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Cisco Nexus 5000 Series NX-OS FabricPath Command Reference

Cisco NX-OS Release 5.x

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Cisco Nexus 5000 Series NX-OS FabricPath Command Reference

CONTENTS

Preface

This preface describes the audience, organization, and conventions of the *Cisco Nexus 5000 Series NX-OS FabricPath Command Reference*. It also provides information on how to obtain related documentation.

This preface includes the following sections:

Audience

This publication is for experienced users who configure and maintain Cisco NX-OS devices.

Supported Switches

This section includes the following topics:

Cisco Nexus 5500 Platform Switches

Table 1 lists the Cisco switches supported in the Cisco Nexus 5500 Platform.

Note For more information on these switches, see the *Cisco Nexus 5500 Platform and Cisco Nexus 5000 Platform Hardware Installation Guide* available at the following URL: http://www.cisco.com/en/US/products/ps9670/tsd_products_support_series_home.html

Table 1 Supported Cisco Nexus 5500 Platform Switches

Switch	Description
Cisco Nexus 5548P Switch	The Cisco Nexus 5548P switch is the first switch in the Cisco Nexus 5500 Platform. It is a one-rack-unit (1 RU), 10-Gigabit Ethernet and Fibre Channel over Ethernet (FCoE) switch that offers up to 960-Gbps throughput and up to 48 ports.
Cisco Nexus 5596P Switch	The Cisco Nexus 5596P switch is a top-of-rack, 10-Gigabit Ethernet and FCoE switch offering up to 1920-Gigabit throughput and up to 96 ports.

Organization

This document is organized as follows:

Chapter Title	Description
New and Changed Information	Describes the new and changed information for the new Cisco NX-OS software releases.
A Commands	Describes the Cisco NX-OS FabricPath commands that begin with A.
C Commands	Describes the Cisco NX-OS FabricPath commands that begin with C.
D Commands	Describes the Cisco NX-OS FabricPath commands that begin with D.
F Commands	Describes the Cisco NX-OS FabricPath commands that begin with F.
H Commands	Describes the Cisco NX-OS FabricPath commands that begin with H.
I Commands	Describes the Cisco NX-OS FabricPath commands that begin with I.
L Commands	Describes the Cisco NX-OS FabricPath commands that begin with L.
M Commands	Describes the Cisco NX-OS FabricPath commands that begin with M.
R Commands	Describes the Cisco NX-OS FabricPath commands that begin with R.
S Commands	Describes the Cisco NX-OS FabricPath commands that begin with S.
Show Commands	Describes the Cisco NX-OS FabricPath **show** commands.
T Commands	Describes the Cisco NX-OS FabricPath commands that begin with T.

Document Conventions

Command descriptions use these conventions:

Convention	Description
boldface font	Commands and keywords are in boldface.
italic font	Arguments for which you supply values are in italics.
[ ]	Elements in square brackets are optional.
{x | y | z}	Alternative keywords are grouped in braces and separated by vertical bars.

[x | y | z]	Optional alternative keywords are grouped in brackets and separated by vertical bars.
string	A nonquoted set of characters. Do not use quotation marks around the string or the string will include the quotation marks.

Screen examples use these conventions:

`screen font`	Terminal sessions and information that the switch displays are in screen font.
`boldface screen font`	Information you must enter is in boldface screen font.
`italic screen font`	Arguments for which you supply values are in italic screen font.
< >	Nonprinting characters, such as passwords, are in angle brackets.
[ ]	Default responses to system prompts are in square brackets.
!, #	An exclamation point (!) or a pound sign (#) at the beginning of a line of code indicates a comment line.

This document uses the following conventions:

Note Means reader *take note*. Notes contain helpful suggestions or references to material not covered in the manual.

Caution Means reader *be careful*. In this situation, you might do something that could result in equipment damage or loss of data.

Related Documentation

Documentation for Cisco Nexus 5000 Series Switches and Cisco Nexus 2000 Series Fabric Extender is available at the following URL:

http://www.cisco.com/en/US/products/ps9670/tsd_products_support_series_home.html

The following are related Cisco Nexus 5000 Series and Cisco Nexus 2000 Series Fabric Extender documents:

Release Notes

Cisco Nexus 5000 Series and Cisco Nexus 2000 Series Release Notes

Cisco Nexus 5000 Series Switch Release Notes

Configuration Guides

Cisco Nexus 5000 Series Configuration Limits for Cisco NX-OS Release 5.0(2)N1(1)

Cisco Nexus 5000 Series Configuration Limits for Cisco NX-OS Release 4.2(1)N1(1) and Release 4.2(1)N2(1)

Cisco Nexus 5000 Series NX-OS Fibre Channel over Ethernet Configuration Guide

Cisco Nexus 5000 Series NX-OS Layer 2 Switching Configuration Guide

Cisco Nexus 5000 Series NX-OS Multicast Routing Configuration Guide

Cisco Nexus 5000 Series NX-OS Quality of Service Configuration Guide

Cisco Nexus 5000 Series NX-OS SAN Switching Configuration Guide

Cisco Nexus 5000 Series NX-OS Security Configuration Guide

Cisco Nexus 5000 Series NX-OS System Management Configuration Guide

Cisco Nexus 5000 Series NX-OS Unicast Routing Configuration Guide

Cisco Nexus 5000 Series Switch NX-OS Software Configuration Guide

Cisco Nexus 5000 Series Fabric Manager Configuration Guide, Release 3.4(1a)

Cisco Nexus 7000 Series NX-OS Fundamentals Configuration Guide, Release 6.x

Cisco Nexus 2000 Series Fabric Extender Software Configuration Guide

Maintain and Operate Guides

Cisco Nexus 5000 Series NX-OS Operations Guide

Installation and Upgrade Guides

Cisco Nexus 5000 Series and Cisco Nexus 5500 Platform Hardware Installation Guide

Cisco Nexus 2000 Series Hardware Installation Guide

Cisco Nexus 5000 Series NX-OS Software Upgrade and Downgrade Guide, Release 4.2(1)N1(1)

Regulatory Compliance and Safety Information for the Cisco Nexus 5000 Series Switches and Cisco Nexus 2000 Series Fabric Extenders

