



Cisco Nexus 5500 Series NX-OS FabricPath Command Reference

Cisco NX-OS Release 6.x

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New and Changed Information

This chapter provides release-specific information for each new and changed feature in the *Cisco Nexus 5500 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 5500 Series NX-OS Release Notes, Release 6.0* 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 6.0\(2\)N1\(2\)](#), page vii

New and Changed Information for Cisco NX-OS Release 6.0(2)N1(2)

summarizes the new and changed features for Cisco NX-OS Release 6.0(2)N1(2) and tells you where they are documented.

Table 1 *New and Changed Information for Release 6.0(2)N1(2)*

| Feature | Description | Changed in Release | Where Documented |
|---------------------------------------|------------------------------|--------------------|--|
| 4x10G Generic Expansion Module (GEM). | This feature was introduced. | 6.0(2)N1(2) | Show Commands, page 61 |





Preface

This preface describes the audience, organization, and conventions of the *Cisco Nexus 5500 Series NX-OS FabricPath Command Reference*. It also provides information on how to obtain related documentation.

This preface includes the following sections:

- [Audience, page ix](#)
- [Document Conventions, page ix](#)
- [Related Documentation, page x](#)
- [Documentation Feedback, page xi](#)
- [Related Documentation, page x](#)

Audience

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

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:

| | |
|-----------------------------|---|
| <code>screen font</code> | Terminal sessions and information that the switch displays are in screen font. |
| boldface screen font | Information you must enter is in boldface screen font. |
| <i>italic screen font</i> | 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 Extenders is available at the following URL:

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

The documentation set includes the following types of documents:

- Licensing Information Guide
- Release Notes
- Installation and Upgrade Guides
- Configuration Guides
- Configuration Examples and TechNotes
- Programming Guides
- Operations Guides
- Error and System Message Guides
- Field Notices
- Security Advisories, Responses and Notices
- Troubleshooting Guide
- Command References
- MIB Reference Guide

Documentation Feedback

To provide technical feedback on this document or to report an error or omission, please send your comments to nexus5k-docfeedback@cisco.com. We appreciate your feedback.

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:

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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 |
|-----------------|-------------|------------------------------|
| | 5.2(1)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 | <i>keychain-name</i> | Authentication keychain. The maximum size is 63 alphanumeric characters. |
|--------------------|----------------------|--|
|--------------------|----------------------|--|

| Defaults | None |
|----------|------|
|----------|------|

| Command Modes | FabricPath IS-IS configuration mode |
|---------------|-------------------------------------|
|---------------|-------------------------------------|

| Command History | Release | Modification |
|-----------------|-------------|------------------------------|
| | 5.2(1)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 NX-OS Security Configuration Guide* for your platform 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 |
|-------------|------------------------------|
| 5.2(1)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. |
| <i>module/slot</i> | (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. |
| <i>port_channel_number</i> | (Optional) Port-channel number. The range is from 1 to 4096. |
| system-id | (Optional) Specifies the system ID. |
| <i>sid</i> | (Optional) System ID in the form of XXXX.XXXX.XXXX. |

Command Default

None

Command Modes

EXEC mode

Command History

| Release | Modification |
|-------------|------------------------------|
| 5.2(1)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 |
| | 5.2(1)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: <pre>switch# clear fabricpath isis statistics * switch#</pre> | |
| 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. |
| <i>module/slot</i> | (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. |
| <i>port_channel_number</i> | | Port-channel number. The range is from 1 to 4096. |

Command Default None

Command Modes EXEC mode

| Command History | Release | Modification |
|-----------------|-------------|------------------------------|
| | 5.2(1)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 | <i>desc</i> | Line description. The maximum size is 80 bytes. |
|---------------------------|-------------|---|

| | |
|------------------------|------|
| Command Default | None |
|------------------------|------|

| | |
|----------------------|---------------------------|
| Command Modes | Global configuration mode |
|----------------------|---------------------------|

