the timer to recover from the bridge protocol data unit (BPDU) guard error disable state. |
| failed-port-state | Enables the timer to recover from the Spanning Tree Protocol (STP) set port state failure. |
| link-flap | Enables the timer to recover from link-state flapping. |
| loopback | Enables timer to recover from the loopback error disabled state detected by Unidirectional Link Detection (UDLD). |
| miscabling | Enables the timer to automatically recover miscabled ports from an error-disabled state. |
| psecure-violation | Enables the timer to recover from the psecure-violation disable state. |
| security-violation | Enables the timer to recover from the 802.1x violation disable state. |
| storm-control | Enables the timer to recover from the storm control error-disabled state. |
| udd | Enables the timer to recover from the UDLD error-disabled state. |
| vpc-peerlink | Enables the timer to recover from an inconsistent virtual port channel (vPC) peer-link error-disabled state. |

Command Default

Automatic recovery of any application from an error-disabled state is disabled.

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 miscabling keyword was added. |

Usage Guidelines

Use the **errdisable recovery cause** command to enable an automatic recovery of an application on the interface from an error-disabled state. This command tries to bring the interface out of the error-disabled state once all the causes have timed out. The interface automatically tries to come up again after 300 seconds. To change this interval, use the **errdisable recovery interval** command.

This command does not require a license.

Examples

This example shows how to automatically recover miscabled ports from an error-disabled state:

```
Device# configure terminal
Device(config)# errdisable recovery cause miscabling
```

Related Commands

| Command | Description |
|---|---|
| errdisable detect cause | Enables error-disable detection for an application. |
| errdisable recovery interval | Configures the error disable recovery timer. |
| fabric connectivity cable-plan import | Imports a cable plan from a local or a remote location. |
| show interface status err-disabled | Displays information about interfaces that are in error-disabled state. |

errdisable recovery interval

To configure the error disable recovery timer, use the **errdisable recovery interval** in global configuration mode. To remove this configuration, use the **no** form of this command.

errdisable recovery interval *interval*

no errdisable recovery interval

Syntax Description

| | |
|-----------------|---|
| <i>interval</i> | Timer interval in seconds. The range is from 30 to 65535. |
|-----------------|---|

Command Default

The default is 300 seconds.

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

Use the **errdisable recovery interval** command to configure the recovery timer. This command does not require a license.

Examples

This example shows how to configure the recovery timer:

```
Device# configure terminal
Device(config)# errdisable recovery interval 32
```

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. |
| fabric connectivity cable-plan import | Imports a cable plan from a local or a remote location. |
| show interface status err-disabled | Displays information about interfaces that are in error-disabled state. |

ether-type (fabricpath-oam)

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

ether-type *ether-type*

no ether-type

Syntax Description

| | |
|-------------------|---|
| <i>ether-type</i> | The flow profile ether-type. The range is from 0x0 to 0xffff. |
|-------------------|---|

Command Default

Flow profile ether-type 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

Ether-type is the payload of an Ethernet Frame. In the FabricPath OAM packet header, the ether type comes after VLAN.

Examples

The following shows how to configure a description for a FabricPath OAM profile.

```
Device(config)# fabricpath oam profile 100
Device (config-fp-oam-profile)# ether-type 0x8903
```

Related Commands

| Command | Description |
|--|--------------------------------------|
| fabricpath oam profile | Configures a FabricPath OAM profile. |

evb mac

To configure the Virtual Station Interface (VSI) Discovery and Configuration Protocol (VDP) multicast MAC address for the Edge Virtual Bridge (EVB) feature on a device, use the **evb mac** command in global configuration mode. To return to the default, use the **no** form of this command.

evb mac *mac-address*

no evb mac *mac-address*

Syntax Description

| | |
|--------------------|----------------------------|
| <i>mac-address</i> | VDP multicast MAC address. |
|--------------------|----------------------------|

Command Default

The VDP multicast MAC address for EVB is not configured.

Command Modes

Global configuration (config)

Command History

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

Usage Guidelines

To configure the device to use a VDP multicast MAC address, the EVB feature needs to be enabled globally on the device using the **feature evb** command.

Examples

This example shows how to configure a VDP multicast MAC address:

```
Device(config)# feature evb
Device(config)# evb mac 01-23-45-67-89-ab
```

Related Commands

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

evb reinit-keep-alive

To configure the Virtual Station Interface (VSI) Discovery and Configuration protocol (VDP) keepalive parameter for the Edge Virtual Bridging (EVB) feature on a device, use the **evb reinit-keep-alive** command in global configuration mode. To return to the default, use the **no** form of this command.

evb reinit-keep-alive *timer*

no evb reinit-keep-alive *timer*

Syntax Description

| | |
|--------------|--|
| <i>timer</i> | Timer exponent to calculate the keepalive time in seconds. The range is from 22 to 31. |
|--------------|--|

Command Default

The default reinit-keep-alive timer exponent is 25.

Command Modes

Global configuration (config)

Command History

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

Usage Guidelines

Use the **feature evb** command to enable the EVB feature globally on the device before configuring the keepalive parameter. After a VDP request is successful, a refresh request is expected within the keep-alive time. If the refresh request is not received within the keepalive time, device revokes the configuration changes. You must configure the correct reinit-keepalive EVB parameter to align with the network scale as each virtual machine contributes a refresh message as per the keepalive time.

Examples

The following examples shows how to configure the keepalive parameter for EVB:

```
Device(config)# feature evb
Device(config)# evb reinit-keep-alive 22
```

Related Commands

| Command | Description |
|---|---|
| evb resource-wait-delay | Configures the resource wait delay parameter for EVB. |
| feature evb | Enables the EVB session on a device. |

evb resource-wait-delay

To configure the Virtual Station Interface (VSI) Discovery and Configuration protocol (VDP) resource wait delay parameter for the Edge Virtual Bridge (EVB) feature on a device, use the **evb resource-wait-delay** command in global configuration mode. To return to the default, use the **no** form of this command.

evb resource-wait-delay *timer*

no evb resource-wait-delay *timer*

Syntax Description

| | |
|--------------|--|
| <i>timer</i> | Timer exponent to calculate the actual delay in seconds. The range is from 22 to 31. |
|--------------|--|

Command Default

The default resource wait delay timer exponent is 25.

Command Modes

Global configuration (config)

Command History

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

Usage Guidelines

Use the **feature evb** command to enable the EVB feature globally on the device before configuring the resource wait delay parameter.

When a VDP request is received, a series of configuration changes are triggered on the device. The resource-wait-delay parameter indicates the maximum waiting time for a device to complete the configuration change. If the change is not completed within the wait delay parameter, then the VDP request fails. You can configure the resource-wait-delay EVB parameter to align with specific configuration scale and requirement.

Examples

The following example shows how to configure the VDP resource wait delay parameter:

```
Device(config)# feature evb
Device(config)# evb resource-wait-delay 22
```

Related Commands

| Command | Description |
|---------------------------------------|---|
| evb reinit-keep-alive | Configures the keepalive parameter for EVB. |
| feature evb | Enables the EVB session on a device. |

fabric access attach device

To attach a remote device in the fabric network to an Extensible Messaging and Presence Protocol (XMPP) server, use the **fabric access attach device** command in privileged EXEC mode.

fabric access attach device *device-name*

Syntax Description

| | |
|--------------------|--|
| <i>device-name</i> | Name of the remote device in the fabric network. |
|--------------------|--|

Command Default

The remote device is not attached.

Command Modes

Privileged EXEC (#)

Command History

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

Examples

The following example shows how to attach a remote device to the XMPP server:

```
Device# fabric access attach device device1
```

Related Commands

| Command | Description |
|--|--|
| clear fabric access | Clears specific user sessions and disconnect a specific user from the XMPP server, or clears fabric access statistics. |
| fabric access attach group | Attaches a group of devices in the fabric network to an XMPP server. |
| fabric access create group | Creates one or more groups of devices on the fabric access network using the XMPP server. |

fabric access attach group

To attach a group of devices in the fabric network to an Extensible Messaging and Presence Protocol (XMPP) server, use the **fabric access attach group** command in privileged EXEC mode.

fabric access attach group *group-name*

| Syntax Description | |
|--------------------|-------------------------------|
| <i>group-name</i> | Name of the group of devices. |

Command Default The group of devices in the fabric network is not attached to the XMPP server.

Command Modes Privileged EXEC (#)

| Command History | Release | Modification |
|-----------------|-------------|------------------------------|
| | 7.0(0)N1(1) | This command was introduced. |

Usage Guidelines A group may consist of only one device.

Examples The following example shows how to attach a group of devices to the fabric network through the XMPP server:
Device# **fabric access attach group group1**

| Related Commands | Command | Description |
|------------------|---|--|
| | clear fabric access | Clears specific user sessions and disconnect a specific user from the XMPP server, or clears fabric access statistics. |
| | fabric access attach device | Attaches a remote device in the fabric network to an XMPP server. |
| | fabric access attach group | Attaches a group of devices in the fabric network to an XMPP server. |
| | fabric access create group | Creates one or more groups of devices on the fabric access network using the XMPP server. |

fabric access create group

To create one or more groups of devices on the fabric access network using the Extensible Messaging and Presence Protocol (XMPP) server, use the **fabric access create group** command in privileged EXEC mode. To remove one or more groups of devices from the fabric access network, use the **no** form of this command.

fabric access create group *group-name1* [*group-name2*, *group-name3*...]

no fabric access create group *group-name1* [*group-name2*, *group-name3*...]

Syntax Description

| | |
|--|--|
| <i>group-name1</i> | Name of the group of devices. |
| [<i>group-name2</i> , <i>group-name3</i> ...] | [Optional] Names of additional groups. |

Command Default

A fabric access group is not created.

Command Modes

Privileged EXEC (#)

Command History

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

Usage Guidelines

A group may consist of only one device.

Examples

The following example shows how to create a group on the fabric access network using the XMPP server:

```
Device# fabric access create group group1
```

Related Commands

| Command | Description |
|---|--|
| clear fabric access | Clears specific user sessions and disconnect a specific user from the XMPP server, or clears fabric access statistics. |
| fabric access attach device | Attaches a remote device in the fabric network to an XMPP server. |

fabric access group

To configure a group to which the switch needs to join or subscribe to in a fabric access network, use the **fabric access group** command in global configuration mode. To remove the switch from a group, use the **no** form of this command.

fabric access group *group-name-1* [*group-name-2*, *group-name-3*,...]

no fabric access group

Syntax Description

| | |
|--|--|
| <i>group-name-1</i> | Name of the group to which the switch needs to join or subscribe to. |
| [<i>group-name-2</i> , <i>group-name-3</i> , ...] | (Optional) Name of the additional groups. |

Command Default

A switch in a fabric access network is not joined to any group.

Command Modes

Global configuration (config)

Command History

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

Usage Guidelines

Switches do not join all the groups in a fabric access network by default. The **fabric access group** command should be configured on all or required switches across the network in order to enable the switches to join the specified group(s) in a network.

Examples

The following example shows how to configure a switch to subscribe to group “spines” and group “rr”:

```
Device(config)# fabric access group spines rr
```

Related Commands

| Command | Description |
|--|---|
| fabric access local-help | Gets the online command syntax help using the currently logged-in switch. |
| fabric access login | Logs in to a fabric access server. |

fabric access local-help

To get the online command syntax help using the currently logged-in local switch instead of remote switches accessed via the fabric access group chat, use the **fabric access local-help** command in privileged EXEC mode. To disable the online help on the currently logged-in local switch, use the **no** form of this command.

fabric access local-help

no fabric access local-help

Syntax Description This command has no arguments or keywords.

Command Default Online help is not enabled for the currently logged-in local switch in the fabric access group chat mode.

Command Modes Privileged EXEC (#)

| Command History | Release | Modification |
|-----------------|-------------|------------------------------|
| | 7.0(0)N1(1) | This command was introduced. |

Usage Guidelines Online help can be used to find the available options after typing in a keyword. By default, online help is executed on the remote devices that generate several keyword options for each device in a network. To retrieve only those keywords related to the currently logged in device, the **fabric access local-help** command is used.

