Cisco NX-OS FabricPath Commands

This chapter describes the Cisco NX-OS FabricPath commands for the Cisco Nexus 7000 Series devices.

authentication-check (fabricpath)

To enable an authentication check on received protocol data units (PDUs), use the **authentication-check** command. To return to the default setting, use the **no** form of this command.

authentication-check

no authentication-check

Syntax Description

This command has no arguments or keywords.

Defaults

Enabled

Command Modes

FabricPath IS-IS mode

SupportedUserRoles

network-admin

vdc-admin

Command History

Release	Modification
5.1(1)	This command was introduced.

Usage Guidelines

This command requires an Enhanced Layer 2 license.

Examples

This example shows how to enable an authentication check on received PDUs:

```
switch# config t
Enter configuration commands, one per line.  End with CNTL/Z.
switch(config)# fabricpath domain default
switch(config-fabricpath-isis)# authentication-check
switch(config-fabricpath-isis)#
```

Related Commands

Command	Description
show fabricpath isis	Displays FabricPath IS-IS information.

authentication key-chain (fabricpath)

To configure an authentication keychain between FabricPath devices, use the **authentication key-chain** command. To return to the default setting, use the **no** form of this command.

authentication key-chain *auth-key-chain-name*

no authentication key-chain *auth-key-chain-name*

Syntax Description

keychain-name	Authentication keychain. The maximum size is 63 alphanumeric characters.

Defaults

None

Command Modes

FabricPath IS-IS mode

SupportedUserRoles

network-admin
vdc-admin

Command History

Release	Modification
5.1(1)	This command was introduced.

Usage Guidelines

Use the **authentication key-chain** command to assign a password in the authentication of a hello protocol data unit. Only one authentication key-chain is applied to an IS-IS interface at one time. If you configure a second **authentication** command, the first is overridden. You can specify authentication for an entire instance of IS-IS instead of at the interface level by using the **authentication** command.

See the *Security Configuration Guide, Cisco DCNM for LAN*, for information about keychains.

This command requires an Enhanced Layer 2 license.

Examples

This example shows how to configure an authentication keychain string for edge device authentication:

```
switch# configure terminal
Enter configuration commands, one per line.  End with CNTL/Z.
switch(config)# fabricpath domain default
switch(config-fabricpath-isis)# authentication key-chain fabrickeys
switch(config-fabricpath-isis)#
```

Related Commands

Command	Description
show fabricpath isis	Displays FabricPath IS-IS information.

authentication-type (fabricpath)

To configure an authentication type, use the **authentication-type** command. To return to the default setting, use the **no** form of this command.

authentication-type {**cleartext** | **md5**}

no authentication-type {**cleartext** | **md5**}

Syntax Description

cleartext	Specifies the cleartext authentication method.
md5	Specifies the Message Digest (MD5) authentication.

Defaults

Enabled

Command Modes

FabricPath IS-IS mode

SupportedUserRoles

network-admin
vdc-admin

Command History

Release	Modification
5.1(1)	This command was introduced.

Usage Guidelines

Use the **authentication-type** command to configure the authentication type for hello protocol data units (PDUs) on an interface.

This command requires an Enhanced Layer 2 license.

Examples

This example shows how to specify cleartext authentication:

```
switch# config t
Enter configuration commands, one per line.  End with CNTL/Z.
switch(config)# fabricpath domain default
switch(config-fabricpath-isis)# authentication-type cleartext
switch(config-fabricpath-isis)#
```

This example shows how to specify Message Digest (MD5) authentication:

```
switch# config t
Enter configuration commands, one per line.  End with CNTL/Z.
switch(config)# fabricpath domain default
switch(config-fabricpath-isis)# authentication-type md5
switch(config-fabricpath-isis)#
```

Related Commands

Command	Description
show fabricpath isis	Displays FabricPath IS-IS information.

clear fabricpath isis adjacency

To clear the FabricPath Layer 2 Intermediate-System to Intermediate-System (IS-IS) adjacency state**,** use the **clear fabricpath isis adjacency** command.

clear fabricpath isis adjacency [* | **ethernet** | **port-channel** | **system-id** {**ethernet** *slot/chassis number* | **port-channel** *port-channel number* | **system-id** *sid*}]

Syntax Description

*	(Optional) Specifies the IS-IS adjacencies on all interfaces.
ethernet	(Optional) Specifies the Ethernet interface.
port-channel	(Optional) Specifies the port-channel interface.
system-id	(Optional) Specifies the system ID.
slot/chassis number	(Optional) Slot or chassis number. The range is from 1 to 253.
port-channel	(Optional) Specifies the port-channel interface.
port-channel number	(Optional) Port-channel number. The range is from 1 to 4096.
system-id	(Optional) Specifies the system ID.
sid	(Optional) System ID in the form of XXXX.XXXX.XXXX.

Defaults

None

Command Modes

EXEC mode

SupportedUserRoles

network-admin
vdc-admin

Command History

Release	Modification
5.1(1)	This command was introduced.

Usage Guidelines

Note If you enter the * variable, you will affect forwarding by entering this command and may interrupt traffic; this command tears down all adjacencies.

This command requires an Enhanced Layer 2 license.

Examples

This example shows how to clear the FabricPath Layer 2 adjacency state:

```
switch# clear fabricpath isis adjacency *
switch#
```

Related Commands

Command	Description
fabricpath domain default	Enables FabricPath Layer 2 IS-IS.

clear fabricpath isis statistics

To clear all FabricPath Intermediate System-to-Intermediate System (IS-IS) protocol statistics**,** use the **clear fabricpath isis statistics** command.

clear fabricpath isis statistics *

Syntax Description

*	Specifies the IS-IS adjacencies on all interfaces.

Defaults

None

Command Modes

EXEC mode

SupportedUserRoles

network-admin
vdc-admin

Command History

Release	Modification
5.1(1)	This command was introduced.

Usage Guidelines

This command requires an Enhanced Layer 2 license.

Examples

This example shows how to clear FabricPath IS-IS protocol statistics:

```
switch# clear fabricpath isis statistics *
switch#
```

Related Commands

Command	Description
fabricpath domain default	Enables FabricPath Layer 2 IS-IS.

clear fabricpath isis traffic

To clear Intermediate System-to-Intermediate System (IS-IS) traffic information**,** use the **clear fabricpath isis traffic** command.

clear fabricpath isis traffic [* | **ethernet** | **port-channel** {**ethernet** *slot/chassis number* | **port-channel** *port-channel number*}]

Syntax Description

*	(Optional) Specifies the IS-IS adjacencies on all interfaces.
ethernet	(Optional) Specifies the Ethernet interface.
port-channel	(Optional) Specifies the port-channel interface.
slot/chassis number	Slot or chassis number.
port-channel number	Port-channel number. The range is from 1 to 256.

Defaults

None

Command Modes

EXEC mode

SupportedUserRoles

network-admin
vdc-admin

Command History

Release	Modification
5.1(1)	This command was introduced.

Usage Guidelines

This command requires an Enhanced Layer 2 license.

Examples

This example shows how to clear FabricPath IS-IS traffic information:

```
switch# clear fabricpath isis traffic *
switch#
```

Related Commands

Command	Description
fabricpath domain default	Enables FabricPath Layer 2 IS-IS.

description

To configure the topology description**,** use the **description** command.

description *desc*

no description *desc*

Syntax Description

desc	Line description. The maximum size is 80 bytes.

Defaults

None

Command Modes

Global configuration mode

SupportedUserRoles

network-admin
vdc-admin

Command History

Release	Modification
5.2(1)	This command was introduced.

Usage Guidelines

This command requires an Enhanced Layer 2 license.

Examples

This example shows how to configure the topology description:

```
switch# config t
switch#(config)# description 50
switch#(config)#
```

Related Commands

Command	Description
fabricpath domain default	Enables FabricPath Layer 2 IS-IS.

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.

fabricpath-domain default

Syntax Description

This command has no arguments or keywords.

Defaults

None

Command Modes

Global configuration mode

SupportedUserRoles

network-admin
vdc-admin

Command History

Release	Modification
5.1(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:

```
switch# config t
Enter configuration commands, one per line.  End with CNTL/Z.
switch(config)# fabricpath domain default
switch(config-fabricpath-isis)#
```

Related Commands

Command	Description
show fabricpath isis	Displays FabricPath IS-IS information.

fabricpath isis authentication-check

To assign a password to check authentication link-state packet (LSP) protocol data units (PDUs) per interface, use the **fabricpath isis authentication-check** command. To return to the default setting, use the **no** form of this command.

fabricpath isis authentication-check

no fabricpath isis authentication-check

Syntax Description

This command has no arguments or keywords.

Defaults

ON

Command Modes

Interface configuration mode

SupportedUserRoles

network-admin
vdc-admin

Command History

Release	Modification
5.1(1)	This command was introduced.

Usage Guidelines

Note A level specification is not required.

This command requires an Enhanced Layer 2 license.

Examples

This example shows how to check authentication on received LSP PDUs:

```
switch# configure terminal
Enter configuration commands, one per line.  End with CNTL/Z.
switch(config)# interface ethernet 5/2
switch(config-if)# fabricpath isis authentication-check
switch(config-if)#
```

Related Commands

Command	Description
show fabricpath isis	Displays FabricPath IS-IS information.

fabricpath isis authentication key-chain

To assign a password to authentication hello protocol data units (PDUs) per interface, use the **fabricpath isis authentication key-chain** command. To return to the default setting, use the **no** form of this command.

fabricpath isis authentication key-chain *auth-key-chain-name*

no fabricpath isis authentication key-chain *auth-key-chain-name*

Syntax Description

auth-key-chain-name	Authentication keychain. The maximum size is 63 alphanumeric characters.

Defaults

None

Command Modes

Interface configuration mode.

SupportedUserRoles

network-admin
vdc-admin

Command History

Release	Modification
5.1(1)	This command was introduced.

Usage Guidelines

Only one authentication key-chain is applied to an IS-IS interface at one time. If you configure a second **authentication** command, the first is overridden. You can specify authentication for an entire instance of IS-IS or at the interface level by using the **authentication** command.

See the *Security Configuration Guide, Cisco DCNM for LAN*, for information about keychains.

Note A level specification is not required.

This command requires an Enhanced Layer 2 license.

Examples

This example shows how to configure an authentication keychain string for edge device authentication:

```
switch# config t
Enter configuration commands, one per line.  End with CNTL/Z.
switch(config)# interface ethernet 5/5
switch(config-if)# fabricpath isis authentication key-chain trees
switch(config-if)#
```

Related Commands

Command	Description
show fabricpath isis	Displays FabricPath IS-IS information.

fabricpath isis authentication-type

To assign a password to Intermediate System-to-Intermediate System (IS-IS) authentication hello protocol data units (PDUs) per interface, use the **fabricpath isis authentication-type** command. To return to the default setting, use the **no** form of this command.

fabricpath isis authentication-type {**cleartext** | **md5**}

no fabricpath isis authentication-type {**cleartext** | **md5**}

Syntax Description

cleartext	Specifies the cleartext authentication method.
md5	Specifies the Message Digest (MD5) authentication.

Defaults

Enabled

Command Modes

Interface configuration mode

SupportedUserRoles

network-admin
vdc-admin

Command History

Release	Modification
5.1(1)	This command was introduced.

Usage Guidelines

Note A level specification is not required.

This command requires an Enhanced Layer 2 license.

Examples

This example shows how to specify cleartext authentication when you are assigning a password:

```
switch# config t
Enter configuration commands, one per line.  End with CNTL/Z.
switch(config)# interface ethernet 5/2
switch(config-if)# fabricpath isis authentication-type cleartext
switch(config-if)#
```

This example shows how to specify Message Digest (MD5) authentication when you are assigning a password:

```
switch# config t
Enter configuration commands, one per line.  End with CNTL/Z.
switch(config)# interface ethernet 5/2
```

```
switch(config-if)# fabricpath isis authentication-type md5
switch(config-if)#
```

Related Commands

Command	Description
show fabricpath isis	Displays FabricPath IS-IS information.

fabricpath isis csnp-interval

To set an Intermediate System-to-Intermediate System (IS-IS) Complete Sequence Number PDU (CSNP) interval in seconds per interface, use the **fabricpath isis csnp-interval** command. To return to the default setting, use the **no** form of this command.

fabricpath isis csnp-interval *seconds*

no fabricpath isis csnp-interval *seconds*

Syntax Description

seconds	CSNP interval value. The range is from 1 to 65535.

Defaults

10 seconds

Command Modes

Interface configuration mode

SupportedUserRoles

network-admin
vdc-admin

Command History

Release	Modification
5.1(1)	This command was introduced.

Usage Guidelines

This command requires an Enhanced Layer 2 license.

Examples

This example shows how to set a CSNP interval value:

```
switch# config t
Enter configuration commands, one per line.  End with CNTL/Z.
switch(config)# interface ethernet 5/2
switch(config-if)# fabricpath isis csnp-interval 60
switch(config-if)#
```

Related Commands

Command	Description
show fabricpath isis	Displays FabricPath IS-IS information.

fabricpath isis hello-interval

To set a hello interval Intermediate System-to-Intermediate System (IS-IS) in seconds per interface, use the **fabricpath isis hello-interval** command. To return to the default setting, use the **no** form of this command.

fabricpath isis hello-interval *seconds*

no fabricpath isis hello-interval *seconds*

Syntax Description

seconds	Hello interval value. The range is from 1 to 65535.

Defaults

10 seconds

Command Modes

Interface configuration mode

SupportedUserRoles

network-admin
vdc-admin

Command History

Release	Modification
5.1(1)	This command was introduced.

Usage Guidelines

This command requires an Enhanced Layer 2 license.

Examples

This example shows how to set a hello interval in seconds:

```
switch# config t
Enter configuration commands, one per line.  End with CNTL/Z.
switch(config)# interface ethernet 5/5
switch(config-if)# fabricpath isis hello-interval 20
switch(config-if)#
```

Related Commands

Command	Description
show fabricpath isis	Displays FabricPath IS-IS information.

fabricpath isis hello-multiplier

To set an Intermediate System-to-Intermediate System (IS-IS) multiplier for a hello holding time per interface, use the **fabricpath isis hello-multiplier** command. To return to the default setting, use the **no** form of this command.

fabricpath isis hello-multiplier *multiplier*

no fabricpath isis hello-multiplier *multiplier*

Syntax Description

multiplier	Hello interval value. The range is from 3 to 1000.

Defaults

The default value is 3.

Command Modes

Interface configuration mode

SupportedUserRoles

network-admin
vdc-admin

Command History

Release	Modification
5.1(1)	This command was introduced.

Usage Guidelines

Note A level specification is not required.

This command requires an Enhanced Layer 2 license.

Examples

This example shows how to set a hello interval in seconds:

```
switch# config t
Enter configuration commands, one per line.  End with CNTL/Z.
switch(config)# interface ethernet 5/5
switch(config-if)# fabricpath isis hello-multiplier 20
switch(config-if)#
```

Related Commands

Command	Description
show fabricpath isis	Displays FabricPath IS-IS information.

fabricpath isis hello-padding

To set FabricPath Intermediate System-to-Intermediate System (ISIS) hello protocol data unit (PDU) padding per interface, use the **fabricpath isis hello-padding** command. To return to the default setting, use the **no** form of this command.

fabricpath isis hello-padding

no fabricpath isis hello-padding [**always**]

Syntax Description

always	(Optional) Specifies the padding for hello PDUs that is always on.

Defaults

ON

Command Modes

Interface configuration mode

SupportedUserRoles

network-admin
vdc-admin

Command History

Release	Modification
5.1(1)	This command was introduced.

Usage Guidelines

Note If you enter the **always** keyword with the **no** form of this command, the padding is always on.

This command requires an Enhanced Layer 2 license.

Examples

This example shows how to set the FabricPath IS-IS hello PDU padding:

```
switch# config t
Enter configuration commands, one per line.  End with CNTL/Z.
switch(config)# interface ethernet 5/2
switch(config-if)# fabricpath isis hello-padding
switch(config-if)#
```

Related Commands

Command	Description
show fabricpath isis	Displays FabricPath IS-IS information.

fabricpath isis lsp-interval

To set a transmission interval between Intermediate System-to-Intermediate System (IS-IS) link-state packet (LSP) protocol data units (PDUs) for each interface, use the **fabricpath isis lsp-interval** command. To return to the default setting, use the **no** form of this command.

fabricpath isis lsp-interval *msec*

no fabricpath isis lsp-interval *msec*

Syntax Description

msec	LSP transmission interval in milliseconds. The range is from 10 to 65535.