| Command History | Release | Modification |
|------------------------|----------------|------------------------------|
| | 5.2(1)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) fabricpath topology 50
switch#(config-fp-topology) # description FabricPath Topology 50 Configuration
```

| 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 |
|-------------|------------------------------|
| 5.2(1)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 reenble 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 |
|-----------------|-------------|------------------------------|
| | 5.2(1)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 | <i>auth-key-chain-name</i> Authentication keychain. The maximum size is 63 alphanumeric characters. |
|---------------------------|---|

| | |
|------------------------|------|
| Command Default | None |
|------------------------|------|

| | |
|----------------------|------------------------------|
| Command Modes | Interface configuration mode |
|----------------------|------------------------------|

| Command History | Release | Modification |
|------------------------|----------------|------------------------------|
| | 5.2(1)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 NX-OS Security Configuration Guide* for your platform for information about key-chains.



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 |
|-----------------|-------------|------------------------------|
| | 5.2(1)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 |
|-------------|------------------------------|
| 5.2(1)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 | <i>seconds</i> | CSNP interval value. The range is from 1 to 65535. |
| Command Default | 10 seconds | |
| Command Modes | Interface configuration mode | |
| Command History | Release | Modification |
| | 5.2(1)N1(1) | This command was introduced. |
| Usage Guidelines | This command requires an Enhanced Layer 2 license. | |
| Examples | <p>This example shows how to set a CSNP interval value:</p> <pre>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)#</pre> | |
| 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 | <i>seconds</i> | Hello interval value. The range is from 1 to 65535. |
| Command Default | 10 seconds | |
| Command Modes | Interface configuration mode | |
| Command History | Release | Modification |
| | 5.2(1)N1(1) | This command was introduced. |
| Usage Guidelines | This command requires an Enhanced Layer 2 license. | |
| Examples | <p>This example shows how to set a hello interval in seconds:</p> <pre>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)#</pre> | |
| 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 | <i>multiplier</i> | 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 |
|-----------------|-------------|------------------------------|
| | 5.2(1)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 |
|-------------|------------------------------|
| 5.2(1)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 transmission interval between Intermediate System-to-Intermediate System (IS-IS) link-state packet (LSP) protocol data units (PDUs) for each interface, use the **fabricpath isis lsp-interval** command. To return to the default setting, use the **no** form of this command.

fabricpath isis lsp-interval *msec*

no fabricpath isis lsp-interval *msec*

| | | |
|---------------------------|---|---|
| Syntax Description | <i>msec</i> | 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 |
| | 5.2(1)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: | |
| | <pre>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)#</pre> | |
| 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

| | |
|---------------|--|
| <i>metric</i> | 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 |
|-------------|------------------------------|
| 5.2(1)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 | <i>seconds</i> | 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 | <table border="1"> <thead> <tr> <th>Release</th> <th>Modification</th> </tr> </thead> <tbody> <tr> <td>5.2(1)N1(1)</td> <td>This command was introduced.</td> </tr> </tbody> </table> | Release | Modification | 5.2(1)N1(1) | This command was introduced. | |
| Release | Modification | | | | | |
| 5.2(1)N1(1) | This command was introduced. | | | | | |
| Usage Guidelines | This command requires an Enhanced Layer 2 license. | | | | | |
| Examples | <p>This example shows how to set an interval between initial LSP retransmissions for a P2P interface:</p> <pre>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)#</pre> | | | | | |
| Related Commands | <table border="1"> <thead> <tr> <th>Command</th> <th>Description</th> </tr> </thead> <tbody> <tr> <td>show fabricpath isis</td> <td>Displays FabricPath IS-IS information.</td> </tr> </tbody> </table> | Command | Description | show fabricpath isis | Displays FabricPath IS-IS information. | |
| 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 | <i>seconds</i> | Interval between retransmissions of the same LSP, in seconds. The range is from 20 to 65535. |
|---------------------------|----------------|--|

| | |
|------------------------|-----------------|
| Command Default | 66 milliseconds |
|------------------------|-----------------|

| | |
|----------------------|------------------------------|
| Command Modes | Interface configuration mode |
|----------------------|------------------------------|

| | | |
|------------------------|----------------|------------------------------|
| Command History | Release | Modification |
| | 5.2(1)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}] [{layer 2 | layer3
| layer4 | mixed} [include-vlan]]
```

```
no fabricpath load-balance unicast [{destination | source | source-destination}] [{layer 2 |
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. |
| layer2 | | (Optional) Specifies that the load-balancing parameters only include Layer 2 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 |
|-----------------|-------------|------------------------------|
| | 5.2(1)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** form of this command.

fabricpath switch-id *switch-id*

no fabricpath switch-id

| | | |
|---------------------------|------------------|--|
| Syntax Description | <i>switch-id</i> | FabricPath switch ID. The range is from 1 to 4094. |
|---------------------------|------------------|--|

| | |
|------------------------|------|
| Command Default | None |
|------------------------|------|

| | |
|----------------------|---------------------------|
| Command Modes | Global configuration mode |
|----------------------|---------------------------|

| Command History | Release | Modification |
|------------------------|----------------|------------------------------|
| | 5.2(1)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 | <i>switch-id</i> | FabricPath switch ID. The range is from 1 to 4094. |
|---------------------------|------------------|--|

| | | |
|------------------------|------|--|
| Command Default | None | |
|------------------------|------|--|

| | | |
|----------------------|-------------------------------|--|
| Command Modes | vPC domain configuration mode | |
|----------------------|-------------------------------|--|

| Command History | Release | Modification |
|------------------------|----------------|------------------------------|
| | 5.2(1)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. |
| <i>sec</i> | 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 |
|-------------|------------------------------|
| 5.2(1)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 5500 Series switch only supports 2 topologies; the default or base topology (topology 0), and another topology (for example, 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 |
|-------------|------------------------------|
| 5.2(1)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 |
|-----------------|-------------|------------------------------|
| | 5.2(1)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 |
|-----------------|-------------|------------------------------|
| | 5.2(1)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 |
|-------------|------------------------------|
| 5.2(1)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 |
|-----------------|-------------|------------------------------|
| | 5.2(1)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 | | |
|-------------------------|--|---|
| <i>lsp-max-wait</i> | | Maximum interval (in seconds) between two consecutive occurrences of an LSP being generated. The range is from 50 to 120000. The default is 8000. |
| <i>lsp-initial-wait</i> | | Initial LSP generation delay (in milliseconds). The range is from 50 to 120000. The default is 50. |
| <i>lsp-second-wait</i> | | 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 |
|-----------------|-------------|------------------------------|
| | 5.2(1)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 Nexus 5500 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 | <i>bytes</i> | 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 |
| | 5.2(1)N1(1) | This command was introduced. |
| Usage Guidelines | This command requires an Enhanced Layer 2 license. | |
| Examples | <p>This example shows how to set the maximum LSP size to 1500 bytes:</p> <pre>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)#</pre> | |
| 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 | <i>paths</i> | 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 |
|------------------------|----------------|------------------------------|
| | 5.2(1)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 | <i>value</i> | 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 |
| | 5.2(1)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: <pre>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)#</pre> | |
| 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 |
|-----------------|-------------|------------------------------|
| | 5.2(1)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)# exit
```