Examples The following example shows how to enable the online-help option only for the currently logged-in local device in the fabric access group chat mode:

```
Device(config)# fabric access local-help
```

fabric access login

To log in to the fabric access server, use the **fabric access login** command in privileged EXEC mode. To log out of the server, use the **no** form of this command.

fabric access login *password*

no fabric access login

Syntax Description

| | |
|-----------------|--|
| <i>password</i> | Password for users to log in to the fabric access server. A password can contain any combination of alphanumeric characters. |
|-----------------|--|

Command Default

Users are not logged in to the fabric access server.

Command Modes

Privileged EXEC (#)

Command History

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

Examples

The following example shows how to log in to the fabric access server:

```
Device# fabric access login cisco123
```

Related Commands

| Command | Description |
|--|--|
| fabric access local-help | Gets the online command syntax help using the currently logged-in switch. |
| fabric access group | Configures a group to which the switch needs to join or subscribe to in a fabric access network. |

fabric access ping

To check the network reachability of the switch to the fabric access server and to enable the Extensible Messaging and Presence Protocol (XMPP) ping, use the **fabric access ping** command in global configuration mode. To disable the ping, use the **no** form of this command.

fabric access ping [*interval seconds response seconds retry time*]

no fabric access ping

Syntax Description

| | |
|--------------------------------|---|
| interval <i>seconds</i> | (Optional) Specifies the frequency of XMPP ping messages that are sent out. The default interval is 60 seconds. The range is from 30 to 180. |
| response <i>seconds</i> | (Optional) Specifies the expected time to receive a ping response from the fabric access server. The default response value is 10 seconds. The range is from 3 to 30. |
| retry <i>time</i> | (Optional) Specifies the number of ping messages that are sent without receiving a successful response from the fabric access server. The default retry value is 5. The range is from 1 to 5. |

Command Default

The network connectivity of the fabric access server is not verified.

Command Modes

Global configuration (config)

Command History

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

Examples

The following example shows how to configure the switch to send XMPP ping message to the fabric access server at a 120-second interval, with a 20-second response time expectancy and with three retries:

```
Device(config)# fabric access ping interval 120 response 20 retry 3
```

Related Commands

| Command | Description |
|-------------------------------------|--|
| fabric access group | Configures a group to which the switch needs to join or subscribe to in a fabric access network. |

fabric access prepend-id

To enable the display of the device ID in the response message of a remote device in the fabric access group chat, use the **fabric access prepend-id** command in global configuration mode. To remove the device ID in the response message, use the **no** form of this command.

fabric access prepend-id

no fabric access prepend-id

Syntax Description This command has no arguments or keywords.

Command Default The device ID of a remote device is not displayed in the response message.

Command Modes Global configuration (config)

| Command History | Release | Modification |
|-----------------|-------------|------------------------------|
| | 7.0(0)N1(1) | This command was introduced. |

Usage Guidelines The **fabric access prepend-id** command enables the user to identify the device ID of a remote device from where the response was generated. This identification enables the local grep to find information about a specific device in a network using the device ID.

Examples The following example shows how to enable the device ID being displayed in the response message of a remote device:

```
Device(config)# fabric access prepend-id
```

| Related Commands | Command | Description |
|------------------|-------------------------------------|--|
| | fabric access group | Configures a group to which the switch needs to join or subscribe to in a fabric access network. |

fabric access send device

To send a command to a host device or a list of host devices without entering the fabric access group chat mode, use the **fabric access send device** command in privileged EXEC mode.

fabric access send device *device-jid1* [*device-jid2...device-jidn*] "*cli-command*"

Syntax Description

| | |
|------------------------|--|
| <i>device-jid</i> | The Jabber ID (JID) of the single peer device to be addressed. Multiple device JIDs (<i>device-jid2...device-jidn</i>) can also be specified. |
| " <i>cli-command</i> " | The command to be executed at the device(s) whose JID(s) are listed as the recipient(s) of this command. <ul style="list-style-type: none"> The CLI command must be within quotation marks. |

Command Default

A command is not sent to the host device.

Command Modes

Privileged EXEC (#)

Command History

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

Usage Guidelines

To ensure the remote device is in the correct mode to accept the command(s), start the message to be sent with an **end** keyword followed by a space, semicolon, and the command. If there are multiple commands to be sent, each command should be separated by a space and semicolon.

Examples

The following example shows how to send a command to a host device with the JID p3-ac13-64t to enable **feature lldp** on that device:

```
Device(config)# fabric access send device p3-ac13-64t "end; conf; feature lldp"
```

The following example shows how to send a command to **show host name** on a list of host devices with the JIDs p1-sp1-48p, p1-sp2-48p, and p3-ac13-64t:

```
Device(config)# fabric access send device p1-sp1-48p p1-sp2-48p p3-ac13-64t "show hostname"
```

Related Commands

| Command | Description |
|--|---|
| fabric access send group | Sends a CLI command to a group of devices without entering fabric access group chat mode. |

fabric access send group

To send a CLI command to a group of devices without entering fabric access group chat mode, use the **fabric access send group** command in EXEC mode.

fabric access send group *group-name* "*cli-command*"

Syntax Description

| | |
|----------------------|--|
| <i>group-name</i> | Name of the group in the fabric access network to which messages are sent. |
| <i>"cli-command"</i> | CLI command to be executed for a group of devices in a fabric access network. Note The CLI command must be within quotation marks. |

Command Default

No command is sent.

Command Modes

Privileged EXEC (#)

Command History

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

Usage Guidelines

Use the **fabric access send group** command to send CLI commands to a group in a fabric access network without entering fabric access group chat mode.



Note

You need to enable the fabric access feature to use the **fabric access send group** command. Use the **feature fabric access** command to enable fabric access on a device.

Examples

This example shows how to send CLI commands to a group with the group name "spines" in a fabric access network:

```
Device(config)# feature fabric access
Device(config)# exit
Device# fabric access send group spines "show hostname"
```

Related Commands

| Command | Description |
|---------------------------------------|---|
| feature fabric access | Enables the fabric access feature for a fabric network. |

| 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 server

To configure the fabric access server to be connected to from a device, use the **fabric access server** command in global configuration mode. To disconnect the device from the fabric access server, use the **no** form of this command.

```
fabric access server dns-name [vrf {vrf-name| default | management}] [device device-name] [password password-name]
```

```
no fabric access server
```

| Syntax Description | |
|----------------------|--|
| <i>dns-name</i> | Fabric network server domain name. |
| vrf | (Optional) Configures virtual routing and forwarding (VRF) information for a fabric access server. |
| <i>vrf-name</i> | (Optional) Name of the VRF. |
| default | (Optional) Configures the default VRF name. |
| management | (Optional) Configures the management VRF name. |
| device | (Optional) Configures the device in the fabric network. |
| <i>device-name</i> | (Optional) Name of the device to be configured in the fabric network. |
| password | (Optional) Configures the password for a device in the fabric network. |
| <i>password-name</i> | (Optional) Password for the device. |

Command Default A fabric access server is not configured in a fabric network.

Command Modes Global configuration (config)

| Command History | Release | Modification |
|-----------------|-------------|------------------------------|
| | 7.0(0)N1(1) | This command was introduced. |

Usage Guidelines Use the **fabric access server** command to configure the fabric access server to be connected from the device that needs to be added to the fabric network. You need to configure the device name and password for the

device in the fabric access server. The device name has to be a unique name in the network on a fabric access server.

**Note**

You need to enable the fabric access feature to access and view the **fabric access server** command. Use the **feature fabric access** command to enable the fabric access feature on a device.

Examples

This example shows how to configure a fabric access server in a fabric network:

```
Device(config)# feature fabric access
Device(config)# fabric access server host1.cisco.com management password test
```

Related Commands

| Command | Description |
|--|--|
| feature fabric access | Enables the fabric access feature for a fabric network. |
| show fabric access connections | Displays the connection status of a device or a user that is connected in the fabric access network. |

fabric connectivity cable-plan enforce

To enforce an imported cable plan, use the **fabric connectivity cable-plan enforce** command in global configuration mode. To stop enforcing a cable plan, use the **no** form of this command.

fabric connectivity cable-plan enforce

no fabric connectivity cable-plan enforce

Syntax Description This command has no arguments or keywords.

Command Default A cable plan is not enforced.

Command Modes Global configuration (config)

| Command History | Release | Modification |
|-----------------|-------------|------------------------------|
| | 6.0(2)N3(1) | This command was introduced. |

Usage Guidelines When the **fabric connectivity cable-plan enforce** command is configured, all type, length, value (TLV) fields received on a device are checked against the enforced cable plan. If no cable plan is enforced, checks are ignored.

After importing a cable plan if the cable plan is not enforced or if the **no fabric connectivity cable-plan enforce** command is configured, all cable plan checks are disabled. However, the imported cable plan will remain in the device.

Use the **show fabric connectivity cable-plan** command to view the currently enforced cable plan.

Examples The following example shows how to enforce an already imported cable plan:

```
Device(config)# fabric connectivity cable-plan enforce
```

| Related Commands | Command | Description |
|------------------|--|--|
| | feature cable-management | Enables the cable management feature for a network |

fabric connectivity cable-plan generate

To automatically generate a cable plan based on the topology of the data center neighbors, use the **fabric connectivity cable-plan generate** command in privileged EXEC mode.

fabric connectivity cable-plan generate [*plan-name*]

Syntax Description

| | |
|------------------|--|
| <i>plan-name</i> | (Optional) Filename of the newly generated cable plan. |
|------------------|--|

Command Default

A cable plan is not automatically generated.

Command Modes

Privileged EXEC (#)

Command History

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

Usage Guidelines

The **fabric connectivity cable-plan generate** command creates a valid cable plan from the output of the **show fabric connectivity neighbors** command. You can modify the autogenerated cable plan to suit the link or connectivity endpoints within your data center.

If you do not specify a *plan-name*, then the filename is a generic time-stamped name.



Note

Before configuring this command you must enable the **feature lldp** command and then the **feature cable-management** command in global configuration mode.

Examples

The following example shows how to autogenerate a cable plan named cplan1:

```
Device# fabric connectivity cable-plan generate cplan1
```

Related Commands

| Command | Description |
|--|---|
| feature cable-management | Enables the cable management feature for a network |
| show fabric connectivity neighbors | Displays cache information about fabric connectivity neighbors. |

fabric connectivity cable-plan import

To import a cable plan from a local or a remote location, use the **fabric connectivity cable-plan import** command in privileged EXEC mode.

fabric connectivity cable-plan import [**ftp**: | **scp**: | **sftp**: | **tftp**:] **bootflash**: [**vrf** *vrf-name*] [**update**] [**verbose**]

Syntax Description

| | |
|----------------------------|--|
| ftp: | (Optional) Imports a cable plan from a remote FTP location. |
| scp: | (Optional) Imports a cable plan from a remote Secure Copy Protocol location. |
| sftp: | (Optional) Imports a cable plan from a remote Secure FTP location. |
| tftp: | (Optional) Imports a cable plan from a remote TFTP location. |
| bootflash: | Imports a cable plan from the local location. |
| vrf <i>vrf-name</i> | (Optional) Displays information about the specified virtual routing and forwarding instance. |
| update | (Optional) Updates the existing cable plan with a newly imported cable plan. |
| verbose | (Optional) Prints all errors regarding the cable plan file import to the console. |

Command Default

Cable plans are not imported.

Command Modes

Privileged EXEC (#)

Command History

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

Usage Guidelines

When you copy a cable plan from a remote location, you must specify the local location to save the file. If a remote import fails, the downloaded file is deleted automatically.

Once you configure the command, you have to enter the name of the source cable plan file and the destination cable plan file.

When you specify the **fabric connectivity cable-plan import bootflash:** command, the local cable plan file that exists in the bootflash is imported. Imported cable plans are stored in the device memory. Once imported, cable plans are persistent across reboots if you configure the **copy running-config startup-config** command.