Defaults

33 milliseconds

Command Modes

Interface configuration mode

SupportedUserRoles

network-admin
vdc-admin

Command History

Release	Modification
5.1(1)	This command was introduced.

Usage Guidelines

This command requires an Enhanced Layer 2 license.

Examples

This example shows how to set an LSP transmission interval:

```
switch# config t
Enter configuration commands, one per line.  End with CNTL/Z.
switch(config)# interface ethernet 5/2
switch(config-if)# fabricpath isis lsp-interval 100
switch(config-if)#
```

Related Commands

Command	Description
show fabricpath isis	Displays FabricPath IS-IS information.

fabricpath isis metric

To configure Intermediate System-to-Intermediate System (IS-IS) metrics for each interface, use the **fabricpath isis metric** command. To return to the default setting, use the **no** form of this command.

fabricpath isis metric *metric*

no fabricpath isis metric *metric*

Syntax Description

metric	Default metric. The range is from 0 to 16777215.

Defaults

Defaults (the default interface for the F Series module is 10 GB):

- 1 GB—400
- 10 GB—40

Command Modes

Interface configuration mode

SupportedUserRoles

network-admin
vdc-admin

Command History

Release	Modification
5.1(1)	This command was introduced.

Usage Guidelines

This command requires an Enhanced Layer 2 license.

Examples

This example shows how to configure metrics for each interface:

```
switch# config t
Enter configuration commands, one per line.  End with CNTL/Z.
switch(config)# interface ethernet 5/2
switch(config-if)# fabricpath isis metric 100
switch(config-if)#
```

Related Commands

Command	Description
show fabricpath isis	Displays FabricPath IS-IS information.

fabricpath isis retransmit-interval

To set an interval between initial Intermediate System-to-Intermediate System (IS-IS) link-state packet (LSP) retransmissions for a peer-to-peer (P2P) interface, use the **fabricpath isis retransmit-interval** command. To return to the default setting, use the **no** form of this command.

fabricpath isis retransmit-interval *seconds*

no fabricpath isis retransmit-interval *seconds*

Syntax Description

seconds	Interval between retransmissions of the same LSP in seconds. The range is from 1 to 65535.

Defaults

5 seconds

Command Modes

Interface configuration mode

SupportedUserRoles

network-admin
vdc-admin

Command History

Release	Modification
5.1(1)	This command was introduced.

Usage Guidelines

This command requires an Enhanced Layer 2 license.

Examples

This example shows how to set an interval between initial LSP retransmissions for a P2P interface:

```
switch# config t
Enter configuration commands, one per line.  End with CNTL/Z.
switch(config)# interface ethernet 5/2
switch(config-if)# fabricpath isis retransmit-interval 65532
switch(config-if)#
```

Related Commands

Command	Description
show fabricpath isis	Displays FabricPath IS-IS information.

fabricpath linkup-delay

To enable the linkup-delay feature, use the **fabricpath linkup-delay** command. To return to the default setting, use the **no** form of this command.

fabricpath linkup-delay

no fabricpath linkup-delay

Syntax Description

This command has no arguments or keywords.

Defaults

Enabled

Command Modes

Global configuration mode

SupportedUserRoles

network-admin
vdc-admin

Command History

Release	Modification
6.2(8)	This command was introduced.

Usage Guidelines

Note Cisco strongly recommends not disabling the linkup-delay feature in networks with dynamically added or unknown switch IDs.

This command requires an Enhanced Layer 2 license.

You must make this configuration on each switch that you want to participate in the FabricPath network.

Examples

This example shows how to enable the FabricPath linkup-delay feature:

```
switch# config t
Enter configuration commands, one per line.  End with CNTL/Z.
switch(config)# fabricpath linkup-delay
switch(config)#
```

Related Commands

Command	Description
show fabricpath timers	Displays information about FabricPath timers.

fabricpath load-balance

To configure the load-balance source-destination selection hash parameter common to unicast and multicast traffic, use the **fabricpath load-balance** command. To return to the default setting, use the **no** form of this command.

fabricpath load-balance *control*

no fabricpath load-balance *control*

Syntax Description

control	Destination-source control selection hash parameters comon to the unicast and multicast traffic. The options are source, source-destination, xor, destination and symmetric.

Note This command is not operational on an F2 Series module, except for virtual device context (VDC) where the user is redirected to use the **port-channel load-balance configuration** command.

Defaults

Symmetric

Command Modes

Interface configuration mode

SupportedUserRoles

network-admin

vdc-admin

Command History

Release	Modification
5.1(1)	This command was introduced.
6.0 (1)	This command was modified.

Usage Guidelines

This command requires an enhanced Layer 2 license.

Examples

This example shows how to set an interval between initial LSP retransmissions for a P2P interface:

```
switch# config t
Enter configuration commands, one per line. End with CNTL/Z.
switch(config)# fabricpath load-balance source
switch(config)#
```

Related Commands

Command	Description
show fabricpath load-balance	Displays FabricPath load-balancing information.

fabricpath load-balance multicast

To configure the load-balancing of hash parameters for multicast traffic, use the **fabricpath load-balance multicast** command. To return to the default setting, use the **no** form of this command.

fabricpath load-balance multicast rotate-amount *rotation-amount vlan-inclusion*

no fabricpath load-balance multicast rotate-amount *rotation-amount vlan-inclusion*

Syntax Description

rotation-amount	Variable amount by which the hash key can be rotated before the hash derivation is generated. The range is from 0 to 14.
vlan-inclusion	Option to include the VLAN information in the load-balance hash derivation. When you specify this argument, you enable VLAN inclusion. Not specifying this argument disables VLAN inclusion.

Defaults

VLAN inclusion is disabled. The default value of the rotation amount varies on every switch/VDC.

Command Modes

Interface configuration mode

SupportedUserRoles

network-admin
vdc-admin

Command History

Release	Modification
5.1(1)	This command was introduced.
6.0 (1)	This command was modified.

Usage Guidelines

This command requires an enhanced Layer 2 license.

Examples

This example shows how to configure load balancing for multicast flows with a rotation amount of 6 bytes with VLAN inclusion disabled:

```
switch# configure terminal
Enter configuration commands, one per line.  End with CNTL/Z.
switch(config)# fabricpath load-balance multicast rotate-amount 0x6
switch(config)#
```

Related Commands

Command	Description
show fabricpath load-balance	Displays FabricPath load-balancing information.

fabricpath load-balance unicast

To configure load-balancing of hash parameters for unicast traffic, use the **fabricpath load-balance unicast** command. To return to the default setting, use the **no** form of this command.

fabricpath load-balance unicast *preference* **rotate-amount** *rotation-amount vlan-inclusion*

no fabricpath load-balance unicast *preference* **rotate-amount** *rotation-amount vlan-inclusion*

Syntax Description

preference	Option of using of L3 parameters, L4 parameters or both in the load-balance hash derivation. Options are **layer3**, **layer4** and **mixed**.
rotation-amount	Variable amount by which the hash key can be rotated before the hash derivation is generated. The range is from 0 to 14.
vlan-inclusion	Option to include the VLAN information in the load-balance hash derivation. When you specify this argument, you enable VLAN inclusion. Not specifying this argument disables VLAN inclusion.

Defaults

Mixed preference and VLAN inclusion is disabled. The default value of the rotation amount varies on every switch/VDC.

Command Modes

Interface configuration mode

SupportedUserRoles

network-admin
vdc-admin

Command History

Release	Modification
5.1(1)	This command was introduced.
6.0 (1)	This command was modified.

Usage Guidelines

This command requires an enhanced layer 2 license.

Examples

This example shows how to configure load-balancing for multicast flows with a Layer 3 preference and a rotation amount of 4 bytes with VLAN inclusion enabled:

```
switch# configure terminal
Enter configuration commands, one per line.  End with CNTL/Z.
switch(config)# fabricpath load-balance unicast layer3 rotate-amount 0x4 include-vlan
switch(config)#
```

Related Commands

Command	Description
show fabricpath load-balance	Displays FabricPath load-balancing information.

fabricpath multicast load-balance

To enable control of two virtual port channel (vPC) peers to be partial designated forwarders when both vPC path are up, use the **fabricpath multicast load-balance** command. To return to the default setting, use the **no** form of this command.

fabricpath multicast load-balance

no fabricpath multicast load-balance

Syntax Description

This command has no arguments or keywords.

Defaults

No fabricpath multicast load-balance

Command Modes

vPC domain mode

SupportedUserRoles

network-admin
vdc-admin

Command History

Release	Modification
6.1(3)	Added a note.
6.0 (1)	This command was introduced.

Usage Guidelines

When the control is enabled, each peer can be the designated forwarder for multi destination southbound packets for a disjoint set of forwarding tags (FTAGs). The designated forwarder is negotiated on a per vPC basis.

There are three designated forwarder states for a vPC port:

- All—If the local vPC path is up and the peer vPC is not configured or is down, the local switch is the designated forwarder for all Result Bundle Hashes (RBHs) or FTAGS for that vPC.
- Partial—If the vPC path is up on both sides, each peer is the designated forwarder for half the RBHs or FTAGs. In the case of FTAGs, the vPC port allows the active FTAGs on that peer.
- None—If the local vPC leg is down or is not configured, the local switch does not forward any multi destination packets to this vPC path.

This command requires an enhanced Layer 2 license.

Note The fabric path multicast load balancing status (all, partial, or none) can be seen under the vPC+ attributes of the **show vpc brief** command.

The **fabricpath multicast load-balance** command is required for configuring vPC+ with Fabric Extender (FEX) ports.

Follow these guidelines when using the **fabricpath multicast load-balance** command:

- The command flaps peer links and vPCs and leads to traffic loss.
- If the command is not configured on both sides, there will be a Type1 inconsistency on each vPC.
- Remove the Fabric Path multicast load-balance configuration before attempting a nondisruptive software downgrade (ISSD) to an image that does not support this configuration.

Note Only an F2 Series module supports multicast load-balancing. On an F1 Series module, the configuration is supported, but load-balancing does not occur.

Examples

This example shows how to enable FabricPath multicast load-balancing:

```
switch# config t
Enter configuration commands, one per line. End with CNTL/Z.
switch(config)# vpc domain 1
switch(config-vpc-domain)# fabricpath multicast load-balance
switch(config-vpc-domain)#
```

Related Commands

Command	Description
show vpc	Displays virtual port-channel (vPC) information.

fabricpath multicast aggregate-routes

To configure program-specific routes for broadcast multicast routes, use the **fabricpath multicast aggregate-routes** command. To return to the default setting, use the **no** form of this command.

fabricpath multicast aggregate-routes [**exclude** *flag-id*]

no fabricpath multicast aggregate-routes [**exclude** *flag-id*]

Syntax Description

exclude	(Optional) Specifies the aggregate routes for these FTAGs.
flag-id	Flag ID for the tree. The range is from 1 to1024.

Defaults

OFF

Command Modes

Global configuration mode

SupportedUserRoles

network-admin
vdc-admin

Command History

Release	Modification
5.2(1)	This command was introduced.

Usage Guidelines

This command allows you to program more routes in the MAC address table.

This command requires an Enhanced Layer 2 license.

Examples

This example shows how to configure program specific routes for broadcast multicast routes:

```
switch# config t
Enter configuration commands, one per line.  End with CNTL/Z.
switch(config)# fabricpath multicast aggregate-routes exclude 11
switch(config)#
```

Related Commands

Command	Description
show fabricpath isis	Displays FabricPath IS-IS information.

fabricpath route

To configure a unicast static route and specifies the device and interfaces through which to send the traffic. You can enter a range of Ethernet ports or port channels, use the **fabricpath route** command. To return to the default setting, use the **no** form of this command.

fabricpath route switch-id *switch-id* **ethernet** *slot number* **port-channel** *port-channel number*

no fabricpath route switch-id *switch-id* **ethernet** *slot number* **port-channel** *port-channel number*

Syntax Description

switch-id	Specifies the switch ID.
switch-id	Switch ID value. The range is from 1 to 4094.
ethernet	Specifies the ethernet interface.
slot number	Slot or chassis number. The range is from 1 to 253.
port-channel	Specifies the port-channel interface number.
port-channel number	Port-channel number. The range is from 1 to 4096.

Defaults

None

Command Modes

Global configuration mode

Fabricpath topology configuration mode

SupportedUserRoles

network-admin
vdc-admin

Command History

Release	Modification
6.2(2)	This command was introduced.

Usage Guidelines

The interfaces specified must be in the same VDC where the FabricPath feature set is enabled.

This command requires an Enhanced Layer 2 license.

Examples

This example shows how to configure fabricpath topology:

```
switch# config t
Enter configuration commands, one per line.  End with CNTL/Z.
switch(config)# fabricpath topology 1
switch(config-fp-topology)# fabricpath route switch-id 2231 ethernet 1/1
switch(config-fp-topology)#
```

Related Commands

Command	Description
show fabricpath isis	Displays FabricPath IS-IS information.

fabricpath switch-id (global configuration mode)

To configure the FabricPath switch ID, use the **fabricpath switch-id** command.

fabricpath switch-id *switch-id*

Syntax Description		
	switch-id	FabricPath switch ID. The range is from 1 to 4094.

Defaults None

Command Modes Global configuration mode

SupportedUserRoles network-admin
vdc-admin

Command History	Release	Modification
	5.1(1)	This command was introduced.

Usage Guidelines You do not have to manually assign a switch ID unless you are running a virtual port channel plus (vPC+) because the system assigns a switch ID for you when you enable FabricPath.

Note For more information about vPC+, see the fabricpath switch-id (vpc-domain configuration mode) command.

This command requires an Enhanced Layer 2 license.

Examples This example shows how to configure a switch ID on a FabricPath-enabled device:

```
switch# configure terminal
Enter configuration commands, one per line.  End with CNTL/Z.
switch(config)# fabricpath switch-id 40
switch(config)#
```

Related Commands	Command	Description
	show fabricpath switch-id	Displays information about switch IDs.

fabricpath switch-id (vpc-domain configuration mode)

To configure a virtual port channel plus (vPC+) switch ID, use the **fabricpath switch-id** command.

fabricpath switch-id *switch-id*

Syntax Description

switch-id	FabricPath switch ID. The range is from 1 to 4094.

Defaults

None

Command Modes

vpc-domain configuration mode

SupportedUserRoles

network-admin
vdc-admin

Command History

Release	Modification
5.1(1)	This command was introduced.

Usage Guidelines

You do not have to manually assign a switch ID (unless you are running a vPC+); the system assigns a switch ID for you when you enable FabricPath.

Note You must assign the same vPC+ switch ID to each of the two vPC+ peer devices before they can form an adjacency.

This command requires an Enhanced Layer 2 license.

Examples

This example shows how to configure a vPC+ switch ID on a FabricPath-enabled device:

```
switch# config t
Enter configuration commands, one per line.  End with CNTL/Z.
switch(config)# interface port-channel 1
switch(config-if)# vpc domain 1
switch(config-vpc-domain)# fabricpath switch-id 1
Note:
 ------:: Remove existing ES ID before configuring a new one ::------
ERROR: Operation failed: An ES ID already exists

switch(config-vpc-domain)#
```

Related Commands

Command	Description
show vpc	Displays information about a vPC.

fabricpath topology

To configure fabricpath topology, use the **fabricpath topology** command. To return to the default setting, use the **no** form of this command.

fabricpath topology *topology-id*

no fabricpath topology *topology-id*

Syntax Description

topology-id	(Optional) Fabricpath topology ID. The range is from 1 to 63.

Defaults

None

Command Modes

Global configuration mode

SupportedUserRoles

network-admin
vdc-admin

Command History

Release	Modification
6.2(2)	This command was introduced.

Usage Guidelines

This command requires an Enhanced Layer 2 license.

