



## F Commands

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**fabricpath switch-id**

# fabricpath switch-id

To configure an emulated switch ID, use the **fabricpath switch-id** command. To return to the default setting, use the **no** form of this command.

```
fabricpath switch-id switch-id
no fabricpath switch-id switch-id
```

<b>Syntax Description</b>	<i>switch-id</i> Emulated switch ID. The range is from 1 to 4095.
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<b>Command Default</b>	None
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<b>Command Modes</b>	Interface configuration mode
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<b>Command History</b>	<b>Release</b>	<b>Modification</b>
	5.1(1)	This command was introduced.

<b>Usage Guidelines</b>	This command does not require a license.
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<b>Examples</b>	This example shows how to configure an emulated switch ID:
-----------------	--

```
switch# configure terminal
switch(config)# vpc domain 1
switch(config-vpc-domain)# fabricpath switch-id 4
Configuring fabricpath switch id will flap vPCs. Continue (yes/no)? [no] yes
Note:
-----: Re-init of peer-link and vPCs started :-----
switch(config-vpc-domain)#

```

This example shows how to set the default ID value:

```
switch# configure terminal
switch(config)# vpc domain 1
switch(config-vpc-domain)# no fabricpath switch-id 4
Deconfiguring fabricpath switch id will flap vPCs. Continue (yes/no)? [no] yes
Note:
-----: Re-init of peer-link and vPCs started :-----
switch(config-vpc-domain)#

```

<b>Related Commands</b>	<b>Command</b>	<b>Description</b>
	<b>show interface switchport</b>	Displays the administrative and operational status of a switching (nonrouting) port.

# feature bfd

To enable Bidirectional Forwarding Detection (BFD), use the **feature bfd** command. To return to the default setting, use the **no** form of this command.

**feature bfd**  
**no feature bfd**

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

**Command Default** Disabled

**Command Modes** Global configuration mode

**Command History**

Release	Modification
5.0(2)	This command was introduced.

**Usage Guidelines** You must use the **feature bfd** command to enable the BFD functionality.



**Note**

The device does not display any BFD commands until you enable the feature.

This command does not require a license.

**Examples**

This example shows how to enable BFD functionality on the device:

```
switch# configure terminal
switch(config)# feature bfd
switch(config)#

```

**Related Commands**

Command	Description
<b>show feature</b>	Displays information about the features enabled on the device.

**feature ethernet-link-oam**

## feature ethernet-link-oam

To enable the ethernet link OAM feature, use the **feature ethernet-link-oam** command in global configuration mode. To disable the ethernet link OAM feature, use the no form of this command.

**feature ethernet-link-oam**

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

**Command Default** None

**Command Modes** Global configuration (config)

<b>Command History</b>	<b>Release</b>	<b>Modification</b>
	7.3(0)D1(1)	This command was introduced.

**Usage Guidelines** This command does not require a license.

The following example shows how to enable the ethernet link OAM feature:

```
switch# configure terminal
switch(config)# feature ethernet-link-oam
```

**Related Commands**

<b>Command</b>	<b>Description</b>
<b>ethernet oam profile</b>	Creates an EOAM profile and enters EOAM configuration mode.

# feature interface-vlan

To enable the creation of VLAN interfaces (switched virtual interfaces [SVI]), use the **feature interface-vlan** command. To disable the VLAN interface feature, use the **no** form of this command.

```
feature interface-vlan  
no feature interface-vlan
```

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

**Command Default** Disabled

**Command Modes** Global configuration mode

Command History	Release	Modification
	4.0	This command was introduced.

**Usage Guidelines** You must use the **feature interface-vlan** command before you can create VLAN interfaces.

This command does not require a license.

**Examples** This example shows how to enable the interface VLAN feature:

```
switch(config) # feature interface-vlan
```

Related Commands	Command	Description
	interface vlan	Creates a VLAN interface.