Examples

The following example shows how the cp.xml file is imported from the local location:

```
Device# fabric connectivity cable-plan import bootflash:cp.xml
```

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

```
Device#
```

The following sample output from the **fabric connectivity cable-plan import bootflash: verbose** command displays cable plan import failures:

```
Device# fabric connectivity cable-plan import bootflash:cp_failure.xml verbose
```

```
/bootflash/cp_failure.xml:6: element LINK_INFO: Schemas validity error : Element
'{http://www.cisco.com/cableplan/Schema2}LINK_INFO',
  attribute 'destPort': [facet 'pattern'] The value 'Eth11' is not accepted by the pattern
'Eth[0-9]{1,3}/[0-9]{1,3}'.
/bootflash/cp_failure.xml:6: element LINK_INFO: Schemas validity error : Element
'{http://www.cisco.com/cableplan/Schema2}LINK_INFO',
  attribute 'destPort': 'Eth11' is not a valid value of the atomic type
'{http://www.cisco.com/cableplan/Schema2}portType'.
/bootflash/cp_failure.xml:7: element LINK_INFO: Schemas validity error : Element
'{http://www.cisco.com/cableplan/Schema2}LINK_INFO',
  attribute 'destPort': [facet 'pattern'] The value 'Et1/1' is not accepted by the pattern
'Eth[0-9]{1,3}/[0-9]{1,3}'.
/bootflash/cp_failure.xml:7: element LINK_INFO: Schemas validity error : Element
'{http://www.cisco.com/cableplan/Schema2}LINK_INFO',
  attribute 'destPort': 'Et1/1' is not a valid value of the atomic type
'{http://www.cisco.com/cableplan/Schema2}portType'.
/bootflash/cp_failure.xml:11: element LINK_INFO: Schemas validity error : Element
'{http://www.cisco.com/cableplan/Schema2}LINK_INFO',
  attribute 'destPort': [facet 'pattern'] The value 'Eth18881/2' is not accepted by the pattern
'Eth[0-9]{1,3}/[0-9]{1,3}'.
/bootflash/cp_failure.xml:11: element LINK_INFO: Schemas validity error : Element
'{http://www.cisco.com/cableplan/Schema2}LINK_INFO',
  attribute 'destPort': 'Eth18881/2' is not a valid value of the atomic type
'{http://www.cisco.com/cableplan/Schema2}portType'.
/bootflash/cp_failure.xml:13: element LINK_INFO: Schemas validity error : Element
'{http://www.cisco.com/cableplan/Schema2}LINK_INFO',
  attribute 'destPort': [facet 'pattern'] The value 'th1/2' is not accepted by the pattern
'Eth[0-9]{1,3}/[0-9]{1,3}'.
/bootflash/cp_failure.xml:13: element LINK_INFO: Schemas validity error : Element
'{http://www.cisco.com/cableplan/Schema2}LINK_INFO',
  attribute 'destPort': 'th1/2' is not a valid value of the atomic type
'{http://www.cisco.com/cableplan/Schema2}portType'.
```

```
Error: Failed to import cable-plan: Invalid cable-plan
```

```
Device#
```

The following is a sample cable plan for a data center with two spine devices and three leaf devices. This cable plan describes a data center that contains the following switches: spine1, spine2, leaf1, leaf2, and leaf3. The sourceChassis, spine2 is connected to destChassis, leaf1 through Ethernet 1/1. If your data center network has more interfaces than the ones described in the cable plan, a warning about the absence is logged.

```
<?xml version="1.0" encoding="UTF-8"?>
<CISCO_NETWORK_TYPES version="1.0" xmlns="http://www.cisco.com/cableplan/Schema2"
xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xsi:schemaLocation="http://www.cisco.com/cableplan/Schema2 nxos-cable-plan-schema.xsd ">
  <DATA_CENTER networkLocation="san-jose" idFormat="hostname">
    <CHASSIS_INFO sourceChassis="spine1" type="n7k">
      <LINK_INFO sourcePort="Eth2/1" destChassis="leaf1" destPort="Eth2/1"/>
      <LINK_INFO sourcePort="Eth2/2" destChassis="leaf2" destPort="Eth2/1"/>
      <LINK_INFO sourcePort="Eth2/3" destChassis="leaf3" destPort="Eth2/1"/>
    </CHASSIS_INFO>

    <CHASSIS_INFO sourceChassis="spine2.cisco.com" type="n7k">
      <LINK_INFO sourcePort="Eth1/1" destChassis="leaf1" destPort="Eth1/2"/>
      <LINK_INFO sourcePort="Eth1/2" destChassis="leaf2" destPort="Eth1/2"/>
      <LINK_INFO sourcePort="Eth1/3" destChassis="leaf3" destPort="Eth1/2"/>
    </CHASSIS_INFO>
  </DATA_CENTER>
</CISCO_NETWORK_TYPES>
```

```

    </CHASSIS_INFO>
  </DATA_CENTER>
</CISCO_NETWORK_TYPES>

```

The following paragraphs describe the lines and the XML tags and attributes associated with each line in the cable plan. These lines are required headings for XML processing and Cisco-specific headers that denote that this is a Cisco cable plan. The format must be exactly the same as shown in the following example for all cable plans. Failure to adhere to the format results in a rejected cable plan.

The `CISCO_NETWORK_TYPES` tag is required and it is the parent tag for the entire XML cable plan. The entire cable plan must be within this tag.

```

<?xml version="1.0" encoding="UTF-8"?>
<CISCO_NETWORK_TYPES version="1.0" xmlns="http://www.cisco.com/cableplan/Schema2"
xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xsi:schemaLocation="http://www.cisco.com/cableplan/Schema2 nxos-cable-plan-schema.xsd ">

```

The `DATA_CENTER` tag is required and it houses all information about each chassis in the plan. The `networkLocation` tag is required and it specifies the location of the data center. The `idFormat` tag is required and it specifies the format in which IDs are present in subsequent entries. In the Cisco NX-OS Release 6.0(2)N3(1), the only supported format is "hostname". Cable plans that do not use "hostname" as the format are rejected.

```

<DATA_CENTER networkLocation="san-jose" idFormat="hostname">

```

The `CHASSIS_INFO` tag is required and it describes one single chassis. All interfaces that belong to the `sourceChassis` that administrators want to include in the cable plan must be within this tag. The `sourceChassis` tag is required and it describes the chassis that all subsequent interfaces (described below by `LINK_INFO` tags) belong to.

Include all details about the interfaces on a device inside the `CHASSIS_INFO` tag. If you need to check interfaces on another device, include them inside another `CHASSIS_INFO` tag. There is no limit to the number of unique `CHASSIS_INFO` tags in a cable plan.

In the following example, all interfaces within the `CHASSIS_INFO` tag belong to `spine1` chassis. The specified chassis name must be the fully qualified domain name of the device. If a domain name is configured for the hostname, the hostname must be followed by the domain name. For example, `spine1.cisco.com` if `spine1` is configured with the domain name, `cisco.com`.

The `type` tag is required and it specifies the type of chassis. In the Cisco NX-OS Release 6.0(2)N3(1), only Cisco Nexus switches are supported. This tag is not case sensitive. Cable plans that do not adhere to the "n#k" format are rejected.

```

<CHASSIS_INFO sourceChassis="spine1" type="n7k">

```

The `LINK_INFO` tag is required and it describes an interface connection from the `sourceChassis` to the `destChassis`. In the following example, the `spine1` source port on Ethernet 2/1 is connected to the `leaf1` destination port on Ethernet 2/1, `spine1` source port on Ethernet 2/2 is connected to `leaf2` destination port on Ethernet 2/1, and so on.

The `sourcePort` tag is required and it denotes the port on the `sourceChassis`. Source ports must be unique per chassis. For example, `spine1` must not specify multiple connections that come from port Ethernet 2/1. The cable plan import will not fail if you do not specify unique ports. However, a warning is displayed on the console and only the first entry is read and checked by the cable plan.

The `destChassis` tag is required and it denotes the destination chassis that the `sourceChassis` is connected to. The `destChassis` name must be the fully qualified domain name.

The destPort tag is required and it denotes the port on the destination chassis. Like the sourcePort, the destPort must be unique to the destChassis.

```
<LINK_INFO sourcePort="Eth2/1" destChassis="leaf1" destPort="Eth2/1"/>  
<LINK_INFO sourcePort="Eth2/2" destChassis="leaf2" destPort="Eth2/1"/>  
<LINK_INFO sourcePort="Eth2/3" destChassis="leaf3" destPort="Eth2/1"/>
```

Related Commands

| Command | Description |
|--|---|
| clear fabric connectivity cable-plan | Clears the current cable plan. |
| feature cable-management | Enables the cable management feature for a network |
| show fabric connectivity cable-plan | Displays the cable plan available in the system memory. |

fabric connectivity mismatch action delay

To delay the port error-disable action on detecting cabling errors for a specified time, use the **fabric connectivity mismatch action delay** command in global configuration mode. To remove this configuration, use the **no** form of this command

fabric connectivity mismatch action delay *time*

no fabric connectivity mismatch action delay *time*

Syntax Description

time Time in seconds to delay action. The range is from 30 to 3600.

Command Default

Delayed action on mismatched errors is not configured.

Command Modes

Global configuration (config)

Command History

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

Usage Guidelines

Use this command to delay, by seconds, any action caused by mismatched errors. For example, if you set the action delay to 30 seconds and have errors configured to error-disable ports, then in case an error is detected at a network port, the port is error-disabled after a period of 30 seconds. If a valid entry is received within the wait period of 30 seconds, the port will remain open and not be error-disabled. You have to enable the cable management feature using the **feature cable-management** command to be able to configure the **fabric connectivity mismatch action delay** command.

Examples

The following example shows how to configure a time period to delay action caused by mismatch errors. Here the time to delay action is set to 35 seconds.

```
Device# configure terminal
Device(conf)# feature cable-management
Device(conf)# fabric connectivity mismatch action delay 35
```

Related Commands

| Command | Description |
|---|---|
| show fabric connectivity neighbors | Displays cache information about fabric connectivity neighbors. |
| fabric connectivity cable-plan import | Imports a cable plan from a local or a remote location. |
| fabric connectivity tier | Configures the tier level of a device. |

fabric connectivity pod

To configure the point of delivery (PoD) a switch belongs to, use the **fabric connectivity pod** command in global configuration mode. To disable this configuration, use the **no** form of this command.

fabric connectivity pod {*id*}

no fabric connectivity pod {*id*}

Syntax Description

| | |
|-----------|---------------------------------|
| <i>id</i> | Data type, specified as string. |
|-----------|---------------------------------|

Command Default

Switch connectivity PoD is not configured.

Command Modes

Global configuration (config)

Command History

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

Usage Guidelines

Cisco Dynamic Fabric Automation (DFA) topology has three tiers consisting of super spines, spines, and leaves. Any switch that has a tier level defined as three or above is considered as a super spine, and is present at the top level. Leaves are grouped as PoDs.