Licensing Guide

Cisco NX-OS Licensing Guide

Command References

Cisco Nexus 5000 Series NX-OS FabricPath Command Reference

Cisco Nexus 5000 Series NX-OS Fabric Extender Command Reference

Cisco Nexus 5000 Series NX-OS Fibre Channel Command Reference

Cisco Nexus 5000 Series NX-OS Fundamentals Command Reference

Cisco Nexus 5000 Series NX-OS Layer 2 Interfaces Command Reference

Cisco Nexus 5000 Series NX-OS Multicast Routing Command Reference

Cisco Nexus 5000 Series NX-OS QoS Command Reference

Cisco Nexus 5000 Series NX-OS Security Command Reference

Cisco Nexus 5000 Series NX-OS System Management Command Reference

Cisco Nexus 5000 Series NX-OS TrustSec Command Reference

Cisco Nexus 5000 Series NX-OS Unicast Routing Command Reference

Cisco Nexus 5000 Series NX-OS Virtual Port Channel Command Reference

Technical References

Cisco Nexus 5000 Series and Cisco Nexus 2000 Series Fabric Extender MIBs Reference

Error and System Messages

Cisco NX-OS System Messages Reference

Troubleshooting Guide

Cisco Nexus 5000 Troubleshooting Guide

Obtaining Documentation and Submitting a Service Request

For information on obtaining documentation, submitting a service request, and gathering additional information, see the monthly *What's New in Cisco Product Documentation*, which also lists all new and revised Cisco technical documentation, at:

http://www.cisco.com/en/US/docs/general/whatsnew/whatsnew.html

Subscribe to the *What's New in Cisco Product Documentation* as an RSS feed and set content to be delivered directly to your desktop using a reader application. The RSS feeds are a free service. Cisco currently supports RSS Version 2.0.

New and Changed Information

This chapter provides release-specific information for each new and changed feature in the *Cisco Nexus 5000 Series NX-OS FabricPath Command Reference*. The latest version of this document is available at the following Cisco website:

http://www.cisco.com/en/US/products/ps9670/prod_command_reference_list.html

To check for additional information about this Cisco NX-OS Release, see the *Cisco Nexus 5000 Series Switch Release Notes* available at the following Cisco website:

http://www.cisco.com/en/US/products/ps9670/prod_release_notes_list.html

New and Changed Information for Cisco NX-OS Releases

This section includes the following topics:

New and Changed Information for Cisco NX-OS Release 5.2(1)N1(1)

Table 1 summarizes the new and changed features for Cisco NX-OS Release 5.2(1)N1(1) and tells you where they are documented.

Table 1 New and Changed Information for Release 5.2(1)N1(1)

Feature	Description	Changed in Release	Where Documented
FabricPath MultiTopology	This feature was introduced.	5.2(1)N1(1)	fabricpath topology, page 33 topology, page 106 show fabricpath topology, page 96

A Commands

This chapter describes the Cisco NX-OS FabricPath commands that begin with A.

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.

Command Default

Enabled

Command Modes

FabricPath IS-IS configuration mode

Command History

Release	Modification
5.1(3)N1(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# configure terminal
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 configuration mode

Command History

Release	Modification
5.1(3)N1(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 *Cisco Nexus 5000 Series NX-OS Security Configuration Guide* 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.

Command Default

Enabled

Command Modes

FabricPath IS-IS configuration mode

Command History

Release	Modification
5.1(3)N1(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# configure terminal
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# configure terminal
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.

C Commands

This chapter describes the Cisco NX-OS FabricPath commands that begin with C.

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** *module/slot* | **port-channel** *port_channel_number* | **system-id** *sid*]

Syntax Description

*	(Optional) Specifies the IS-IS adjacencies on all interfaces.
ethernet	(Optional) Specifies the IS-IS adjacencies on an Ethernet interface.
module/slot	(Optional) Module and slot number. The module range is from 1 to 255 and the slot is from 1 to 128.
port-channel	(Optional) Specifies the IS-IS adjacencies on a 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.

Command Default

None

Command Modes

EXEC mode

Command History

Release	Modification
5.1(3)N1(1)	This command was introduced.

Usage Guidelines

Note If you enter the * variable, you will affect forwarding by entering this command and might 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.

Command Default

None

Command Modes

EXEC mode

Command History

Release	Modification
5.1(3)N1(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** *module/slot* | **port-channel** *port_channel_number*]

Syntax Description

*****	(Optional) Specifies the IS-IS traffic on all interfaces.
ethernet	(Optional) Specifies the IS-IS traffic on an Ethernet interface.
module/slot	(Optional) Module and slot number. The module range is from 1 to 255 and the port is from 1 to 128.
port-channel	(Optional) Specifies the IS-IS traffic on a port-channel interface.
port_channel_number	Port-channel number. The range is from 1 to 256.

Command Default

None

Command Modes

EXEC mode

Command History

Release	Modification
5.1(3)N1(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.

D Commands

This chapter describes the Cisco NX-OS FabricPath commands that begin with D.

description (FabricPath)

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.

Command Default

None

Command Modes

Global configuration mode

Command History

Release	Modification
5.1(3)N1(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# configure terminal
switch#(config)# description FabricPath Topology 50 Configuration
switch#(config)#
```

Related Commands

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

F Commands

This chapter describes the Cisco NX-OS FabricPath commands that begin with F.

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.

Command Default

None

Command Modes

Global configuration mode

Command History

Release	Modification
5.1(3)N1(1)	This command was introduced.

Usage Guidelines

This command requires an Enhanced Layer 2 license.

Examples

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

```
switch# configure terminal
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 graceful-merge

To disable a graceful merge of the FabricPath feature, use the **fabricpath graceful-merge** command. To reenable this feature, enter the **no** form of the command.

fabricpath graceful-merge

no fabricpath graceful-merge

Syntax Description

This command has no arguments or keywords.

Command Default

Enabled

Command Modes

Global configuration mode

Command History

Release	Modification
5.1(3)N1(1)	This command was introduced.

Usage Guidelines

This command requires an Enhanced Layer 2 license.

Examples

This example shows how to disable FabricPath graceful merges on the switch:

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

This example shows how to enable FabricPath graceful merges on the switch:

```
switch# configure terminal
Enter configuration commands, one per line.  End with CNTL/Z.
switch(config)# no fabricpath graceful-merge
switch(config)#
```

Related Commands

Command	Description
feature-set fabricpath	Enables the FabricPath feature set on the switch.
show running-config fabricpath	Displays the running system FabricPath configuration 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 authentication isis authentication key-chain *auth-key-chain-name*

Syntax Description

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

Command Default

None

Command Modes

Interface configuration mode

Command History

Release	Modification
5.1(3)N1(1)	This command was introduced.

