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## **Cisco Nexus 7000 Series NX-OS FabricPath Command Reference, Release 5.x**

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## **C O N T E N T S**

### **Preface**   vii

Audience   vii

Organization   vii

Document Conventions   vii

Related Documentation   viii

Obtaining Documentation and Submitting a Service Request   x

### **Cisco NX-OS FabricPath Commands**   FP-1

authentication-check (fabricpath)   FP-2

authentication key-chain (fabricpath)   FP-3

authentication-type (fabricpath)   FP-4

clear fabricpath isis adjacency   FP-6

clear fabricpath isis statistics   FP-8

clear fabricpath isis traffic   FP-9

fabricpath domain default   FP-10

fabricpath isis authentication-check   FP-11

fabricpath isis authentication key-chain   FP-12

fabricpath isis authentication-type   FP-14

fabricpath isis csnp-interval   FP-16

fabricpath isis hello-interval   FP-17

fabricpath isis hello-multiplier   FP-18

fabricpath isis hello-padding   FP-19

fabricpath isis lsp-interval   FP-20

fabricpath isis metric   FP-21

fabricpath isis retransmit-interval   FP-22

fabricpath isis retransmit-throttle-interval   FP-23

fabricpath switch-id (global configuration mode)   FP-24

fabricpath switch-id (vpc-domain configuration mode)   FP-25

fabricpath timers   FP-26

feature-set fabricpath   FP-28

graceful-restart (fabricpath)   FP-29

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hostname dynamic (fabricpath)	FP-30
log-adjacency-changes (fabricpath)	FP-31
lsp-gen-interval (fabricpath)	FP-32
lsp-mtu (fabricpath)	FP-34
mac address-table learning-mode conversational	FP-35
max-lsp-lifetime (fabricpath)	FP-36
maximum-paths (fabricpath)	FP-37
reference bandwidth (fabricpath)	FP-38
root-priority (fabricpath)	FP-39
show fabricpath isis adjacency	FP-40
show fabricpath isis database	FP-42
show fabricpath isis ftag	FP-44
show fabricpath isis hostname	FP-45
show fabricpath isis interface	FP-46
show fabricpath isis ip mroute	FP-48
show fabricpath isis ip redistribute mroute	FP-49
show fabricpath isis protocol	FP-50
show fabricpath isis route	FP-52
show fabricpath isis rrm	FP-53
show fabricpath isis spf-log	FP-54
show fabricpath isis srm	FP-56
show fabricpath isis ssn	FP-57
show fabricpath isis statistics	FP-58
show fabricpath isis switch-id	FP-59
show fabricpath isis topology summary	FP-60
show fabricpath isis traffic	FP-61
show fabricpath isis trees	FP-62
show fabricpath isis vlan-range	FP-63
show fabricpath conflict	FP-64
show fabricpath ftag	FP-65
show fabricpath load-balance	FP-66
show fabricpath route	FP-67
show fabricpath switch-id	FP-69
show fabricpath system-id	FP-71
show fabricpath timers	FP-72

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[show fabricpath topology](#) **FP-73**  
[show feature-set](#) **FP-75**  
[show mroute](#) **FP-76**  
[show multicast trees](#) **FP-78**  
[show mac address-table learning-mode](#) **FP-80**  
[show running-config fabricpath](#) **FP-81**  
[spanning-tree domain](#) **FP-83**  
[spf-interval](#) **FP-84**  
[switchport mode fabricpath](#) **FP-86**  
[system default switchport fabricpath](#) **FP-87**

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## Preface

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This preface describes the audience, organization, and conventions of the *Cisco Nexus 7000 Series NX-OS FabricPath Command Reference, Release 5.x*. It also provides information on how to obtain related documentation.

This chapter includes the following sections:

- [Audience, page vii](#)
- [Organization, page vii](#)
- [Document Conventions, page vii](#)
- [Related Documentation, page viii](#)
- [Obtaining Documentation and Submitting a Service Request, page x](#)

## Audience

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

## Organization

This reference is organized as follows:

Chapter and Title	Description
<a href="#">Chapter 1, “Cisco NX-OS FabricPath Commands”</a>	Describes the Cisco NX-OS FabricPath commands.

## Document Conventions

Command descriptions use these conventions:

Convention	Description
<b>boldface font</b>	Commands and keywords are in boldface.
<i>italic font</i>	Arguments for which you supply values are in italics.

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

Screen examples use these conventions:

screen font	Terminal sessions and information that the switch displays are in screen font.
<b>boldface screen font</b>	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.



#### Tip

Means *the following information will help you solve a problem*.

## Related Documentation

Cisco NX-OS includes the following documents:

### Release Notes

*Cisco Nexus 7000 Series NX-OS Release Notes, Release 5.x*

### NX-OS Configuration Guides

*Cisco Nexus 7000 Series NX-OS Getting Started with Virtual Device Contexts, Release 5..x*

*Cisco Nexus 7000 Series OTV Quick Start Guide*

*Cisco Nexus 7000 Series NX-OS Fundamentals Configuration Guide, Release 5.x*

*Cisco Nexus 7000 Series NX-OS Interfaces Configuration Guide, Release 5.x*

*Cisco Nexus 7000 Series NX-OS Layer 2 Switching Configuration Guide, Release 5.x*



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*Cisco Nexus 7000 Series NX-OS Quality of Service Configuration Guide, Release 5.x*  
*Cisco Nexus 7000 Series NX-OS Unicast Routing Configuration Guide, Release 5.x*  
*Cisco Nexus 7000 Series NX-OS Multicast Routing Configuration Guide, Release 5.x*  
*Cisco Nexus 7000 Series NX-OS Security Configuration Guide, Release 5.x*  
*Cisco Nexus 7000 Series NX-OS OTV Configuration Guide, Release 5.x*  
*Cisco Nexus 7000 Series NX-OS Virtual Device Context Configuration Guide, Release 5.x*  
*Cisco Nexus 7000 Series NX-OS FabricPath Configuration Guide, Release 5.x*  
*Cisco Nexus 7000 Series NX-OS Software Upgrade and Downgrade Guide, Release 5.x*  
*Cisco Nexus 7000 Series NX-OS Licensing Guide, Release 5.x*  
*Cisco Nexus 7000 Series NX-OS High Availability and Redundancy Guide, Release 5.x*  
*Cisco Nexus 7000 Series NX-OS System Management Configuration Guide, Release 5.x*  
*Cisco NX-OS XML Management Interface User Guide, Release 5.x*  
*Cisco NX-OS System Messages Reference*  
*Cisco Nexus 7000 Series NX-OS MIB Quick Reference*