Examples

The following example shows how to configure a connectivity PoD:

```
Device(config)# fabric connectivity pod 200
```

fabric connectivity tier

To configure the tier level of a device in the Dynamic Fabric Automation (DFA) fabric, use the **fabric connectivity tier** command in global configuration mode. To remove this configuration, use the **no** form of this command.

fabric connectivity tier *tier-level*

no fabric connectivity tier *tier-level*

| | | |
|---------------------------|-------------------|---|
| Syntax Description | <i>tier-level</i> | Tier level of the device. The range is from 1 to 16, where 1 indicates a leaf, 2 indicates a level 1 spine, 3 indicates a level 2 spine, and so on. |
|---------------------------|-------------------|---|

| | |
|------------------------|---|
| Command Default | Tier level of the device is not configured. |
|------------------------|---|

| | |
|----------------------|-------------------------------|
| Command Modes | Global configuration (config) |
|----------------------|-------------------------------|

| | | |
|------------------------|----------------|-----------------------------|
| Command History | Release | Modification |
| | 7.0(0)N1(1) | This command was introduced |

| | |
|-------------------------|--|
| Usage Guidelines | To detect and resolve miscabling issues in a Clos network, DFA provides the user the functionality to assign a sequential number (called the tier number) at each stage of the network topology. Every device in a stage can be associated with the corresponding tier level number assigned to the stage the device is in. All leaf switches (in the lowest level of the Clos stage) are provisioned with a tier level of 1, the next higher-level stage devices (1st stage of spine switches) are provisioned with a tier level value of 2, and the next higher-level stage devices (2nd stage of spine switches) are provisioned with a tier level of 3, and so on. Use the fabric connectivity tier command to assign the tier-level number for a specific device in the fabric. You have to enable the cable management feature using the feature cable-management command to be able to configure the fabric connectivity tier command. |
|-------------------------|--|

| | |
|-----------------|--|
| Examples | The following example shows how you can assign a tier number to a specific device in the topology: |
|-----------------|--|

```
Device# configure terminal
Device(config)# feature cable-management
Device(config)# fabric connectivity tier 2
```

| | | |
|-------------------------|---|---|
| Related Commands | Command | Description |
| | clear fabric connectivity neighbors | Clears all information about neighbors from the neighbor cache. |

| Command | Description |
|---|--|
| fabric connectivity cable-plan import | Imports a cable plan from a local or a remote location. |
| fabric connectivity mismatch action delay | Delays the port error-disable action on detecting cabling errors for a specified time. |

fabric database auto-pull

To auto provision the network and tenant configuration on supported Cisco Nexus switches in a Cisco Dynamic Fabric Automation (DFA) deployment, use the **fabric database auto-pull** command in privileged EXEC mode.

```
fabric database auto-pull {dot1q dot1q_id| vni vni_id} interface interface-id
```

Syntax Description

| | |
|--------------------------------------|---|
| dot1q <i>dot1q-id</i> | Specifies that the tenant be provisioned based on the IEEE 802.1Q (dot1q) tag identifier of the Cisco DFA host. Note dot1q <i>dot1q-id</i> requires the fabric database mobility domain to be defined first. |
| vni <i>vni-id</i> | Specifies that the tenant be provisioned based on the virtual network identifier (VNI) of the Cisco DFA host. The range is from 4096 to 16773119. Note This keyword and <i>argument</i> combination is not supported on the Cisco Nexus 5500 Platform Switches. |
| interface <i>interface-id</i> | Specifies the interface to which the host is associated. The allowed interfaces are Ethernet and port channel. |

Command Modes

Privileged EXEC (#)

Command History

| Release | Modification |
|-------------|---|
| 7.0(0)N1(1) | This command was introduced. |
| 7.0(2)N1(1) | This command was supported in Cisco Nexus 5500 Platform Switches. |

Usage Guidelines

Use this command if auto configuration triggers such as data plane or VDP are not available for a Cisco Nexus 5500 Platform Switch, or provisioning is proactive, that is, before the host comes online.



Note

This command will respects the recovery and clear timers.

Use the **fabric database auto-pull** command to trigger the command-line interface-based auto configuration, and preprovision the switch configurations for the specified IEEE 802.1Q (dot1q) or virtual network identifier (VNI) of the host.

Command-line interface-based auto configuration is the only supported configuration option for Cisco Nexus 55xx switches with Cisco NX-OS Release 7.0(2)N1(1) and later releases. Before Cisco NX-OS Release 7.0(2)N1(1), you had to manually provision the tenant switches.

The **fabric database auto-pull** command must be executed on all the switches where auto configuration is required, including both the switches in a virtual port channel+ (vPC+) topology.

If you are using a script to issue this command, make sure that the configuration has successfully completed before starting the next request.

This command is a part of configuration profiles, and will only appear in a running configuration if the **show running-config expand-port-profile** command is used.

To save the auto configuration, use the **copy running start** command on all the switches, including both the switches in a vPC+ topology.

Use the **interface interface-id** keyword and argument to allow for a per-interface profile map.

**Note**

Only switchport interfaces are permitted.

Examples

The following example shows how to configure the **fabric database auto-pull** command:

```
switch# fabric database auto-pull dot1q 1000 interface e1/1
switch# fabric database auto-pull vni 110000 interface e1/1
```

- In the following example, if interface ethernet 2/4 is specified, then profile map 100 will be used. If ethernet 2/5 is specified, profile map 200 will be used:

```
fabric database profile-map 100
  ethernet-tag encapsulation dot1q 50 dynamic
fabric database profile-map 200
  ethernet-tag encapsulation dot1q 50 static tenant-tmpl
!
interface Ethernet2/4
  fabric database inherit-profile-map 100
!
interface Ethernet2/5
  fabric database inherit-profile-map 200
```

Related Commands

| Command | Description |
|---|--|
| clear fabric database host | Clears the Cisco DFA host ID from the tenant switch configuration. |
| fabric database mobility-domain | Configures the mobility domain name. |

fabric database auto-pull dci

To trigger the Node to extract an entry from LDAP, use the **fabric database auto-pull dci** command in global configuration mode. You must configure the **feature-set fabric** and **feature fabric forwarding** commands before you can configure the **fabric database dci** command.

```
fabric database auto-pull dci vrf vrf-name node-id ipaddr peer-id ipaddr
```

Syntax Description

| | |
|------------------------------|--|
| vrf <i>vrf-name</i> | Deploys the VRF at this node. It is one of the three primary keys to the LDAP entry. |
| node-id <i>ipaddr</i> | Specifies the IP address to be used to identify this switch (it is applicable to both border and dc edge router) in LDAP. The value of <i>ipaddr</i> must match the IP address that you configured in the Cisco Prime Data Center Network Manager (DCNM) when you set up your topology. |
| peer-id <i>ipaddr</i> | Specifies the node ID of the peer node in VRF-lite. The value for <i>ipaddr</i> is as follows: <ul style="list-style-type: none"> For a VRF-lite or CE-PE, the value is the IP address of the separate Edge Router device that pairs with the border leaf switch. |

Command Default

The new partition (VRF) is not configured on a tenant.

Command Modes

Global configuration (config)

Command History

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

Usage Guidelines

Cisco DFA fabrics communicate to other Cisco DFA fabrics and to the external networks through one or more border leaf switches. If a border leaf does not support Edge Router functionalities, such as Multi Protocol Label Switching or virtual private network, Virtual Private LAN Service (VPLS), or Overlay Transport Virtualization (OTV), a separate Edge Router device pairs with the border leaf switch to enable Layer 3 connectivity to the end points in the same VRF in another fabric. This is called a VRF-lite or CE-PE.

The **fabric database auto-pull dci** command creates an Edge Router VRF-specific auto configuration on the border leafs or the Edge Router devices or both, and enables Layer 3 connectivity to end points in the same VRF in another fabric or to the outside world (WAN), whether the other fabric is geographically collocated or not.

This command is supported on the border leaf switch in a Edge Router in a VRF-lite or CE-PE solution.

**Note**

EL2 license is required for fabric forwarding. For GW and auto-config, L3 Base and LAN Enterprise licenses are required with no grace-period for L3 Base.

Examples

The following sample shows how to create connectivity outside fabric using the **fabric database auto-pull dci** command:

```
Device(config)# fabric database auto-pull dci vrf VRF1 node-id 1.1.1.1 peer-id 2.2.2.2
```

Related Commands

| Command | Description |
|---|--|
| fabric forwarding switch-role | Specifies the role of a device in the network. |
| feature-set fabric | Enables configuring host mobility-specific commands. |
| show fabric database dci | Displays information for auto-configured VRFs in Cisco DFA deployment. |

fabric database mobility-domain

To configure the mobility domain name, use the **fabric database mobility-domain** command in global configuration mode. To remove the mobility domain name, use the **no** form of this command.

fabric database mobility-domain *domain-name*

no fabric database mobility-domain *domain-name*

Syntax Description

| | |
|--------------------|--|
| <i>domain-name</i> | Mobility domain name up to 128 characters. |
|--------------------|--|

Command Default

The mobility domain name is not configured.

Command Modes

Global configuration (config)

Command History

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

Usage Guidelines

Use the **fabric database mobility-domain** command to configure the mobility domain name that is use to retrieve the profile name and parameters if the profiles are stored remotely. Profiles stored remotely are indexed by the mobility domain and VLAN pair.

Mobility domain uses only data plane MAC learning as the network auto-configuration trigger.

The specified *domain-name* must match the "mobility domain ID" specified in the DCNM as part of the workload-automation settings. If they do not match, the auto-configuration profile will not be populated with the appropriate parameters (for example, segment-IP or subnet).

Mobility domain requires either 802.1Q trunk header transport or, if an access-port is used, a trunk with a native VLAN and matching allowed VLAN between the host (server) and the leaf switch.

Examples

The following example shows how to configure the mobility domain name:

```
Device# configure terminal
Device(config)# install feature-set fabric
Device(config)# feature-set fabric
Device(config)# feature fabric forwarding
Device(config)# fabric database mobility-domain mymobilitydomain
```

Related Commands

| Command | Description |
|---|--|
| fabric database auto-pull | Provisions the tenant switch based on a Cisco DFA host ID. |

| Command | Description |
|--------------------------------------|--|
| fabric database type | Configures the external database. |
| feature-set fabric | Enables configuring host mobility-specific commands. |

fabric database override-profile

To configure fabric database override network profile name, use the **fabric database override-profile** command in global configuration mode. To remove the override profile name, use the **no** form of this command.

fabric database override-profile *ProfileName*

no fabric database override-profile *ProfileName*

Syntax Description

| | |
|--------------------|--|
| <i>ProfileName</i> | Name of the network profile to be changed. |
|--------------------|--|

Command Default

The profile returned from the Lightweight Directory Access Protocol (LDAP) is honored as part of the auto-configuration trigger.

Command Modes

Global configuration (config)

Command History

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

Usage Guidelines

An example use-case for this command is the usage on a Cisco Nexus 5500 Platform Switch that does not support segment ID. Consequently, the Cisco Nexus 5500 Platform Switch can only be a Layer-2 leaf. This command-line interface will force Cisco Nexus 5500 Platform Switches to always use a specified profile regardless of the profile associated with the network entry in the LDAP database.

Examples

The following example shows how to override a profile name using the **fabric database override-profile** command:

```
Device(config)# fabric database override-profile Profile1
```

The following example shows how to auto configure Cisco Nexus 5500 series switches using the **fabric database override-profile** command:

```
Device(config)# fabric database override-profile defaultNetworkL2GblVlanProfile
```

fabric database override-vrf-profile

When a particular switch needs to use a different include profile for tenant, than what is specified in the tenant profile, use the **fabric database override-vrf-profile** command in global configuration mode. To disable the overridden profile name, use the **no** form of this command.

fabric database override-vrf-profile *vrfProfileName*

no fabric database override-vrf-profile *vrfProfileName*

Syntax Description

| | |
|-----------------------|--|
| <i>vrfProfileName</i> | Name of the network profile to be changed. |
|-----------------------|--|

Command Default

The profile returned from the Lightweight Directory Access Protocol (LDAP) is honored as part of the auto-configuration trigger.

Command Modes

Global configuration (config)

Command History

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

Usage Guidelines

When you configure a different include profile name for a tenant, it works by substituting the profile specified in the LDAP database locally at the switch in which this command is configured.

Examples

The following example shows how the border leaf can use the **fabric database override-vrf-profile** command to specify a border leaf specific version of an include profile name:

```
Device(config)# fabric database override-vrf-profile vrf-common-universal-bl
```

fabric database profile-map

To configure a fabric database profile map, use the **fabric database profile-map** command in global configuration mode. To disable a fabric database profile map, use the **no** form of this command.

```
fabric database profile-map {global | id}
```

```
no fabric database profile-map {global | id}
```

| Syntax Description | | |
|--------------------|---------------|---|
| | global | Displays the global profile applicable to all the interfaces. |
| | <i>id</i> | Profile map ID. |

Command Default A profile map is not assigned.

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 configure Leaf map by using the **fabric database profile-map** command:

```
Device(config)# fabric database profile-map global
Device(config-profile-map-global)# ethernet-tag encapsulation dot1q default dynamic
Device(config-profile-map-global)# ethernet-tag encapsulation vni default dynamic
Device(config-profile-map-global)# vdp vni default dynamic
Device(config-profile-map-global)# vdp dot1q default dynamic
```

The following sample shows how to configure Border Leaf map by using the **fabric database profile-map** command:

```
Device(config)# fabric database profile-map global
Device(config-profile-map-global)# vrf default dynamic
```

fabric database refresh

To refresh the database, use the **fabric database refresh** command in privileged EXEC mode.

```
fabric database refresh {dot1q | include-vrf | vni}
```

Syntax Description

| | |
|--------------------|--|
| dot1q | Displays the dot1q encapsulation. |
| include-vrf | Displays the include vrf name. |
| vni | Displays the Virtual Network Identifier (VNI). |

Command Modes

Privileged EXEC (#)

Command History

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

Usage Guidelines

In the virtual port channel (vPC) setup, the **fabric database refresh** command is supported only on the vPC primary switch. Also this command requires a matching vni or dot1q hosts. You can use the **show fabric database host** command to list active vni or dot1q hosts.