Examples

This example shows how to configure fabricpath topology:

```
switch# config t
Enter configuration commands, one per line.  End with CNTL/Z.
switch(config)# fabricpath topology 1
switch(config-fp-topology)#
```

Related Commands

Command	Description
show fabricpath isis	Displays FabricPath IS-IS information.

fabricpath ttl multicast

To assign a time to live (TTL) for multicast traffic, use the **fabricpath ttl multicast** command. To return to the default setting, use the **no** form of this command.

fabricpath ttl multicast *numhops*

no fabricpath ttl multicast *numhops*

Syntax Description

numhops	Number of hops for the multicast traffic. The range is from 1 to 64 and the default value is 32.

Defaults

None

Command Modes

Global configuration mode

SupportedUserRoles

network-admin
vdc-admin

Command History

Release	Modification
6.2(2)	This command was introduced.

Usage Guidelines

This command requires an Enhanced Layer 2 license.

Examples

This example shows how to configure TTL for multicast traffic:

```
switch# configure terminal
Enter configuration commands, one per line. End with CNTL/Z.
switch(config)# fabricpath ttl multicast 20
switch(config)#
```

Related Commands

Command	Description
show fabricpath ttl	Displays FabricPath TTL information.

fabricpath ttl unicast

To assign a time to live (TTL) for unicast traffic, use the **fabricpath ttl unicast** command. To return to the default setting, use the **no** form of this command.

fabricpath ttl unicast *numhops*

no fabricpath ttl unicast *numhops*

Syntax Description

numhops	Number of hops for the unicast traffic. The range is from 1 to 64.

Defaults

None

Command Modes

Global configuration mode

SupportedUserRoles

network-admin
vdc-admin

Command History

Release	Modification
6.2(2)	This command was introduced.

Usage Guidelines

Unicast as well as broadcast & unknown unicast frames use Unicast TTL setting.

IPv4/IPv6 Multicast and non-IP multicast frames use Multicast TTL setting.

This command requires an Enhanced Layer 2 license.

Examples

This example shows how to configure TTL for unicast traffic:

```
switch# configure terminal
Enter configuration commands, one per line. End with CNTL/Z.
switch(config)# fabricpath ttl unicast 20
switch(config)#
```

Related Commands

Command	Description
show fabricpath ttl	Displays FabricPath TTL information.

fabricpath timers

To configure FabricPath timers, use the **fabricpath timers** command.

fabricpath timers {**allocate-delay** *sec* | **linkup-delay** *sec* | **linkup-delay always** | **transition-delay** *sec*}

Syntax Description

allocate-delay	Specifies the time delay for a new resource to be propagated throughout the network.
sec	Timer value in seconds. The range is from 1 to 1200 seconds.
linkup-delay	Specifies the time delay for a link bringup to detect conflicts. The conflict will be detected in time to avoid link bringups, if this delay is sufficiently large enough for an exchange of LSP databases between nodes to be completed.
linkup-delay always	Specifies the linkup-delay as always. You can decrease traffic loss after reloading modules that provide redundant paths to known networks.
transition-delay	Specifies the time delay for a transitioned value to be propagated throughout the network.

Defaults

- **allocate-delay**—10 seconds
- **linkup-delay**—10 seconds
- **transition-delay**—10 seconds

Command Modes

Global configuration mode

SupportedUserRoles

network-admin
vdc-admin

Command History

Release	Modification
6.2(2)	Added **linkup-delay always** keyword to the syntax description.
6.1(1)	Added the usage guidelines.
5.1(1)	This command was introduced.

Usage Guidelines

If conflicts are not resolved for user-configured switch ID, warnings are displayed. To avoid incorrect traffic forwarding, keep the delay large enough around 60 seconds for IS-IS to gather all neighbor information while changing the topology. This delay allows the timely detection of conflicts. The links are held down until the conflict is resolved by user intervention or on the expiry of the LSP of the conflicting Switch ID.

This command requires an Enhanced Layer 2 license.

Examples

This example shows how to configure the delay for a new switch ID to be propagated throughout the network before that value becomes available and permanent:

```
switch(config)# fabricpath timers allocate-delay 60
switch(config)#
```

This example shows how to configure the link bringup delay to detect conflicts in the switch ID. If the system finds a conflict, the system takes some time to resolve the conflict and to bring FabricPath to an operational state.

```
switch(config)# fabricpath timers linkup-delay 60
switch(config)#
```

This example shows how to configure the delay for propagating a transitioned value in the network; during this period, all old and new switch ID values exist in the network. This transition lasts only until the link comes up and the system checks to see if the network has two identical switch IDs.

```
switch(config)# fabricpath timers transition-delay 600
switch(config)#
```

Related Commands

Command	Description
show fabricpath timers	Displays information about the FabricPath timers.

feature-set fabricpath

To enable a FabricPath feature set in a virtual device context (VDC)**,** use the **feature-set fabricpath** command. To disable the FabricPath feature in a VDC, use the **no** form of this command.

feature-set fabricpath

Syntax Description This command has no arguments or keywords.

Defaults None

Command Modes Global configuration mode

SupportedUserRoles network-admin
vdc-admin

Command History

Release	Modification
5.1(1)	This command was introduced.

Usage Guidelines You cannot view or access any FabricPath commands until you enable FabricPath on the device.

Note You must install the FabricPath feature set before you enable FabricPath on the switch. See the *Configuring Feature Set for FabricPath* document for more information about feature sets. Also, you must enable the FabricPath feature set on the default virtual device context (VDC), as well as separately on any other VDCs that are running FabricPath.

This command requires an N7K-F132-15 module.

This command requires an Enhanced Layer 2 license.

Examples This example shows how to enable the FabricPath feature in the device:

```
switch(config)# feature-set fabricpath
switch(config)#
```

Related Commands

Command	Description
show feature set	Displays the status of the feature.

force gateway-down

To enforce an HSRP anycast bundle to remain the down state even if one invalid VLAN is configured for the bundle, use the **force gateway-down** command. The bundle will come up only when all configured VLANs are valid. This mode favors loss of traffic.

To return to the default setting, use the **no** form of this command. In this case, the bundle will come up even if one valid VLAN configuration exits. This mode favors loss of anycast gateway.

force gateway-down

no force gateway-down

Note A VLAN is considered to be invalid if it is not completely configured. For example, if the VLAN or SVI is not configured, if HSRP groups are not configured, if configured HSRP groups have incomplete VIP configurations or incorrect HSRP versions, if the VLAN or SVI is in SHUT state, and if the VLAN is not in FP mode.

Syntax Description

This command has no arguments or keywords.

Defaults

Disabled

Command Modes

Anycast-bundle configuration mode

SupportedUserRoles

network-admin
vdc-admin

Command History

Release	Modification
6.2(10)	This command was introduced.

Usage Guidelines

This command requires an Enhanced Layer 2 license.

Ensure that you have installed the FabricPath feature set in the default VDC.

Ensure that you have enabled the HSRP feature.

The HSRP anycast bundle needs to be shut down before configuring or unconfiguring this command.

Examples

This example shows how to enable the **force gateway-down** command on the device:

```
switch# configure terminal
Enter configuration commands, one per line.  End with CNTL/Z.
switch(config)# hsrp anycast 1 ipv4
switch(config-anycast-bundle)# force gateway-down
switch(config-anycast-bundle)#
```

Related Commands

Command	Description
hsrp anycast	Configures an HSRP anycast bundle and enters anycast-bundle configuration mode.

graceful-restart (fabricpath)

To enable graceful restart for the Intermediate System-to-Intermediate System (IS-IS) process, use the **graceful-restart** command. To return to the default setting, use the **no** form of this command.

graceful-restart [**t3 manual** *secs*]

no graceful-restart [**t3 manual** *secs*]

Syntax Description

t3	(Optional) Sets the T3 graceful restart timer.
manual	(Optional) Specifies to manually set the T3 default value.
secs	T3 value. The range is from 30 to 65535.

Defaults

60 seconds

Command Modes

FabricPath IS-IS mode

SupportedUserRoles

network-admin
vdc-admin

Command History

Release	Modification
5.1(1)	This command was introduced.

Usage Guidelines

This command requires an Enhanced Layer 2 license.

Examples

This example shows how to enable a graceful restart for the IS-IS process:

```
switch# configure terminal
Enter configuration commands, one per line.  End with CNTL/Z.
switch(config)# fabricpath domain default
switch(config-fabricpath-isis)# graceful-restart
switch(config-fabricpath-isis)#
```

Related Commands

Command	Description
show fabricpath isis	Displays FabricPath IS-IS information.

hostname dynamic (fabricpath)

To configure a dynamic hostname exchange for Intermediate-System-to-Intermediate System (IS-IS), use the **hostname dynamic** command. To return to the default setting, use the **no** form of this command.

hostname dynamic

no hostname dynamic

Syntax Description

This command has no arguments or keywords.

Defaults

ON

Command Modes

FabricPath IS-IS mode

SupportedUserRoles

network-admin
vdc-admin

Command History

Release	Modification
5.1(1)	This command was introduced.

Usage Guidelines

Instead of displaying a hexadecimal format value for the system ID, a switch hostname is used.

Some **show fabricpath** commands that have capability are as follows:

show fabricpath isis hostname

show fabricpath isis adjacency

show fabricpath isis database

The **hostname dynamic** command has nothing to do with the dynamic switch ID allocation in the Dynamic Resource Allocation Protocol (DRAP).

This command requires an Enhanced Layer 2 license.

Examples

This example shows how to configure a dynamic hostname exchange for IS-IS:

```
switch# configure terminal
Enter configuration commands, one per line.  End with CNTL/Z.
switch(config)# fabricpath domain default
switch(config-fabricpath-isis)# hostname dynamic
switch(config-fabricpath-isis)#
```

Related Commands

Command	Description
show hostname	Displays the system host name.

hsrp

To configure a Hot Standby Router Protocol (HSRP) interfaces configuration commands, use the **hsrp** command. To disable this function, use the **no** form of this command.

hsrp *group-number* {**ipv4** | **ipv6**} | **version** {**version 1 version 2**}

no hsrp *group-number* {**ipv4** | **ipv6**} | **version** {**version 1 version 2**}

Syntax Description

group-number	Specifies the group number. The range is from 0 to 4095.
ipv4	Configures IP version 4 group.
ipv6	Configures IP version 6 group.
version	Specifies the HSRP version.
version 1	Specifies the version 1.
version 2	Specifies the version 2.

Defaults

HSRP anycast is supported only in version 2

Command Modes

Interface configuration mode

SupportedUserRoles

network-admin
vdc-admin

Command History

Release	Modification
6.2(2)	This command was introduced.

Usage Guidelines

The bundle ID number is used to identify the context for configuring other anycast bundle parameters such as the VLAN range, switch ID, or priority.

This command requires an Enhanced Layer 2 license.

Examples

The following example shows how to configure a Hot Standby Router Protocol (HSRP) interfaces configuration commands:

```
switch(config-if)# hsrp 1
switch(config-if-hsrp)#
```

Related Commands

Command	Description
hsrp anycast	Configures an HSRP anycast bundle and enters anycast-bundle configuration mode.

hsrp anycast

To configure a Hot Standby Router Protocol (HSRP) anycast bundle and enter anycast-bundle configuration mode, use the **hsrp anycast** command. To disable this function, use the **no** form of this command.

hsrp anycast *bundle-id* {**ipv4 | ipv6 | both**}

no hsrp anycast *bundle-id* {**ipv4 | ipv6 | both**}

Syntax Description

bundle-id	Bundle number used to identify this HSRP anycast bundle. The range is from 1 to 4096.
ipv4	Specifies that this is an IPv4 bundle. All IPv4 groups in the interface are associated with this bundle.
ipv6	Specifies that this is an IPv6 bundle. All IPv6 groups in the interface are associated with this bundle.
both	Specifies that this is an IPv4 and an IPv6 bundle. All IPv4 and IPv6 groups in the interface are associated with this bundle.

Defaults

HSRP anycast bundle is not configured

Command Modes

Global configuration mode

SupportedUserRoles

network-admin
vdc-admin

Command History

Release	Modification
6.2(2)	This command was introduced.

Usage Guidelines

The bundle ID number is used to identify the context for configuring other anycast bundle parameters such as the VLAN range, switch ID, or priority.

This command requires an Enhanced Layer 2 license.

Examples

The example shows how to configure an HSRP anycast bundle:

```
switch(config)# hsrp anycast 112 both
switch(config-anycast-bundle)# switch-id 2200
switch(config-anycast-bundle)# vlan 600-700
switch(config-anycast-bundle)# priority 110
switch(config-anycast-bundle)# timers 5 15
switch(config-anycast-bundle)# no shutdown
switch(config-anycast-bundle)# exit
```

Related Commands

Command	Description
hsrp anycast	Configures an HSRP anycast bundle and enters anycast-bundle configuration mode.
limit-resource anycast_bundleid	Configures anycast bundle ID resource limits.

hardware fabricpath mac-learning

To enable Fabric Path MAC address learning on F2 Series module port groups, use the **hardware fabricpath mac-learning** command. To disable this feature, use the **no** form of this command.

hardware fabricpath mac-learning module *module-number* [**port-group** *list*]

no hardware fabricpath mac-learning module *module-number* [**port-group** *list*]

Syntax Description

module	Specifies the module.
module-number	Module number. The range is from 1 to 10.
port-group	(Optional) Specifies the port group.
list	List of static port range from 1 to 4, 5 to 8, 9 to 12, 13 to 16, 17 to 20, 21 to 24, 25 to 28, 29 to 32, 33 to 36, 37 to 40, 41 to 44, and 45 to 48.

Defaults

None

Command Modes

Global configuration mode

SupportedUserRoles

network-admin
vdc-admin

Command History

Release	Modification
6.1(2)	This command was introduced.

Usage Guidelines

Note Use this command only for F2 Series modules or port groups that have Fabric Path core ports only (or unused/shutdown ports), not customer edge ports or any other type of port.

After you use this command, FabricPath core ports on the specified modules and port groups no longer learn any MAC addresses in the VLANs that do not have switched virtual interfaces (SVIs). This command does not affect forwarding behavior (Fabric Path core ports that do not use the MAC address table to perform forwarding).

For VLANs with SVIs configured (even on port-groups where the CLI is applied), and for port groups that this CLI has not been applied to, the F2 Series module still learns MAC addresses.

This command requires an Enhanced Layer 2 license.

Examples

This example shows how to disable hardware FabricPath MAC learning on F2 Series module port-groups regardless of the VDC membership:

```
switch# conf t
Enter configuration commands, one per line.  End with CNTL/Z.
switch(config)# no hardware fabricpath mac-learning module 2 port-group 1-4 5-8 9-12 25-28
Warning: Disabled hardware MAC learning on requested port-group(s): ensure all ports in
these port-groups are FabricPath core ports (or are shutdown/unused)
switch(config)#
```

Related Commands

Command	Description
show mac address-table learning-mode	Displays the MAC address learning mode on a specific VLAN.

limit-resource anycast_bundleid

To configure anycast bundle ID resource limits, use the **limit-resource anycast_bundleid** command. To release reserved anycast switch IDs, use the **no** form of this command.

limit-resource anycast_bundleid minimum *min-value* **maximum** *max-value*

no limit-resource anycast_bundleid

Syntax Description

minimum *min-value*	Specifies the minimum number of anycast bundle IDs per VDC. The range is from 0 to 0. The minimum value is set to 0 and cannot be changed.
maximum *max-value*	Specifies the maximum number of anycast switch IDs per VDC. The range is from 0 to 128. For Supervisor 1 and Supervisor 2 the maximum value is limited to 64. For Supervisor 2e and Supervisor 3, the maximum value is limited to 128.

Defaults

The number of anycast switch IDs per VDC is not configured.

Command Modes

VDC configuration mode (config-vdc)

SupportedUserRoles

network-admin
vdc-admin

Command History

Release	Modification
6.2(2)	This command was introduced.

Usage Guidelines

Use the **hsrp anycast** command to used to configure an anycast bundle that is specified by the bundle number. This number is used to identify the context for configuring other anycast bundle parameters such as the VLAN range, switch ID, or priority.

The **limit-resource anycast_bundleid** command is used to configure the number of anycast bundle IDs per VDC. The number of anycast switch IDs per system is limited to 128. The number of anycast switch IDs per VDC is limited to 16.

This command requires an Enhanced Layer 2 license.