Usage Guidelines

Use the **authentication** command to assign a password in the authentication of a hello protocol data unit. Only one authentication keychain 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 *Cisco Nexus 5000 Series NX-OS Security Configuration Guide* 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# configure terminal
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-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.

Command Default

ON

Command Modes

Interface configuration mode

Command History

Release	Modification
5.1(3)N1(1)	This command was introduced.

Usage Guidelines

This command requires an Enhanced Layer 2 license.

Note Level specification is not required.

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-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.

Command Default

Enabled

Command Modes

Interface configuration mode

Command History

Release	Modification
5.1(3)N1(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# configure terminal
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# configure terminal
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.

Command Default

10 seconds

Command Modes

Interface configuration mode

Command History

Release	Modification
5.1(3)N1(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# configure terminal
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.

Command Default

10 seconds

Command Modes

Interface configuration mode

Command History

Release	Modification
5.1(3)N1(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# configure terminal
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.

Command Default

The default value is 3.

Command Modes

Interface configuration mode

Command History

Release	Modification
5.1(3)N1(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# configure terminal
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) Padding for hello PDUs that is always on.

Command Default

ON

Command Modes

Interface configuration mode

Command History

Release	Modification
5.1(3)N1(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# configure terminal
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 transmisssion 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.

Command Default

33 milliseconds

Command Modes

Interface configuration mode

Command History

Release	Modification
5.1(3)N1(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# configure terminal
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.

Command Default

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

- 1 GB—400
- 10 GB—40

Command Modes

Interface configuration mode

Command History

Release	Modification
5.1(3)N1(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# configure terminal
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.

Command Default

5 seconds

Command Modes

Interface configuration mode

Command History

Release	Modification
5.1(3)N1(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# configure terminal
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 isis retransmit-throttle-interval

To set the interval between subsequent link-state packet (LSP) retransmissions, use the **fabricpath isis retransmit-throttle-interval** command. To return to the default setting, use the **no** form of this command.

fabricpath isis retransmit-throttle-interval *seconds*

no fabricpath isis retransmit-throttle-interval *seconds*

Syntax Description

seconds	Interval between retransmissions of the same LSP, in seconds. The range is from 20 to 65535.

Command Default

None

Command Modes

Interface configuration mode

Command History

Release	Modification
5.1(3)N1(1)	This command was introduced.

Usage Guidelines

This command requires an Enhanced Layer 2 license.

Examples

This example shows how to set the minimum delay value between LSP retransmissions:

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

Related Commands

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

fabricpath load-balance

To configure FabricPath load-balancing parameters, use the **fabricpath load-balance** command. To return to the default FabricPath unicast load-balancing scheme, use the **no** form of this command.

fabricpath load-balance unicast [{**destination** | **source** | **source-destination**}] [{**layer3** | **layer4** | **mixed**} [**include-vlan**]]

no fabricpath load-balance unicast [{**destination** | **source** | **source-destination**}] [{**layer3** | **layer4** | **mixed**} [**include-vlan**]]

Syntax Description

unicast	Specifies that the load-balancing parameters are configured for the unicast load-balancing scheme.
destination	(Optional) Specifies that the load-balancing parameters include destination parameters.
source	(Optional) Specifies that the load-balancing parameters include source parameters.
source-destination	(Optional) Specifies that the load-balancing parameters include source and destination parameters.
layer3	(Optional) Specifies that the load-balancing parameters only include Layer 3 parameters.
layer4	(Optional) Specifies that the load-balancing parameters only include Layer 4 parameters.
mixed	(Optional) Specifies that the load-balancing parameters include a mix of Layer 3 and Layer 4 parameters. This is the default configuration.
include-vlan	(Optional) Specifies that the load-balancing parameters use VLAN.

Command Default

Includes a mix of Layer 3 and Layer 4 parameters.

Command Modes

Global configuration mode

Command History

Release	Modification
5.1(3)N1(1)	This command was introduced.

Usage Guidelines

This command requires an Enhanced Layer 2 license.

Examples

This example shows how to configure the FabricPath source load-balancing parameters:

```
switch# configure terminal
switch(config)# fabricpath load-balance unicast source
switch(config)#
```

This example shows how to remove the FabricPath load-balancing parameters:

```
switch# configure terminal
switch(config)# no fabricpath load-balance unicast source
switch(config)#
```

Related Commands

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

fabricpath switch-id (FabricPath)

To configure the FabricPath switch ID, use the **fabricpath switch-id** command. To remove the statically configured switch ID, use the **no** from of this command.

fabricpath switch-id *switch-id*

no fabricpath switch-id

Syntax Description

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

Command Default

None

Command Modes

Global configuration mode

Command History

Release	Modification
5.1(3)N1(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)#
```

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)# no fabricpath switch-id 40
switch(config)#
```

Related Commands

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

fabricpath switch-id (vPC)

To configure a virtual port channel plus (vPC+) switch ID, use the **fabricpath switch-id** command. To remove the FabricPath switch from a vPC domain, use the **no** form of this command.

fabricpath switch-id *switch-id*

no fabricpath switch-id [*switch-id*]

Syntax Description

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

Command Default

None

Command Modes

vPC domain configuration mode

Command History

Release	Modification
5.1(3)N1(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# configure terminal
switch(config)# vpc domain 1
switch(config-vpc-domain)# fabricpath switch-id 1
Configuring fabricpath switch id will flap vPCs. Continue (yes/no)? [no]
```

Related Commands

Command	Description
show running-config fabricpath	Displays the running system FabricPath configuration information.
show vpc	Displays information about a vPC.

fabricpath timers

To configure FabricPath timers, use the **fabricpath timers** command. To remove the FabricPath timers, use the **no** form of this command.

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

no fabricpath timers {**allocate-delay** | **linkup-delay** | **transition-delay**}

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.
transition-delay	Specifies the time delay for a transitioned value to be propagated throughout the network.

Command Default

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

Command Modes

Global configuration mode

Command History

Release	Modification
5.1(3)N1(1)	This command was introduced.

Usage Guidelines

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# configure terminal
switch(config)# fabricpath timers allocate-delay 600
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# configure terminal
switch(config)# fabricpath timers linkup-delay 600
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# configure terminal
switch(config)# fabricpath timers transition-delay 600
switch(config)#
```

Related Commands

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

fabricpath topology

To configure a FabricPath topology, use the **fabricpath topology** command. To remove a FabricPath topology, use the **no** form of this command.