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)# exit
switch#
```

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 | <i>bandwidth</i> | 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 |
|-----------------|-------------|------------------------------|
| | 5.2(1)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 | <i>value</i> | 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 |
| | 5.2(1)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

| | |
|-------------------------|---|
| <i>spf-max-wait</i> | Maximum interval (in seconds) between two consecutive occurrences of a link-state packet (LSP) being generated. The range is from 50 to 120000. |
| <i>spf-initial-wait</i> | Initial LSP generation delay (in milliseconds). The range is from 50 to 120000. |
| <i>spf-second-wait</i> | 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 |
|-------------|------------------------------|
| 5.2(1)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 |
|-----------------|-------------|------------------------------|
| | 5.2(1)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 |
|-----------------|-------------|------------------------------|
| | 5.2(1)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 |
|-------------|------------------------------|
| 5.2(1)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 |
|-----------------|-------------|------------------------------|
| | 5.2(1)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 |
|-----------------|-------------|------------------------------|
| | 5.2(1)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. |
| <i>module/slot</i> | 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. |
| <i>channel-number</i> | 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. |
| <i>sid</i> | Hostname or system ID in the format XXXX.XXXX.XXXX. |

Command Default None

Command Modes Global configuration mode

| Command History | Release | Modification |
|-----------------|-------------|------------------------------|
| | 5.2(1)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. |
| <i>sid</i> | (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 |
|-----------------|-------------|------------------------------|
| | 5.2(1)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#
```