Examples

The following example shows how to refresh dot1q by using the **fabric database refresh** command:

```
Device# fabric database refresh dot1q 50
```

fabric database timer

To configure the fabric database timers, use the **fabric database timer** command in global configuration mode. To disable fabric database timers, use the **no** form of this command.

fabric database timer {cleanup| recovery| vdp}

no fabric database timer {cleanup| recovery| vdp}

Syntax Description

| | |
|-----------------|--|
| cleanup | Displays the delay, in minutes, before a profile is deleted. The range is from 0 to 1440. The default is 15. |
| recovery | Displays the delay, in minutes, before a recovered profile is deleted. The range is from 0 to 1440 (during startup) and range is from 15 to 1440 (during runtime). Although default recovery timer is not set, in (POAP) leaf templates, it is set to 30. Also, the values from 0 to 1440 are supported for backward compatibility (during startup configuration). |
| vdp | Displays the delay, in minutes, before any new Virtual Station Interface (VSI) Discovery and Configuration Protocol (VDP) requests (after un-apply) are accepted. The range is from 0 to 1440. The default is 2. |

Command Default

None

Command Modes

Global configuration (config)

Command History

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

Usage Guidelines

The following are the guidelines for each timer:

- The cleanup timer indicates the amount of time the Host Mobility Manager (HMM) will delay before a profile is deleted. The cleanup timer starts when the last host in a given Bridge Domain/VLAN/segment goes offline.
- Recovery timer indicates the amount of time the profiles are recovered from the startup configuration, they are not applicable after this timeout if there is no traffic to override this state. This applies after a copy running-config startup-config followed by a reload. HMM builds its state from Port-Profile Manager which recovers it from the startup config. If there are no hosts that are received within this time interval for a given segment, then the corresponding profile will be aged out. There is no recovery timer by default set which means on a copy running-config, startup-config and reload, the configuration will not be aged out. However, in the POAP leaf templates this value is set to 30 minutes.

- The VDP hold timer indicates the amount of time the HMM will not allow VDP to instantiate a profile after that profile is un-applied. This is done because when the Virtual Station Interface (VSI) going down is removed, it is not completely removed from the system for at least a minute. After the last VDP virtual machine goes away for a given segment, HMM will not honor new VDP requests until the VDP hold time lapses in order to prevent unnecessary profile updates.

Examples

The following example shows how to configure VDP hold timeout value, in minutes, by using the **fabric database timer** command:

```
Device(config)# fabric database timer vdp 5
```

The following example shows how to verify the timer values:

```
Device# show fabric database host summary
```

```
Number of instances applied :    5
Number of VDP hosts         :    5
Recovery Timeout Value     :   30 minutes
Cleanup Timeout Value      :   15 minutes
VDP Add Suppression Timeout :    2 minutes
```

Related Commands

| Command | Description |
|--|--|
| show fabric database host summary | Displays the relevant auto configuration timers. |

fabric database type

To configure the external database, use the **fabric database type** command in global configuration mode. To remove this configuration, use the **no** form of this command

fabric database type {network| profile}

no fabric database type {network| profile}

Syntax Description

| | |
|----------------|---|
| network | Configures the network database. |
| profile | Configures the config-profile database. |

Command Default

The external database is not configured.

Command Modes

Global configuration (config)

Command History

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

Examples

The following example shows how to configure a database type:

```
Device# configure terminal
Device(config)# fabric database type network
Device(config)# fabric database type profile
```

Related Commands

| Command | Description |
|--|---|
| clear fabric database statistics | Clears the external database statistics such as number of messages sent or received, pending requests, access errors, and access timeouts |
| show fabric database statistics | Displays fabric database statistics. |

fabric-soo

To configure the site of origin (SoO) extended community value in a Border Gateway Protocol (BGP) update message, use the **fabric-soo** command. To remove the configuration, use the **no** form of this command.

fabric-soo *extended-community-value*

no fabric-soo *extended-community-value*

Syntax Description

extended-community-value The format for the *extended-community-value* is *asn:number*.

- The value for the *asn* argument is either a 2-byte autonomous system number (ASN) or a 4-byte ASN.
- The range for the *number* argument is from 0 to 65535 for a 2-byte ASN or from 0 to 4294967295 for a 4-byte ASN.

The colon (:) is required.

Command Default

The SoO extended community value is not included in the BGP update message.

Command Modes

Router BGP configuration (config-router)

Command History

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

Usage Guidelines

A BGP community is a group of destinations that share a common property. Community information is included as a path attribute in Border Gateway Protocol (BGP) update messages. This information identifies community members and enables you to perform actions on a group without having to elaborate upon each member.

The site-of-origin (SoO) extended community is a BGP extended community attribute that is used to identify routes that have originated from a site and prevents the prefix from being advertised back to the source site. BGP uses the SoO value that is associated with a route to prevent internal routes from looping back into the fabric.

This command does not require a license.

Examples

The following example shows how to configure a value for the SoO extended community attribute in BGP update messages from BGP 100:

```
router bgp 100
  fabric-soo 1:1
```

fabric forwarding anycast-gateway-mac

To specify the MAC address of the server facing ports across all leaf nodes, use the **fabric forwarding anycast-gateway-mac** command in global configuration mode. To disable the anycast gateway MAC address, use the **no** form of this command.

fabric forwarding anycast-gateway-mac *mac-address*

no fabric forwarding anycast-gateway-mac *mac-address*

Syntax Description

| | |
|--------------------|--|
| <i>mac-address</i> | Anycast gateway MAC address of the switch. |
|--------------------|--|

Command Default

The anycast gateway MAC address is not configured.

Command Modes

Global configuration (config)

Command History

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

Usage Guidelines

The anycast gateway MAC address is used per interface; hence, it is replicated across all the switch virtual interfaces (SVI) that are supporting proxy gateway or anycast gateway.

Examples

The following example shows how to configure the anycast gateway MAC address:

```
Device> enable
Device# configure terminal
Device(config)# install feature-set fabric
Device(config)# feature-set fabric
Device(config)# fabric forwarding anycast-gateway-mac EE:EE:EE:EE:EE:EE
```

Related Commands

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

fabric forwarding control-segment

To configure a control segment under a switched virtual interface (SVI) in a default virtual routing and forwarding (VRF) instance, use the **fabric forwarding control-segment** command in interface configuration mode.

fabric forwarding control-segment

Syntax Description This command has no arguments or keywords.

Command Default A control segment is not configured.

Command Modes Interface configuration (config-if)

| Command History | Release | Modification |
|-----------------|-------------|------------------------------|
| | 7.0(0)N1(1) | This command was introduced. |

Usage Guidelines Use the **fabric forwarding control-segment** command to specify an SVI interface to be a fabric control VLAN interface on which adjacencies are established in the default VRF. You can configure only one SVI interface in the default VRF as a fabric control VLAN interface.



Note You can also configure a control segment under a bridge domain.

Examples The following example shows how to specify an SVI interface to be a fabric control VLAN interface:

```
Device> enable
Device# configure terminal
Device(config)# interface vlan 2
Device(config-if)# fabric forwarding control-segment
```

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

fabric forwarding conversational-aging

To configure the conversational aging timeout value, use the **fabric forwarding conversational-aging** command in global configuration mode. To remove the aging timeout value, use the **no** form of this command.

fabric forwarding conversational-aging *timeout*

no fabric forwarding conversational-aging *timeout*

Syntax Description

| | |
|----------------|---|
| <i>timeout</i> | Conversational aging timeout value in minutes. The range is from 15 to 1800. The default is 30. |
|----------------|---|

Command Default

The timeout value is set to 30 minutes.

Command Modes

Global configuration (config)

Command History

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

Usage Guidelines

Use the **fabric forwarding conversational-aging** command to configure the aging timeout value that determines if a conditional route must be aged or not.

Examples

The following example shows how to set the conversational learning aging timeout value to 50 minutes:

```
Device> enable
Device# configure terminal
Device(config)# install feature-set fabric
Device(config)# feature-set fabric
Device(config)# fabric forwarding conversational-aging 50
```

Related Commands

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

fabric forwarding conversational-learning

To enable Layer 3 conversational learning-based route download into the forwarding information base (FIB), use the **fabric forwarding conversational-learning** command in global configuration mode. To disable the conversational learning-based FIB route download, use the **no** form of this command.

fabric forwarding conversational-learning all

no fabric forwarding conversational-learning

| | | |
|---------------------------|------------|---|
| Syntax Description | all | Enables conversational learning for all virtual routing and forwarding (VRF) instances. |
|---------------------------|------------|---|

| | |
|------------------------|--------------------------------------|
| Command Default | Conversational learning is disabled. |
|------------------------|--------------------------------------|

| | |
|----------------------|-------------------------------|
| Command Modes | Global configuration (config) |
|----------------------|-------------------------------|

| | | |
|------------------------|----------------|------------------------------|
| Command History | Release | Modification |
| | 7.0(0)N1(1) | This command was introduced. |

| | |
|-------------------------|--|
| Usage Guidelines | Use the fabric forwarding conversational-learning command to enable Layer 3 conversational learning. After conversational learning is enabled, the host routes are downloaded into the FIB when a conversation is detected. |
|-------------------------|--|

| | |
|-----------------|---|
| Examples | The following example shows how to enable Layer 3 conversational learning for all VRFs: |
|-----------------|---|

```
Device> enable
Device# configure terminal
Device(config)# install feature-set fabric
Device(config)# feature-set fabric
Device(config)# fabric forwarding conversational-learning all
```

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

fabric forwarding identifier

To specify a fabric forwarding identifier, use the **fabric forwarding identifier** command in global configuration mode. To remove this configuration, use the **no** form of this command.

fabric forwarding identifier *id*

no fabric forwarding identifier *id*

Syntax Description

| | |
|-----------------------------|--|
| identifier <i>id</i> | Specifies a fabric forwarding identifier number. The range is from 1 to 65535. |
|-----------------------------|--|

Command Default

A fabric forwarding identifier is not specified.

Command Modes

Global configuration (config)

Command History

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

Usage Guidelines

Use this command to configure an identifier for a DFA fabric.

The fabric forwarding identifier provides unique identification of a DFA fabric and drives Site of Origin (SoO) information as a BGP community attribute.

The SoO extended community is a BGP extended community attribute that is used to identify routes that have originated from a site so that the readvertisement of that prefix back to the source site can be prevented. The SoO extended community uniquely identifies the site from which a router has learned a route. BGP can use the SoO value associated with a route to prevent routing loops.

You can configure multiple islands of DFA fabrics that are connected to each other through a border leaf. BGP uses the fabric identifier to generate the fabric SoO value when the system is connected to an external fabric. The system also uses this identifier to generate distinct vPC SoO values for a DFA fabric.



Note

Use a single fabric forwarding identifier throughout a single DFA fabric. Do not use the same fabric forwarding identifier across multiple DFA fabrics interconnected by a border leaf.

This command is supported on the Cisco Nexus 5600 and Nexus 6000 Series switch only on Layer 3 DFA leaf nodes; it is not supported on Layer 2 DFA nodes. The command is not supported on the Cisco Nexus 5500 Series switches.

Examples

The following example shows how to configure a fabric forwarding identifier:

```
Device# configure terminal  
Device(config)# fabric forwarding identifier 1
```

Related Commands

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

fabric forwarding limit-vlan-mac

To configure the maximum number of IPs per MAC in any VLAN or segment or bridge-domain, use the **fabric forwarding limit-vlan-mac** command in global configuration mode.

fabric forwarding limit-vlan-mac <value>

Syntax Description

| | |
|--------------|--|
| <i>value</i> | Maximum number of end hosts that are allowed to have the same mapping (VLAN or MAC) in a virtual routing and forwarding (VRF). The maximum limit from 5 to 30. |
|--------------|--|

Command Default

None

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 configure the maximum number of end hosts allowed to have the same mapping (VLAN or MAC) in a given VRF by using the **fabric forwarding limit-vlan-mac** command:

```
Device(config)# fabric forwarding limit-vlan-mac 7
```

fabric forwarding port-l2dci

To configure on the layer-2 trunk port connected out from the border-leaf, use the **fabric forwarding port-l2dci** command in interface configuration mode. To disable this configuration, use the **no** form of this command.

fabric forwarding port-l2dci

no fabric forwarding port-l2dci

Syntax Description This command has no arguments or keywords.