Note Cisco Nexus 5000 series only supports 2 topologies; the default or base topology (topology 0), and the local VLAN topology (topology 1).

fabricpath topology *topology_number*

no fabricpath topology [*topology_number*]

Syntax Description

topology_number	Topology ID. The range is from 1 to 63.

Command Default

None

Command Modes

Interface configuration mode

Command History

Release	Modification
5.1(3)N1(1)	This command was introduced.

Usage Guidelines

This command requires an Enhanced Layer 2 license.

Examples

This example shows how to configure a FabricPath topology:

```
switch# configure terminal
switch(config)# interface ethernet 1/5
switch(config-if)# fabricpath topology 1
switch(config-if)#
```

This example shows how to remove all FabricPath topologies configured on the switch:

```
switch# configure terminal
switch(config)# interface ethernet 1/5
switch(config-if)# no fabricpath topology
switch(config-if)#
```

Related Commands

Command	Description
show fabricpath route	Displays the FabricPath routing topology.
show fabricpath topology	Displays information about the FabricPath Intermediate System-to-Intermediate System (IS-IS) topology.

feature-set fabricpath

To enable a FabricPath feature set, use the **feature-set fabricpath** command. To disable the FabricPath feature, use the **no** form of this command.

feature-set fabricpath

no feature-set fabricpath

Syntax Description

This command has no arguments or keywords.

Command Default

None

Command Modes

Global configuration mode

Command History

Release	Modification
5.1(3)N1(1)	This command was introduced.

Usage Guidelines

Note The FabricPath feature is supported only on the Cisco Nexus 5500 Series switches.

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.

This command requires an Enhanced Layer 2 license.

Examples

This example shows how to enable the FabricPath feature on the switch:

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

This example shows how to disable the FabricPath feature on the switch:

```
switch# configure terminal
switch(config)# no feature-set fabricpath
switch(config)#
```

Related Commands

Command	Description
feature fabric-binding	Enables or disables fabric binding on the switch.
install feature-set fabricpath	Installs the FabricPath feature set on the switch.
show feature-set	Displays the status of the feature.

H Commands

This chapter describes the Cisco NX-OS FabricPath commands that begin with H.

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.

Command Default

ON

Command Modes

FabricPath IS-IS configuration mode

Command History

Release	Modification
5.1(3)N1(1)	This command was introduced.

Usage Guidelines

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's hostname.

I Commands

This chapter describes the Cisco NX-OS FabricPath commands that begin with I.

install feature-set fabricpath

To install the FabricPath feature set on the switch, use the **install feature-set fabricpath** command. To remove the FabricPath feature set, use the **no** form of this command.

install feature-set fabricpath

no install feature-set fabricpath

Syntax Description

This command has no arguments or keywords.

Command Default

Disabled

Command Modes

Global configuration mode

Command History

Release	Modification
5.1(3)N1(1)	This command was introduced.

Usage Guidelines

Note The FabricPath feature is supported only on the Cisco Nexus 5500 Series switches.

This command requires an Enhanced Layer 2 license.

Examples

This example shows how to install the FabricPath features on the switch:

```
switch# configure terminal
switch(config)# install feature-set fabricpath
switch(config)#
```

Related Commands

Command	Description
feature fabric-binding	Enables or disables fabric binding on the switch.
feature-set fabricpath	Enables the FabricPath feature set on the switch.
show running-config	Displays the running system configuration information.

L Commands

This chapter describes the Cisco NX-OS FabricPath commands that begin with L.

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.

Command Default

ON

Command Modes

FabricPath IS-IS configuration mode

Command History

Release	Modification
5.1(3)N1(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# configure terminal
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.

Command Default

The defaults are as follows:

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

Command Modes

FabricPath IS-IS configuration mode

Command History

Release	Modification
5.1(3)N1(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# configure terminal
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.

Command Default

1492 bytes

Command Modes

FabricPath IS-IS configuration mode

Command History

Release	Modification
5.1(3)N1(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# configure terminal
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.

M Commands

This chapter describes the Cisco NX-OS FabricPath commands that begin with M.

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 to 16.

Defaults

The default value is 16.

Command Modes

FabricPath IS-IS configuration mode

Command History

Release	Modification
5.1(3)N1(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# configure terminal
Enter configuration commands, one per line.  End with CNTL/Z.
switch(config)# fabricpath domain default
switch(config-fabricpath-isis)# topology 1
switch(config-fabricpath-isis-topo)# maximum-paths 1
switch(config-fabricpath-isis-topo)#
```

Related Commands

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

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.

Command Default

1200 seconds

Command Modes

FabricPath IS-IS configuration mode

Command History

Release	Modification
5.1(3)N1(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# configure terminal
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.

mode (FabricPath)

To configure VLANs as FabricPath VLANs for FabricPath forwarding, use the **mode** command. To remove the FabricPath VLANs, use the **no** form of this command.

mode {**ce** | **fabricpath**}

no mode {**ce** | **fabricpath**}

Syntax Description

ce	Enables the VLAN as a Classical IEEE 802.1Q Ethernet (CE) VLAN. This is the default VLAN mode.
fabricpath	Enables the VLAN as a FabricPath VLAN.

Command Default

The default VLAN mode is **ce**.

Command Modes

VLAN configuration mode

Command History

Release	Modification
5.1(3)N1(1)	This command was introduced.

Usage Guidelines

Ensure that you have enabled the FabricPath feature set.

Note You must have already created the VLANs before you can set the VLAN mode using FabricPath.

You designate those VLANs that you want to carry FabricPath traffic on the network by configuring them as FabricPath VLANs. By default, all FabricPath VLANs and FabricPath interfaces are added to the default FabricPath topology.

All FabricPath VLANs use conversational learning only if the switch virtual interface (SVI) is not enabled on the VLANs; otherwise, FabricPath VLANs use traditional learning.

Only FabricPath VLANs support conversational learning. CE VLANs support only traditional learning.

This command requires an Enhanced Layer 2 license.

Examples

This example shows how to configure a VLAN as a FabricPath VLAN:

```
switch# configure terminal
switch(config)# vlan 5
switch(config-vlan)# mode fabricpath
switch(config-vlan)#
```

This example shows how to remove a FabricPath VLAN:

```
switch# configure terminal
switch(config)# vlan 5
```

```
switch(config-vlan)# no mode fabricpath
switch(config-vlan)#
```

Related Commands

Command	Description
feature-set fabricpath	Enables the FabricPath feature set on the switch.
show fabricpath topology vlans	Displays information about the FabricPath Intermediate System-to-Intermediate System (IS-IS) topology, including the VLANs in the Layer 2 topology.

R Commands

This chapter describes the Cisco NX-OS FabricPath commands that begin with R.

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	Specifies the 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.

Command Default

The defaults are as follows:

- Gbps: 400
- Mbps: 400000

Command Modes

FabricPath IS-IS configuration mode

Command History

Release	Modification
5.1(3)N1(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# configure terminal
Enter configuration commands, one per line.  End with CNTL/Z.
switch(config)# fabricpath domain default
switch(config-fabricpath-isis)# topology 1
switch(config-fabricpath-isis-topo)# reference-bandwidth 500 Gbps
switch(config-fabricpath-isis-topo)#
```

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.

Command Default

The default value is 64.

Command Modes

FabricPath IS-IS configuration mode

Command History

Release	Modification
5.1(3)N1(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# configure terminal
Enter configuration commands, one per line.  End with CNTL/Z.
switch(config)# fabricpath domain default
switch(config-fabricpath-isis)# topology 1
switch(config-fabricpath-isis-topo)# root-priority 1
switch(config-fabricpath-isis-topo)#
```

Related Commands

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

S Commands

This chapter describes the Cisco NX-OS FabricPath commands that begin with S.

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.

Command Default

The defaults are as follows:

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

Command Modes

FabricPath IS-IS configuration mode

Command History

Release	Modification
5.1(3)N1(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# configure terminal
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. To return the interfaces to the default settings, use the **no** form of this command.

switchport mode fabricpath

no switchport mode

Syntax Description

This command has no arguments or keywords.

Command Default

None

Command Modes

Interface configuration mode
Virtual Ethernet interface configuration mode

Command History

Release	Modification
5.1(3)N1(1)	This command was introduced.

Usage Guidelines

Note The **no** keyword returns the interface to the default Classical IEEE 802.1Q Ethernet (CE) switchport access interface. The FabricPath ports carry traffic only for those VLANs configured as FabricPath VLANs.

This command requires an Enhanced Layer 2 license.

Examples

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

```
switch# configure terminal
switch(config)# interface ethernet 2/11-15
switch(config-if)# switchport mode fabricpath
switch(config-if)# no shutdown
switch(config-if)#
```

This example shows how to configure a virtual Ethernet interface as a FabricPath port:

```
switch# configure terminal
switch(config)# interface vethernet 1
switch(config-if)# switchport mode fabricpath
switch(config-if)# no shutdown
switch(config-if)#
```

Related Commands

Command	Description
show interface brief	Displays a brief summary of the interface status and information.

system default switchport fabricpath

To configure the default port mode as FabricPath, use the **system default switchport fabricpath** command. To return to the default settings, use the **no** form of this command.

system default switchport fabricpath

no system default switchport fabricpath

Syntax Description

This command has no arguments or keywords.

Command Default

None

Command Modes

Global configuration mode

Command History

Release	Modification
5.1(3)N1(1)	This command was introduced.

Usage Guidelines

This command requires an Enhanced Layer 2 license.

Examples

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

```
switch# configure terminal
switch(config)# system default switchport fabricpath
switch(config)#
```

Related Commands

Command	Description
show running-config	Displays the running system configuration information.

Show Commands

This chapter describes the Cisco NX-OS FabricPath **show** commands.

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.

Command Default

None

Command Modes

Any command mode

Command History

Release	Modification
5.1(3)N1(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 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.

Command Default

None

Command Modes

Any command mode

Command History

Release	Modification
5.1(3)N1(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
No ftag values present
switch#
```

Related Commands

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

show fabricpath isis

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

show fabricpath isis

Syntax Description

This command has no arguments or keywords.

Command Default

None

Command Modes

Global configuration mode

Command History

Release	Modification
5.1(3)N1(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 adjacency:

```
switch# show fabricpath isis

Fabricpath IS-IS domain : default
  System ID : 0005.73a3.ba3c  IS-Type : L1
  SAP : 432  Queue Handle : 11
  Maximum LSP MTU: 1492
  Graceful Restart enabled. State: Inactive
  Last graceful restart status : none
  Metric-style : advertise(wide), accept(wide)
  Start-Mode: Complete [Start-type configuration]
  Area address(es) :
    00
  Process is up and running
  CIB ID: 4
  Interfaces supported by Fabricpath IS-IS :
  Level 1
  Authentication type and keychain not configured
  Authentication check specified
  MT-0 Ref-Bw: 400000
  Address family Swid unicast :
    Number of interface : 0
    Distance : 115
  L1 Next SPF: Inactive
switch#
```

Related Commands

Command	Description
fabricpath domain default	Enables FabricPath Layer 2 IS-IS.
show running-config fabricpath	Displays the FabricPath running system configuration 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** *module/slot* | **port-channel** *channel-number*} | **detail** | **summary** | **system-id** *sid*]

Syntax Description

interface	(Optional) Displays the interface status.
ethernet	Displays the Ethernet interface.
module/slot	Module and slot number. The module number is from 1 to 255 and the port number is from 1 to 128.
port-channel	Displays the port-channel interface.
channel-number	Port-channel number. The range is from 1 to 4096.
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 format XXXX.XXXX.XXXX.