■ show fabricpath isis database

| 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 |
|-----------------|-------------|------------------------------|
| | 5.2(1)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 |
|------------------------|----------------|------------------------------|
| | 5.2(1)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* 02-48_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 [QSFP-module] port | port-channel channel-number }
```

| Syntax Descriptions | | |
|-----------------------|--|---|
| brief | | Displays brief information about the IS-IS interface. |
| ethernet | | Displays the Ethernet interface. |
| <i>slot/port</i> | | Slot/chassis number and the port number. The slot number is from 1 to 255 and the port number is from 1 to 128. |
| <i>QSFP-module</i> | | (Optional) The QSFP+ port on the Generic Expansion Module (GEM). The port numbers are from 1 to 4. |
| port-channel | | Displays the port-channel interface. |
| <i>channel-number</i> | | Port-channel number. The range is from 1 to 4096. |

Command Default None

Command Modes Global configuration mode

| Command History | Release | Modification |
|-----------------|-------------|------------------------------|
| | 6.0(2)N1(2) | Support for QSFP+ GEM. |
| | 5.2(1)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 | Parameter | Description |
|--------------------|------------------|---|
| | vlan | (Optional) Displays the IS-IS VLAN information. |
| | <i>vlan-id</i> | VLAN ID. The range is from 1 to 4094. |
| | group | (Optional) Displays the group information. |
| | <i>group-id</i> | Group ID information in the format <i>A.B.C.D</i> . |
| | source | (Optional) Displays the source information. |
| | <i>source-id</i> | Source ID in the format <i>A.B.C.D</i> . |

Command Default None

Command Modes Global configuration mode

| Command History | Release | Modification |
|-----------------|-------------|------------------------------|
| | 5.2(1)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 | Parameter | Description |
|--------------------|------------------|---|
| | vlan | (Optional) Displays the IS-IS VLAN information. |
| | <i>vlan-id</i> | Displays the VLAN ID. The range is from 1 to 4094. |
| | group | (Optional) Displays the group information. |
| | <i>group-id</i> | Group ID information in the format <i>A.B.C.D</i> . |
| | source | (Optional) Displays the source information. |
| | <i>source-id</i> | Source ID in the format <i>A.B.C.D</i> . |

Command Default None

Command Modes Global configuration mode

| Command History | Release | Modification |
|-----------------|-------------|------------------------------|
| | 5.2(1)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 |
|-----------------|-------------|------------------------------|
| | 5.2(1)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 |
|-----------------|-------------|------------------------------|
| | 5.2(1)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[QSFP-module]/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. |
| <i>slot/port</i> | | 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. |
| <i>QSFP-module</i> | (Optional) | The QSFP+ port on the Generic Expansion Module (GEM). The port numbers are from 1 to 4. |
| port-channel | | Displays the IS-IS RRM information for a port-channel interface. |
| <i>channel-number</i> | | Port-channel number. The range is from 1 to 4096. |

Command Default None

Command Modes Global configuration mode

| Command History | Release | Modification |
|-----------------|-------------|------------------------------|
| | 6.0(2)N1(2) | Support for the QSFP+ GEM. |
| | 5.2(1)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 |
|------------------------|----------------|------------------------------|
| | 5.2(1)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[/QSFP-module]/port | port-channel
channel-number}
```

| Syntax Description | | |
|-----------------------|------------|--|
| gm | (Optional) | Displays the IS-IS GM-Send-Sequence-Number information. |
| ethernet | | Displays the Ethernet interface. |
| <i>slot/port</i> | | 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. |
| <i>QSFP-module</i> | (Optional) | The QSFP+ port on the Generic Expansion Module (GEM). The port numbers are from 1 to 4. |
| port-channel | | Displays the port-channel interface. |
| <i>channel-number</i> | | Port-channel number. The range is from 1 to 4096. |