**feature lacp**

# feature lacp

To enable Link Aggregation Control Protocol (LACP) port channeling on the device, use the **feature lacp** command. To disable LACP on the device, use the **no** form of this command.

**feature lacp**  
**no feature lacp**

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

**Command Default** Disabled

**Command Modes** Global configuration mode

Release	Modification
4.0	This command was introduced.

**Usage Guidelines** You must remove all the LACP configuration parameters from all port channels on the device before you can disable LACP. You cannot disable LACP while LACP configurations remain on the device.

Even after you enable LACP globally, you do not have to run LACP on all port channels on the device. You enable LACP on each channel mode using the **channel-group mode** command.

When you enter the **no** form of this command, the system removes all the LACP configuration from the device.

This command does not require a license.

## Examples

This example shows how to enable LACP port channeling on the device:

```
switch(config)# feature lacp
```

## Related Commands

Command	Description
<b>show lacp port-channel</b>	Displays information on port channels with LACP enabled.

# feature tunnel

To enable the creation of tunnel interfaces, use the **feature tunnel** command. To disable the tunnel interface feature, use the **no** form of this command.

**feature tunnel**  
**no feature tunnel**

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

**Command Default** Disabled

**Command Modes** Global configuration mode

Command History	Release	Modification
4.0	This command was introduced.	

**Usage Guidelines** You must use the **feature tunnel** command before you can create tunnel interfaces.

This command requires the Enterprise license.

**Examples** This example shows how to enable the interface tunnel feature:

```
switch(config) # feature tunnel
```

Related Commands	Command	Description
	<b>interface tunnel</b>	Creates a tunnel interface.

**feature udld**

# feature udld

To enable Unidirectional Link Detection (UDLD) globally on the device, use the **feature udld** command. To disable UDLD globally on the device, use the **no** form of this command.

```
feature udld
no feature udld
```

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

**Command Default** None

**Command Modes** Global configuration mode

**Command History**

Release	Modification
4.0	This command was introduced.

**Usage Guidelines** Use the **feature udld** command to enable UDLD globally on the device. UDLD must be also enabled on the other linked interface and its device. After enabling the devices, it is possible to enable a UDLD *mode* for an interface.

Use the **no feature udld** command to disable UDLD globally for Ethernet interfaces on the device.

This command does not require a license.

**Examples**

This example shows how to enable the UDLD for a device:

```
switch# configure terminal
switch(config)# feature udld
```

This example shows how to disable UDLD for a device:

```
switch# configure terminal
switch(config)# no feature udld
```

**Related Commands**

Command	Description
<b>show udld</b>	Displays information about the UDLD configuration.

# feature vpc

To enable virtual port channels (vPCs), use the **feature vpc** command. To return to the default setting, use the **no** form of this command.

**feature vpc**  
**no feature vpc**

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

**Command Default** Disabled

**Command Modes** Global configuration mode

Command History	Release	Modification
	4.1(3)	This command was introduced.

**Usage Guidelines** You must use the **feature vpc** command to enable the vPC functionality. You must enable vPCs before you can configure them.



**Note** When you disable vPC, the device clears all the vPC configurations.

This command does not require a license.

**Examples** This example shows how to enable vPC functionality on the device:

```
switch(config) #feature vpc
```

Related Commands	Command	Description
	<b>show feature</b>	Displays information about the features enabled on the device.
	<b>show vpc brief</b>	Displays vPC information on vPCs. If the feature is not enabled, the system displays an error when you enter this command.

# fec

To configure the Forward Error Correction (FEC) feature for the interface range, use the **fec** command. To return to the default setting, use the **no** form of this command.

```
fec { auto | cl91 | off }
no fec
```

Syntax Description	
<b>auto</b>	Enables the FEC feature based on the transceiver type.
<b>cl91</b>	Enables clause 91 for 100 Gigabit interface.
<b>off</b>	Disables FEC for the interface range.

**Command Default** Disabled

**Command Modes** Interface configuration mode

**Command History**

**Release Modification**

4.1(3) This command was introduced.