Command Default

None

Command Modes

Global configuration mode

Command History

Release	Modification
5.1(3)N1(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 adjacency:

```
switch# show fabricpath isis adjacency detail
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 [**l1**] [**level-1**] [**mgroup**] [**detail** | **summary**] [*sid*] {[**zero-sequence**] | [**router-id**] | [**adjacency**]}

Syntax Description

l1	(Optional) Displays the IS-IS Level-1 routing link state database.
level-1	(Optional) Displays the 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 format 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.

Command Default

None

Command Modes

Global configuration mode

Command History

Release	Modification
5.1(3)N1(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
  O2-48_Mgmt-2.00-00  * 0x00000008   0x2F9D    1073       0/0/0/1
switch#
```

This example shows how to display the IS-IS Level-1 routing link state database:

```
switch# show fabricpath isis database level-1
Fabricpath IS-IS domain: default LSP database
  LSPID                 Seq Number   Checksum  Lifetime   A/P/O/T
  O2-48_Mgmt-2.00-00  * 0x00000008   0x2F9D    1041       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.

Command Default

None

Command Modes

Global configuration mode

Command History

Release	Modification
5.1(3)N1(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

MT-0
                           PrimaryTree
    Multidestination-2      0 [C]
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.

Command Default

None

Command Modes

Global configuration mode

Command History

Release	Modification
5.1(3)N1(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      0005.73a3.ba3c.00-00* O2-48_Mgmt-2

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/port* | **port-channel** *channel-number*}

Syntax Descriptions

brief	Displays brief information about the IS-IS interface.
ethernet	Displays the Ethernet interface.
slot/port	Slot/chassis number and the port number. The slot number is from 1 to 255 and the port number is from 1 to 128.
port-channel	Displays the port-channel interface.
channel-number	Port-channel number. The range is from 1 to 4096.

Command Default

None

Command Modes

Global configuration mode

Command History

Release	Modification
5.1(3)N1(1)	This command was introduced.

Usage Guidelines

This command requires an Enhanced Layer 2 license.

Examples

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

```
switch1# show fabricpath isis interface brief
```

This example shows how to display the FabricPath IS-IS interface information for an Ethernet interface:

```
switch1# show fabricpath isis interface ethernet 1/2
```

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 ip 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 group information.
group-id	Group ID information in the format *A.B.C.D*.
source	(Optional) Displays the source information.
source-id	Source ID in the format *A.B.C.D*.

Command Default

None

Command Modes

Global configuration mode

Command History

Release	Modification
5.1(3)N1(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
```

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 multicast route 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 group information.
group-id	Group ID information in the format *A.B.C.D*.
source	(Optional) Displays the source information.
source-id	Source ID in the format *A.B.C.D*.

Command Default

None

Command Modes

Global configuration mode

Command History

Release	Modification
5.1(3)N1(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
```

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.

Command Default

None

Command Modes

Global configuration mode

Command History

Release	Modification
5.1(3)N1(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 : 0005.73a3.ba3c  IS-Type : L1
  SAP : 432  Queue Handle : 11
  Maximum LSP MTU: 1492
  Graceful Restart enabled. State: Inactive
  Last graceful restart status : none
  Metric-style : advertise(wide), accept(wide)
  Start-Mode: Complete [Start-type configuration]
  Area address(es) :
    00
  Process is up and running
  CIB ID: 4
  Interfaces supported by Fabricpath IS-IS :
  Level 1
  Authentication type and keychain not configured
  Authentication check specified
  MT-0 Ref-Bw: 400000
  Address family Swid unicast :
    Number of interface : 0
    Distance : 115
  L1 Next SPF: Inactive
switch#
```

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.

Command Default

None

Command Modes

Global configuration mode

Command History

Release	Modification
5.1(3)N1(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 MT-0
Topology 0, Tree 0, Swid routing table

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*/*port* | **port-channel** *channel-number*}

Syntax Description

gm	(Optional) Displays the IS-IS GM-Send-Sequence-Number information.
ethernet	Displays the IS-IS RRM information for an Ethernet interface.
slot/*port*	Slot or chassis number and the port number. The slot number is from 1 to 2555 and the port number is from 1 to 128.
port-channel	Displays the IS-IS RRM information for a port-channel interface.
channel-number	Port-channel number. The range is from 1 to 4096.

Command Default

None

Command Modes

Global configuration mode

Command History

Release	Modification
5.1(3)N1(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
```

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.

Command Default

None

Command Modes

Global configuration mode

Command History

Release	Modification
5.1(3)N1(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: 1

Log entry (current/max): 1/20
Log entry: 01, Ago: 02:32:37, Date: Tue Oct 25 03:41:00 2011
  Level  Instance    Init      SPF       IS Update  URIB Update  Total
  1      0x00000001  0.000062  0.000009  0.000009   0.000009     0.000411
  Level  Node Count   Changed  Reason
  1         1     2         0  Switch-id updated


switch#
```

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*/*port* | **port-channel** *channel-number*}

Syntax Description

gm	(Optional) Displays the IS-IS GM-Send-Sequence-Number information.
ethernet	Displays the Ethernet interface.
slot/*port*	Slot or chassis number and the port number. The slot number is from 1 to 255 and the port number is from 1 to 128.
port-channel	Displays the port-channel interface.
channel-number	Port-channel number. The range is from 1 to 4096.

Command Default

None

Command Modes

Global configuration mode

Command History

Release	Modification
5.1(3)N1(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
```

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/port* | **port-channel** *channel-number*}

Syntax Description

gm	(Optional) Displays the IS-IS GM-Send-Sequence-Number information.
ethernet	Displays the Ethernet interface.
slot/port	Slot or chassis number and the port number. The slot number is from 1 to 255 and the port number is from 1 to 128.
port-channel	Specifies the port-channel interface.
channel-number	Port-channel number. The range is from 1 to 4096.

Command Default

None

Command Modes

Global configuration mode

Command History

Release	Modification
5.1(3)N1(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
```

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.

Command Default

None

Command Modes

Global configuration mode

Command History

Release	Modification
5.1(3)N1(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:   1
LSPs sourced:       2
LSPs refreshed:     18
LSPs purged:        0
Buffers U2RIB:      0
Buffers M2RIB:      0
Buffers PIXM:       0
Swid Updates:       2
Ftag Updates:       0

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.

Command Default

None

Command Modes

Global configuration mode

Command History

Release	Modification
5.1(3)N1(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
MT-0
0005.73a3.ba3c*  2590[C]       0[C]  Yes                64
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.

Command Default

None

Command Modes

Global configuration mode

Command History

Release	Modification
5.1(3)N1(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:
  Number of trees: 2
    Tree id: 1, ftag: 0, root system: 0000.0000.0000, 0
    Tree id: 2, ftag: 0, root system: 0000.0000.0000, 0
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/port* | **port-channel** *channel-number*}

Syntax Description

ethernet	Displays the Ethernet interface.
slot/port	Slot or chassis number and the port number. The slot number is from 1 to 255 and the port number is from 1 to 128.
port-channel	Displays the port-channel interface.
channel-number	Port-channel number. The range is from 1 to 4096.