Command Default None

Command Modes Global configuration mode

| Command History | Release | Modification |
|-----------------|-------------|------------------------------|
| | 6.0(2)N1(2) | Support for the QSFP+ GEM. |
| | 5.2(1)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/[QSFP-module/]port | port-channel channel-number }
```

Syntax Description

| | |
|-----------------------|--|
| gm | (Optional) Displays the IS-IS GM-Send-Sequence-Number information. |
| ethernet | Displays the Ethernet interface. |
| <i>slot/port</i> | 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. |
| <i>QSFP-module</i> | (Optional) The QSFP+ port on the Generic Expansion Module (GEM). The port numbers are from 1 to 4. |
| port-channel | Specifies the port-channel interface. |
| <i>channel-number</i> | Port-channel number. The range is from 1 to 4096. |

Command Default

None

Command Modes

Global configuration mode

Command History

| Release | Modification |
|-------------|------------------------------|
| 5.2(1)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 |
|-----------------|-------------|------------------------------|
| | 5.2(1)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 | Enables FabricPath Layer 2 IS-IS. |
| | default | |

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 |
|-----------------|-------------|------------------------------|
| | 5.2(1)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 |
|-----------------|-------------|------------------------------|
| | 5.2(1)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 | Enables FabricPath Layer 2 IS-IS. |
| | default | |

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/[QSFP-module/]port | port-channel channel-number}
```

Syntax Description

| | |
|-----------------------|--|
| ethernet | Displays the Ethernet interface. |
| <i>slot/port</i> | 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. |
| <i>QSFP-module</i> | (Optional) The QSFP+ port on the Generic Expansion Module (GEM). The port numbers are from 1 to 4. |
| port-channel | Displays the port-channel interface. |
| <i>channel-number</i> | Port-channel number. The range is from 1 to 4096. |

Command Default

None

Command Modes

Global configuraion mode

Command History

| Release | Modification |
|-------------|------------------------------|
| 6.0(2)N1(2) | Support for the QSFP+ GEM. |
| 5.2(1)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             0          n/a
CSNP         0                    0     0            0             0          n/a
PSNP         0                    0     0            0             0          n/a
LSP          0                    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. |
|--------------------|------------------|---|
| | <i>tree-id</i> | Tree identifier. The range is from 1 to 2. |

Command Default None

Command Modes Any command mode

| Command History | Release | Modification |
|-----------------|-------------|------------------------------|
| | 5.2(1)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 tree 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 |
|-------------|------------------------------|
| 5.2(1)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 | Enables FabricPath Layer 2 IS-IS. |
| default | |

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 |
|-----------------|-------------|------------------------------|
| | 5.2(1)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 (L2, L3 and L4)
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 | Description |
|--------------------|-----------------------------|---|
| | vlan <i>vlan-ID</i> | Displays load-balancing for FabricPath VLANs. The range is from 1 to 4094. |
| | macg <i>MAC-addr</i> | 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 |
|-----------------|-------------|------------------------------|
| | 5.2(1)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 <i>ftag-ID</i> | | Displays the load-balancing parameters for the FabricPath FTAG. The FTAG value is from 0 to 4,294,967,295. |
| switchid <i>switch-ID</i> | | 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. |
| <i>MAC-addr</i> | | 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. |
| <i>ip-addr</i> | | IPv4 address. The format is A.B.C.D. |
| dst-ipv6 | | (Optional) Displays the load-balancing destination hash parameters. |
| <i>ipv6-addr</i> | | IPv6 address. The format is EE:EE::EE:EE. |
| l4-dst-port <i>l4-dest-port</i> | | (Optional) Displays the destination TCP or UDP port information used in hashing. The port number is from 0 to 65535. |
| l4-src-port <i>l4-src-port</i> | | (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 <i>vlan-ID</i> | | (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 |
|-----------------|-------------|------------------------------|
| | 5.2(1)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
14-dst-port 100 14-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 | Parameter | Description |
|--------------------|------------------------------------|---|
| | detail | (Optional) Displays detailed information. |
| | hex | (Optional) Displays the switch IDs in hexadecimal. |
| | topology <i>topology_ID</i> | (Optional) Displays the topology information. The topology value is from 0 to 63. |
| | switchid | (Optional) Displays the switch ID. |
| | <i>switch-ID</i> | Switch ID value. The range is from 0 to 16383. |