## **NX-OS Command References**

*Cisco Nexus 7000 Series NX-OS Command Reference Master Index, Release 5.x*  
*Cisco Nexus 7000 Series NX-OS Fundamentals Command Reference, Release 5.x*  
*Cisco Nexus 7000 Series NX-OS Interfaces Command Reference, Release 5.x*  
*Cisco Nexus 7000 Series NX-OS Layer 2 Switching Command Reference, Release 5.x*  
*Cisco Nexus 7000 Series NX-OS Quality of Service Command Reference, Release 5.x*  
*Cisco Nexus 7000 Series NX-OS Unicast Routing Command Reference, Release 5.x*  
*Cisco Nexus 7000 Series NX-OS Multicast Routing Command Reference, Release 5.x*  
*Cisco Nexus 7000 Series NX-OS Security Command Reference, Release 5.x*  
*Cisco Nexus 7000 Series NX-OS OTV Command Reference, Release 5.x*  
*Cisco Nexus 7000 Series NX-OS Virtual Device Context Command Reference, Release 5.x*  
*Cisco Nexus 7000 Series NX-OS FabricPath Command Reference, Release 5.x*  
*Cisco Nexus 7000 Series NX-OS System Management Command Reference, Release 5.x*

## **Other Software Document**

*Cisco Nexus 7000 Series NX-OS Troubleshooting Guide, Release 5.x*

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

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

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

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## Cisco NX-OS FabricPath Commands

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

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## authentication-check (fabricpath)

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

**authentication-check**

**no authentication-check**

**Syntax Description** This command has no arguments or keywords.

**Defaults** Enabled

**Command Modes** Fabricpath IS-IS mode

**SupportedUserRoles** network-admin  
vdc-admin

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

**Usage Guidelines** This command requires an Enhanced Layer 2 license.

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

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

Related Commands	Command	Description
	<b>show fabricpath isis</b>	Displays FabricPath IS-IS information.

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## 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 mode
---------------	-----------------------

SupportedUserRoles	network-admin vdc-admin
--------------------	----------------------------

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

Usage Guidelines	Use the <b>authentication key-chain</b> 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 <b>authentication</b> 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 <b>authentication</b> command.
------------------	--

See the *Cisco DCNM Security Configuration Guide, Release 5.x*, 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# config t
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
	<b>show fabricpath isis</b>	Displays FabricPath IS-IS information.

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## 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

<b>cleartext</b>	Specifies the cleartext authentication method.
<b>md5</b>	Specifies the Message Digest (MD5) authentication.

### Defaults

Enabled

### Command Modes

Fabricpath IS-IS mode

### Supported User Roles

network-admin  
vdc-admin

### Command History

Release	Modification
5.1(1)	This command was introduced.

### Usage Guidelines

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

This command requires an Enhanced Layer 2 license.

### Examples

This example shows how to specify cleartext authentication:

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

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

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

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---

**Related Commands**

<b>Command</b>	<b>Description</b>
<b>show fabricpath isis</b>	Displays FabricPath IS-IS information.

---

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## clear fabricpath isis adjacency

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

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

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

**Defaults** None

**Command Modes** EXEC mode

**SupportedUserRoles** network-admin  
vdc-admin

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

### Usage Guidelines



**Note**

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

This command requires an Enhanced Layer 2 license.

### Examples

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

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



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Related Commands	Command	Description
	<code>fabricpath domain default</code>	Enables FabricPath Layer 2 IS-IS.

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## 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 \***

<b>Syntax Description</b>	* Specifies the IS-IS adjacencies on all interfaces.
---------------------------	--

<b>Defaults</b>	None
-----------------	------

<b>Command Modes</b>	EXEC mode
----------------------	-----------

<b>SupportedUserRoles</b>	network-admin vdc-admin
---------------------------	----------------------------

<b>Command History</b>	<b>Release</b>	<b>Modification</b>
	5.1(1)	This command was introduced.

<b>Usage Guidelines</b>	This command requires an Enhanced Layer 2 license.
-------------------------	--

<b>Examples</b>	This example shows how to clear FabricPath IS-IS protocol statistics:
-----------------	---

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

<b>Related Commands</b>	<b>Command</b>	<b>Description</b>
	<b>fabricpath domain</b> <b>default</b>	Enables FabricPath Layer 2 IS-IS.

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## clear fabricpath isis traffic

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

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

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

**Defaults** None

**Command Modes** EXEC mode

**SupportedUserRoles** network-admin  
vdc-admin

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

**Usage Guidelines** This command requires an Enhanced Layer 2 license.

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

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

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

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# fabricpath domain default

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

## fabricpath-domain default

**Syntax Description** This command has no arguments or keywords.

**Defaults** None

**Command Modes** Global configuration mode

**SupportedUserRoles** network-admin  
vdc-admin

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

**Usage Guidelines** This command requires an Enhanced Layer 2 license.

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

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

Related Commands	Command	Description
	<b>show fabricpath isis</b>	Displays FabricPath IS-IS information.

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## fabricpath isis authentication-check

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

**fabricpath isis authentication-check**

**no fabricpath isis authentication-check**

**Syntax Description** This command has no arguments or keywords.

**Defaults** ON

**Command Modes** Interface configuration mode

**Supported User Roles** network-admin  
vdc-admin

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

**Usage Guidelines** This command requires an Enhanced Layer 2 license.



**Note** Level specification is not required.

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

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

Related Commands	Command	Description
	<b>show fabricpath isis</b>	Displays FabricPath IS-IS information.

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## 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 key-chain** *auth-key-chain-name*

Syntax Description	
	<i>auth-key-chain-name</i> Authentication keychain. The maximum size is 63 alphanumeric characters.

Defaults	
	None

Command Modes	
	Interface configuration mode

SupportedUserRoles	
	network-admin vdc-admin

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

**Usage Guidelines**

Use the **authentication** 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 DCNM Security Configuration Guide, Release 5.x*, for information about keychains.



**Note**

A level specification is not required.

This command requires an Enhanced Layer 2 license.

**Examples**

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

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

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

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## 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

<b>cleartext</b>	Specifies the cleartext authentication method.
<b>md5</b>	Specifies the Message Digest (MD5) authentication.

### Defaults

Enabled

### Command Modes

Interface configuration mode

### Supported User Roles

network-admin  
vdc-admin

### Command History

Release	Modification
5.1(1)	This command was introduced.

### Usage Guidelines

Use the **fabricpath isis authentication-type** command to configure the authentication type for hello PDUs on an interface.



#### Note

A level specification is not required.

This command requires an Enhanced Layer 2 license.

### Examples

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

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

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

```
switch# config t
```



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```
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**

<b>Command</b>	<b>Description</b>
<b>show fabricpath isis</b>	Displays FabricPath IS-IS information.