This example shows how to configure FEC feature on the device:

```
switch(config)# interface ethernet1/2
switch(config-if-range)# fec cl91
switch(config-if-range)# exit
switch(config)# copy running-config startup-config
switch(config)# exit
switch# show interface Ethernet1/2

Ethernet1/2 is up
admin state is up, Dedicated Interface
    Hardware: 40000/100000 Ethernet, address: 00e0.d50f.9fe0 (bia 00eb.d50e.9fe0)
    MTU 9216 bytes, BW 40000000 Kbit, DLY 10 usec
    reliability 255/255, txload 1/255, rxload 1/255
    Encapsulation ARPA, medium is broadcast
    Port mode is access
    full-duplex, 40 Gb/s, media type is 40G
    Beacon is turned off
    Auto-Negotiation is turned on
    Input flow-control is off, output flow-control is off
    Auto-mdix is turned off
    Rate mode is dedicated
    Switchport monitor is off
    EtherType is 0x8100
    EEE (efficient-ethernet) : n/a
        admin fec state is auto, oper fec state is off
    .
    .
    .
```

Related Commands	Command	Description
	<b>show feature</b>	Displays information about the features enabled on the device.

# flowcontrol

To enable or disable the ability of the Ethernet port to send and receive flow-control pause frames, use the **flowcontrol** command. To return to the default flow-control settings, use the **no** form of this command.

```
flowcontrol {send | receive} {desired | on | off}
no flowcontrol {send | receive}
```

<b>Syntax Description</b>	
<b>send</b>	Specifies the flow-control send setting for ports that run at 1000 Mbps or faster.
<b>receive</b>	Specifies the flow-control receive setting for ports that run at any speed.
<b>desired</b>	Specifies the remote port setting to desired for both send and receive, if the configuration of the remote port is unknown.
<b>on</b>	Specifies the remote port setting to on, if you want the local port to send flow-control pause frames.
<b>off</b>	Specifies the remote port's send and receive parameter settings to off, if you do not want to use flow control.

<b>Command Default</b>	1-Gb/s interfaces—Off for receive and send 10-Gb/s interfaces—Off for receive and send
------------------------	---

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

<b>Release</b>	<b>Modification</b>
4.0	This command was introduced.

<b>Usage Guidelines</b>	Use the flowcontrol command to enable or disable the ability of the Ethernet port to send and receive flow-control pause frames.
-------------------------	--

Make sure that the remote port has the corresponding setting for the flow control that you need. If you want the local port to send flow-control pause frames, the remote port has a receive parameter set to on or desired. If you want the local port to receive flow-control frames, you must make sure that the remote port has a send parameter set to on or desired. If you do not want to use flow control, you can set the remote port's send and receive parameters to off.

For Ethernet ports that run at 1 Gbps or faster speeds, you can enable or disable the port's ability to send and receive flow-control pause frames. For Ethernet ports that run slower than 1 Gbps, you can enable or disable only the port's ability to receive pause frames.

When enabling flow control for the local port, you either fully enable the local port to send or receive frames regardless of the flow-control setting of the remote port or you set the local port to use the desired setting used by the remote port. If you enable both the local and remote ports for flow control, set the desired flow control of the other port, or set a combination of those two states, flow control is enabled for those ports.

**Note**

For ports that run at 10 Gbps, you cannot use the desired state for the send or receive parameter. The **desired** keyword in the **flowcontrol** command is not supported for higher port speeds such as 40 Gb/s and 100 Gb/s.

To see how the different port flow-control states affect the link flow-control state, see [Table 1: Port Flow-Control Influences on Link Flow Control, on page 13](#).

**Table 1: Port Flow-Control Influences on Link Flow Control**

Port Flow Control States	Link Flow Control State	
Port Receiving Data (Sends Pause Frames)	Port Transmitting Data (Receives Pause Frames)	Enabled
Enabled	Enabled	
Enabled	Desired	
Enabled	Disabled	
Desired	Enabled	
Desired	Desired	
Desired	Disabled	
Disabled	Enabled	
Disabled	Desired	
Disabled	Disabled	

This command does not require a license.