Examples

This example shows how to configure the number of anycast switch IDs per VDC:

```
switch(config)# vdc switch
switch(config-vdc)# limit-resource anycast_bundleid minimum 0 maximum 8
```

Related Commands

Command	Description
hsrp anycast	Configures an HSRP anycast bundle and enters anycast-bundle configuration mode.
priority	Specifies a priority value for a HSRP anycast bundle.

log-adjacency-changes (fabricpath)

To configure the log changes in the adjacency state, use the **log-adjacency-changes** command. To return to the default setting, use the **no** form of this command.

log-adjacency-changes

no log-adjacency-changes

Syntax Description

This command has no arguments or keywords.

Defaults

ON

Command Modes

FabricPath IS-IS mode

SupportedUserRoles

network-admin
vdc-admin

Command History

Release	Modification
5.1(1)	This command was introduced.

Usage Guidelines

This command requires an Enhanced Layer 2 license.

Examples

This example shows how to configure the log changes in the adjacency state:

```
switch# config t
Enter configuration commands, one per line.  End with CNTL/Z.
switch(config)# fabricpath domain default
switch(config-fabricpath-isis)# log-adjacency-changes
switch(config-fabricpath-isis)#
```

Related Commands

Command	Description
show fabricpath isis	Displays FabricPath IS-IS information.

lsp-gen-interval (fabricpath)

To configure a link-state packet (LSP) generation interval, use the **lsp-gen-interval** command. To return to the default setting, use the **no** form of this command.

lsp-gen-interval {*lsp-max-wait* | *lsp-initial-wait* | *lsp-second-wait*}

no lsp-gen-interval {*lsp-max-wait* | *lsp-initial-wait* | *lsp-second-wait*}

Syntax Description

lsp-max-wait	Maximum interval (in seconds) between two consecutive occurrences of an LSP being generated. The range is from 50 to 120000. The default is 8000.
lsp-initial-wait	Initial LSP generation delay (in milliseconds). The range is from 50 to 120000. The default is 50.
lsp-second-wait	Hold time between the first and second LSP generation (in milliseconds). The range is from 50 to 120000. The default is 50.

Defaults

The defaults are as follows:

- *lsp-max-wait:* 8000
- *lsp-initial-wait:* 50
- *lsp-second-wait:* 50

Command Modes

FabricPath IS-IS mode

SupportedUserRoles

network-admin
vdc-admin

Command History

Release	Modification
5.1(1)	This command was introduced.

Usage Guidelines

You can enter the **lsp-gen-interval** command to control the rate of LSP packets being generated, transmitted, and retransmitted.

This command requires an Enhanced Layer 2 license.

Examples

This example shows how to configure an LSP-generation interval:

```
switch# config t
Enter configuration commands, one per line.  End with CNTL/Z.
switch(config)# fabricpath domain default
switch(config-fabricpath-isis)# lsp-gen-interval 9000 60 70
switch(config-fabricpath-isis)#
```

Related Commands

Command	Description
show fabricpath isis	Displays FabricPath IS-IS information.

lsp-mtu (fabricpath)

To configure a link-state packet (LSP) maximum transmission unit (MTU) that is generated by the Cisco NX-OS software, use the **lsp-mtu** command. To return to the default setting, use the **no** form of this command.

lsp-mtu *bytes*

no lsp-mtu *bytes*

Syntax Description

bytes	Maximum LSP size in bytes. The range is from 128 to 4352.

Defaults

1492 bytes

Command Modes

Fabricpath IS-IS mode

SupportedUserRoles

network-admin
vdc-admin

Command History

Release	Modification
5.1(1)	This command was introduced.

Usage Guidelines

This command requires an Enhanced Layer 2 license.

Examples

This example shows how to set the maximum LSP size to 1500 bytes:

```
switch# config t
Enter configuration commands, one per line.  End with CNTL/Z.
switch(config)# fabricpath domain default
switch(config-fabricpath-isis)# lsp-mtu 1500
switch(config-fabricpath-isis)#
```

Related Commands

Command	Description
show fabricpath isis	Displays FabricPath Layer 2 IS-IS.

mac address-table fabricpath remote-learning

To enable remote MAC address learning for a chassis that contains an M Series module and an F2e module (M-F2e) or an M Series module and an F1 Series module (M-F1), use the **mac address table fabricpath remote-learning** command. To disable remote MAC address learning, use the **no** form of this command.

mac address-table fabricpath remote-learning

no mac address-table fabricpath remote-learning

Syntax Description

This command has no arguments or keywords.

Defaults

Enabled

Command Modes

Global configuration mode

SupportedUserRoles

network-admin
vdc-admin

Command History

Release	Modification
6.2(2)	This command was introduced.

Usage Guidelines

This command requires an Enhanced Layer 2 license.

Examples

This example shows how to disable remote MAC address learning on the VDC:

```
switch# configure terminal
Enter configuration commands, one per line. End with CNTL/Z.
switch(config)# mac address-table fabricpath remote-learning
switch(config)#
```

Related Commands

Command	Description
show system internal l2fm info detail	Displays Layer 2 feature manager detailed information.

mac address-table learning-mode conversational

To configure conversational MAC address learning on specified Classical Ethernet (CE) VLANs on the F Series module, use the **mac address-table learning-mode conversational** command. To return to the traditional (or non conversational learning) MAC learning mode, use the **no** form of this command.

mac address-table learning-mode conversational {**vlan** *vlan-id*}

no mac address-table learning-mode conversational {**vlan** *vlan-id*}

Syntax Description

vlan	Specifies the VLAN.
vlan-id	VLAN ID. The range is from 1 to 4094.

Defaults

Traditional MAC address learning is the default for CE VLANs on the F Series Module.

Command Modes

Global configuration mode

SupportedUserRoles

network-admin
vdc-admin

Command History

Release	Modification
5.1(1)	This command was introduced.

Usage Guidelines

Note You cannot configure FabricPath VLANs for the traditional MAC address learning mode.

This command requires an Enhanced Layer 2 license.

Examples

This example shows how to configure conversational MAC address learning on specified CE VLANs on the F Series module:

```
switch(config)# mac address-table learning-mode conversational vlan 1-10
switch(config)#
```

Related Commands

Command	Description
show mac address-table learning-mode	Displays VLANs and the MAC address learning mode.

max-lsp-lifetime (fabricpath)

To configure a lifetime for a maximum link-state packet (LSP), use the **max-lsp-lifetime** command. To return to the default setting, use the **no** form of this command.

max-lsp-lifetime *value*

no max-lsp-lifetime *value*

Syntax Description

value	Maximum LSP lifetime in seconds. The range is from 1 to 65535.

Defaults

1200 seconds

Command Modes

FabricPath IS-IS mode

SupportedUserRoles

network-admin
vdc-admin

Command History

Release	Modification
5.1(1)	This command was introduced.

Usage Guidelines

The maximum LSP lifetime must be greater than the LSP refresh interval.

This command requires an Enhanced Layer 2 license.

Examples

This example shows how to set the maximum time that the link-state packets persists to 11,000 seconds:

```
switch# config t
Enter configuration commands, one per line.  End with CNTL/Z.
switch(config)# fabricpath domain default
switch(config-fabricpath-isis)# max-lsp-lifetime 1300
switch(config-fabricpath-isis)#
```

Related Commands

Command	Description
show fabricpath isis	Displays FabricPath Layer 2 IS-IS.

maximum-paths (fabricpath)

To configure the maximum number of paths per destination, use the **maximum-paths** command. To return to the default setting, use the **no** form of this command.

maximum-paths *paths*

no maximum-paths *paths*

Syntax Description

paths	Maximum number of paths per destination. The range is from 1 and 255.

Defaults

The default value is 16.

Command Modes

FabricPath IS-IS mode

SupportedUserRoles

network-admin
vdc-admin

Command History

Release	Modification
5.1(1)	This command was introduced.

Usage Guidelines

This command requires an Enhanced Layer 2 license.

Examples

This example shows how to configure the maximum number of paths per destination:

```
switch# config t
Enter configuration commands, one per line.  End with CNTL/Z.
switch(config)# fabricpath domain default
switch(config-fabricpath-isis)# maximum-paths 1
switch(config-fabricpath-isis)#
```

Related Commands

Command	Description
show fabricpath isis	Displays FabricPath Layer 2 IS-IS.

port-channel limit

To extend support for more than 244 virtual port channel (vPC) plus port channels, use the **port-channel limit** command, to return to the default settings, use the **no** form of this command.

port-channel limit

no port-channel limit

Syntax Description This command has no arguments or keywords.

Defaults Disabled

Command Modes vPC domain mode

SupportedUserRoles network-admin
vdc-admin

Command History

Release	Modification
6.1(2)	This command was introduced.

Usage Guidelines This command allows support for more than 244 vPC+ port channels when configured on both vPC+ peer switches. To enable this command, first enter the **fabricpath multicast load-balance** command.

Follow these guidelines when using the **no port-channel limit** command:

- Entering this command could cause the peer link and VPC to go up and down, which could lead to traffic losses.
- Only F2 Series modules support this configuration. It can not be configured on VDCs that do not have an F2 Series module.
- The command changes FabricPath MAC addresses that are used by vPC+ port channels. It leads to some transient flooding until the MAC addresses are learned again.
- An in-service software upgrade (ISSU) and an in-service software downgrade (ISSD) are not supported in this release.
- Remove the no port-channel limit configuration before attempting an ISSD to an image that does not support this configuration. To revert to an earlier configuration, the maximum number of vPCs that you can use is 244
- To unconfigure the FabricPath multicast load-balance configuration, you must first remove the no port-channel limit configuration.

The **fabricpath multicast load-balance** command must be entered before the **no port-channel limit** command:

- Only VDCs that have an F2 Series module can support more than 244 vPC+ port channels.
- Support for more than 244 vPC+ port channels (per vPC+ domain) is enabled with the no port-channel limit command.

This command requires an Enhanced Layer 2 license.

Note The **no port-channel limit** command is not applicable with a Fabric Extender (FEX). A FEX can support more than 244 vPC+ port channels.

Examples

This example shows how to configure a no port-channel limit:

```
switch# configure terminal
Enter configuration commands, one per line. End with CNTL/Z.
switch(config)# vpc domain 1
switch(config-vpc-domain)# fabricpath multicast load-balance
switch(config-vpc-domain)# no port-channel limit
switch(config-vpc-domain)#
```

Related Commands

Command	Description
show vPC	Displays virtual port channel (vPC) information.

priority

To specify the priority value for a Hot Standby Router Protocol (HSRP) anycast bundle, use the **priority** command. To disable this function, use the **no** form of this command.

priority *priority*

no priority *priority*

Syntax Description

priority	Priority value for this HSRP anycast bundle. Valid values are from 1 to 127.

Defaults

The priority value is set to 100.

Command Modes

Anycast bundle configuration (config-anycast-bundle)

SupportedUserRoles

network-admin
vdc-admin

Command History

Release	Modification
6.2(2)	This command was introduced.

Usage Guidelines

Use the **hsrp anycast** command to used to configure an anycast bundle that is specified by the bundle number. This number is used to identify the context for configuring other anycast bundle parameters such as the VLAN range, switch ID, or priority.

The priority value is used to select which of the participating switches should act as a root switch.

Examples

This example shows how to configure the priority value for an HSRP anycast bundle:

```
switch# hsrp anycast 112 both
switch(config-anycast-bundle)# switch-id 2200
switch(config-anycast-bundle)# vlan 600-700
switch(config-anycast-bundle)# priority 110
```

Related Commands

Command	Description
hsrp anycast	Configures a HSRP anycast bundle and enters anycast-bundle configuration mode.
limit-resource anycast_bundleid	Configures anycast bundle ID resource limits.

redistribute filter route-map

To configure the route map to control the routes that are redistributed into the FabricPath Intermediate System-to-Intermediate System (IS-IS) topology, use the **redistribute filter route-map** command. To return to the default setting, use the **no** form of this command.

redistribute filter route-map *map-name*

no redistribute filter route-map *map-name*

Syntax Description

map-name	Route map name. The maximum size is 63 characters.

Defaults

None

Command Modes

FabricPath IS-IS mode

SupportedUserRoles

network-admin
vdc-admin

Command History

Release	Modification
6.2(2)	This command was introduced.

Usage Guidelines

This command requires an Enhanced Layer 2 license.

Examples

This example shows how to redistribute information from another routing protocol:

```
switch# config t
Enter configuration commands, one per line.  End with CNTL/Z.
switch(config)# fabricpath domain default
switch(config-fabricpath-isis)# redistribute filter route-map filter-map1
switch(config-fabricpath-isis)#
```

Related Commands

Command	Description
show fabricpath isis	Displays FabricPath Layer 2 IS-IS.

reference-bandwidth (fabricpath)

To change the reference bandwidth used for setting an interface, use the **reference bandwidth** command. To return to the default setting, use the **no** form of this command.

reference-bandwidth *bandwidth* {**Mbps** | **Gbps**}

no reference-bandwidth *bandwidth* {Mbps | Gbps}

Syntax Description

bandwidth	Bandwidth in Mbps and Gbps. The range is from 1 to 400000 in Mbps and from 1 to 400 in Gbps.
Mbps	Specifies the bandwidth in Mbps.
Gbps	Specifies the bandwidth in Gbps.

Defaults

The defaults are as follows:

- **Gbps**: 400
- **Mbps**: 400000

Command Modes

FabricPath IS-IS mode

SupportedUserRoles

network-admin
vdc-admin

Command History

Release	Modification
5.1(1)	This command was introduced.

Usage Guidelines

This command requires an Enhanced Layer 2 license.

Examples

This example shows how to change the reference bandwidth for a Gbps interface:

```
switch# config t
Enter configuration commands, one per line.  End with CNTL/Z.
switch(config)# fabricpath domain default
switch(config-fabricpath-isis)# reference-bandwidth 500 Gbps
switch(config-fabricpath-isis)#
```

Related Commands

Command	Description
show fabricpath isis	Displays FabricPath Layer 2 IS-IS.

root-priority (fabricpath)

To set the priority for which node becomes the root, use the **root-priority** command. To return to the default setting, use the **no** form of this command.

root-priority *value*

no root-priority *value*

Syntax Description

value	Root priority value per topology. The range is from 1 to 255. The default is 64.

Defaults

The default value is 64.

Command Modes

FabricPath IS-IS mode

SupportedUserRoles

network-admin
vdc-admin

Command History

Release	Modification
5.1(1)	This command was introduced.

Usage Guidelines

The highest numerical value for the priority is likely to become root.

This command requires an Enhanced Layer 2 license.

Examples

This example shows how to set the priority for which node becomes the root:

```
switch# config t
Enter configuration commands, one per line.  End with CNTL/Z.
switch(config)# fabricpath domain default
switch(config-fabricpath-isis)# root-priority 1
switch(config-fabricpath-isis)#
```

Related Commands

Command	Description
show fabricpath isis	Displays FabricPath IS-IS information.

set-overload-bit

To configure the overload bit for the system, use the **set-overload- bit** command. To disable the overload bit enter the **no** form of this command.

set-overload-bit {**always** | **on-startup** *seconds*}

no set-overload-bit {**always** | **on-startup** *seconds*}

Syntax Description

always	Sets the overload bit unconditionally.
on-startup	Sets the overload bit on IS-IS startup.
seconds	Clears the overload bit after an elapsed time in seconds. The range is from 5 to 86400.

Defaults

None.

Command Modes

FabricPath IS-IS mode

SupportedUserRoles

network-admin
vdc-admin

Command History

Release	Modification
6.2(2)	This command was introduced.

Usage Guidelines

This command requires an Enhanced Layer 2 license.

Examples

This example shows how to set the overload bit unconditionally:

```
switch# config t
Enter configuration commands, one per line. End with CNTL/Z.
switch(config)# fabricpath domain default
switch(config-fabricpath-isis)# set-overload-bit always
switch(config-fabricpath-isis)#
```

Related Commands

Command	Description
show fabricpath isis	Displays FabricPath IS-IS information.

show fabricpath isis adjacency

To display the FabricPath Intermediate System-to-Intermediate System (IS-IS) adjacency database**,** use the **show fabricpath isis adjacency** command.

show fabricpath isis adjacency [**interface** {**ethernet** *slot/chassis number* | **port-channel** *channel-number*} | **detail** | **summary** | **system-id** *sid*]

Syntax Description

interface	(Optional) Displays the interface status.
ethernet	Displays the Ethernet interface.
slot/chassis number	Slot or chassis number. The range is from 1 to 253.
port-channel	Displays the port-channel interface.
channel-number	Port-channel number. The range is from 1 to 256.
detail	(Optional) Displays the IS-IS adjacency detailed information.
summary	(Optional) Displays the IS-IS adjacency summary information.
system-id	(Optional) Displays the system ID.
sid	Hostname or System ID (in the form of XXXX.XXXX.XXXX).