Command Default Port configuration to DCI remains disabled.

Command Modes Interface configuration (config-if)

| Command History | Release | Modification |
|-----------------|-------------|------------------------------|
| | 7.1(0)N1(1) | This command was introduced. |

Usage Guidelines For layer-2 extension across data center fabrics, various common technologies such as VPLS, OTV, and so on are employed. When a tenant subnet spans across data center fabrics, ARP (Address Resolution Protocol) and IPv6 ND (Neighbor Discovery) packets received on a border leaf from hosts connected to other data centers should NOT be treated as if coming from local hosts (also known as the directly attached ones).

When you configure this command, clients are notified that the corresponding port is connected for layer 2 data center interconnection. After this notification, the ARP and Neighbor Discovery process will ignore ARP and Neighbor Discovery packets ingress on the port and HMM is not triggered. to add the route to ARP and Neighbor Discovery.

Examples The following example shows how to configure a port connection:

```
Device(config)# interface port-channel 43
Device(config-if)# fabric forwarding port-l2dci
```

fabric forwarding port-tracking

To determine the MAC address of the server on a leaf node by tracking the physical ports, use the **fabric forwarding port-tracking** command in global configuration mode. To disable tracking the MAC address, use the **no** form of this command.

fabric forwarding port-tracking

no fabric forwarding port-tracking

Syntax Description This command has no arguments or keywords.

Command Default No physical ports on the leaf switches will be included for port-tracking.

Command Modes Global configuration (config)

| Command History | Release | Modification |
|-----------------|-------------|------------------------------|
| | 7.0(0)N1(1) | This command was introduced. |

Usage Guidelines If multiple physical ports of a leaf switch are connected directly to other switches then a list of such physical ports can be configured using the **fabric forwarding port-tracking** command. This command helps to solve the problem described in the vswitch mobility scenario. In the absence of this config, there will be a greater traffic loss in the scenarios where a host move occurs for the hosts that are connected through vswitch. This configuration will be parsed by the HMM component. By default, no physical ports on the leaf switches will be included in this list. Port-tracking can be selectively enabled to include only those ports that are connected to a switch.

This is an optional command that may need to be supported in the absence of vswitch assist. This configuration can be used under any physical, and logical Layer-2 port-channel.

Examples The following example shows how to track the physical ports:

```
Device# configure terminal
Device(config)# interface port-channel3
  switchport mode trunk
  spanning-tree bpdufilter enable
  speed 1000
  vpc 2
  fabric forwarding port-tracking
```

fabric forwarding switch-role

To specify the role of a device in the Cisco Dynamic Fabric Automation (DFA) network, use the **fabric forwarding switch-role** command in global configuration mode. To disable the role specified for a device, use the **no** form of the command.

```
fabric forwarding switch-role { border [ leaf | spine | dci-node ] | leaf [ border ] | spine [ border ] | dci-node [ border ] }
```

```
no fabric forwarding switch-role
```

Syntax Description

| | |
|-----------------|--|
| border | (Optional) Specifies that the device is a border switch. |
| leaf | (Optional) Specifies that the device functions as a leaf switch. |
| spine | (Optional) Specifies that the device functions as a spine switch. |
| dci-node | (Optional) Specifies that the device is a Cisco Data Center Interconnect (DCI) node. Use this keyword with the border keyword to specify that the device is both a DFA border-leaf switch and a DCI node. |

Command Default

The device is configured as a DFA leaf switch.

Command Modes

Global configuration (config)

Command History

| Release | Modification |
|-------------|---|
| 7.0(0)N1(1) | This command was introduced. |
| 7.1(0)N1(1) | This command was modified. The dci-node keyword was added. |

Usage Guidelines

You can configure a switch to act like a border (leaf or spine), spine, or leaf switch. A device sends notifications to registered components whenever there is a change in the role of a device. You can specify a combination of a border and a leaf or a spine on a device. Both Border Gateway Protocol (BGP) and Intermediate System-to-Intermediate System (ISIS) protocol restart when the role of a device changes.

When the role of a node is changed to spine, the FabricPath IS-IS root priority of that node is updated to 128. (The default root priority is 64.) The role of spine introduces a change in the FabricPath root priority for the MDT-Root.



Note You can manually configure the FabricPath IS-IS root priority of any node.

This command is supported only on Layer 3 DFA leaf switches (Cisco Nexus 5600/6000 series switches); it is not supported on Layer 2 DFA switches. The command is not supported on the Cisco Nexus 5500 Platform.

Examples



Note The release 7.1(0)N1(1) does not allow switch-role change, which was applicable in the previous release 7.0(0)N1(1). You must execute the write erase command to perform a switch-role, else the switch-role command gets rejected.

The following example shows how to specify a device to be a border-spine switch:

```
Device> enable
Device# configure terminal
Device(config)# install feature-set fabric
Device(config)# feature-set fabric
Device(config)# feature fabric forwarding
Device(config)# fabric forwarding switch-role border spine
```

The following example shows how to specify a device to be a border-leaf switch:

```
Device> enable
Device# configure terminal
Device(config)# install feature-set fabric
Device(config)# feature-set fabric
Device(config)# feature fabric forwarding
Device(config)# fabric forwarding switch-role border leaf
```

Related Commands

| Command | Description |
|---|--|
| fabric database auto-pull dci | Triggers the Node to pull an entry from LDAP. |
| feature-set fabric | Enables configuring host mobility-specific commands. |

fabricpath domain default

To enter the global FabricPath Layer 2 Intermediate System-to-Intermediate System (IS-IS) configuration mode, use the **fabricpath domain default** command in global configuration mode.

fabricpath domain default

Syntax Description This command has no arguments or keywords.

Command Default None

Command Modes Global configuration (config)

| Command History | Release | Modification |
|------------------------|----------------|------------------------------|
| | 7.1(0)N1(1) | This command was introduced. |

Usage Guidelines This command requires an Enhanced Layer 2 license.

Examples This example shows how to enter the global FabricPath Layer 2 IS-IS configuration mode:

```
Device(config)# fabricpath domain default  
Device(config-fabricpath-isis)#
```

fabricpath isis bfd

To enable the Bidirectional Forwarding Detection (BFD) function for FabricPath IS-IS (Intermediate System-to-Intermediate System), use the **fabricpath isis bfd** command in interface configuration mode. To disable BFD for FabricPath IS-IS, use the **no** form of this command in interface configuration mode.

fabricpath isis bfd [disable]

no fabricpath isis bfd [disable]

Syntax Description

| | |
|----------------|--|
| disable | (Optional) Disables the FabricPath feature on the IS-IS interface. |
|----------------|--|

Command Default

The FabricPath IS-IS BFD feature is not enabled on the interface.

Command Modes

Interface configuration (config-if)

Command History

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

Usage Guidelines

You must enable **feature bfd** before using the **fabricpath isis bfd** command.

The **fabricpath isis bfd disable** command disables the BFD on the interface, but if global BFD is configured, the interface inherits the global BFD and BFD remains enabled on that interface.



Note

BFD for FabricPath supports only asynchronous mode.

The **no fabricpath isis bfd disable** command disables the BFD on the interface even if global BFD is configured. This command overrides the global BFD configuration. No BFD is configured on that interface.

BFD for FabricPath is only supported on the following interface types:

- Ethernet interface
- Port channel interface



Note

BFD for FabricPath IS-IS uses VLAN 1 for sending FabricPath IS-IS BFD packets.

You can configure a BFD for FabricPath IS-IS session on any port belonging to FabricPath (using the **switchport mode fabricpath** command). The default VLAN (VLAN 1) must be in mode fabricpath which is configured in VLAN configuration mode.

The default values for BFD interface timers are:

- Minimum receive interval: 50 milliseconds
- Minimum transmit interval: 50 milliseconds
- Detect multiplier: 3
- BFD fabricpath slow-timer: 2000 milliseconds

Examples

This example shows how to enable mode fabricpath:

```
Device(config)# vlan 1
Device(config-vlan)# mode fabricpath
```

Once mode fabricpath has been enabled, you can enable the FabricPath feature on an IS-IS interface:

```
Device(config-if)# fabricpath isis bfd
```

Related Commands

| Command | Description |
|--|---|
| show fabricpath isis | Displays information about FabricPath IS-IS. |
| show fabricpath isis interface | Displays information about the FabricPath Intermediate System-to-Intermediate System (IS-IS) interface. |

fabricpath oam profile

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

fabricpath oam profile *profile-id*

no fabricpath oam profile *profile-id*

Syntax Description

| | |
|-------------------|--|
| <i>profile-id</i> | Profile ID. The range is from 1 to 1023. |
|-------------------|--|

Command Default

A FabricPath OAM profile is not configured.

Command Modes

Global configuration (config)

Command History

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

Usage Guidelines

All FabricPath OAM profiles have default values. To display the FabricPath OAM profiles, use the **show run all** command. A FabricPath OAM profile with a profile ID of 1 is created by default, when the FabricPath feature is enabled.

Examples

The following example shows how to configure a FabricPath OAM profile with a profile ID of 100.

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

Related Commands

| Command | Description |
|--|--|
| show fabricpath oam loopback | Shows statistics for FabricPath OAM loopback. |
| show fabricpath oam mtrace | Shows statistics for fabricpath OAM mtrace. |
| show fabricpath oam notification | Shows information about for FabricPath OAM notification. |
| show fabric oam traceroute | Shows statistics for FabricPath OAM traceroute. |

feature cable-management

To enable the cable management feature for a network, use the **feature cable-management** command in global configuration mode. To disable the feature, use the **no** form of this command.

feature cable-management

no feature cable-management

Syntax Description This command has no arguments or keywords.

Command Default Disabled

Command Modes Global configuration (config)

| Command History | Release | Modification |
|-----------------|-------------|------------------------------|
| | 7.0(0)N1(1) | This command was introduced. |

Usage Guidelines Use the **feature cable-management** command to enable the cable management feature. This command does not require a license.



Note

Enable the Link Layer Discovery Protocol (LLDP) by using the **feature lldp** command prior to enabling the cable management feature.

Examples

This example shows how to enable the cable management feature:

```
Device# configure terminal
Device(config)# feature lldp
Device(config)# feature cable-management
Device(config)# exit
```

This example shows how to disable the cable management feature:

```
Device(config)# no feature cable-management
```

feature evb

To enable the Edge Virtual Bridging (EVB) feature on a device, use the **feature evb** command in global configuration mode. To disable EVB feature, use the **no** form of this command.

feature evb

no feature evb

Syntax Description This command has no arguments or keywords.

Command Default EVB is disabled.

Command Modes Global configuration (config)

| Command History | Release | Modification |
|-----------------|-------------|------------------------------|
| | 7.0(0)N1(1) | This command was introduced. |

Usage Guidelines You can enable or disable EVB globally on a device. You must use the **feature evb** command to enable and configure the EVB parameters.

Examples This example shows how to enable the EVB feature on a device:

```
Device(config)# feature evb
```

| Related Commands | Command | Description |
|------------------|---|---|
| | evb reinit-keep-alive | Configures the keepalive parameter for EVB. |
| | evb resource-wait-delay | Configures the resource wait delay parameter for EVB. |
| | show evb | Displays information associated with Edge Virtual Bridging (EVB). |

feature fabric

To enable fabric network services on a device, use the **feature fabric** command in global configuration mode. To disable the fabric network services, use the **no** form of this command.

feature fabric {**access**| **forwarding**| **multicast**}

no feature fabric {**access**| **forwarding**| **multicast**}

Syntax Description

| | |
|-------------------|---|
| access | Enables single point of access in an Extensible Messaging and Presence Protocol (XMPP) client for a fabric network. |
| forwarding | Enables the Host Mobility Manager (HMM) and release-specific HMM configuration commands. |
| multicast | Enables the Next-Gen Multicast VPN (NGMVPN) features associated with the fabric network services. |

Command Default

Fabric network services are disabled.