[Send document comments to nexus7k-docfeedback@cisco.com.](mailto:nexus7k-docfeedback@cisco.com)

# 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*

<b>Syntax Description</b>	<i>seconds</i>	CSNP interval value. The range is from 1 to 65535.
<b>Defaults</b>	10 seconds	
<b>Command Modes</b>	Interface configuration mode	
<b>SupportedUserRoles</b>	network-admin vdc-admin	
<b>Command History</b>	<b>Release</b>	<b>Modification</b>
	5.1(1)	This command was introduced.
<b>Usage Guidelines</b>	This command requires an Enhanced Layer 2 license.	
<b>Examples</b>	This example shows how to set a CSNP interval value:	
	<pre>switch# <b>config t</b> Enter configuration commands, one per line. End with CNTL/Z. switch(config)# <b>interface ethernet 5/2</b> switch(config-if)# <b>fabricpath isis csnp-interval 60</b> switch(config-if)#</pre>	
<b>Related Commands</b>	<b>Command</b>	<b>Description</b>
	<b>show fabricpath isis</b>	Displays FabricPath IS-IS information.

[Send document comments to nexus7k-docfeedback@cisco.com.](mailto:nexus7k-docfeedback@cisco.com)

## 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*

<b>Syntax Description</b>	<i>seconds</i>	Hello interval value. The range is from 1 to 65535.
<b>Defaults</b>	10 seconds	
<b>Command Modes</b>	Interface configuration mode	
<b>SupportedUserRoles</b>	network-admin vdc-admin	
<b>Command History</b>	<b>Release</b>	<b>Modification</b>
	5.1(1)	This command was introduced.
<b>Usage Guidelines</b>	This command requires an Enhanced Layer 2 license.	
<b>Examples</b>	<p>This example shows how to set a hello interval in seconds:</p> <pre>switch# <b>config t</b> Enter configuration commands, one per line. End with CNTL/Z. switch(config)# <b>interface ethernet 5/5</b> switch(config-if)# <b>fabricpath isis hello-interval 20</b> switch(config-if)#</pre>	
<b>Related Commands</b>	<b>Command</b>	<b>Description</b>
	<b>show fabricpath isis</b>	Displays FabricPath IS-IS information.

*Send document comments to [nexus7k-docfeedback@cisco.com](mailto:nexus7k-docfeedback@cisco.com).*

## 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.
-------------------	--

### Defaults

Default value is 3

### Command Modes

Interface configuration mode

### Supported User Roles

network-admin  
vdc-admin

### Command History

Release	Modification
5.1(1)	This command was introduced.

### Usage Guidelines



#### Note

A level specification is not required.

This command requires an Enhanced Layer 2 license.

### Examples

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

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

### Related Commands

Command	Description
<b>show fabricpath isis</b>	Displays FabricPath IS-IS information.

[Send document comments to nexus7k-docfeedback@cisco.com.](mailto:nexus7k-docfeedback@cisco.com)

## 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]**

<b>Syntax Description</b>	<i>always</i> (Optional) Padding for hello PDUs that is always on.
---------------------------	--

<b>Defaults</b>	ON
-----------------	----

<b>Command Modes</b>	Interface configuration mode
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<b>SupportedUserRoles</b>	network-admin vdc-admin
---------------------------	----------------------------

<b>Command History</b>	<b>Release</b>	<b>Modification</b>
	5.1(1)	This command was introduced.

### Usage Guidelines



#### Note

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

This command requires an Enhanced Layer 2 license.

### Examples

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

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

<b>Related Commands</b>	<b>Command</b>	<b>Description</b>
	<b>show fabricpath isis</b>	Displays FabricPath IS-IS information.

[Send document comments to nexus7k-docfeedback@cisco.com.](mailto:nexus7k-docfeedback@cisco.com)

## 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*

<b>Syntax Description</b>	<i>msec</i>	LSP transmission interval in milliseconds. The range is from 10 to 65535.
<b>Defaults</b>	33 milliseconds	
<b>Command Modes</b>	Interface configuration mode	
<b>Supported User Roles</b>	network-admin vdc-admin	
<b>Command History</b>	<b>Release</b>	<b>Modification</b>
	5.1(1)	This command was introduced.
<b>Usage Guidelines</b>	This command requires an Enhanced Layer 2 license.	
<b>Examples</b>	This example shows how to set an LSP transmission interval:	
	<pre>switch# <b>config t</b> Enter configuration commands, one per line. End with CNTL/Z. switch(config)# <b>interface ethernet 5/2</b> switch(config-if)# <b>fabricpath isis lsp-interval 100</b> switch(config-if)#</pre>	
<b>Related Commands</b>	<b>Command</b>	<b>Description</b>
	<b>show fabricpath isis</b>	Displays FabricPath IS-IS information.

[Send document comments to nexus7k-docfeedback@cisco.com.](mailto:nexus7k-docfeedback@cisco.com)

## 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*

<b>Syntax Description</b>	<i>metric</i>	Default metric. The range is from 0 to 16777215.
<b>Defaults</b>	Defaults (the default interface for the F Series module is 10 Gigabyte):	
	<ul style="list-style-type: none"> <li>• 1 GB—400</li> <li>• 10 GB—40</li> </ul>	
<b>Command Modes</b>	Interface configuration mode	
<b>Supported User Roles</b>	network-admin vdc-admin	
<b>Command History</b>	<b>Release</b>	<b>Modification</b>
	5.1(1)	This command was introduced.
<b>Usage Guidelines</b>	This command requires an Enhanced Layer 2 license.	
<b>Examples</b>	<p>This example shows how to configure metrics for each interface:</p> <pre>switch# <b>config t</b> Enter configuration commands, one per line. End with CNTL/Z. switch(config)# <b>interface ethernet 5/2</b> switch(config-if)# <b>fabricpath isis metric 100</b> switch(config-if)#</pre>	
<b>Related Commands</b>	<b>Command</b>	<b>Description</b>
	<b>show fabricpath isis</b>	Displays FabricPath IS-IS information.

[Send document comments to nexus7k-docfeedback@cisco.com.](mailto:nexus7k-docfeedback@cisco.com)

## 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*

<b>Syntax Description</b>	<i>seconds</i>	Interval between retransmissions of the same LSP in seconds. The range is from 1 to 65535.
<b>Defaults</b>	5 seconds	
<b>Command Modes</b>	Interface configuration mode	
<b>Supported User Roles</b>	network-admin vdc-admin	
<b>Command History</b>	<b>Release</b>	<b>Modification</b>
	5.1(1)	This command was introduced.
<b>Usage Guidelines</b>	This command requires an Enhanced Layer 2 license.	
<b>Examples</b>	This example shows how to set an interval between initial LSP retransmissions for a P2P interface:	
	<pre>switch# <b>config t</b> Enter configuration commands, one per line. End with CNTL/Z. switch(config)# <b>interface ethernet 5/2</b> switch(config-if)# <b>fabricpath isis retransmit-interval 65532</b> switch(config-if)#</pre>	
<b>Related Commands</b>	<b>Command</b>	<b>Description</b>
	<b>show fabricpath isis</b>	Displays FabricPath IS-IS information.