Defaults

None

Command Modes

Global configuration mode

SupportedUserRoles

network-admin
vdc-admin

Command History

Release	Modification
5.1(1)	This command was introduced.

Usage Guidelines

This command requires an Enhanced Layer 2 license.

Note If the hostname is less than 14 characters in length, the **show fabricpath isis adjacency** command displays the hostname to the user. Otherwise, the System ID is displayed to the user.

Examples

This example shows how to display detailed information about the IS-IS adjacency:

```
switch# show fabricpath isis adjacency detail
Fabricpath IS-IS domain: default Fabricpath IS-IS adjacency database on MT-62:
System ID       SNPA            Level  State  Hold Time  Interface
switch#
```

Related Commands

Command	Description
fabricpath domain default	Enables FabricPath Layer 2 IS-IS.

show fabricpath isis database

To display information about the FabricPath Intermediate System-to-Intermediate System (IS-IS) link-state packet (LSP) database**,** use the **show fabricpath isis database** command.

show fabricpath isis database [*level*] [**mgroup**] [**detail** | **summary**] [*sid*] {[**zero-sequence**] | [**router-id**] | [**adjacency**]}

Syntax Description

level	(Optional) IS-IS Level-1 routing link state database.
mgroup	(Optional) Displays the IS-IS GM database information.
detail	(Optional) Displays the detailed IS-IS information.
summary	(Optional) Displays the summary IS-IS information.
sid	(Optional) LSP ID in the form of XXXX.XXXX.XXXX.XX-XX.
zero-sequence	(Optional) Displays the LSP with a zero sequence number.
router-id	(Optional) Displays the router ID filter.
adjacency	(Optional) Displays the adjacency filter.

Defaults

None

Command Modes

Global configuration mode

SupportedUserRoles

network-admin
vdc-admin

Command History

Release	Modification
5.1(1)	This command was introduced.

Usage Guidelines

This command requires an Enhanced Layer 2 license.

Examples

This example shows how to display information about the FabricPath IS-IS LSP database:

```
switch# show fabricpath isis database
Fabricpath IS-IS domain: default LSP database
  LSPID                 Seq Number   Checksum  Lifetime   A/P/O/T
  AA.00-00            * 0x00000199   0x9FEB    935        0/0/0/1
  AA-vdc2.00-00         0x0000019A   0xF5D3    1078       0/0/0/1
  AA-vdc3.00-00         0x00000197   0x6ECF    833        0/0/0/1
switch#
```

Related Commands

Command	Description
fabricpath domain default	Enables FabricPath Layer 2 IS-IS.

show fabricpath isis ftag

To display Intermediate System-to-Intermediate System (IS-IS) FTAG values associated with the trees in the topology**,** use the **show fabricpath isis ftag** command.

show fabricpath isis ftag [**multidestination** *tree-id*]

Syntax Description

multidestination	(Optional) Displays the multidestination information.
tree-id	Tree identifier. The range is from 1 to 2.

Defaults

None

Command Modes

Global configuration mode

SupportedUserRoles

network-admin
vdc-admin

Command History

Release	Modification
5.1(1)	This command was introduced.

Usage Guidelines

This command requires an Enhanced Layer 2 license.

Examples

This example shows how to display IS-IS FTAG multidestination information:

```
switch# show fabricpath isis ftag multidestination 1
Fabricpath IS-IS domain: default
Fabricpath IS-IS Ftag Database
  Legend: C - Confirmed, T - tentative
switch#
```

Related Commands

Command	Description
fabricpath domain default	Enables FabricPath Layer 2 IS-IS.

show fabricpath isis hostname

To display FabricPath Intermediate System-to-Intermediate System (IS-IS) hostname table information, use the **show fabricpath isis hostname** command.

show fabricpath isis hostname [**detail**]

Syntax Description

detail	(Optional) Displays the detailed IS-IS information.

Defaults

None

Command Modes

Global configuration mode

SupportedUserRoles

network-admin
vdc-admin

Command History

Release	Modification
5.1(1)	This command was introduced.

Usage Guidelines

This command requires an Enhanced Layer 2 license.

Examples

This example shows how to display information about the FabricPath IS-IS hostname table:

```
Switch# show fabricpath isis hostname detail
Fabricpath IS-IS domain: default dynamic hostname table
  Level  LSP ID                Dynamic hostname
  1      0024.986d.3141.00-00  dceSwitch2
  1      0024.986d.3cc1.00-00* dceSwitch1s
  1      0026.9805.c3c1.00-00  dceSwitch3
switch#
```

Related Commands

Command	Description
fabricpath domain default	Enables FabricPath Layer 2 IS-IS.

show fabricpath isis interface

To display information about the FabricPath Intermediate System-to-Intermediate System (IS-IS) interface**,** use the **show fabricpath isis interface** command.

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

Syntax Description

brief	Displays brief information about the IS-IS interface.
ethernet	Displays the Ethernet interface.
slot/chassis number	Slot/chassis number.
port-channel	Displays the port-channel interface.
channel-number	Port-channel number. The range is from 1 to 256.

Defaults

None

Command Modes

Global configuration mode

SupportedUserRoles

network-admin
vdc-admin

Command History

Release	Modification
5.1(1)	This command was introduced.

Usage Guidelines

This command requires an Enhanced Layer 2 license.

Examples

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

```
Switch1# show fabricpath isis interface brief
Fabricpath IS-IS domain: default
Interface    Type  Idx State        Circuit   MTU  Metric  Priority  Adjs/AdjsUp
--------------------------------------------------------------------------------
Ethernet2/2  P2P   1     Up/Ready   0x01/L1   1500 40      64          1/1
Ethernet2/3  P2P   2     Up/Ready   0x01/L1   1500 40      64          1/1
Ethernet2/16 P2P   3     Up/Ready   0x01/L1   1500 40      64          1/1
Ethernet2/32 P2P   4     Up/Ready   0x01/L1   1500 40      64          1/1
Ethernet12/32 P2P   5     Up/Ready   0x01/L1   1500 40      64          1/1
switch1#
```

Related Commands

Command	Description
fabricpath domain default	Enables FabricPath Layer 2 IS-IS.

show fabricpath isis ip mroute

To display information about the FabricPath Intermediate System-to-Intermediate System (IS-IS) multicast route, use the **show fabricpath isis ip mroute** command.

show fabricpath isis mroute [**vlan** *vlan-id* [**group** *group-id* [**source** *source-id*]]]

Syntax Description

vlan	(Optional) Displays the IS-IS VLAN information.
vlan-id	VLAN ID. The range is from 1 to 4094.
group	(Optional) Displays the IS-IS group information.
group-id	Group ID information.
source	(Optional) Displays the IS-IS source information.
source-id	Displays the single IP redistribute route.

Defaults

None

Command Modes

Global configuration mode

SupportedUserRoles

network-admin
vdc-admin

Command History

Release	Modification
5.1(1)	This command was introduced.

Usage Guidelines

This command requires an Enhanced Layer 2 license.

Examples

This example shows how to display information about the IS-IS mroute:

```
switch# show fabricpath isis ip mroute
Fabricpath IS-IS domain: default
Fabricpath IS-IS IPv4 Multicast Group database
VLAN 2: (*, *) (Flood)
  Outgoing interface list: (count: 2)
    SWID: 0x14 (20)
    SWID: 0x1e (30)
switch#
```

Related Commands

Command	Description
fabricpath domain default	Enables FabricPath Layer 2 IS-IS.

show fabricpath isis ip redistribute mroute

To display the FabricPath Intermediate System-to-Intermediate System (IS-IS) redistribute mroute information, use the **show fabricpath isis ip redistribute mroute** command.

show fabricpath isis ip redistribute mroute [**vlan** *vlan-id* [**group** *group-id* [**source** *source-id*]]]

Syntax Description

vlan	(Optional) Displays the IS-IS VLAN information.
vlan-id	Displays the VLAN ID. The range is from 1 to 4094.
group	(Optional) Displays the IS-IS group information.
group-id	Group ID information.
source	(Optional) Displays the IS-IS source information.
source-id	Displays the single IP redistribute route.

Defaults

None

Command Modes

Global configuration mode

SupportedUserRoles

network-admin
vdc-admin

Command History

Release	Modification
5.1(1)	This command was introduced.

Usage Guidelines

This command requires an Enhanced Layer 2 license.

Examples

This example shows how to display the FabricPath IS-IS redistribute mroute information:

```
switch# show fabricpath isis ip redistribute mroute
Fabricpath IS-IS domain: default
Fabricpath IS-IS IPv4 Local Multicast Group database
VLAN 2: (*, *)
switch#
```

Related Commands

Command	Description
fabricpath domain default	Enables FabricPath Layer 2 IS-IS.

show fabricpath isis protocol

To display information about the FabricPath Intermediate System-to-Intermediate System (IS-IS) protocol**,** use the **show fabricpath isis protocol** command.

show fabricpath isis protocol

Syntax Description

This command has no arguments or keywords.

Defaults

None

Command Modes

Global configuration mode

SupportedUserRoles

network-admin
vdc-admin

Command History

Release	Modification
5.1(1)	This command was introduced.

Usage Guidelines

This command requires an Enhanced Layer 2 license.

Examples

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

```
switch1# show fabricpath isis protocol
Fabricpath IS-IS domain : default
  System ID : 0024.986d.3cc1  IS-Type : L1
  SAP : 432  Queue Handle : 11
  Maximum LSP MTU: 1492
  Graceful Restart enabled. State: Inactive
  Last graceful restart status : successful
  Metric-style : advertise(wide), accept(wide)
  Start-Mode: Complete [Start-type crash]
  Area address(es) :
    00
  Process is up and running
  CIB ID: 3
  Interfaces supported by Fabricpath IS-IS :
    Ethernet2/2
    Ethernet2/3
    Ethernet2/16
    Ethernet2/32
    Ethernet12/32
  Level 1
  Authentication type and keychain not configured
  Authentication check specified
  MT-0 Ref-Bw: 400000
```

```
  Address family Swid unicast :
--More--
```

Related Commands

Command	Description
fabricpath domain default	Enables FabricPath Layer 2 IS-IS.

show fabricpath isis route

To display the FabricPath Intermediate System-to-Intermediate System (IS-IS) routing table for unicast routes**,** use the **show fabricpath isis route** command.

show fabricpath isis route [**summary** | **detail**]

Syntax Description

summary	(Optional) Displays a summary of the IS-IS adjacency information.
detail	(Optional) Displays the detailed IS-IS adjacency detail information.

Defaults

None

Command Modes

Global configuration mode

SupportedUserRoles

network-admin
vdc-admin

Command History

Release	Modification
5.1(1)	This command was introduced.

Usage Guidelines

This command requires an Enhanced Layer 2 license.

Examples

This example shows how to display detailed information about the IS-IS route:

```
switch# show fabricpath isis route detail
Fabricpath IS-IS domain: default
switch#
```

Related Commands

Command	Description
fabricpath domain default	Enables FabricPath Layer 2 IS-IS.

show fabricpath isis rrm

To display information about the FabricPath Intermediate System-to-Intermediate System (IS-IS) Retransmit-Routing-Message (RRM)**,** use the **show fabricpath isis rrm** command.

show fabricpath isis rrm [**gm**] {**ethernet** *slot/chassis number* **port-channel** *number*}

Syntax Description

gm	(Optional) Displays the IS-IS GM-Send-Sequence-Number information.
ethernet	Displays the Ethernet interface.
slot/chassis number	Slot or chassis number.
port-channel	Displays the port-channel interface.
number	Port-channel number. The range is from 1 to 256.

Defaults

None

Command Modes

Global configuration mode

SupportedUserRoles

network-admin
vdc-admin

Command History

Release	Modification
5.1(1)	This command was introduced.

Usage Guidelines

This command requires an Enhanced Layer 2 license.

Examples

This example shows how to display the FabricPath IS-IS RRM information:

```
switch# show fabricpath isis rrm gm ethernet 2/2
switch#
```

Related Commands

Command	Description
fabricpath domain default	Enables the FabricPath Layer 2 IS-IS.

show fabricpath isis spf-log

To display information about FabricPath Intermediate System-to-Intermediate System (IS-IS) shortest-path-first (SPF) calculation statistics**,** use the **show fabricpath isis spf-log** command.

show fabricpath isis spf-log [**detail**]

Syntax Description

detail	(Optional) Displays the detailed IS-IS SPF information.

Defaults

None

Command Modes

Global configuration mode

SupportedUserRoles

network-admin
vdc-admin

Command History

Release	Modification
5.1(1)	This command was introduced.

Usage Guidelines

This command requires an Enhanced Layer 2 license.

Examples

This example shows how to display the detailed information about the FabricPath IS-IS SPF:

```
switch1# show fabricpath isis spf-log detail
Fabricpath IS-IS domain: default SPF information
Total number of SPF calculations: 0

Log entry (current/max): 20/20
Log entry: 01, Ago: 06:37:27, Date: Wed Nov 03 16:08:43 2010
  Level  Instance    Init      SPF       IS Update  URIB Update  Total
  1      0x00000005  0.000219  0.000425  0.000049   0.000225     0.004572
  Level  Node Count   Changed  Reason
  1         9     2         0  Lost adj dceSwitch2 on Ethernet2/16

Log entry: 02, Ago: 06:37:16, Date: Wed Nov 03 16:08:54 2010
  Level  Instance    Init      SPF       IS Update  URIB Update  Total
  1      0x00000006  0.000207  0.000284  0.000048   0.000157     0.002655
  Level  Node Count   Changed  Reason
  1         9     1         0  Updated LSP dceSwitch2.00-00

Log entry: 03, Ago: 06:35:59, Date: Wed Nov 03 16:10:11 2010
  Level  Instance    Init      SPF       IS Update  URIB Update  Total
  1      0x00000007  0.000247  0.000352  0.000049   0.000159     0.003963
  Level  Node Count   Changed  Reason
  1         9     1         0  New adj dceSwitch2 on Ethernet2/2
```

```
Log entry: 04, Ago: 06:35:56, Date: Wed Nov 03 16:10:14 2010
  Level  Instance    Init      SPF       IS Update  URIB Update  Total
--More--
```

Related Commands

Command	Description
fabricpath domain default	Enables FabricPath Layer 2 IS-IS.

show fabricpath isis srm

To display information about the FabricPath Intermediate System-to-Intermediate System (IS-IS) Send-Routing-Message (SRM)**,** use the **show fabricpath isis srm** command.

show fabricpath isis srm [**gm**] {**ethernet** *slot/chassis number* **port-channel** *number*}

Syntax Description

gm	(Optional) Displays the IS-IS GM-Send-Sequence-Number information.
ethernet	Displays the Ethernet interface.
slot/chassis number	Slot or chassis number.
port-channel	Displays the port-channel interface.
number	Port-channel number. The range is from 1 to 256.

Defaults

None

Command Modes

Global configuration mode

SupportedUserRoles

network-admin
vdc-admin

Command History

Release	Modification
5.1(1)	This command was introduced.

Usage Guidelines

This command requires an Enhanced Layer 2 license.

Examples

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

```
switch# show fabricpath isis srm gm ethernet 2/2
switch#
```

Related Commands

Command	Description
fabricpath domain default	Enables FabricPath Layer 2 IS-IS.

show fabricpath isis ssn

To display information about the FabricPath Intermediate System-to-Intermediate System (IS-IS) Send-Sequence-Number (SSN)**,** use the **show fabricpath isis ssn** command.

show fabricpath isis ssn [**gm**] {**ethernet** *slot/chassis number* | **port-channel** *number*}

Syntax Description

gm	(Optional) Displays the IS-IS GM-Send-Sequence-Number information.
ethernet	Displays the Ethernet interface.
slot/chassis number	Slot or chassis number.
port-channel	Specifies the port-channel interface.
number	Port-channel number. The range is from 1 to 256.

Defaults

None

Command Modes

Global configuration mode

SupportedUserRoles

network-admin
vdc-admin

Command History

Release	Modification
5.1(1)	This command was introduced.