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 the fabric network services on a device:

```
Device# configure terminal
Device(config)# feature fabric access
Device(config)# feature fabric forwarding
Device(config)# feature fabric multicast
Device(config)# end
```

feature fabric access

To enable the fabric access feature for a fabric network, use the **feature fabric access** command in global configuration mode. To disable the fabric access feature, use the **no** form of this command.

feature fabric access

no feature fabric access

Syntax Description This command has no arguments or keywords.

Command Default Disabled

Command Modes Global configuration (config)

Command History

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

Usage Guidelines

You must use the **feature fabric access** command to enable the fabric access feature. This command does not require a license.

Examples

This example shows how to enable the fabric access feature on a device:

```
Device(config)# feature fabric access
```

This example shows how to disable the fabric access feature on a device:

```
Device(config)# no feature fabric access
```

Related Commands

| Command | Description |
|--|--|
| show fabric access connections | Displays the connection status of a device or a user that is connected in the fabric access network. |

feature fabric multicast

To enable the fabric multicast features on a device, use the **feature fabric multicast** command in global configuration mode. To disable the fabric multicast features on a device, use the **no** form of this command.

feature fabric multicast

no feature fabric multicast

This command has no arguments or keywords.

Command Default The fabric multicast features are disabled.

Command Modes Global configuration (config)

| Command History | Release | Modification |
|-----------------|-------------|------------------------------|
| | 7.0(0)N1(1) | This command was introduced. |

Examples The following example shows how to enable fabric multicast features on a device:

```
Device(config)# feature fabric multicast
```

The following example shows how to disable fabric multicast features on a device:

```
Device(config)# no feature fabric multicast
```

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

feature-set fabric

To enable configuring host mobility-specific commands, use the **feature-set fabric** command in global configuration mode.

feature-set fabric

Syntax Description

This command has no arguments or keywords.

Command Modes

Global configuration (config)

Command History

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

Usage Guidelines

This command must be configured before configuring host mobility-specific commands.

Examples

The following example shows how to enable configuring host mobility-specific commands:

```
Device> enable
Device# configure terminal
Device(config)# feature-set fabric
```

Related Commands

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

feature vn-segment-vlan-based

To enable the (VLAN)-based virtual network (VN) segment feature on a device, use the **feature vn-segment-vlan-based** command in global configuration mode. To disable VLAN-based VN segment feature, use the **no** form of this command.

```
feature vn-segment-vlan-based
no feature vn-segment-vlan-based
```

Syntax Description This command has no arguments or keywords.

Command Default The VLAN-based virtual network segment is disabled.

Command Modes Global configuration (config)

| Command History | Release | Modification |
|-----------------|-------------|------------------------------|
| | 7.0(0)N1(1) | This command was introduced. |

Usage Guidelines You can enable or disable the VLAN-based VN segment feature globally on a device. The VLAN-based VN segment feature is enabled only if the feature-set fabricpath is enabled on the device.

Examples This example shows how to enable the VLAN-based VN segment feature on a device:
 Device(config)# **feature vn-segment-vlan-based**

| Related Commands | Command | Description |
|------------------|----------------------------|--|
| | vn-segment | Configures the segment identifier of the VLAN. |
| | vni | Configures the virtual network identifier. |

flow (fabricpath-oam)

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

flow {forward | reverse}

no flow {forward | reverse}

Syntax Description

| | |
|----------------|---|
| forward | Configures the FabricPath OAM forward flow. |
| reverse | Configures the FabricPath OAM reverse flow. |

Command Default

The direction of FabricPath OAM packet flow 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 **flow** command to configure the direction of flow entropy, forward or reverse, and enter FabricPath OAM profile flow configuration mode. You can configure specific information for forward or reverse flow entropy from FabricPath OAM profile flow configuration mode.

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)# flow forward
Device(config-fb-oam-profile-flow)#
```

Related Commands

| Command | Description |
|---|---|
| fabricpath oam profile | Configures a FabricPath OAM profile. |
| protocol (fabricpath-oam) | Configures the FabricPath OAM flow protocol number. |

hardware profile route resource service-template

To configure a hardware profile Host Route Table (HRT) resource with the HRT template, use the **hardware profile route resource service-template** command in global configuration mode.

hardware profile route resource service-template *{template-name}*

Syntax Description

| | |
|----------------------|--------------------|
| <i>template-name</i> | HRT template name. |
|----------------------|--------------------|

Command Default

The HRT partition is not applied. The default HRT size is 128 kb and Station Table Management (STM) size is 128 kb MAC.

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 configure hardware profile HRT by using the **hardware profile route resource service-template** command:

```
Device(config)# hardware profile route resource service-template hrt-32-stm-224
```

Table 1: Pre-defined templates for the hardware profile route resource service-template Command

| Template Profile | Specifications |
|------------------|---|
| hrt-128-stm-128 | HRT size: 128 kb, STM size: 128 kb (default size) |
| hrt-96-stm-160 | HRT size: 96 kb, STM size: 160 kb |
| hrt-64-stm-192 | HRT size: 64 kb, STM size: 192 kb |
| hrt-32-stm-224 | HRT size: 32 kb, STM size: 224 kb |

hop (fabricpath-oam)

To configure the hop limit for a FabricPath OAM service packet protocol header, use the **hop** command in FabricPath OAM profile configuration mode. To restore the hop limit to the default value, use the **no** form of this command.

hop *hop-limit*

no hop

Syntax Description

| | |
|------------------|---|
| <i>hop-limit</i> | Hop limit. Range is from 1 to 255. Default is 64. |
|------------------|---|

Command Default

The hop limit for FabricPath OAM service packets is 64 hops.

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 hop count specified in the FabricPath OAM packet header to determine the hop limit to address issues caused by infinite loops.

Examples

The following example shows how to configure a FabricPath OAM service packet hop limit of 25.

```
Device# configure terminal
Device(config)# fabricpath oam profile 100
Device(config-fb-oam-profile)# hop 25
```

Related Commands

| Command | Description |
|---|---|
| fabricpath oam profile | Configures a FabricPath OAM profile. |
| protocol (fabricpath-oam) | Configures the FabricPath OAM flow protocol number. |

include profile

To configure a set of VLAN profile instances to refer to a common virtual routing and forwarding (VRF) instance, use the **include profile** command in profile configuration mode. To remove the reference to a common VRF instance, use the **no** form of this command.

include profile *profile-name*

no include profile *profile-name*

| Syntax Description | |
|---------------------|--|
| <i>profile-name</i> | Name of the profile. The maximum number of characters allowed is 80. |

Command Default VLAN profile instances do not refer to a common VRF instance.

Command Modes Profile configuration (config-profile)

| Command History | Release | Modification |
|-----------------|-------------|------------------------------|
| | 7.0(0)N1(1) | This command was introduced. |

Usage Guidelines Use the **include profile** command to configure a set of VRF profile instances to refer to a common VRF instance. For example, a set of VLANs can refer to the same VLAN VRF instance. Any configuration after you configure the first VLAN VRF instance will increment the reference count of the include instance. The configuration related to the VRF stays until the last instance referring to the VRF is present.

Examples The following example shows how to configure a set of VLAN profile instances to refer to a common VRF instance:

```
Device> enable
Device# configure profile p1
Device(config-profile)# configure profile p2
Device(config-profile)# include profile p1
```

| Related Commands | Command | Description |
|------------------|-----------------------------------|-----------------------|
| | configure profile | Configures a profile. |

install feature-set fabric

To enable configuring host mobility-specific commands, use the **install feature-set fabric** command in global configuration mode.

install feature-set fabric

Syntax Description

This command has no arguments or keywords.

Command Modes

Global configuration (config)

Command History

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

Usage Guidelines

This command needs to be configured before configuring host mobility-specific commands.

Examples

The following example shows how to enable configuring host mobility-specific commands:

```
Device> enable
Device# configure terminal
Device(config)# install feature-set fabric
```

Related Commands

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

instance

To create an instance of a user-defined parameter list, use the **instance** command in parameter list configuration mode. To remove an instance of a user-defined parameter list, use the **no** form of this command.

instance *instance-name*

no instance *instance-name*

Syntax Description

| | |
|----------------------|-------------------------------|
| <i>instance-name</i> | Parameter-list instance name. |
|----------------------|-------------------------------|

Command Default

A user-defined parameter-list instance is not created.

Command Modes

Parameter list configuration (config-param-list)

Command History

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

Usage Guidelines

You can create instances of a parameter list for different hosts with various values. When you create an instance of a parameter list using the **instance** command, the device enters parameter instance configuration (config-param-inst) mode. The following options are available in this mode:

- set - Sets the parameter value.
- this - Displays information about the instance.
- verify - Verifies the instance with the specified device-profile.
- end - Exits parameter instance configuration mode and returns to EXEC mode.
- exit - Exits parameter instance configuration mode and returns to parameter list configuration mode.
- pop - Pops the mode from the stack or restores it from the specified name.
- push - Pushes the current mode to the stack or saves it with the specified name.
- where - Displays instance-related details (such as parameter-list name, instance name, and so on).

Examples

The following example shows to create an instance inst1 under the user-defined parameter list List1:

```
Device# configure terminal
Device(config)# param-list List1
Device(config-param-list)# instance inst1
```

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

Related Commands

| Command | Description |
|------------------------|---|
| define | Creates user-defined parameters for the specified parameter list. |

interface (fabricpath-oam)

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

```
interface ethernet slot-number/port-number [- slot-number/port-number]  
no interface
```

Syntax Description

| | |
|--------------------------------|---|
| ethernet | Specifies that the egress interface is an Ethernet interface. |
| <i>slot-number/port-number</i> | Interface ID or interface range. |

Command Default

A FabricPath OAM egress interface 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

You can configure multiple egress interfaces to create an interface list in the fabric OAM profile. You can also enter a range of interface addresses of the same interface type. You can configure Ethernet or PortChannel interfaces.

Examples

The following example shows how to configure an egress ethernet interface.

```
Device# configure terminal  
Device(config)# fabricpath oam profile 100  
Device(config-fb-oam-profile)# interface Ethernet 1/1-1/3
```

Related Commands

| Command | Description |
|--|--------------------------------------|
| fabricpath oam profile | Configures a FabricPath OAM profile. |

ip (fabricpath-oam)

To configure a Layer 3 flow destination or source IPv4 address, use the **ip** command in FabricPath OAM profile flow configuration mode. To remove the IPv4 flow address, use the **no** form of this command.

ip {destination | source} *ip-address*

no ip {destination | source}

Syntax Description

| | |
|--------------------|--|
| destination | Specifies the FabricPath OAM profile flow destination address. |
| source | Specifies the FabricPath OAM profile flow source address. |
| <i>ip-address</i> | IP address. |

Command Default

The IPv4 flow 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 flow IPv4 destination address.