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## fabricpath isis retransmit-throttle-interval

To set an interval between subsequent Intermediate System-to-Intermediate System (IS-IS) link-state packet (LSP) retransmissions for a peer-to-peer (P2P) interface, 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** *msec*

**no fabricpath isis retransmit-throttle-interval** *msec*

<b>Syntax Description</b>	<i>msec</i>	Interval between retransmissions of the same LSP in seconds. The range is from 20 to 65535.
<b>Defaults</b>	66 milliseconds	
<b>Command Modes</b>	Interface configuration mode	
<b>SupportedUserRoles</b>	network-admin vdc-admin	
<b>Command History</b>	<b>Release</b>	<b>Modification</b>
	5.1(1)	This command was introduced.
<b>Usage Guidelines</b>	This command requires an Enhanced Layer 2 license.	
<b>Examples</b>	This example shows how to set an interval between initial LSP retransmissions for a P2P interface:	
	<pre>switch# <b>config t</b> Enter configuration commands, one per line. End with CNTL/Z. switch(config)# <b>interface ethernet 5/5</b> switch(config-if)# <b>fabricpath isis retransmit-throttle-interval 65532</b> switch(config-if)#</pre>	
<b>Related Commands</b>	<b>Command</b>	<b>Description</b>
	<b>show fabricpath isis</b>	Displays FabricPath IS-IS information.

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## fabricpath switch-id (global configuration mode)

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

**fabricpath switch-id** *switch-id*

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

<b>Defaults</b>	None	
-----------------	------	--

<b>Command Modes</b>	Global configuration mode	
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<b>SupportedUserRoles</b>	network-admin vdc-admin	
---------------------------	----------------------------	--

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

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



**Note**

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

This command requires an Enhanced Layer 2 license.

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

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

Related Commands	Command	Description
	<b>show fabricpath switch-id</b>	Displays information about switch IDs.

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## fabricpath switch-id (vpc-domain configuration mode)

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

**fabricpath switch-id** *switch-id*

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

<b>Defaults</b>	None
-----------------	------

<b>Command Modes</b>	vpc-domain configuration mode
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<b>SupportedUserRoles</b>	network-admin vdc-admin
---------------------------	----------------------------

<b>Command History</b>	<b>Release</b>	<b>Modification</b>
	5.1(1)	This command was introduced.

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



**Note**

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

This command requires an Enhanced Layer 2 license.

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

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

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

<b>Related Commands</b>	<b>Command</b>	<b>Description</b>
	<b>show vpc</b>	Displays information about a vPC.

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## fabricpath timers

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

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

Syntax	Description
<b>allocate-delay</b>	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.
<b>linkup-delay</b>	Specifies the time delay for a link bringup to detect conflicts.
<b>transition-delay</b>	Specifies the time delay for a transitioned value to be propagated throughout the network.

### Defaults

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

### Command Modes

Global configuration mode

### Supported User Roles

network-admin  
vdc-admin

### Command History

Release	Modification
5.1(1)	This command was introduced.

### Usage Guidelines

This command requires an Enhanced Layer 2 license.

### Examples

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

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

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

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

Related Commands	Command	Description
	<b>show fabricpath timers</b>	Displays information about the FabricPath timers.

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# feature-set fabricpath

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

## feature-set fabricpath

**Syntax Description** This command has no arguments or keywords.

**Defaults** None

**Command Modes** Global configuration mode

**SupportedUserRoles** network-admin  
vdc-admin

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

**Usage Guidelines** You will not be able to view or access any FabricPath commands until you enable FabricPath on the device.



### Note

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

This command requires an N7K-F132-15 module.

This command requires an Enhanced Layer 2 license.

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

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

Related Commands	Command	Description
	show feature-set	Displays the status of the feature.

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## graceful-restart (fabricpath)

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

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

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

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

**Defaults** Default value is 60 seconds.

**Command Modes** Fabricpath IS-IS mode

**SupportedUserRoles** network-admin  
vdc-admin

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

**Usage Guidelines** Use the **graceful-restart** command to enable graceful restart for the IS-IS process. This command requires an Enhanced Layer 2 license.

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

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

Related Commands	Command	Description
	<b>show fabricpath isis</b>	Displays FabricPath IS-IS information.

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## hostname dynamic (fabricpath)