**Examples**

This example shows how to set Ethernet port 3/1 to send flow-control pause frames:

```
switch# configure terminal
switch(config)# interface ethernet 3/1
switch(config-if)# flowcontrol send on
```

**Related Commands**

Command	Description
<b>show interface</b>	Displays information about the interface, which includes the flow-control parameter.
<b>show interface flowcontrol</b>	Displays information about the interface flow control.

frame-period threshold

# frame-period threshold

To configure the thresholds that trigger an Ethernet OAM frame-period error event, use the **frame-period threshold** command in Ethernet OAM link monitor or interface Ethernet OAM link monitor configuration mode. To remove the configuration, use the **no** form of this command.

```
frame-period threshold low threshold [high threshold]
no frame-period threshold [low threshold [high threshold]]
```

<b>Syntax Description</b>	<p><b>low threshold</b> Low threshold, in frames, that triggers a frame-period error event. The range is 1 to 1000000. The default value for low threshold is 60000.</p> <p>(Optional) High threshold, in frames, that triggers a frame-period error event. The range is 1 to 1000000. The high threshold value can be configured only in conjunction with the low threshold value.</p>
<b>Command Default</b>	The default low threshold value is 1. There is no default high threshold value.
<b>Command Modes</b>	<p>Ethernet OAM link monitor configuration (config-eoam-lm)</p> <p>Interface Ethernet OAM link monitor configuration (config-if-eoam-lm)</p>
<b>Supported User Roles</b>	network-admin vdc---admin network---operator vdc-operator

Command History	Release	Modification
	7.3(0)D1(1)	This command was introduced.

<b>Usage Guidelines</b>	When the low threshold is passed, a frame-period error event notification is generated and transmitted to the OAM peer. Additionally, any registered higher level OAM protocols, such as Connectivity Fault Management (CFM), are also notified. When the high threshold is passed, the configured high threshold action is performed in addition to the low threshold actions. The high threshold is optional and is configurable only in conjunction with the low threshold.
	This command does not require a license.

The following example shows how to configure the low and high thresholds that trigger a frame-period error event.

```
switch(config)# ethernet oam profile Profile_1
switch(config-eoam)# link-monitor
switch(config-eoam-lm)# frame-period threshold low 100 high 600000
```

# frame-period window

To configure the window size for an Ethernet OAM frame-period error event, use the **frame-period window** command in Ethernet OAM link monitor or interface Ethernet OAM link monitor configuration mode. To remove the configuration, use the **no** form of this command.

```
frame-period window window
no frame-period window [window]
```

<b>Syntax Description</b>	<i>window</i> Size of the window for a frame-period error in milliseconds. The range is 1000 to 60000.
---------------------------	--

<b>Command Default</b>	The default window size value is 1000.
------------------------	--

<b>Command Modes</b>	Ethernet OAM link monitor configuration (config-eoam-lm) Interface Ethernet OAM link monitor configuration (config-if-eoam-lm)
----------------------	---

## Supported User Roles

network-admin  
vdc---admin  
network---operator  
vdc-operator

<b>Command History</b>	<b>Release</b>	<b>Modification</b>
	7.3(0)D1(1)	This command was introduced.

<b>Usage Guidelines</b>	This command does not require a license.
-------------------------	--

<b>Task ID</b>	<b>Task ID</b>	<b>Operation</b>

The following example shows how to configure the window size for a frame-period error:

```
switch(config)# ethernet oam profile Profile_1
switch(config-eoam)# link-monitor
switch(config-eoam-lm)# frame-period window 60000
```

**frame-seconds threshold**

# frame-seconds threshold

To configure the thresholds that trigger a frame-seconds error event, use the **frame-seconds threshold** command in Ethernet OAM link monitor or interface Ethernet OAM link monitor configuration mode. To remove the configuration, use the **no** form of this command.

```
frame-seconds threshold low threshold [high threshold]
no frame-seconds threshold [low threshold [high threshold]]
```

---

## Syntax Description

**lowthreshold** Low threshold, in seconds, that triggers a frame-seconds error event. The range is 1 to 900.

**high threshold** (Optional) High threshold, in seconds, that triggers a frame-seconds error event. The range is 1 to 900. The high threshold value can be configured only in conjunction with the low threshold value.