Usage Guidelines

This command requires an Enhanced Layer 2 license.

Examples

This example shows how to display FabricPath IS-IS Send-Sequence-Number information:

```
switch# show fabricpath isis ssn gm port-channel 400
switch#
```

Related Commands

Command	Description
fabricpath domain default	Enables FabricPath Layer 2 IS-IS.

show fabricpath isis statistics

To display information about the FabricPath Intermediate System-to-Intermediate System (IS-IS) protocol statistics**,** use the **show fabricpath isis statistics** command.

show fabricpath isis statistics

Syntax Description

This command has no arguments or keywords.

Defaults

None

Command Modes

Global configuration mode

SupportedUserRoles

network-admin
vdc-admin

Command History

Release	Modification
5.1(1)	This command was introduced.

Usage Guidelines

This command requires an Enhanced Layer 2 license.

Examples

This example shows how to display information about the FabricPath IS-IS protocol statistics:

```
switch# show fabricpath isis statistics
Fabricpath IS-IS domain:      default
SPF calculations:   16
LSPs sourced:       2
LSPs refreshed:     828
LSPs purged:        0
Buffers U2RIB:      0
Buffers M2RIB:      0
Buffers PIXM:       0
Swid Updates:       6
Ftag Updates:       6
switch#
```

Related Commands

Command	Description
fabricpath domain default	Enables FabricPath Layer 2 IS-IS.

show fabricpath isis switch-id

To display switch IDs and reachability information in the topology**,** use the **show fabricpath isis switch-id** command.

show fabricpath isis switch-id

Syntax Description

This command has no arguments or keywords.

Defaults

None

Command Modes

Global configuration mode

SupportedUserRoles

network-admin
vdc-admin

Command History

Release	Modification
5.1(1)	This command was introduced.

Usage Guidelines

This command requires an Enhanced Layer 2 license.

Examples

This example shows how to display the switch ID database:

```
switch# show fabricpath isis switch-id

Fabricpath IS-IS domain: default
Fabricpath IS-IS Switch-ID Database
Legend: C - Confirmed, T - tentative, W - swap
        S - sticky, E - Emulated Switch
        '*' - this system
System-ID        Primary  Secondary  Reachable  Bcast-Priority
switch#
```

Related Commands

Command	Description
fabricpath domain default	Enables FabricPath Layer 2 IS-IS.

show fabricpath isis topology summary

To display information about the Intermediate System-to-Intermediate System (IS-IS) summary topology, use the **show fabricpath isis topology summary** command.

show fabricpath isis topology summary

Syntax Description

This command has no arguments or keywords.

Defaults

None

Command Modes

Global configuration mode

SupportedUserRoles

network-admin
vdc-admin

Command History

Release	Modification
5.1(1)	This command was introduced.

Usage Guidelines

This command requires an Enhanced Layer 2 license.

Examples

This example shows how to display information about the FabricPath IS-IS summary topology:

```
switch# show fabricpath isis topology summary
Fabricpath IS-IS domain: default FabricPath IS-IS Topology Summary
MT-0
  Configured interfaces:  Ethernet3/3  Ethernet3/5  Ethernet3/9
  Number of trees: 2
    Tree id: 1, ftag: 1, root system: 001b.54c2.2544, 2646
    Tree id: 2, ftag: 2, root system: 001b.54c2.2543, 1029
switch#
```

Related Commands

Command	Description
fabricpath domain default	Enables FabricPath Layer 2 IS-IS.

show fabricpath isis traffic

To display information about the FabricPath Intermediate System-to-Intermediate System (IS-IS) traffic**,** use the **show fabricpath isis traffic** command.

show fabricpath isis traffic {**ethernet** *slot/chassis number* | **port-channel** *number*}

Syntax Description

ethernet	Displays the Ethernet interface.
slot/chassis number	Slot or chassis number.
port-channel	Displays the port-channel interface.
number	Port-channel number. The range is from 1 to 256.

Defaults

None

Command Modes

Global configuration mode

SupportedUserRoles

network-admin
vdc-admin

Command History

Release	Modification
5.1(1)	This command was introduced.

Usage Guidelines

This command requires an Enhanced Layer 2 license.

Examples

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

```
switch1# show fabricpath isis traffic
Fabricpath IS-IS domain: default
Fabricpath IS-IS Traffic:
PDU        Received        Sent  RcvAuthErr OtherRcvErr  ReTransmit
P2P-IIH       14540       14550           0           1         n/a
CSNP           2168        1095           0           0         n/a
PSNP           4747        6357           0           0         n/a
LSP            8332        5380           0           0           0

switch#
```

Related Commands

Command	Description
fabricpath domain default	Enables FabricPath Layer 2 IS-IS.

show fabricpath isis trees

To display information about the FabricPath Intermediate System-to-Intermediate System (IS-IS) trees**,** use the **show fabricpath isis trees** command.

show fabricpath isis trees [**multidestination** *tree-id*]

Syntax Description

multidestination	(Optional) Displays the multidestination information.
tree-id	Tree identifier. The range is from 1 to 2.

Defaults

None

Command Modes

Any mode

SupportedUserRoles

network-admin
vdc-admin

Command History

Release	Modification
5.1(1)	This command was introduced.

Usage Guidelines

This command requires an Enhanced Layer 2 license.

Examples

This example shows how to display information about the FabricPath IS-IS tree multidestination:

```
switch# show fabricpath isis trees multidestination 1
Fabricpath IS-IS domain: default
Note: The metric mentioned for multidestination tree is from the root of that tr
ee to that switch-id
switch#
```

Related Commands

Command	Description
fabricpath domain default	Enables FabricPath Layer 2 IS-IS.

show fabricpath isis vlan-range

To display VLANs in the FabricPath Intermediate System-to-Intermediate System (IS-IS) topology**,** use the **show fabricpath isis vlan-range** command.

show fabricpath isis vlan-range

Syntax Description

This command has no arguments or keywords.

Defaults

None

Command Modes

Any mode

SupportedUserRoles

network-admin
vdc-admin

Command History

Release	Modification
5.1(1)	This command was introduced.

Usage Guidelines

This command requires an Enhanced Layer 2 license.

Examples

This example shows how to display VLANs in the FabricPath IS-IS topology:

```
switch# show fabricpath isis vlan-range
Fabricpath IS-IS domain: default
switch#
```

Related Commands

Command	Description
fabricpath domain default	Enables FabricPath Layer 2 IS-IS.

show fabricpath conflict

To display information about the conflicts in the FabricPath network**,** use the **show fabricpath conflict** command.

show fabricpath conflict {**all** [*detail*] | **link** [*detail*] | **switch-id** [*detail*] | **transitions** [*detail*]}

Syntax Description

all	Displays all the conflicts.
detail	(Optional) Displays the details.
link	Displays all the links.
switch-id	Displays the switch IDs.
transitions	Displays the transitions.

Defaults

None

Command Modes

Any mode

SupportedUserRoles

network-admin
vdc-admin

Command History

Release	Modification
5.1(1)	This command was introduced.

Usage Guidelines

This command requires an Enhanced Layer 2 license.

Examples

This example shows how to display detailed information about the conflicts in the FabricPath network:

```
switch# show fabricpath conflict all detail
No Ports under Fabricpath control
No Switch id Conflicts
No transitions in progress
switch#
```

Related Commands

Command	Description
show running-config fabricpath	Displays the current FabricPath configuration.

show fabricpath ftag

To display information about the FabricPath FTAG, use the **show fabricpath ftag** command.

show fabricpath ftag

Syntax Description This command has no arguments or keywords.

Defaults None

Command Modes Any mode

SupportedUserRoles network-admin
vdc-admin

Command History

Release	Modification
5.1(1)	This command was introduced.

Usage Guidelines This command requires an Enhanced Layer 2 license.

Examples This example shows how to display the information about the FabricPath FTAG:

```
switch# show fabricpath ftag
                        FABRICPATH FTAG TABLE
================================================================================
         ALLOCATING
FTAG      SYSTEM-ID     TREE-ID     TOPOLOGY-ID    FLAGS     STATE
------+--------------+----------+--------------+----------+------------
1       0018.bad8.12ff      1           0           Primary    Confirmed
2       0018.bad8.12ff      2           0           Primary    Confirmed
switch#
```

Related Commands

Command	Description
show running-config fabricpath	Displays the current FabricPath configuration.

show fabricpath load-balance unicast

To display FabricPath unicast load-balancing information, use the **show fabricpath load-balance unicast** command.

show fabricpath load-balance unicast forwarding-path ftag *ftag-id* **switchid** *switch-id* **flow-type** {**l2** {{**dst-mac** *dst-mac* | **src-mac** *src-mac*}}} | {**l3** {**dst-ip** *dst-ip* | **src-ip** *src-ip* | **dst-ipv6** *dst-ipv6* | **srcipv6** *src-ipv6*}} | {**l4** {**l4-src-port** *l4-src-port* | **l4-dst-port** *l4-dst-port* | **dst-ip** *dst-ip* | *src-ip src-ip* | **dst-ipv6** *dst-ipv6* | **srcipv6** *src-ipv6*}}} {**vlan** *vlan-id*} {**ether-type** *eth -number*} {**module** *mod-number*}

Syntax Description

forwarding-path	Displays the forwarding path.
ftag	Displays FTAG.
ftag-id	FTAG ID. The range is from 0 to 1023.
switchid	Displays the switch ID.
switch-id	Switch ID. The range is from 0 to 16383.
flow-type	Displays the flow-type as l2 or l3 or l4.
l2	Displays the Layer 2 flow.
dst-mac	Displays the destination MAC address.
dst-mac	MAC address.
src-mac	Displays the destination MAC address.
src-mac	MAC address.
l3	Display the Layer 3 flow.
dst-ip	Displays the destination IPv4 address.
dst-ip	Destination IP address.
src-ip	Displays the source IPv4 address.
src-ip	Source IP address.
dst-ipv6	Displays the destination IPv6 address.
dst-ipv6	Destination IPv6 address
src-ipv6	Displays the source IPv6 address.
scr-ipv6	Source IPv6 address.
l4	Displays the Layer 4 flow.
l4-src-port	Displays the source l4 port.
l4-dst-port	Displays the destination l4 port.
src-port	l4 port number. The range is from 0 to 65535.
vlan	Displays the virtual LAN.
vlan-id	VLAN ID. The range is from 0 to 4294967295.
ether-type	Displays the ether type.
eth-number	Ether Type number.
module	Displays the ingress module at the FabricPath edge.
mod-number	Module number. The range is from 0 to 4294967295.

Defaults None

Command Modes Any mode

SupportedUserRoles network-admin
vdc-admin

Command History

Release	Modification
5.1(1)	This command was introduced.

Usage Guidelines

Note The **show fabricpath load-balance** cannot be executed by any users without admin privileges.

This command requires an Enhanced Layer 2 license.

Examples This example shows how to display FabricPath load balancing information:

```
switch# show fabricpath load-balance
ECMP load-balancing configuration:
L3/L4 Preference: Mixed
Hash Control: Symmetric
Rotate amount: 7 bytes
Use VLAN: TRUE


Ftag load-balancing configuration:
Hash Control: Symmetric
Rotate amount: 7 bytes
Use VLAN: TRUE
switch#
```

The example shows how to display the FabricPath unicast load balancing command:

```
switch# show fabricpath load-balance unicast forwarding-path ftag 1 switchid 2231
flow-type l3 src-ip 1.1.1.1 dst-ip 1.1.1.2 module 4
128b Hash Key generated : 00001010102010101010000000000000
This flow selects interface Po100
switch#
```

Related Commands

Command	Description
fabricpath load-balance	Configures FabricPath load-balancing parameters.

show fabricpath load-balance multicast

To display FabricPath multicast load-balancing information, use the **show fabricpath load-balance multicast** command.

show fabricpath load-balance multicast ftag-selected flow-type {**l2** {{**dst-mac** *dst-mac* | **src-mac** *src-mac*} **ether-type** *ether-type*}} | {**l3** {**dst-ip** *dst-ip* | **dst-ipv6** *dst-ipv6* | **src-ip** | *src-ip* | **src-ipv6** *src-ipv6*}} | {**l4** {**l4-dst-port** | *l4-dst-port* | **l4 src-port** *l4 src-port*}{**dst-ip** | **dst-ipv6** | **l4-dst-port** | **src-ip** | **src-ipv6** | **vlan** *vlan-id*} {**module** *mod-number*}}

Syntax Description

ftag-selected	Displays the FTAG information.
flow-type	Displays the flow-type as l2 or l3 or l4.
l2	Displays the Layer 2 flow.
dst-mac	Displays the destination MAC address.
dst-mac	MAC address.
src-mac	Displays the source MAC address.
src-mac	MAC address.
ether-type	Displays the Ether Type
ether-type	Ether Type number
l3	Displays the Layer 3 flow.
dst-ip	Displays the destination IPv4 address.
dst-ip	IP address.
dst-ipv6	Displays the destination IPv6 address.
dst-ipv6	IPv6 address.
src-ip	Displays the source IPv4 address.
src-ip	Source IP address
src-ipv6	Displays the source IPv6 address.
scr-ipv6	Source IPv6 address.
l4	Displays the Layer 4 flow.
l4-dst-port	Displays the destination l4 port.
port-number	l4 port number. The range is from 0 to 65535.
l4-src-port	Displays the source l4 port.
14-src-port	Source 14 port.
vlan	Displays the virtual LAN.
vlan-id	VLAN ID. The range is from 0 to 4294967295.
module	Displays the ingress module at the FabricPath edge.
module number	Module number. The range is from 0 to 4294967295.

Defaults

None

Command Modes

Any mode

SupportedUserRoles

network-admin
vdc-admin

Command History

Release	Modification
5.1(1)	This command was introduced.

Usage Guidelines

Note The **show fabricpath load-balance** cannot be executed by any users without admin privileges.

This command requires an Enhanced Layer 2 license.

Examples

This example shows how to display FabricPath load balancing information:

```
switch# show fabricpath load-balance
ECMP load-balancing configuration:
L3/L4 Preference: Mixed
Hash Control: Symmetric
Rotate amount: 7 bytes
Use VLAN: TRUE


Ftag load-balancing configuration:
Hash Control: Symmetric
Rotate amount: 7 bytes
Use VLAN: TRUE
switch#
```

This example shows how to display the FabricPath multicast load-balancing:

```
switch(config)# show fabricpath load-balance multicast ftag-selected flow-type l3 src-ip
1.1.1.1 dst-ip 1.1.1.2 vlan 2 module 4
128b Hash Key generated : 00 00 10 10 10 20 00 00 00 00 02 00 00 00 00 00
0x3
```

Related Commands

Command	Description
fabricpath load-balance	Configures FabricPath load-balancing parameters.

show fabricpath mode

To display FabricPath mode information, use the **show fabricpath mode** command.

Syntax Description This command has no arguments or keywords.

Defaults None

Command Modes Any mode

Command History

Release	Modification
8.1(1)	This command was introduced.

show fabricpath route

To display FabricPath route information, use the **show fabricpath route** command.

show fabricpath route [**detail hex | hex detail | switchid** *switchid value*]

Syntax Description

detail	(Optional) Displays detailed information.
hex	(Optional) Displays the switch IDs in hexadecimal.
switchid	(Optional) Displays the switch ID.
switchid value	Switch ID value. The range is from 0 to 16383.

Defaults

None

Command Modes

Any mode

SupportedUserRoles

network-admin
vdc-admin

Command History

Release	Modification
5.1(1)	This command was introduced.

Usage Guidelines

This command requires an Enhanced Layer 2 license.