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

**hostname dynamic**

**no hostname dynamic**

**Syntax Description** This command has no arguments or keywords.

**Defaults** ON

**Command Modes** Fabricpath IS-IS mode

**Supported User Roles** network-admin  
vdc-admin

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

**Usage Guidelines** This command requires an Enhanced Layer 2 license.

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

```
switch# config t
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
	<b>show hostname</b>	Displays the system's hostname.



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## log-adjacency-changes (fabricpath)

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

**log-adjacency-changes**

**no log-adjacency-changes**

**Syntax Description** This command has no arguments or keywords.

**Defaults** ON

**Command Modes** Fabricpath IS-IS mode

**SupportedUserRoles** network-admin  
vdc-admin

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

**Usage Guidelines** This command requires an Enhanced Layer 2 license.

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

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

Related Commands	Command	Description
	<b>show fabricpath isis</b>	Displays FabricPath IS-IS information.

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## 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.

### Defaults

The defaults are as follows:

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

### Command Modes

Fabricpath IS-IS mode

### Supported User Roles

network-admin  
vdc-admin

### Command History

Release	Modification
5.1(1)	This command was introduced.

### Usage Guidelines

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

This command requires an Enhanced Layer 2 license.

### Examples

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

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

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

***Send document comments to [nexus7k-docfeedback@cisco.com](mailto:nexus7k-docfeedback@cisco.com).***

## **lsp-mtu (fabricpath)**

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

**lsp-mtu** *bytes*

**no lsp-mtu** *bytes*

<b>Syntax Description</b>	<i>bytes</i>	Maximum LSP size in bytes. The range is from 128 to 4352.
---------------------------	--------------	---

<b>Defaults</b>	1492 bytes
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<b>Command Modes</b>	Fabricpath IS-IS mode
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<b>SupportedUserRoles</b>	network-admin vdc-admin
---------------------------	----------------------------

<b>Command History</b>	<b>Release</b>	<b>Modification</b>
	5.1(1)	This command was introduced.

<b>Usage Guidelines</b>	This command requires an Enhanced Layer 2 license.
-------------------------	--

<b>Examples</b>	This example shows how to set the maximum LSP size to 1500 bytes:
-----------------	---

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

<b>Related Commands</b>	<b>Command</b>	<b>Description</b>
	<b>show fabricpath isis</b>	Displays FabricPath Layer 2 IS-IS.

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## mac address-table learning-mode conversational

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

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

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

### Syntax Description

<b>vlan</b>	Specifies the VLAN.
<i>vlan-id</i>	VLAN ID. The range is from 1 to 4094.

### Defaults

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

### Command Modes

Global configuration mode

### Supported User Roles

network-admin  
vdc-admin

### Command History

Release	Modification
5.1(1)	This command was introduced.

### Usage Guidelines



#### Note

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

This command requires an Enhanced Layer 2 license.

### Examples

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

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

### Related Commands

Command	Description
<b>show mac address-table learning-mode</b>	Displays VLANs and the MAC address learning mode.

*Send document comments to [nexus7k-docfeedback@cisco.com](mailto:nexus7k-docfeedback@cisco.com).*

## max-lsp-lifetime (fabricpath)

To configure lifetime of maximum link-state packets (LSPs), 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*

<b>Syntax Description</b>	<i>value</i>	Maximum LSP lifetime in seconds. The range is from 1 to 65535.
<b>Defaults</b>	1200 seconds	
<b>Command Modes</b>	Fabricpath IS-IS mode	
<b>SupportedUserRoles</b>	network-admin vdc-admin	
<b>Command History</b>	<b>Release</b>	<b>Modification</b>
	5.1(1)	This command was introduced.
<b>Usage Guidelines</b>	The maximum LSP lifetime must be greater than the LSP refresh interval. This command requires an Enhanced Layer 2 license.	
<b>Examples</b>	This example shows how to set the maximum time that the link-state packets persists to 11,000 seconds:  <pre>switch# <b>config t</b> Enter configuration commands, one per line. End with CNTL/Z. switch(config)# <b>fabricpath domain default</b> switch(config-fabricpath-isis)# <b>max-lsp-lifetime 1300</b> switch(config-fabricpath-isis)#</pre>	
<b>Related Commands</b>	<b>Command</b>	<b>Description</b>
	<b>show fabricpath isis</b>	Displays FabricPath Layer 2 IS-IS.

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## 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*

<b>Syntax Description</b>	<i>paths</i>	Maximum paths per destination.
---------------------------	--------------	--------------------------------

<b>Defaults</b>	Default value is 16
-----------------	---------------------

<b>Command Modes</b>	Fabricpath IS-IS mode
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<b>SupportedUserRoles</b>	network-admin vdc-admin
---------------------------	----------------------------

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

<b>Usage Guidelines</b>	This command requires an Enhanced Layer 2 license.
-------------------------	--

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

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

Related Commands	Command	Description
	<b>show fabricpath isis</b>	Displays FabricPath Layer 2 IS-IS.

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## 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.
	<b>Mbps</b>	Specifies the bandwidth in Mbps.
	<b>Gbps</b>	Specifies the bandwidth in Gbps.

### Defaults

The defaults are as follows:

- Gbps: 400
- Mbps: 400000

### Command Modes

Fabricpath IS-IS mode

### Supported User Roles

network-admin  
vdc-admin

### Command History

Release	Modification
5.1(1)	This command was introduced.

### Usage Guidelines

This command requires an Enhanced Layer 2 license.

### Examples

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

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

### Related Commands

Command	Description
<b>show fabricpath isis</b>	Displays FabricPath Layer 2 IS-IS.



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## 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*

<b>Syntax Description</b>	<i>value</i>	Root priority value per topology. The range is from 1 to 255. The default is 64.
---------------------------	--------------	--

<b>Defaults</b>	Default value is 64.
-----------------	----------------------

<b>Command Modes</b>	Fabricpath IS-IS mode
----------------------	-----------------------

<b>SupportedUserRoles</b>	network-admin vdc-admin
---------------------------	----------------------------

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

<b>Usage Guidelines</b>	The highest numerical value for the priority is likely to become root. This command requires an Enhanced Layer 2 license.
-------------------------	--

<b>Examples</b>	This example shows how to set the priority for which node becomes the root:
-----------------	---

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

Related Commands	Command	Description
	<b>show fabricpath isis</b>	Displays FabricPath IS-IS information.

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## show fabricpath isis adjacency

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

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

Syntax Description		
<b>interface</b>	(Optional)	Displays the interface status.
<b>ethernet</b>		Displays the Ethernet interface.
<i>slot/chassis number</i>		Slot or chassis number.
<b>port-channel</b>		Displays the port-channel interface.
<i>channel-number</i>		Port-channel number. The range is from 1 to 256.
<b>detail</b>	(Optional)	Displays the IS-IS adjacency detailed information.
<b>summary</b>	(Optional)	Displays the IS-IS adjacency summary information.
<b>system-id</b>	(Optional)	Displays the system ID.
<i>sid</i>	(Optional)	System ID.

**Defaults** None

**Command Modes** Global configuration mode

**Supported User Roles** network-admin  
vdc-admin

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

**Usage Guidelines** This command requires an Enhanced Layer 2 license.

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

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

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

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## show fabricpath isis database

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

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

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

**Defaults** None

**Command Modes** Global configuration mode

**Supported User Roles** network-admin  
vdc-admin

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

**Usage Guidelines** This command requires an Enhanced Layer 2 license.

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

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

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Related Commands	Command	Description
	<code>fabricpath domain default</code>	Enables FabricPath Layer 2 IS-IS.

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## 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.
	<i>tree-id</i>	(Optional) Tree identifier. The range is from 1 to 2.

**Defaults** None

**Command Modes** Global configuration mode

**Supported User Roles** network-admin  
vdc-admin

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