---

## Command Default

The default low threshold value is 1. There is no default high threshold value.

---

## Command Modes

Ethernet OAM link monitor configuration (config-eoam-lm)

Interface Ethernet OAM link monitor configuration (config-if-eoam-lm)

## Supported User Roles

network-admin

vdc---admin

network---operator

vdc-operator

---

## Command History

Release	Modification
---------	--------------

7.3(0)D1(1) This command was introduced.

---

## Usage Guidelines

When the low threshold is passed, a frame-seconds error event notification is generated and transmitted to the OAM peer. Additionally, any registered higher level OAM protocols, such as Connectivity Fault Management (CFM), are also notified. When the high threshold is passed, the configured high threshold action is performed in addition to the low threshold actions. The high threshold is optional and is configurable only in conjunction with the low threshold.

This command does not require a license.

The following example shows how to configure the low and high thresholds that trigger a frame-seconds error event:

```
switch(config)# ethernet oam profile Profile_1
switch(config-eoam)# link-monitor
switch(config-eoam-lm)# frame-seconds threshold low 10 high 900
```

Related Commands	Command	Description
	<b>ethernet oam profile</b>	Creates an EOAM profile and enters EOAM configuration mode.
	<b>link-monitor</b>	Enters Ethernet OAM link monitor configuration mode.

# frame-seconds window

To configure the window size for the OAM frame-seconds error event, use the **frame-seconds window** command in Ethernet OAM link monitor or interface Ethernet OAM link monitor configuration mode. To remove the configuration, use the **no** form of this command.

```
frame-seconds window window
no frame-seconds window [window]
```

---

**Syntax Description** *window* Size of the window for a frame-seconds error in milliseconds. The range is 10000 to 900000.

---

**Command Default** The default window size value is 60000.

**Command Modes** Ethernet OAM link monitor configuration (config-*eoam-lm*)  
Interface Ethernet OAM link monitor configuration (config-*if-eoam-lm*)

## Supported User Roles

network-admin  
vdc---admin  
network---operator  
vdc-operator

---

<b>Command History</b>	<b>Release</b>	<b>Modification</b>
	7.3(0)D1(1)	This command was introduced.

---

**Usage Guidelines** This command does not require a license.

The following example shows how to configure the window size for a frame-seconds error.

```
switch(config)# ethernet oam profile Profile_1
switch(config-eoam)# link-monitor
switch(config-eoam-lm)# frame-seconds window 900000
```

---

<b>Related Commands</b>	<b>Command</b>	<b>Description</b>
	<b>ethernet oam profile</b>	Creates an EOAM profile and enters EOAM configuration mode.
	<b>link-monitor</b>	Enters Ethernet OAM link monitor configuration mode.

---

# frame threshold

To configure the thresholds that trigger an Ethernet OAM frame error event, use the **frame threshold** command in Ethernet OAM link monitor or interface Ethernet OAM link monitor configuration mode. To remove the configuration, use the **no** form of this command.

```
frame threshold low threshold [high threshold]
noframe threshold low threshold [high threshold]
```