Command Default

None

Command Modes

Global configuraion mode

Command History

Release	Modification
5.1(3)N1(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           0           0           0           0         n/a
CSNP              0           0           0           0         n/a
PSNP              0           0           0           0         n/a
LSP               0           0           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.

Command Default

None

Command Modes

Any command mode

Command History

Release	Modification
5.1(3)N1(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

MT-0
Topology 0, Tree 1, Swid routing table

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.

Command Default

None

Command Modes

Any command mode

Command History

Release	Modification
5.1(3)N1(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
MT-0
switch#
```

Related Commands

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

show fabricpath load-balance

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

show fabricpath load-balance

Syntax Description

This command has no arguments or keywords.

Command Default

None

Command Modes

Any command mode

Command History

Release	Modification
5.1(3)N1(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

switch#
```

Related Commands

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

show fabricpath load-balance multicast

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

show fabricpath load-balance multicast ftag-selected vlan *vlan-ID* **macg** *MAC-addr*

Syntax Description

ftag-selected	Displays the multicast load-balancing parameters for the FabricPath FTAG.
vlan *vlan-ID*	Displays load-balancing for FabricPath VLANs. The range is from 1 to 4094.
macg *MAC-addr*	Displays the load-balancing parameters for the multicast group MAC address. The format is EEEE.EEEE.EEEE.

Command Default

None

Command Modes

Any command mode

Command History

Release	Modification
5.1(3)N1(1)	This command was introduced.

Usage Guidelines

This command requires an Enhanced Layer 2 license.

Examples

This example shows how to display FabricPath load-balancing forwarding information for the multicast load-balancing scheme:

```
switch# show fabricpath load-balance multicast ftag-selected vlan 10 macg 0100.5E10.1010
```

Related Commands

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

show fabricpath load-balance unicast

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

show fabricpath load-balance unicast forwarding-path ftag *ftag-ID* **switchid** *switch-ID* **src-mac** *MAC-addr* **dst-mac** *MAC-addr* [**dst-ip** *ip-addr*] [**dst-ipv6** *ipv6-addr*] [**l4-dst-port** *l4-dest-port*] [**l4-src-port** *l4-src-port*] [**src-ip** *ip-addr*] [**src-ipv6** *ipv6-addr*] [**vlan** *vlan-ID*]

Syntax Description

forwarding-path	Identifies the FabricPath that forwards the packet.
ftag *ftag-ID*	Displays the load-balancing parameters for the FabricPath FTAG. The FTAG value is from 0 to 4,294,967,295.
switchid *switch-ID*	Displays the load-balancing parameters for a specific FabricPath switch ID. The switch ID is from 0 to 4,294,967,295.
src-mac	Displays the load-balancing parameters for the source MAC address.
MAC-addr	MAC address. The format is EE:EE:EE:EE:EE:EE.
dst-mac	Displays the load-balancing parameters for the destination MAC address.
dst-ip	(Optional) Displays the load-balancing parameters for the destination IPv4 address.
ip-addr	IPv4 address. The format is A.B.C.D.
dst-ipv6	(Optional) Displays the load-balancing destination hash parameters.
ipv6-addr	IPv6 address. The format is EE:EE::EE:EE.
l4-dst-port *l4-dest-port*	(Optional) Displays the destination TCP or UDP port information used in hashing. The port number is from 0 to 65535.
l4-src-port *l4-src-port*	(Optional) Displays the source TCP or UDP port information used in hashing. The port number is from 0 to 65535.
src-ip	(Optional) Displays the load-balancing parameters for the source IPv4 address.
src-ipv6	(Optional) Displays the load-balancing source hash parameters.
vlan *vlan-ID*	(Optional) Displays the load-balancing information for FabricPath VLANs. The range is from 1 to 4094.

Command Default

None

Command Modes

Any command mode

Command History

Release	Modification
5.1(3)N1(1)	This command was introduced.

Usage Guidelines

This command requires an Enhanced Layer 2 license.

Examples

This example shows how to display FabricPath load-balancing forwarding information for the unicast load-balancing scheme:

```
switch# show fabricpath load-balance unicast forwarding-path ftag 1 switchid 200 src-mac
00:10:20:30:40:50 dst-mac 00:30:40:50:60:70 vlan 200
```

This example shows how to display FabricPath load-balance hashing information for the unicast load-balancing scheme:

```
switch# show fabricpath load-balance unicast forwarding-path ftag 1 switchid 232 src-mac
0000.1234.5678 dst-mac 0000.3452.4567 src-ipv6 12:34::56:78 dst-ipv6 01:34::56:78
l4-dst-port 100 l4-src-port 435 vlan 200
Missing params will be substituted by 0's.

crc8_hash: 229
This flow selects interface Po400
switch#
```

Related Commands

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

show fabricpath route

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

show fabricpath route [**detail** [**hex**] | **hex** | **topology** {topology_ID [**switchid** *switch-ID*] | all} [**detail** | **hex**]]

Syntax Description

detail	(Optional) Displays detailed information.
hex	(Optional) Displays the switch IDs in hexadecimal.
topology *topology_ID*	(Optional) Displays the topology information. The topology value is from 0 to 63.
switchid	(Optional) Displays the switch ID.
switch-ID	Switch ID value. The range is from 0 to 16383.

Command Default

None

Command Modes

Any command mode

Command History

Release	Modification
5.1(3)N1(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

0/2590/0, number of next-hops: 0
        via ---- , [60/0], 0 day/s 02:57:18, 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

0/2590/0, number of next-hops: 0
        via ---- , [60/0], 0 day/s 02:58:05, 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 information.

Command Default

None

Command Modes

Any command mode

Command History

Release	Modification
5.1(3)N1(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
----------+----------------+------------+-----------+--------------------
*2590        0005.73a3.ba3c    Primary     Confirmed    No      No
Total Switch-ids: 1
O2-48_Mgmt-2(config)#
O2-48_Mgmt-2(config)# show fabricpath s?
  switch-id  Switch ID
  system-id  System-id

switch#
```

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

```
switch# show fabricpath switch-id local
Switch-Id: 2590
System-Id: 0005.73a3.ba3c
switch#
```

Related Commands

Command	Description
fabricpath switch-id (FabricPath)	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.

Command Default

None

Command Modes

Any command mode

Command History

Release	Modification
5.1(3)N1(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 0005.73a3.ba3c
Switch-Id: 2590
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.

Command Default

None

Command Modes

Any command mode

Command History

Release	Modification
5.1(3)N1(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
switch#
```

Related Commands

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.