**Usage Guidelines** This command requires an Enhanced Layer 2 license.

**Examples** This example shows how to display ISIS FTAG multidestination information:

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

Related Commands	Command	Description
	<b>fabricpath domain</b>	Enables FabricPath Layer 2 IS-IS.
	<b>default</b>	

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## 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]**

<b>Syntax Description</b>	<b>detail</b> (Optional) Displays the detailed IS-IS information.
---------------------------	---

<b>Defaults</b>	None
-----------------	------

<b>Command Modes</b>	Global configuration mode
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<b>SupportedUserRoles</b>	network-admin vdc-admin
---------------------------	----------------------------

<b>Command History</b>	<b>Release</b>	<b>Modification</b>
	5.1(1)	This command was introduced.

<b>Usage Guidelines</b>	This command requires an Enhanced Layer 2 license.
-------------------------	--

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

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

<b>Related Commands</b>	<b>Command</b>	<b>Description</b>
	<b>fabricpath domain default</b>	Enables FabricPath Layer 2 IS-IS.

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## show fabricpath isis interface

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

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

Syntax Descriptions		
<b>brief</b>		Displays the brief display of IS-IS interfaces.
<b>ethernet</b>		Displays the Ethernet interface.
<i>slot/chassis number</i>		Slot/chassis number.
<b>port-channel</b>		Displays the port-channel interface.
<i>channel-number</i>		Port-channel number. The range is from 1 to 256.

**Defaults** None

**Command Modes** Global configuration mode

**Supported User Roles** network-admin  
vdc-admin

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

**Usage Guidelines** This command requires an Enhanced Layer 2 license.

**Examples** This example shows how to display information about the FabricPath IS-IS-related interface:

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



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

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## show fabricpath isis ip mroute

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

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

Syntax	Description
<b>VLAN</b>	(Optional) Displays the detailed IS-IS VLAN information.
<i>vlan-id</i>	(Optional) VLAN ID. The range is from 1 to 4094.
<b>group</b>	(Optional) Displays the group information.
<i>group-id</i>	(Optional) Group ID information.
<b>source</b>	(Optional) Displays the source information.
<i>source-id</i>	(Optional) Source ID.

**Defaults** None

**Command Modes** Global configuration mode

**Supported User Roles** network-admin  
vdc-admin

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

**Usage Guidelines** This command requires an Enhanced Layer 2 license.

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

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

Related Commands	Command	Description
	<b>fabricpath domain</b>	Enables FabricPath Layer 2 IS-IS.
	<b>default</b>	

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## show fabricpath isis ip redistribute mroute

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

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

### Syntax Description

<b>vlan</b>	(Optional) Displays the IS-IS VLAN information.
<b>vlan-id</b>	(Optional) Displays the VLAN ID. The range is from 1 to 4094.
<b>group</b>	(Optional) Displays the group information.
<i>group-id</i>	(Optional) Group ID information.
<b>source</b>	(Optional) Displays the source information.
<i>source-id</i>	(Optional) Source ID.

### Defaults

None

### Command Modes

Global configuration mode

### Supported User Roles

network-admin  
vdc-admin

### Command History

Release	Modification
5.1(1)	This command was introduced.

### Usage Guidelines

This command requires an Enhanced Layer 2 license.

### Examples

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

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

### Related Commands

Command	Description
<b>fabricpath domain</b>	Enables FabricPath Layer 2 IS-IS.
<b>default</b>	

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# show fabricpath isis protocol

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

## show fabricpath isis protocol

**Syntax Description** This command has no arguments or keywords.

**Defaults** None

**Command Modes** Global configuration mode

**SupportedUserRoles** network-admin  
vdc-admin

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

**Usage Guidelines** This command requires an Enhanced Layer 2 license.

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

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

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

Related Commands	Command	Description
	<b>fabricpath domain default</b>	Enables FabricPath Layer 2 IS-IS.

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## 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 the IS-IS adjacency summary information.
	<b>detail</b>	(Optional) Displays the IS-IS adjacency detail information.

**Defaults** None

**Command Modes** Global configuration mode

**Supported User Roles** network-admin  
vdc-admin

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

**Usage Guidelines** This command requires an Enhanced Layer 2 license.

**Examples** This example shows how to display information about the IS-IS route detail:

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

Related Commands	Command	Description
	<b>fabricpath domain</b>	Enables FabricPath Layer 2 IS-IS.
	<b>default</b>	

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## show fabricpath isis rrm

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

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

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

**Defaults** None

**Command Modes** Global configuration mode

**SupportedUserRoles** network-admin  
vdc-admin

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

**Usage Guidelines** This command requires an Enhanced Layer 2 license.

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

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

Related Commands	Command	Description
	<b>fabricpath domain default</b>	Enables the FabricPath Layer 2 IS-IS.

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## 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]**

<b>Syntax Description</b>	<b>detail</b>	(Optional) Displays the detailed IS-IS SPF information.
---------------------------	---------------	---

<b>Defaults</b>	None
-----------------	------

<b>Command Modes</b>	Global configuration mode
----------------------	---------------------------

<b>SupportedUserRoles</b>	network-admin vdc-admin
---------------------------	----------------------------

<b>Command History</b>	<b>Release</b>	<b>Modification</b>
	5.1(1)	This command was introduced.

<b>Usage Guidelines</b>	This command requires an Enhanced Layer 2 license.
-------------------------	--

<b>Examples</b>	This example shows how to display information about the FabricPath IS-IS SPF:
-----------------	---

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

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

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

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



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

**Related Commands**

<b>Command</b>	<b>Description</b>
<b>fabricpath domain default</b>	Enables FabricPath Layer 2 IS-IS.

`show fabricpath isis srm`

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## show fabricpath isis srm

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

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

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

**Defaults** None

**Command Modes** Global configuration mode

**SupportedUserRoles** network-admin  
vdc-admin

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

**Usage Guidelines** This command requires an Enhanced Layer 2 license.

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

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

Related Commands	Command	Description
	<b>fabricpath domain</b>	Enables FabricPath Layer 2 IS-IS.
	<b>default</b>	

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## show fabricpath isis ssn

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

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

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

**Defaults** None

**Command Modes** Global configuration mode

**SupportedUserRoles** network-admin  
vdc-admin

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

**Usage Guidelines** This command requires an Enhanced Layer 2 license.

**Examples** This example shows how to display FabricPath ISIS GM-Send-Sequence-Number information:

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

Related Commands	Command	Description
	<b>fabricpath domain default</b>	Enables FabricPath Layer 2 IS-IS.

*Send document comments to [nexus7k-docfeedback@cisco.com](mailto:nexus7k-docfeedback@cisco.com).*

## show fabricpath isis statistics

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

**show fabricpath isis statistics**

**Syntax Description** This command has no arguments or keywords.

**Defaults** None

**Command Modes** Global configuration mode

**SupportedUserRoles** network-admin  
vdc-admin

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

**Usage Guidelines** This command requires an Enhanced Layer 2 license.

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

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

Related Commands	Command	Description
	<b>fabricpath domain</b>	Enables FabricPath Layer 2 IS-IS.
	<b>default</b>	

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## show fabricpath isis switch-id

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

**show fabricpath isis switch-id**

**Syntax Description** This command has no arguments or keywords.

**Defaults** None

**Command Modes** Global configuration mode

**SupportedUserRoles** network-admin  
vdc-admin

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

**Usage Guidelines** This command requires an Enhanced Layer 2 license.

**Examples** This example shows how to display the switch ID database:

```
switch# show fabricpath isis switch-id

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

Related Commands	Command	Description
	<b>fabricpath domain default</b>	Enables FabricPath Layer 2 IS-IS.

*Send document comments to [nexus7k-docfeedback@cisco.com](mailto:nexus7k-docfeedback@cisco.com).*

## show fabricpath isis topology summary

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

### show fabricpath isis topology summary

**Syntax Description** This command has no arguments or keywords.

**Defaults** None

**Command Modes** Global configuration mode

**SupportedUserRoles** network-admin  
vdc-admin

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

**Usage Guidelines** This command requires an Enhanced Layer 2 license.

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

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

Related Commands	Command	Description
	<b>fabricpath domain default</b>	Enables FabricPath Layer 2 IS-IS.

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## show fabricpath isis traffic

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

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

### Syntax Description

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

### Defaults

None

### Command Modes

Global configuraion mode

### SupportedUserRoles

network-admin  
vdc-admin

### Command History

Release	Modification
5.1	This command was introduced.

### Usage Guidelines

This command requires an Enhanced Layer 2 license.

### Examples

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

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

switch#
```

### Related Commands

Command	Description
<b>fabricpath domain default</b>	Enables FabricPath Layer 2 IS-IS.

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## 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>	(Optional) Tree identifier. The range is from 1 to 2.

**Defaults** None

**Command Modes** Any mode

**Supported User Roles** network-admin  
vdc-admin

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

**Usage Guidelines** This command requires an Enhanced Layer 2 license.

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

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

Related Commands	Command	Description
	<b>fabricpath domain default</b>	Enables FabricPath Layer 2 IS-IS.



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## show fabricpath isis vlan-range

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

**show fabricpath isis vlan-range**

**Syntax Description** This command has no arguments or keywords.

**Defaults** None

**Command Modes** Any mode

**SupportedUserRoles** network-admin  
vdc-admin

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

**Usage Guidelines** This command requires an Enhanced Layer 2 license.

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

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

Related Commands	Command	Description
	<b>fabricpath domain default</b>	Enables FabricPath Layer 2 IS-IS.

## ■ show fabricpath conflict

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# 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		
	<b>all</b>	Displays all the conflict.
	<b>link</b>	Displays all the links.
	<b>switch-id</b>	Displays the switch IDs.
	<b>transitions</b>	Displays the transitions.
	<i>detail</i>	(Optional) Displays the details.

**Defaults** None

**Command Modes** Any mode

**SupportedUserRoles** network-admin  
vdc-admin

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

**Usage Guidelines** This command requires an Enhanced Layer 2 license.

**Examples** This example shows how to display information about the 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
	<b>show running-config fabricpath</b>	Displays current FabricPath configuration.

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## show fabricpath ftag

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

```
show fabricpath ftag
```

**Syntax Description** This command has no arguments or keywords.

**Defaults** None

**Command Modes** Any mode

**SupportedUserRoles** network-admin  
vdc-admin

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

**Usage Guidelines** This command requires an Enhanced Layer 2 license.

**Examples** This example shows how to display the FabricPath FTAG:

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

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

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## 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.

**Defaults** None

**Command Modes** Any mode

**SupportedUserRoles** network-admin  
vdc-admin

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

**Usage Guidelines** This command requires an Enhanced Layer 2 license.

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

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

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

Related Commands	Command	Description
	<b>fabricpath load-balance</b>	Displays FabricPath load-balancing parameters.

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## show fabricpath route

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

**show fabricpath route**

**Syntax Description** This command has no arguments or keywords.

**Defaults** None

**Command Modes** Any mode

**SupportedUserRoles** network-admin  
vdc-admin

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

**Usage Guidelines** This command requires an Enhanced Layer 2 license.

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

```
switch# show fabricpath route
FabricPath Unicast Route Table
'a/b/c' denotes ftag/switch-id/subswitch-id
'[x/y]' denotes [admin distance/metric]
ftag 0 is local ftag
subswitch-id 0 is default subswitch-id
FabricPath Unicast Route Table for Topology-Default
0/10/0, number of next-hops: 0
    via ---- , [60/0], 5 day/s 11:35:56, local
1/20/0, number of next-hops: 1
    via Po2, [115/40], 5 day/s 11:35:23, isis_l2mp-default
1/30/0, number of next-hops: 1
    via Eth7/2, [115/40], 5 day/s 11:35:28, isis_l2mp-default
1/35/0, number of next-hops: 0
    via ---- , [60/0], 5 day/s 11:35:26, local
2/35/0, number of next-hops: 0
    via ---- , [60/0], 5 day/s 11:35:26, local
switch#
```

**show fabricpath route**

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**Related Commands**

<b>Command</b>	<b>Description</b>
<b>show running-config fabricpath</b>	Displays the current FabricPath configuration.

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## show fabricpath switch-id

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

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

<b>Syntax Description</b>	<b>local</b> (Optional) Displays the local switch ID.
---------------------------	---

<b>Defaults</b>	None
-----------------	------

<b>Command Modes</b>	Any mode
----------------------	----------

<b>SupportedUserRoles</b>	network-admin vdc-admin
---------------------------	----------------------------

<b>Command History</b>	<b>Release</b>	<b>Modification</b>
	5.1(1)	This command was introduced.


<b>Usage Guidelines</b>	This command requires an Enhanced Layer 2 license.
-------------------------	--

**Examples** This example shows how to display the FabricPath switch ID:

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

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

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

 show fabricpath switch-id

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---

**Related Commands**

<b>Command</b>	<b>Description</b>
<b>fabricpath switch-id</b>	Displays the FabricPath switch ID.

---



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## 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.
--------------------	--------------------	--------------

Defaults	None
----------	------

Command Modes	Any mode
---------------	----------

SupportedUserRoles	network-admin vdc-admin
--------------------	----------------------------

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

Usage Guidelines	This command requires an Enhanced Layer 2 license.
------------------	--

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

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

Related Commands	Command	Description
	<b>show running-config fabricpath</b>	Displays information about the current FabricPath configuration.

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## show fabricpath timers

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

### show fabricpath timers

**Syntax Description** This command has no arguments or keywords.

**Defaults** None

**Command Modes** Any mode

**SupportedUserRoles** network-admin  
vdc-admin

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

**Usage Guidelines** This command requires an Enhanced Layer 2 license.

**Examples** This example shows how to display FabricPath timers:

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

Related Commandss	Command	Description
	fabricpath timers	Configures the FabricPath timers.

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## show fabricpath topology

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

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

Syntax Description		
<b>detail</b>	(Optional)	Displays the detailed information.
<b>ftag</b>	(Optional)	Displays the forwarding tag of a graph.
<b>active</b>	(Optional)	Displays the active multicast FTAGs.
<b>multicast</b>	(Optional)	Displays the multicast FTAGs.
<b>unicast</b>	(Optional)	Displays the unicast FTAGs.
<b>interface</b>		Displays the interface topology information.
<b>ethernet</b>	(Optional)	Displays the Ethernet interface.
<i>slot/chassis number</i>	(Optional)	Slot or chassis number. The range is from 1 to 253.
<b>port-channel</b>	(Optional)	Displays the port-channel interface number.
<i>port channel-number</i>		Port-channel number. The range is from 1 to 4096.
<b>vlan</b>	(Optional)	Displays the VLANs in the Layer 2 topology.

**Defaults** None

**Command Modes** Any mode

**SupportedUserRoles** network-admin  
vdc-admin

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

**Usage Guidelines** This command requires an Enhanced Layer 2 license.

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

```
switch# show fabricpath topology vlan active
TPG-name                TPG-  ID                Active VLAN List
-----
0                        0          1-2
1                        1          3-4
```

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```
switch#
```

This example shows how to display interface topology information:

```
switch# show fabricpath topology interface
Interface          Topo-Description          Topo-ID  Topo-IF-State
-----
port-channel2      0                          0        Up
Ethernet7/2        0                          0        Up
switch#
```

This example shows how to display active multicast FTAGs:

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

#### Related Commands

Command	Description
<b>fabricpath domain default</b>	Enables FabricPath Layer 2 IS-IS.