```
Device# configure terminal
Device(config)# fabricpath oam profile 100
Device(config-fb-oam-profile)# flow forward
Device(config-fb-oam-profile-flow)# ip destination 172.31.10.10
```

Related Commands

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

ip arp rarp fabric-forwarding

To enable forwarding of Reverse Address Resolution Protocol (RARP) messages from a host to the fabric, and to set a rate-limit for the messages being forwarded, use the **ip arp rarp fabric-forwarding** command in global configuration mode. To disable forwarding of RARP messages from a host to the fabric, use the **no** form of this command.

ip arp rarp fabric-forwarding [**rate-limit** *rate-limit*]

no ip arp rarp fabric-forwarding [**rate-limit** *rate-limit*]

Syntax Description

| | |
|-------------------------------------|---|
| rate-limit <i>rate-limit</i> | (Optional) Specifies the forwarding rate of the RARP frames. |
| Note | The default forwarding rate is 200 RARP frames per second. You can specify a forwarding rate in the range of 200 to 400 RARP frames per second. |

Command Default

Forwarding of RARP messages from a host to the fabric is disabled.

Command Modes

Global configuration (config)

Command History

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

Usage Guidelines

If you want to enable forwarding of RARP messages and set the rate to the default value of 200 RARP frames per second, then use the **ip arp rarp fabric-forwarding** command.

If you want to enable forwarding of RARP messages and set the rate to a specific value, then include the use the **rate-limit** keyword and the *rate-limit* value.

Examples

The following example shows how to enable forwarding of RARP messages from a host to the fabric:

```
Device# configure terminal
Device(config)# ip arp rarp fabric-forwarding rate-limit 201
Device(config)# exit
```

ip multicast fabric-forwarding

To apply multicast enhanced fabric forwarding on all Virtual Routing and Forwarding (VRF) instances, use the **ip multicast fabric-forwarding** command in global configuration mode. To disable fabric forwarding for the VRF, use the **no** form of this command.

{ip | ipv6} multicast fabric-forwarding

no {ip | ipv6} multicast fabric-forwarding

Syntax Description

| | |
|-------------|---|
| ip | Enables IPv4 multicast fabric forwarding. |
| ipv6 | Enables IPv6 multicast fabric forwarding. |

Command Default

Multicast forwarding is disabled.

Command Modes

Global configuration (config)

Command History

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

Examples

The following example shows how to enable the fabric forwarding feature:

```
Device# configure terminal
Device(config)# ip multicast fabric-forwarding
Device(config)# ipv6 multicast fabric-forwarding
```

Related Commands

| Command | Description |
|---|---|
| show fabric multicast globals | Displays the global state associated with the fabric multicast process. |

ipv6 (fabricpath-oam)

To configure a Layer 3 flow destination or source IPv6 address, use the **ipv6** command in FabricPath OAM profile flow configuration mode. To remove the IPv6 flow address, use the **no** form of this command.

ipv6 {destination | source} *ip-address*

no ipv6 {destination | source}

Syntax Description

| | |
|--------------------|--|
| destination | Specifies the FabricPath OAM profile flow destination address. |
| source | Specifies the FabricPath OAM profile flow source address. |
| <i>ip-address</i> | IP address. |

Command Default

The IPv6 flow 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 flow IPv6 destination address.

```
Device# configure terminal
Device(config)# fabricpath oam profile 100
Device(config-fb-oam-profile)# flow forward
Device(config-fb-oam-profile-flow)# ipv6 destination 2001:DB8:1::1
```

Related Commands

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

logging level evb

To enable the system log (syslog) filter level for an Edge Virtual Bridging (EVB) session, use the **logging level evb** command in global configuration mode. To disable the syslog filter level for EVB, use the **no** form of this command.

logging level evb *log-level*

no logging level evb *log-level*

Syntax Description

| | |
|------------------|---|
| <i>log-level</i> | <p>Sets the severity for the syslog filter level. The level values ranges from 0 to 7. The severity associated with the values are:</p> <ul style="list-style-type: none"> • 0-emerg—Sets severity levels for emergencies. • 1-alert—Sets severity levels for alerts. • 2-crit—Sets severity levels for critical issues. • 3-err—Sets severity levels for errors. • 4-warn—Sets severity levels for warnings. • 5-notif—Sets severity levels for notifications. • 6-inform—Sets severity levels for session information. • 7-debug—Sets severity levels for debugs. |
|------------------|---|

Command Default

Syslog filter level with severity value 5 is enabled.

Command Modes

Global configuration (config)

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 on the device.

Examples

The following example shows how to set a syslog filter level of 4 for an EVB session:

```
Device# configure terminal
```

```
Device(config)# feature evb
Device(config)# logging level evb 4
Device(config)# end
```

The following example displays the default severity level and the user-defined syslog filter level for an EVB session:

```
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) | |

mac-address (fabricpath-oam)

To specify a FabricPath OAM flow destination or source MAC address, use the **mac-address** command in FabricPath OAM profile flow configuration mode. To remove the MAC address, use the **no** form of this command.

mac-address {destination | source} *mac-address*

no mac-address {destination | source}

Syntax Description

| | |
|--------------------|--|
| destination | Specifies the FabricPath OAM profile flow destination MAC address. |
| source | Specifies the FabricPath OAM profile flow source MAC address. |
| <i>mac-address</i> | MAC address. |

Command Default

The MAC flow 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 MAC address.

```
Device# configure terminal
Device(config)# fabricpath oam profile 100
Device(config-fb-oam-profile)# flow forward
Device(config-fb-oam-profile-flow)# mac-address destination 00-14-22-01-23-45
```

Related Commands

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

match (VLAN access-map)

To specify an access control list (ACL) for traffic filtering in a VLAN access map, use the **match** command in VLAN access-map configuration mode. To remove a **match** command from a VLAN access map, use the **no** form of this command.

match {ip | ipv6 | mac} address *access-list-name*

no match {ip | ipv6 | mac} address *access-list-name*

| Syntax Description | | |
|--------------------|-------------------------|---|
| | ip | Specifies that the ACL is an IPv4 ACL. |
| | ipv6 | Specifies that the ACL is an IPv6 ACL. |
| | mac | Specifies that the ACL is a MAC ACL. |
| | <i>access-list-name</i> | Specifies the ACL by name, which can be up to 64 alphanumeric, case-sensitive characters. |

Command Default None

Command Modes VLAN access-map configuration

| 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 specify one or more **match** commands per entry in a VLAN access map.

By default, the device classifies traffic and applies IPv4 ACLs to IPv4 traffic, IPv6 ACLs to IPv6 traffic, and MAC ACLs to all other traffic.

This command does not require a license.

Examples

This example shows how to create a VLAN access map named `vlan-map-01` and add two entries that each have two **match** commands and one **action** command:

```
Device(config-access-map)# vlan access-map vlan-map-01
Device(config-access-map)# match ip address ip-acl-01
switch(config-access-map)# action forward
switch(config-access-map)# match mac address mac-acl-00f
switch(config-access-map)# vlan access-map vlan-map-01
switch(config-access-map)# match ip address ip-acl-320
switch(config-access-map)# match mac address mac-acl-00e
switch(config-access-map)# action drop
switch(config-access-map)# show vlan access-map
Vlan access-map vlan-map-01 10
    match ip: ip-acl-01
    match mac: mac-acl-00f
    action: forward
Vlan access-map vlan-map-01 20
    match ip: ip-acl-320
    match mac: mac-acl-00e
    action: drop
```

mtrace fabricpath

To trace the path from a source to a destination branch for FabricPath OAM, use the **mtrace fabricpath** command in privileged EXEC mode.

```
mtrace fabricpath [tree id | ftag ftag-id] {profile profile-id | mac dst dst-mac etype etype | ip dst dst-ip src src-ip | forward flow flow-ent {I2 | I3}} [ingress if-id] {vlan vlan-id | tag tag-id | dot1q dot1q-id intf-id} [use-host-vlan] [topology t-id] [reply mode out-of-band {ipv4 ip-addr | ipv6 ipv6-addr }] [data pattern data] [size size][validate][repeat repeat-count][switch-id sw-id] [verbose]
```

Syntax Description

| | |
|-------------------------------------|---|
| tree id | (Optional) Specifies the ID of the multicast tree to be verified. |
| ftag <i>ftag-id</i> | (Optional) Specifies the multicast Forwarding Tag (FTag) ID. |
| profile <i>profile-id</i> | Specifies the profile ID. |
| mac dst <i>dst-mac</i> | Specifies the destination MAC address. |
| etype <i>etype</i> | Specifies the ether type. |
| ip dst <i>dst-ip</i> | Specifies the destination IP address. |
| src <i>src-ip</i> | Specifies the source IP address. |
| forward flow <i>flow-ent</i> | Specifies the input flow entropy (128 bytes) from actual user data traffic so that FabricPath OAM packet takes the same path as user traffic. |
| I2 | 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. |
| I3 | 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 |
| ingress <i>if-id</i> | (Optional) Specifies the ingress interface ID. |
| vlan <i>vlan-id</i> | Specifies the VLAN ID for the multicast tree to be verified. |
| tag <i>tag-id</i> | Specifies the tag ID. Note The VLAN ID and tag ID are mutually exclusive. |

| | |
|---------------------------------------|---|
| dot1q <i>dot1q-id intf-id</i> | Specifies the 802.1Q tag 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 switches. |
| 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. |
| topology <i>t-id</i> | (Optional) Specifies the topology ID. Range is from 0 to 63. Default is 0. |
| 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 <i>ip-addr</i> | (Optional) Specifies the input IPv4 address for out-of-band reply. |
| ipv6 <i>ipv6-addr</i> | (Optional) Specifies the input IPv6 address for out-of-band reply. |
| data pattern <i>data</i> | (Optional) Specifies the data pattern. |
| size <i>size</i> | (Optional) Specifies the padding size of data TLV or test TLV. The total size must not be greater than the MTU of the egress interface. |
| validate | (Optional) Validates the ping command. |
| repeat <i>repeat-count</i> | (Optional) Specifies the repeat value. |
| interval <i>interval-value</i> | (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. |
| timeout <i>timeout-value</i> | (Optional) Specifies the timeout values in seconds. Range is from 1 to 36000. |
| hop <i>hop-count</i> | (Optional) Specifies the FabricPath OAM ping hop count. Range is from 1 to 64. Default is 63. |

| | |
|-------------------------------|--|
| switch-id <i>sw-id</i> | (Optional) Sends an mtrace request to the specified switch ID. |
| verbose | (Optional) Displays additional information. |

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.

The following rules are apply:

- If a tree ID is specified, an ether type cannot be specified.
- If a Layer 2 tree is specified, a source MAC cannot be specified.
- If a Layer 3 tree is specified, a source and destination MAC addresses cannot be specified.
- If flow entropy is specified, type of flow, either Layer 2 or Layer 3, must be specified. If the flow is Layer 2, the source MAC address is overwritten. If the flow is Layer 3, the source and destination MAC addresses are overwritten.

Examples

The following example shows how to specify a FabricPath mtrace for all trees.

```
Device# mtrace fabricpath vlan 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,
'*' - 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

FabricPath mtrace for multicast ftag 1, vlan 10

Code SwitchId Interface State TotalTime
=====
! 320 Rcvd on Eth1/48 fwd 2ms
! 3498 Rcvd on Eth1/47 fwd 2ms

FabricPath mtrace for multicast ftag 2, vlan 10

Code SwitchId Interface State TotalTime
=====
! 320 Rcvd on Eth1/48 fwd 2ms
```

```

! 3498 Rcvd on Eth1/47 fwd 2ms

FabricPath mtrace for multicast ftag 1, vlan 10

Code SwitchId Interface State TotalTime
=====
! 320 Rcvd on Eth1/48 fwd 2ms
! 3498 Rcvd on Eth1/47 fwd 2ms

FabricPath mtrace for multicast ftag 2, vlan 10

Code SwitchId Interface State TotalTime
=====
! 320 Rcvd on Eth1/48 fwd 2ms
! 3498 Rcvd on Eth1/47 fwd 3ms

FabricPath mtrace for multicast ftag 1, vlan 10

Code SwitchId Interface State TotalTime
=====
! 320 Rcvd on Eth1/48 fwd 2ms
! 3498 Rcvd on Eth1/47 fwd 3ms

```

The following example shows how to specify FabricPath mtrace for a specific tree.

```

Device(#) mtrace fabricpath tree 1 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: 4

FabricPath mtrace for multicast ftag 1, vlan 10

Code SwitchId Interface State TotalTime
=====
! 3498 Rcvd on Eth1/47 fwd 2ms
! 320 Rcvd on Eth1/48 fwd 3ms

```

The following example shows how to specify FTag instead of tree.

```

Device(#) mtrace fabricpath ftag 1 vlan 10 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

FabricPath mtrace for multicast ftag 1, vlan 10

Code SwitchId Interface State TotalTime DownSwitchId Intf State
=====
! 3498 Rcvd on Eth1/47 fwd 2ms
! 320 Rcvd on Eth1/48 fwd 3ms

```

The following example shows how to specify a pair of trees.

```
Device(#) mtrace fabricpath ip dst 224.1.1.1 src 10.1.1.1 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
```

```
FabricPath mtrace for multicast ftag 1, vlan 10
```

```
Code SwitchId Interface State TotalTime
=====
! 320 Rcvd on Eth1/48 fwd 2ms
```

Related Commands

| Command | Description |
|---------------------------------------|--|
| ping fabricpath | Tests the FabricPath OAM reachability. |
| traceroute fabricpath | Discovers the FabricPath route. |