Examples

This example shows how to display the detailed information about the FabricPath route:

```
switch# show fabricpath route detail
FabricPath Unicast Route Table
'a/b/c' denotes ftag/switch-id/subswitch-id
'[x/y]' denotes [admin distance/metric]
ftag 0 is local ftag
subswitch-id 0 is default subswitch-id
FabricPath Unicast Route Table for Topology-Default
0/3009/0, number of next-hops: 0
        via ---- , [60/0], 1 day/s 22:56:03, local
switch#
```

This example shows how to display the information about the FabricPath route:

```
switch# show fabricpath route
FabricPath Unicast Route Table
'a/b/c' denotes ftag/switch-id/subswitch-id
'[x/y]' denotes [admin distance/metric]
ftag 0 is local ftag
subswitch-id 0 is default subswitch-id
FabricPath Unicast Route Table for Topology-Default
```

```
0/10/0, number of next-hops: 0
        via ---- , [60/0], 5 day/s 11:35:56, local
1/20/0, number of next-hops: 1
        via Po2, [115/40], 5 day/s 11:35:23, isis_l2mp-default
1/30/0, number of next-hops: 1
        via Eth7/2, [115/40], 5 day/s 11:35:28, isis_l2mp-default
1/35/0, number of next-hops: 0
        via ---- , [60/0], 5 day/s 11:35:26, local
2/35/0, number of next-hops: 0
        via ---- , [60/0], 5 day/s 11:35:26, local
switch#
```

Related Commands

Command	Description
show running-config fabricpath	Displays the current FabricPath configuration.

show fabricpath switch-id

To display the FabricPath switch ID, use the **show fabricpath switch-id** command.

show fabricpath switch-id [**local**]

Syntax Description

local	(Optional) Displays the local switch ID.

Defaults

None

Command Modes

Any mode

SupportedUserRoles

network-admin
vdc-admin

Command History

Release	Modification
5.1(1)	This command was introduced.

Usage Guidelines

This command requires an Enhanced Layer 2 license.

Examples

This example shows how to display the FabricPath switch ID:

```
switch# show fabricpath switch-id
                        FABRICPATH SWITCH-ID TABLE
Legend: '*' - this system
==============================================================================
SWITCH-ID      SYSTEM-ID       FLAGS         STATE    STATIC  EMULATED
----------+---------------+-----------+-----------+-------------------
*10          0018.bad8.12fd    Primary     Confirmed    Yes     No
20          0018.bad8.12fe    Primary     Confirmed     Yes     No
30          0018.bad8.12ff    Primary     Confirmed     Yes     No
35          0018.bad8.12fd    Primary     Confirmed     No      Yes
35          0018.bad8.12fe    Primary     Confirmed     No      Yes
switch#
```

This example shows how to display the local FabricPath switch ID:

```
switch# show fabricpath switch-id local
Switch-Id: 40
System-Id: 0018.bad8.12fd
switch#
```

Related Commands

Command	Description
fabricpath switch-id	Displays the FabricPath switch ID.

show fabricpath static route

To display the FabricPath static route information, use the **show fabricpath static route** command.

show fabricpath static route

Syntax Description This command has no arguments or keywords

Defaults None

Command Modes Global configuration mode

SupportedUserRoles network-admin
vdc-admin

Command History

Release	Modification
6.2(2)	This command was introduced.

Usage Guidelines This command requires an Enhanced Layer 2 license.

Examples This example shows how to display the FabricPath static route information:

```
switch(config)# show fabricpath static route
FabricPath Static Route Table
'[a]' denotes switch-id
'[x/y]' denotes [admin distance/metric]
FabricPath Static Route Table for Topology 1
[1]number of next-hops: 1
        via Po1, [40/40]
switch(config)#
```

Related Commands

Command	Description
fabricpath switch-id	Displays the FabricPath switch ID.

show fabricpath system-id

To display information about the FabricPath network by the system ID**,** use the **show fabricpath system-id** command.

show fabricpath system-id {*mac-address*}

Syntax Description

mac-address	MAC address.

Defaults

None

Command Modes

Any mode

SupportedUserRoles

network-admin
vdc-admin

Command History

Release	Modification
5.1(1)	This command was introduced.

Usage Guidelines

This command requires an Enhanced Layer 2 license.

Examples

This example shows how to display information about the FabricPath network by the system ID:

```
switch# show fabricpath system-id 0000.0000.0001
Switch-Id: 10
State: Confirmede
Switch-Id: 1000
State: Confirmed
switch#
```

Related Commands

Command	Description
show running-config fabricpath	Displays information about the current FabricPath configuration.

show fabricpath timers

To display settings for the allocate-delay, linkup-delay, and transition-delay timers for the FabricPath network by the system ID, use the **show fabricpath timers** command.

show fabricpath timers

Syntax Description

This command has no arguments or keywords.

Defaults

None

Command Modes

Any mode

SupportedUserRoles

network-admin
vdc-admin

Command History

Release	Modification
5.1(1)	This command was introduced.

Usage Guidelines

This command requires an Enhanced Layer 2 license.

Examples

This example shows how to display FabricPath timers:

```
switch# show fabricpath timers
Allocate Delay Timer       :   10
Transition Delay Timer     :   10
Link-up Delay Timer        :   10
```

Related Commandss

Command	Description
fabricpath timers	Configures the FabricPath timers.

show fabricpath topology

To display information about the FabricPath Intermediate System-to-Intermediate System (IS-IS) topology, use the **show fabricpath topology** command.

show fabricpath topology [**detail** | [**graph** *graph-id*] **ftag active** | **multicast** | **unicast**] | **interface** [**ethernet** *slot/chassis number* | **port-channel** *port-channel number* | **vlan active**]

Syntax Description

detail	(Optional) Displays the detailed information.
graph	(Optional) Displays the graph for each topology.
graph-id	(Optional) Graph to identify the corresponding trees for each topology.
ftag	(Optional) Displays the forwarding tag of a graph.
active	(Optional) Displays the active multicast FTAGs.
multicast	(Optional) Displays the multicast FTAGs.
unicast	(Optional) Displays the unicast FTAGs.
interface	Displays the interface topology information.
ethernet	(Optional) Displays the Ethernet interface.
slot/chassis number	Slot or chassis number. The range is from 1 to 253.
port-channel	(Optional) Displays the port-channel interface number.
port-channel number	Port-channel number. The range is from 1 to 4096.
vlan	(Optional) Displays the VLANs in the Layer 2 topology.

Defaults

None

Command Modes

Any mode

SupportedUserRoles

network-admin
vdc-admin

Command History

Release	Modification
5.2(1)	Added the command outputs.

Usage Guidelines

This command requires an Enhanced Layer 2 license.

Examples

This example shows how to display VLANs in a Layer 2 topology:

```
switch# show fabricpath topology 0 vlan
Topo-Description         TPG-ID    Configured VLAN List
------------------------ --------- ----------------------------
```

```
0                         0         1-4095
switch#
```

This example shows how to display interface topology information:

```
switch# show fabricpath topology 0 interface
Interface      Topo-Description         Topo-ID    Topo-IF-State
-------------- ----------------------- ---------- -------------
Ethernet2/1    0                       0          Up
```

This example shows how to display active multicast FTAGs:

```
switch# show fabricpath topology 1 ftag
Topo-Description         Topo-ID    Graph-ID  Ftag
------------------------ ---------- --------- ---------
1                        1          0         0
1                        1          1         1
1                        1          2         4
switch#
```

This example shows how to display the fabricpath topology interface VLANs:

```
switch# show fabricpath topology interface ethernet 2/1 vlan
Interface               Configured VLAN List
----------------------- ------------------------------------
Ethernet2/1             1, 6, 10-4095
```

Related Commands

Command	Description
fabricpath domain default	Enables FabricPath Layer 2 IS-IS.

show feature-set

To display the status of a feature set**,** use the **show feature-set** command.

show feature-set

Syntax Description

This command has no arguments or keywords.

Defaults

None

Command Modes

Any mode

SupportedUserRoles

network-admin
vdc-admin

Command History

Release	Modification
5.1(1)	This command was introduced.

Usage Guidelines

This command displays the status of all feature sets on the device. See the *Configuring Feature Set for FabricPath* document for more information on enabling the FabricPath feature set.

This command requires an Enhanced Layer 2 license.

Examples

This example shows how to display the status of a feature set:

```
switch# show feature-set
Feature Set Name      ID        State
--------------------  --------  --------
fabricpath            2         enabled
fex                   3         disabled
switch#
```

Related Commands

Command	Description
feature-set fabricpath	Enables the FabricPath feature set in the VDC.

show hsrp

To display the Hot Standby Router Protocol HSRP group information**,** use the **show hsrp** command.

show hsrp

Syntax Description

This command has no arguments or keywords.

Defaults

None

Command Modes

Any mode

SupportedUserRoles

network-admin
vdc-admin

Command History

Release	Modification
6.2(2)	This command was introduced.

Usage Guidelines

This command requires an Enhanced Layer 2 license.

Examples

This example shows how to display the HSRP group information:

```
switch# show hsrp
switch#
```

Related Commands

Command	Description
feature-set fabricpath	Enables the FabricPath feature set in the VDC.

show hsrp anycast

To display the Hot Standby Router Protocol (HSRP) anycast related commands**,** use the **show hsrp anycast** command.

show hsrp anycast *bundle-number* {**both** | **ipv4** | **ipv6**} | **brief** | **interface** {**vlan** | *vlan-id*} | **internal** {**info** | *bundle-number*}| **pss-rec**} | **remote-db** *bundle-number* {**both** | **ipv4** | **ipv6**} | **summary**

Syntax Description

bundle-number	Bundle number. The range is from 1 to 4096.
both	(Optional) Specifies an IPv4 and an IPv6 bundle. All IPv4 and IPv6 groups in the interface are associated with this bundle.
ipv4	(Optional) Specifies that this is an IPv4 bundle. All IPv4 groups in the interface are associated with this bundle.
ipv6	(Optional) Specifies an IPv6 bundle. All IPv6 groups in the interface are associated with this bundle.
brief	Displays the brief output.
interface	Displays the bundle on this interface.
vlan	Displays the VLAN interface.
vlan-id	VLAN number.
internal	Specifies the HSRP internal information.
info	Displays the internal data structure information.
pss-rec	Displays the HSRP Anycast PSS record.
remote-db	Specifies the remote database for the bundle.
summary	Displays the HSRP summary.

Defaults

None

Command Modes

Any mode

SupportedUserRoles

network-admin
vdc-admin

Command History

Release	Modification
6.2(2)	This command was introduced.

Usage Guidelines

This command requires an Enhanced Layer 2 license.

Examples

This example shows how to display the HRSP anycast related commands:

```
switch# show hsrp anycast
Anycast bundle - 1 (IPv4)
  Admin Status: Down  Oper Status: Down
                Reason: N/A, :
  Anycast Switch ID 0
  Bundle priority 100
  Bundle State Initial
  VLAN range:
switch#
```

This example shows how to display the HSRP anycast brief output:

```
switch# show hsrp anycast brief
------------------------------------------------------------
---
 Bundle/addr    Prio Switch.ID Track.ID   State     Vlans
 * = Up
------------------------------------------------------------
---
   1/IPv4       100   0          N/A       Initial
switch#
```

This example shows how to display the HSRP anycast summary:

```
switch# show hsrp anycast summary

HSRP Anycast Summary:

Total Number of bundles configured: 1
                     Root bundles: 0
                 Non-Root bundles: 1
                Admin down bundles: 1
switch#
```

Related Commands

Command	Description
feature-set fabricpath	Enables the FabricPath feature set in the VDC.

show l2 multicast trees ftag

To display the status of a feature set**,** use the **show l2 multicast trees ftag** command.

show l2 multicast trees ftag {*ftag-id*}

Syntax Description

ftag-id	FTAG ID. The range is from 1 to 1024.

Defaults

None

Command Modes

Any mode

SupportedUserRoles

network-admin
vdc-admin

Command History

Release	Modification
5.2(1)	This command was introduced.

Usage Guidelines

This command requires an Enhanced Layer 2 license.

Examples

This example shows how to display the status of a feature set:

```
switch# show l2 multicast trees flag 30
switch#
```

Related Commands

Command	Description
feature-set fabricpath	Enables the FabricPath feature set in the VDC.

show mroute

To display the Layer 2 (l2) multicast route database**,** use the **show l2 mroute** command.

show {**l2** | **fabricpath**} **mroute** {[**vdc_omf**] | [**vlan** *vlanid*] {{[**omf**] | [**flood**] | [**source** {*srcaddr* | *v6srcaddr*}] [**group** {*groupaddr* | *v6groupaddr*}]} [**resolved**] [**ftag** *ftag-id*] [**hex**]}}

Syntax Description

l2	Displays Layer 2 information.
fabricpath	Displays FabricPath information.
vdc_omf	(Optional) Displays the virtual device context (VDC) Optimized Multicast Flooding (OMF) route.
vlan	(Optional) Displays the VLAN ID. The range is from 1 to 4096.
vlan-id	VLAN ID. The range is from 1 to 4096.
omf	(Optional) Displays the VLAN OMF route.
flood	(Optional) Displays the switch IDs in hexadecimal.
source	(Optional) Displays the source IP address.
srcassr	Source address.
v6srcaddr	IPv6 source address.
group	(Optional) Displays the group address.
groupaddr	Group address.
ipv6groupaddr	IPv6 group address.
resolved	(Optional) Displays the resolved switch ID next hop's underlying interfaces.
ftag	(Optional) Displays the FTAG number.
ftag-id	FTAG ID. The range is from 1 to 1024.
hex	(Optional) Displays the switch IDs in hexadecimal.

Defaults

None

Command Modes

Global configuration mode

SupportedUserRoles

network-admin
vdc-admin

Command History

Release	Modification
5.1(1)	This command was introduced.

Usage Guidelines

Note l2 can be used interchangeably with FabricPath.

This command requires an Enhanced Layer 2 license.

Examples

This example shows how to display the resolved switch ID of the next hop's underlying interfaces:

```
switch(config)# show l2 mroute resolved
(ftag/2, vlan/2, *, *), Flood, uptime: 07:21:24, isis
 Outgoing interface list: (count: 2)
  Interface port-channel2, uptime: 07:21:20, isis
  Interface port-channel2, uptime: 07:21:20, isis

(ftag/1, vlan/2, *, *), Flood, uptime: 07:21:24, isis
 Outgoing interface list: (count: 2)
  Interface Ethernet7/2, uptime: 07:21:23, isis

(ftag/2, vlan/3, *, *), Flood, uptime: 07:21:24, isis
 Outgoing interface list: (count: 2)
  Interface port-channel2, uptime: 07:21:20, isis
  Interface port-channel2, uptime: 07:21:20, isis

(ftag/1, vlan/3, *, *), Flood, uptime: 07:21:24, isis
 Outgoing interface list: (count: 2)
  Interface Ethernet7/2, uptime: 07:21:23, isis

(ftag/2, vlan/4, *, *), Flood, uptime: 07:21:24, isis
 Outgoing interface list: (count: 2)
  Interface port-channel2, uptime: 07:21:20, isis
  Interface port-channel2, uptime: 07:21:20, isis

--More--
```

Related Commands

Command	Description
show running-config fabricpath	Displays the current FabricPath configuration.

show multicast trees

To display the Layer 2 (l2) multicast tree database**,** use the **show l2 multicast trees** command.

show {**l2** | **fabricpath**} **multicast trees** [**topo** *topo-id*] [**ftag** *ftag-id*] [**hex**]

Syntax Description

l2	Displays Layer 2 information.
fabricpath	Displays FabricPath information.
topo	(Optional) Displays the topology instance.
topo-id	Topology ID. The range is from 0 to 64.
ftag	(Optional) Displays the FTAG number.
ftag-id	FTAG ID. The range is from 1 to 1024.
hex	(Optional) Displays the switch IDs in hexadecimal.

Defaults

None

Command Modes

Global configuration mode

SupportedUserRoles

network-admin
vdc-admin

Command History

Release	Modification
5.1(1)	This command was introduced.

Usage Guidelines

This command requires an Enhanced Layer 2 license.