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## show feature-set

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

**show feature-set**

**Syntax Description** This command has no arguments or keywords.

**Defaults** None

**Command Modes** Any mode

**SupportedUserRoles** network-admin  
vdc-admin

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

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

This command requires an Enhanced Layer 2 license.

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

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

Related Commands	Command	Description
	<b>feature-set fabricpath</b>	Enables the FabricPath feature set in the VDC.

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## show mroute

To display the Layer 2 (I2) multicast route database, use the **show I2 mroute** command.

```
show {I2 | fabricpath} mroute {[vdc_omf] | [vlan vlanid] {[omf] | [flood] | [source {srcaddr |
v6srcaddr}]} [group {groupaddr | v6groupaddr}]} [resolved] [ftag ftag-id] [hex]}
```

Syntax	Description
<b>I2</b>	Displays Layer 2 information.
<b>fabricpath</b>	Displays FabricPath information.
<b>vdc_omf</b>	(Optional) Displays the VDC OMF route.
<b>vlan</b>	(Optional) Displays the VLAN ID. The range is from 1 to 4096.
<i>vlan-id</i>	(Optional) VLAN ID.
<b>omf</b>	(Optional) Displays the VLAN omf route.
<b>flood</b>	(Optional) Displays the switch IDs in hexadecimal.
<b>source</b>	(Optional) Displays the source IP address.
<i>srcaddr</i>	Source address.
<i>v6srcaddr</i>	IPV6 source address.
<b>group</b>	(Optional) Displays the group address.
<i>groupaddr</i>	Group address.
<i>ipv6groupaddr</i>	IPV6 group address.
<b>resolved</b>	(Optional) Displays the resolved switch ID next hop's underlying interfaces.
<b>ftag</b>	(Optional) Displays the FTAG number.
<i>ftag-id</i>	Ftag ID. The range is from 1 to 1024.
<b>hex</b>	(Optional) Displays the switch IDs in hexadecimal.

**Defaults** None

**Command Modes** Global configuration mode

**Supported User Roles** network-admin  
vdc-admin

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

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## Usage Guidelines



### Note

l2 can be used interchangeably with FabricPath.

This command requires an Enhanced Layer 2 license.

## Examples

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

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

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

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

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

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

--More--
```

## Related Commands

Command	Description
<b>show running-config fabricpath</b>	Displays the current FabricPath configuration.

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## show multicast trees

To display the Layer 2 (L2) multicast tree database, use the **show l2 multicast trees** command.

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

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

**Defaults** None

**Command Modes** Global configuration mode

**Supported User Roles** network-admin  
vdc-admin

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

**Usage Guidelines** This command requires an Enhanced Layer 2 license.

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

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

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

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

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

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



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

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

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

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

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

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

#### Related Commands

Command	Description
<code>show l2 route</code>	Displays FabricPath route information.

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## show mac address-table learning-mode

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

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

Syntax Description	Parameter	Description
	<b>vlan</b>	(Optional) Displays a VLAN.
	<i>vlan-id</i>	(Optional) VLAN ID. The range is from 1 to 4094.

**Defaults** None

**Command Modes** Any mode

**Supported User Roles** network-admin  
vdc-admin

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

### Usage Guidelines



**Note**

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

This command requires an Enhanced Layer 2 license.

### Examples

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

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

Related Commands	Command	Description
	<b>mac address-table learning-mode conversation</b>	Displays conversational MAC address learning on specified CE VLANs on the F Series module.

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# show running-config fabricpath

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

**show running-config fabricpath**

**Syntax Description** This command has no arguments or keywords.

**Defaults** None

**Command Modes** Any mode

**SupportedUserRoles** network-admin  
vdc-admin

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

**Usage Guidelines** This command requires an Enhanced Layer 2 license.

**Examples** This example shows how to display FabricPath information:

```
switch# show running-config fabricpath

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

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

vlan 1-1000
 mode fabricpath

interface Ethernet2/1
 fabricpath isis authentication key-chain trees

interface Ethernet2/2
 switchport mode fabricpath

interface Ethernet2/3
 switchport mode fabricpath

interface Ethernet2/10
 switchport mode fabricpath
```

```
show running-config fabricpath
```

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

---

**Related Commands**

<b>Command</b>	<b>Description</b>
<b>fabricpath domain default</b>	Enables FabricPath Layer 2 IS-IS.

---

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## spanning-tree domain

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

**spanning-tree domain** *domain-id*

<b>Syntax Description</b>	<i>domain-id</i>	Domain ID. The range is from 1 to 1023.
<b>Defaults</b>	None	
<b>Command Modes</b>	Global configuration mode	
<b>SupportedUserRoles</b>	network-admin vdc-admin	
<b>Command History</b>	<b>Release</b>	<b>Modification</b>
	5.1(1)	This command was introduced.
<b>Usage Guidelines</b>	This command requires an Enhanced Layer 2 license.	
<b>Examples</b>	This example shows how to configure a spanning-tree domain:  switch(config)# <b>spanning-tree domain 5</b> switch(config)#	
<b>Related Commands</b>	<b>Command</b>	<b>Description</b>
	<b>show spanning-tree summary</b>	Displays information about STP.

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## 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 an 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.

### Defaults

The defaults are as follows:

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

### Command Modes

Fabricpath IS-IS mode

### Supported User Roles

network-admin  
vdc-admin

### Command History

Release	Modification
5.1(1)	This command was introduced.

### Usage Guidelines

This command requires an Enhanced Layer 2 license.

### Examples

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

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

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Related Commands	Command	Description
	<code>fabricpath domain default</code>	Enables FabricPath Layer 2 IS-IS.

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# switchport mode fabricpath

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

**switchport mode fabricpath**

**Syntax Description** This command has no arguments or keywords.

**Defaults** Classical Ethernet (CE) switchport access interface

**Command Modes** Interface configuration mode

**SupportedUserRoles** network-admin  
vdc-admin

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

**Usage Guidelines** This command requires an Enhanced Layer 2 license.



**Note**

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

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

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

Related Commands	Command	Description
	<b>show interface</b>	Displays the interface status and information.



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## system default switchport fabricpath

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

**system default switchport fabricpath**

**Syntax Description** This command has no arguments or keywords.

**Defaults** None

**Command Modes** Global configuration mode

**SupportedUserRoles** network-admin  
vdc-admin

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

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

This command requires an Enhanced Layer 2 license.

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

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

Related Commands	Command	Description
	<b>show interface</b>	Displays interface status and information.

■ system default switchport fabricpath

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