Command Default None

Command Modes Any command mode

| Command History | Release | Modification |
|-----------------|-------------|------------------------------|
| | 5.2(1)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
```

show fabricpath route

```

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 |
|------------------------|----------------|------------------------------|
| | 5.2(1)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 | <i>mac-address</i> | MAC address. |
|---------------------------|--------------------|--------------|

| | | |
|------------------------|------|--|
| Command Default | None | |
|------------------------|------|--|

| | | |
|----------------------|------------------|--|
| Command Modes | Any command mode | |
|----------------------|------------------|--|

| Command History | Release | Modification |
|------------------------|----------------|------------------------------|
| | 5.2(1)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: | |
| | <pre>switch# show fabricpath system-id 0005.73a3.ba3c Switch-Id: 2590 State: Confirmed switch#</pre> | |

| Related Commands | Command | Description |
|-------------------------|----------------|---------------------------------------|
| | | show running-config fabricpath |

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 |
|-----------------|-------------|------------------------------|
| | 5.2(1)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 5500 Series switch only supports 2 topologies; the default or base topology (topology 0), and another optional topology (for example, topology 1).

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

Syntax Description

| | |
|-----------------------|--|
| <i>topology-ID</i> | 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. |
| <i>slot/port</i> | 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. |
| <i>QSFP-module</i> | (Optional) The QSFP+ port on the Generic Expansion Module (GEM). The port numbers are from 1 to 4. |
| port-channel | (Optional) Displays the port-channel interface number. |
| <i>channel-number</i> | 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 |
|-------------|------------------------------|
| 6.0(2)N1(2) | Support for the QSFP+ GEM. |
| 5.2(1)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 | Enables FabricPath Layer 2 IS-IS. |
| default | |

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. |
|--------------------|-------------------------|--|
| | <i>feature-set-name</i> | Name of the service or feature set. |

| Command Default | None |
|-----------------|------|
|-----------------|------|

| Command Modes | Any command mode |
|---------------|------------------|
|---------------|------------------|

| Command History | Release | Modification |
|-----------------|-------------|------------------------------|
| | 5.2(1)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 (I2) or FabricPath multicast route database, use the **show mroute** command.

```
show {i2 | fabricpath} mroute {[vdc_omf] | [vlan vlanid] {[omf] | [flood] | [source {srcaddr |
ipv6srcaddr}]} [group {groupaddr | ipv6groupaddr}]} [resolved] [ftag ftag-id] [hex]}
```

| Syntax | Description |
|----------------------|--|
| i2 | 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. |
| <i>vlan-id</i> | (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. |
| <i>srcaddr</i> | IPv4 source address. |
| <i>ipv6srcaddr</i> | IPv6 source address. |
| group | (Optional) Displays the group address. |
| <i>groupaddr</i> | IPv4 group address. |
| <i>ipv6groupaddr</i> | IPv6 group address. |
| resolved | (Optional) Displays the resolved switch ID next hop's underlying interfaces. |
| ftag | (Optional) Displays the FTAG number. |
| <i>ftag-id</i> | 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 |
|-----------------|-------------|------------------------------|
| | 5.2(1)N1(1) | This command was introduced. |

Usage Guidelines



Note

I2 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 12 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. |
| <i>topo-id</i> | | Topology ID. The range is from 0 to 64. |
| ftag | | (Optional) Displays the FTAG number. |
| <i>ftag-id</i> | | 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 |
|-----------------|-------------|------------------------------|
| | 5.2(1)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 |
|-----------------|-------------|------------------------------|
| | 5.2(1)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 5.2(1)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. |

■ show running-config fabricpath



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 5500 Series switch only supports 2 topologies; the default or base topology (topology 0), and another optional topology (for example, topology 1).

topology *topology-number*

no topology [*topology-number*]

Syntax Description

| | |
|------------------------|---|
| <i>topology-number</i> | Topology number. The range is form 1 to 63. |
|------------------------|---|

Command Default

None

Command Modes

FabricPath IS-IS configuration mode

Command History

| Release | Modification |
|-------------|------------------------------|
| 5.2(1)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. |