Note Cisco Nexus 5000 series only supports 2 topologies; the default or base topology (topology 0), and the local VLAN topology (topology 1).

show fabricpath topology [*topology-ID* {**ftag** [**active** | **multicast** | **unicast**] | **interface** [**ethernet** *slot/port* | **port-channel** *channel-number*] | **vlan** [**active**]} | **detail** | **ftag** [**active** | **multicast** | **unicast**] | **interface** [**ethernet** *slot/port* | **port-channel** *channel-number* | **vlan** [**active**]] | **vlan** [**active**]]

Syntax Description

topology-ID	FabricPath topology ID. The range is from 0 to 63.
detail	(Optional) Displays the detailed FabricPath topology information.
ftag	(Optional) Displays the forwarding tag (FTAG) 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/port	Slot or chassis number and the port number. The slot number is from 1 to 255 and the port number is from 1 to 128.
port-channel	(Optional) Displays the port-channel interface number.
channel-number	Port-channel number. The range is from 1 to 4096.
vlan	(Optional) Displays the VLANs in the Layer 2 topology.

Command Default

None

Command Modes

Any command mode

Command History

Release	Modification
5.1(3)N1(1)	This command was introduced.

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
```

This example shows how to display active multicast FTAGs:

```
switch# show fabricpath topology 0 ftag
```

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

```
switch# show fabricpath topology interface ethernet 2/1 vlan
```

Related Commands

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

show feature-set

To display the status of all feature sets on the switch, use the **show feature-set** command.

show feature-set [**services** *feature-set-name*]

Syntax Description

services	Displays the services associated with a feature set.
feature-set-name	Name of the service or feature set.

Command Default

None

Command Modes

Any command mode

Command History

Release	Modification
5.1(3)N1(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 feature-set
Feature Set Name      ID        State
--------------------  --------  --------
fabricpath            2         enabled
virtualization        4         uninstalled
switch#
```

This example shows how to display the services associated with the FabricPath feature set:

```
switch# show feature-set services fabricpath
u2rib
drap
isis_fabricpath
3 services in feature set fabricpath
switch#
```

Related Commands

Command	Description
feature-set fabricpath	Enables the FabricPath feature set on the switch.

show mroute

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

show {**l2** | **fabricpath**} **mroute** {[**vdc_omf**] | [**vlan** *vlanid*] {{[**omf**] | [**flood**] | [**source** {*srcaddr* | *ipv6srcaddr*}] [**group** {*groupaddr* | *ipv6groupaddr*}]} [**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.
vlan-id	(Optional) VLAN ID. The range is from 1 to 4096.
omf	(Optional) Displays the VLAN OMF route.
flood	(Optional) Displays the VLAN flood routes.
source	(Optional) Displays the source IP address.
srcassr	IPv4 source address.
ipv6srcaddr	IPv6 source address.
group	(Optional) Displays the group address.
groupaddr	IPv4 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	Forwarding tag (FTAG) ID. The range is from 1 to 1024.
hex	(Optional) Displays the switch IDs in hexadecimal.

Command Default

None

Command Modes

Any command mode

Command History

Release	Modification
5.1(3)N1(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 VLAN flood routes in the FabricPath multicast route database:

```
switch# show fabricpath mroute flood
```

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

```
switch# show l2 mroute resolved
```

Related Commands

Command	Description
fabricpath load-balance	Displays FabricPath load-balancing parameters.
show running-config fabricpath	Displays the current FabricPath configuration.

show multicast trees

To display the Layer 2 (l2) or FabricPath multicast tree database, use the **show 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	Forwarding tag (FTAG) ID. The range is from 1 to 1024.
hex	(Optional) Displays the switch IDs in hexadecimal.

Command Default

None

Command Modes

EXEC mode

Command History

Release	Modification
5.1(3)N1(1)	This command was introduced.

Usage Guidelines

This command requires an Enhanced Layer 2 license.

Examples

This example shows how to display the FabricPath multicast tree database:

```
switch# show fabricpath multicast trees
```

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

```
switch# show l2 multicast trees ftag 1
```

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

```
switch# show l2 multicast trees
```

Related Commands

Command	Description
show l2 route	Displays FabricPath route information.
show fabricpath route	Displays FabricPath route information.

show running-config fabricpath

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

show running-config fabricpath [**domain default** | **switch-id** | **topology**] [**all**]

Syntax Description

domain	(Optional) Displays the FabricPath Intermediate System-to-Intermediate System (IS-IS) domain configuration information.
default	(Optional) Displays the FabricPath IS-IS default FabricPath domain information.
switch-id	(Optional) Displays the FabricPath switch ID configuration information.
topology	(Optional) Displays the FabricPath topology information.
all	(Optional) Displays the running configuration, including the defaults.

Command Default

None

Command Modes

Any command mode

Command History

Release	Modification
5.1(3)N1(1)	This command was introduced.

Usage Guidelines

This command requires an Enhanced Layer 2 license.

Examples

This example shows how to display FabricPath running system configuration information:

```
switch# show running-config fabricpath

!Command: show running-config fabricpath
!Time: Tue Oct 25 07:55:05 2011

version 5.1(3)N1(1)
install feature-set fabricpath
feature-set fabricpath

vpc domain 1
fabricpath domain default


switch#
```

Related Commands

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

T Commands

This chapter describes the Cisco NX-OS FabricPath commands that begin with T.

topology

To configure a Layer 2 topology for FabricPath Intermediate System-to-Intermediate System (ISIS), use the **topology** command. To return to the default setting, use the **no** form of this command.

Note Cisco Nexus 5000 series only supports 2 topologies; the default or base topology (topology 0), and the local VLAN topology (topology 1).

topology *topology-number*

no topology [*topology-number*]

Syntax Description

topology-number	Topology number. The range is form 1 to 63.

Command Default

None

Command Modes

FabricPath IS-IS configuration mode

Command History

Release	Modification
5.1(3)N1(1)	This command was introduced.

Usage Guidelines

This command requires an Enhanced Layer 2 license.

Examples

This example shows how to configure a FabricPath IS-IS topology:

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

Related Commands

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