<b>Syntax Description</b>	<p><b>lowthreshold</b> Low threshold, in symbols, that triggers a frame error event. The range is 1 to 12000000.</p> <p><b>lowthreshold</b> (Optional) High threshold, in symbols, that triggers a frame error event. The range is 1 to 12000000. The high threshold value can be configured only in conjunction with the low threshold value.</p>				
<b>Command Default</b>	The default low threshold value is 1. There is no default high threshold value.				
<b>Command Modes</b>	Ethernet OAM link monitor configuration (config-eoam-lm) Interface Ethernet OAM link monitor configuration (config-if-eoam-lm)				
<b>Supported User Roles</b>	network-admin vdc---admin network--operator vdc-operator				
<b>Command History</b>	<table border="1"> <thead> <tr> <th><b>Release</b></th><th><b>Modification</b></th></tr> </thead> <tbody> <tr> <td>7.3(0)D1(1)</td><td>This command was introduced.</td></tr> </tbody> </table>	<b>Release</b>	<b>Modification</b>	7.3(0)D1(1)	This command was introduced.
<b>Release</b>	<b>Modification</b>				
7.3(0)D1(1)	This command was introduced.				
<b>Usage Guidelines</b>	When the low threshold is passed, a frame error event notification is generated and transmitted to the OAM peer. Additionally, any registered higher level OAM protocols, such as Connectivity Fault Management (CFM), are also notified. When the high threshold is passed, the configured high threshold action is performed in addition to the low threshold actions. The high threshold is optional and is configurable only in conjunction with the low threshold.  This command does not require a license.				

The following example shows how to configure the low and high thresholds that trigger a frame error event:

```
switch(config)# etherent oam profile Profile_1
switch(config-eoam)# link-monitor
switch(config-eoam-lm)# frame threshold low 100 high 60000
```

**frame threshold**

Related Commands	Command	Description
	<b>ethernet oam profile</b>	Configures collection parameters for a Bulkstat data group. Creates an EOAM profile and enters EOAM configuration mode.
	<b>link-monitor</b>	Enters Ethernet OAM link monitor configuration mode.

# frame window

To configure the frame window size of an OAM frame error event, use the **frame window** command in Ethernet OAM link monitor or interface Ethernet OAM link monitor configuration mode. To remove the configuration, use the **no** form of this command.

```
frame window window
no frame window [window]
```

<b>Syntax Description</b>	<i>window</i> Size of the window for a frame error in seconds. The range is 1000 to 60000.						
<b>Command Default</b>	The default frame window size is 1000.						
<b>Command Modes</b>	Ethernet OAM link monitor configuration (config-eoam-lm) Interface Ethernet OAM link monitor configuration (config-if-eoam-lm)						
<b>Command History</b>	<table> <thead> <tr> <th><b>Release</b></th><th><b>Modification</b></th></tr> </thead> <tbody> <tr> <td>7.3(0)D1(1)</td><td>This command was introduced.</td></tr> </tbody> </table>	<b>Release</b>	<b>Modification</b>	7.3(0)D1(1)	This command was introduced.		
<b>Release</b>	<b>Modification</b>						
7.3(0)D1(1)	This command was introduced.						
<b>Usage Guidelines</b>	<p>This command does not require a license.</p> <p>The following example shows how to configure the window size for a frame error.</p> <pre>switch(config)# <b>ethernet oam profile</b> Profile_1 switch(config-eoam)# <b>link-monitor</b> switch(config-eoam-lm)# <b>frame window</b> 60</pre>						
<b>Related Commands</b>	<table border="1"> <thead> <tr> <th><b>Command</b></th><th><b>Description</b></th></tr> </thead> <tbody> <tr> <td><b>ethernet oam profile</b></td><td>Creates an EOAM profile and enters EOAM configuration mode.</td></tr> <tr> <td><b>link-monitor</b></td><td>Enters Ethernet OAM link monitor configuration mode.</td></tr> </tbody> </table>	<b>Command</b>	<b>Description</b>	<b>ethernet oam profile</b>	Creates an EOAM profile and enters EOAM configuration mode.	<b>link-monitor</b>	Enters Ethernet OAM link monitor configuration mode.
<b>Command</b>	<b>Description</b>						
<b>ethernet oam profile</b>	Creates an EOAM profile and enters EOAM configuration mode.						
<b>link-monitor</b>	Enters Ethernet OAM link monitor configuration mode.						

frame window