Examples

This example shows how to display the FTAG number of the Layer 2 multicast trees:

```
switch(config)# show l2 multicast trees ftag 1

(ftag/1, topo/0, Switch-id 20), uptime: 07:11:50, isis
 Outgoing interface list: (count: 1, '*' is the preferred interface)
* Interface Ethernet7/2, [admin distance/115] uptime: 07:11:50, isis

(ftag/1, topo/0, Switch-id 30), uptime: 07:11:50, isis
 Outgoing interface list: (count: 1, '*' is the preferred interface)
* Interface Ethernet7/2, [admin distance/115] uptime: 07:11:50, isis
Found total 2 route(s)
```

This example shows how to display the Layer 2 multicast tree database:

```
switch(config)# show l2 multicast trees
```

```
(ftag/2, topo/0, Switch-id 20), uptime: 07:24:16, isis
 Outgoing interface list: (count: 1, '*' is the preferred interface)
* Interface port-channel2, [admin distance/115] uptime: 07:24:13, isis

(ftag/2, topo/0, Switch-id 30), uptime: 07:24:16, isis
 Outgoing interface list: (count: 1, '*' is the preferred interface)
* Interface port-channel2, [admin distance/115] uptime: 07:24:13, isis

(ftag/2, topo/0, Switch-id 35), uptime: 07:24:13, isis
 Outgoing interface list: (count: 1, '*' is the preferred interface)
* Interface port-channel2, [admin distance/115] uptime: 07:24:13, isis

(ftag/1, topo/0, Switch-id 20), uptime: 07:24:16, isis
 Outgoing interface list: (count: 1, '*' is the preferred interface)
* Interface Ethernet7/2, [admin distance/115] uptime: 07:24:16, isis

(ftag/1, topo/0, Switch-id 30), uptime: 07:24:16, isis
 Outgoing interface list: (count: 1, '*' is the preferred interface)
* Interface Ethernet7/2, [admin distance/115] uptime: 07:24:16, isis

(ftag/6, topo/2, Switch-id 20), uptime: 07:24:16, isis
 Outgoing interface list: (count: 1, '*' is the preferred interface)
* Interface port-channel2, [admin distance/115] uptime: 07:24:12, isis
--More--
```

Related Commands

Command	Description
show l2 route	Displays FabricPath route information.

show mac address-table learning-mode

To display the MAC address learning mode on a specific VLAN**,** use the **show mac address-table learning-mode** command.

show mac address-table learning-mode [**vlan** *vlan-id*]

Syntax Description

vlan	(Optional) Displays a VLAN.
vlan-id	VLAN ID. The range is from 1 to 4094.

Defaults

None

Command Modes

Any mode

SupportedUserRoles

network-admin
vdc-admin

Command History

Release	Modification
5.1(1)	This command was introduced.

Usage Guidelines

Note MAC learning modes are available only on the F Series modules.

This command requires an Enhanced Layer 2 license.

Examples

This example shows how to display the MAC address learning mode on a specific VLAN:

```
switch# show mac address-table learning-mode vlan 1
Vlan    Learning Mode
----    ----------
1       Non-Conversational-Learning
switch#
```

Related Commands

Command	Description
mac address-table learning-mode conversation	Displays conversational MAC address learning on specified CE VLANs on the F Series module.

show running-config fabricpath

To display FabricPath information, use the **show running-config fabricpath** command.

show running-config fabricpath

Syntax Description This command has no arguments or keywords.

Defaults None

Command Modes Any mode

SupportedUserRoles network-admin
vdc-admin

Command History

Release	Modification
5.1(1)	This command was introduced.

Usage Guidelines This command requires an Enhanced Layer 2 license.

Examples This example shows how to display FabricPath information:

```
switch# show running-config fabricpath

!Command: show running-config fabricpath
!Time: Wed Nov 10 23:10:14 2010

version 5.1(1)
install feature-set fabricpath
feature-set fabricpath

vlan 1-1000
  mode fabricpath

interface Ethernet2/1
  fabricpath isis authentication key-chain trees

interface Ethernet2/2
  switchport mode fabricpath

interface Ethernet2/3
  switchport mode fabricpath

interface Ethernet2/10
  switchport mode fabricpath
```

```
interface Ethernet2/16
--More--
```

Related Commands

Command	Description
fabricpath domain default	Enables FabricPath Layer 2 IS-IS.

shutdown

To configure administrative shutdown settings for a Hot Standby Router Protocol (HSRP) anycast bundle, use the **shutdown** command. To disable this function, use the **no** form of this command.

shutdown

no shutdown

Syntax Description

This command has no arguments or keywords.

Defaults

shutdown

Command Modes

Anycast bundle configuration mode (config-anycast-bundle)

SupportedUserRoles

network-admin
vdc-admin

Command History

Release	Modification
6.2(2)	This command was introduced.

Usage Guidelines

Use the **hsrp anycast** command to used to configure an anycast bundle that is specified by the bundle number. This number is used to identify the context for configuring other anycast bundle parameters such as the VLAN range, switch ID, or priority.

Use the **shutdown** command to configure administrative shutdown settings for the anycast bundle.

This command requires an Enhanced Layer 2 license.

Examples

This example shows how to configure no shutdown for a HSRP anycast bundle:

```
switch(config)# hsrp anycast 112 both
switch(config-anycast-bundle)# switch-id 2200
switch(config-anycast-bundle)# vlan 600-700
switch(config-anycast-bundle)# priority 110
switch(config-anycast-bundle)# timer 15
switch(config-anycast-bundle)# no shutdown
switch(config-anycast-bundle)# exit
```

Related Commands

Command	Description
hsrp anycast	Configures an HSRP anycast bundle and enters anycast-bundle configuration mode.
limit-resource anycast_bundleid	Configures anycast bundle ID resource limits.

spanning-tree domain

To assign a spanning-tree domain ID to the different Spanning Tree Protocol (STP) domains attached to FabricPath Layer 2 gateway switches that are connected to a single FabricPath network**,** use the **spanning-tree domain** command.

spanning-tree domain *domain-id*

Syntax Description

domain-id	Domain ID. The range is from 1 to 1023.

Defaults

None

Command Modes

Global configuration mode

SupportedUserRoles

network-admin
vdc-admin

Command History

Release	Modification
5.1(1)	This command was introduced.

Usage Guidelines

This command requires an Enhanced Layer 2 license.

Examples

This example shows how to configure a spanning-tree domain:

```
switch(config)# spanning-tree domain 5
switch(config)#
```

Related Commands

Command	Description
show spanning-tree summary	Displays information about STP.

spf-interval

To configure an interval for shortest-path-first (SPF) generation, use the **spf-interval** command. To return to the default setting, use the **no** form of this command.

spf-interval {*spf-max-wait* | *spf-initial-wait* | *spf-second-wait*}

no spf-interval {*spf-max-wait* | *spf-initial-wait* | *spf-second-wait*}

Syntax Description

spf-max-wait	Maximum interval (in seconds) between two consecutive occurrences of a link-state packet (LSP) being generated. The range is from 50 to 120000.
spf-initial-wait	Initial LSP generation delay (in milliseconds). The range is from 50 to 120000.
spf-second-wait	Hold time between the first and second LSP generation (in milliseconds). The range is from 50 to 120000.

Defaults

The defaults are as follows:

- *spf-max-wait*: 8000
- *spf-initial-wait*: 50
- *spf-second-wait*: 50

Command Modes

FabricPath IS-IS mode

SupportedUserRoles

network-admin
vdc-admin

Command History

Release	Modification
5.1(1)	This command was introduced.

Usage Guidelines

This command requires an Enhanced Layer 2 license.

Examples

This example shows how to configure an interval for SPF generation:

```
switch# config t
Enter configuration commands, one per line.  End with CNTL/Z.
switch(config)# fabricpath domain default
switch(config-fabricpath-isis)# spf-interval 9000 60 70
switch(config-fabricpath-isis)#
```

Related Commands

Command	Description
fabricpath domain default	Enables FabricPath Layer 2 IS-IS.

switchport mode fabricpath

To configure interfaces as FabricPath ports**,** use the **switchport mode fabricpath** command.

switchport mode fabricpath

Syntax Description

This command has no arguments or keywords.

Defaults

Classical Ethernet (CE) switchport access interface

Command Modes

Interface configuration mode

SupportedUserRoles

network-admin
vdc-admin

Command History

Release	Modification
5.1(1)	This command was introduced.

Usage Guidelines

This command requires an Enhanced Layer 2 license.

Note The **no** keyword returns the interface to the default CE switchport access interface. The FabricPath ports carry traffic only for those VLANs configured as FabricPath VLANs.

Examples

This example shows how to configure specific interfaces as FabricPath ports:

```
switch# config t
switch(config)# interface ethernet 2/11-15
switch(config-if)# switchport mode fabricpath
switch(config-if)#
```

Related Commands

Command	Description
show interface	Displays the interface status and information.

system default switchport fabricpath

To configure the default port mode as FabricPath**,** use the **system default switchport fabricpath** command.

system default switchport fabricpath

Syntax Description This command has no arguments or keywords.

Defaults None

Command Modes Global configuration mode

SupportedUserRoles network-admin
vdc-admin

Command History

Release	Modification
5.1(1)	This command was introduced.

Usage Guidelines This command takes effect only on interfaces on the F Series modules. Any interfaces on the M Series modules are unaffected by this command.

This command requires an Enhanced Layer 2 license.

Examples This example shows how to configure the default port mode as FabricPath:

```
switch(config-if)# system default switchport fabricpath
switch(config)#
```

Related Commands

Command	Description
show interface	Displays interface status and information.

switch-id

To assign a switch ID number to a Hot Standby Router Protocol (HSRP) anycast bundle, use the **switch-id** command in anycast-bundle configuration mode. To disable this function, use the **no** form of this command.

switch-id *anycast-switch-id*

no switch-id *anycast-switch-id*

Syntax Description

anycast-switch-id	Switch number used to identify this HSRP anycast bundle. Valid values are 1 to 4095.

Defaults

None

Command Modes

Anycast bundle configuration (config-anycast-bundle)

SupportedUserRoles

network-admin
vdc-admin

Command History

Release	Modification
6.2(2)	This command was introduced.

Usage Guidelines

Use the **hsrp anycast** command to used to configure an anycast bundle that is specified by the bundle number. This number is used to identify the context for configuring other anycast bundle parameters such as the VLAN range, switch ID, or priority.

This command requires an Enhanced Layer 2 license.

Examples

This example shows how to assign a switch ID to an anycast bundle:

```
switch(config)# hsrp anycast 112 ipv6
switch(config-anycast-bundle)# switch-id 2200system default switchport fabricpath
switch(config-anycast-bundle)#
```

Related Commands

Command	Description
hsrp anycast	Configures a HSRP anycast bundle and enters anycast-bundle configuration mode.
limit-resource anycast_bundleid	Configures anycast bundle ID resource limits.

timer

To configure timer values for a Hot Standby Router Protocol (HSRP) anycast bundle, use the **timer** command. To disable timers, use the **no** form of this command.

timer *hello-interval*

no timer *hello-interval*

Syntax Description

hello-interval	Hello timer value for this HSRP anycast bundle. The range is from 0 to 255.

Defaults

The hello interval is set to 3.

Command Modes

Anycast bundle configuration mode (config-anycast-bundle)

SupportedUserRoles

network-admin
vdc-admin

Command History

Release	Modification
6.2(2)	This command was introduced.

Usage Guidelines

Use the **hsrp anycast** command to used to configure an anycast bundle that is specified by the bundle number. This number is used to identify the context for configuring other anycast bundle parameters such as the VLAN range, switch ID, or priority.

The timer is set for the groups that use the anycast bundle.

Examples

This example shows how to configure the hello and hold timer values for a HSRP:

anycast bundle:

```
switch(config)# hsrp anycast 112 both
switch(config-anycast-bundle)# switch-id 2200
switch(config-anycast-bundle)# vlan 600-700
switch(config-anycast-bundle)# priority 110
switch(config-anycast-bundle)# timer 15
switch(config-anycast-bundle)# exit
```

Related Commands

Command	Description
hsrp anycast	Configures an HSRP anycast bundle and enters anycast-bundle configuration mode.
limit-resource anycast_bundleid	Configures anycast bundle ID resource limits.

track

To configure a tracking object for the Hot Standby Router Protocol (HSRP) anycast bundle, use the **track** command. To disable this function, use the **no** form of this command.

track *object-id*

no track *object-id*

Syntax Description

object-id	Object ID. Valid values are from 1 to 500.

Defaults

No objects are tracked.

Command Modes

Anycast bundle configuration mode (config-anycast-bundle)

SupportedUserRoles

network-admin
vdc-admin

Command History

Release	Modification
6.2(2)	This command was introduced.

Usage Guidelines

Use the **hsrp anycast** command to used to configure an anycast bundle that is specified by the bundle number. This number is used to identify the context for configuring other anycast bundle parameters such as the VLAN range, switch ID, or priority.

The ID number is used to specify which object (interface or route) that this anycast bundle tracks. This object can be used to track Layer 3 forwarding entities for this bundle. The anycast bundle moves to the down state if this object moves to the down state. The anycast bundle moves to the up state when this object comes up (and any other criteria are satisfied).

Examples

This example shows how to configure an HSRP anycast bundle tracking object:

```
switch(config)# hsrp anycast 112 both
Device(config-anycast-bundle)# switch-id 2200
Device(config-anycast-bundle)# vlan 600-700
Device(config-anycast-bundle)# priority 110
Device(config-anycast-bundle)# track 25
Device(config-anycast-bundle)# exit
```

Related Commands

Command	Description
hsrp anycast	Configures an HSRP anycast bundle and enters anycast-bundle configuration mode.
limit-resource anycast_bundleid	Configures anycast bundle ID resource limits.

vlan

To specify the VLAN IDs of the allowed FabricPath VLANs in the anycast bundle, use the **vlan** command. To disable this function, use the **no** form of this command.

vlan *vlan-ids*

no vlan *vlan-ids*

Syntax Description

vlan-ids	VLAN IDs of the allowed FabricPath VLANs in the anycast bundle.

Defaults

No FabricPath VLANs are allowed in the anycast bundle.

Command Modes

Anycast bundle configuration (config-anycast-bundle)

SupportedUserRoles

network-admin
vdc-admin

Command History

Release	Modification
6.2(10)	Added the ability to add or delete a VLAN to or from an existing VLAN range (for an HSRP Anycast bundle) without having to enter the complete VLAN range again.
6.2(2)	This command was introduced.

Usage Guidelines

Use the **hsrp anycast** command to used to configure an anycast bundle that is specified by the bundle number. This number is used to identify the context for configuring other anycast bundle parameters such as the VLAN range, switch ID, or priority.

You can enter VLAN IDs as single numbers, a comma separated list, a range of numbers, or a combination of entries.

Examples

This example shows how to specify that the allowed FabricPath VLANs in the anycast bundle are the VLANs with an ID of 1, all VLANs with IDs in the range 20 to 30, and all VLANs with IDs in the range 50 to 300:

```
switch(config)# hsrp anycast 112 ipv6
switch(config-anycast-bundle)# switch-id 2200
switch(config-anycast-bundle)# vlan 1,20-30,50-300
```

This example shows how to add VLAN 5 to an existing VLAN range of 1,20-30,50-300 in different Cisco NX-OS releases:

```
switch(config-anycast-bundle)# vlan 1,5,20-30,50-300 (Cisco NX-OS Release 6.2(8) and
earlier releases)
switch(config-anycast-bundle)# vlan 5 (Cisco NX-OS Release 6.2(10) and later releases)
```

This example shows how to delete VLAN 5 from an existing VLAN range of 1,5,20-30,50-300 in different Cisco NX-OS releases:

```
switch(config-anycast-bundle)# no vlan 1,5,20-30,50-300 (Cisco NX-OS Release 6.2(8) and
earlier releases)
switch(config-anycast-bundle)# no vlan 5 (Cisco NX-OS Release 6.2(10) and later releases)
```

Related Commands

Command	Description
hsrp anycast	Configures an HSRP anycast bundle and enters anycast-bundle configuration mode.
limit-resource anycast_bundleid	Configures anycast bundle ID resource limits.

vlan-pruning enable

To configure the VLAN pruning for the system, use the **vlan-pruning enable** command. To disable this function, use the **no** form of this command.

vlan-pruning enable

no vlan-pruning enable

Syntax Description

This command has no arguments or keywords.

Defaults

None

Command Modes

Anycast bundle configuration (config-anycast-bundle)

SupportedUserRoles

network-admin
vdc-admin

Command History

Release	Modification
6.2(2)	This command was introduced.

Usage Guidelines

This command requires an Enhanced Layer 2 license.

Examples

This example shows how to set the mode for VLAN pruning:

```
switch(config-fabricpath-isis)# vlan-pruning enable
% Vlan pruning has been enabled, LSP cache will be refreshed
% Vlan sync timer running for 300 seconds %
switch(config-fabricpath-isis)#
```

Related Commands

Command	Description
hsrp anycast	Configures an HSRP anycast bundle and enters anycast-bundle configuration mode.
limit-resource anycast_bundleid	Configures anycast bundle ID resource limits.