



P Commands

This chapter describes the Cisco NX-OS system management commands that begin with the letter P.

port-monitor activate

To activate a Simple Network Management Protocol (SNMP) port-monitor policy, use the **port-monitor activate** command. To deactivate a port-monitor policy, use the **no** form of this command.

```
port-monitor activate [policy-name]
```

```
no port-monitor activate [policy-name]
```

Syntax Description	<i>policy-name</i> (Optional) Port-monitor policy. The maximum number of alphanumeric characters is 32.
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Defaults	None
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Command Modes	Global configuration mode (config)
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Supported User Roles	network-admin vdc-admin
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Command History	Release	Modification
	4.1(2)	This command was introduced.

Usage Guidelines	This command does not require a license.
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Examples This example shows how to activate an SNMP port-monitor policy:

```
switch(config)# port-monitor name policy_1
switch(config-port-monitor)# port-monitor activate policy_1
switch(config)#
```

This example shows how to deactivate a port-monitor policy:

```
switch(config-port-monitor)# no port-monitor activate policy_1
switch(config)#
```

Related Commands	Command	Description
	counter	Configures an individual counter.

port-monitor enable

To enable the Simple Network Management Protocol (SNMP) port-monitor feature, use the **port-monitor enable** command. To disable the port-monitor feature, use the **no** form of this command.

port-monitor enable

no port-monitor enable

Syntax Description This command has no arguments or keywords.

Defaults None

Command Modes Global configuration mode (config)

SupportedUserRoles network-admin
vdc-admin

Command History	Release	Modification
	4.1(2)	This command was introduced.

Usage Guidelines This command does not require a license.

Examples This example shows how to enable the SNMP port-monitor feature:

```
switch(config)# port-monitor enable
switch(config)#
```

This example shows how to disable the SNMP port-monitor feature:

```
switch(config)# no port-monitor enable
switch(config)#
```

Related Commands	Command	Description
	port-monitor activate	Activates the specified port-monitor policy.

port-monitor name

To create a Simple Network Management Protocol (SNMP) port-monitor policy, use the **port-monitor name** command. To delete a port-monitor policy, use the **no** form of this command.

port-monitor name *policy-name*

no port-monitor name *policy-name*

Syntax Description	
	<i>policy-name</i> Policy name. The maximum number of alphanumeric characters is 32.

Defaults	
	None

Command Modes	
	Global configuration mode (config)

SupportedUserRoles	
	network-admin vdc-admin

Command History	Release	Modification
	4.1(2)	This command was introduced.

Usage Guidelines	
	This command does not require a license.

Examples	
	This example shows how to create an SNMP port-monitor policy:

```
switch(config)# port-monitor name PM1
switch(config-port-monitor)#
```

This example shows how to remove an SNMP port-monitor policy:

```
switch(config)# no port-monitor name PM1
switch(config)
```

Related Commands	Command	Description
	port-monitor activate	Activates the specified port-monitor policy.

port-type

To configure a port type for the Simple Network Management Protocol (SNMP) port monitoring, use the **port-type** command. To delete the port-type configuration for port monitoring, use the **no** form of this command.

```
port-type { access-port | all | trunks }
```

```
no port-type { access-port | all | trunks }
```

Syntax Description

access-port	Configures port monitoring for access ports.
all	Configures port monitoring for all ports.
trunks	Configures port monitoring for trunk ports.

Defaults

None

Command Modes

Port-monitor configuration (config-port-monitor)

Supported User Roles

network-admin
vdc-admin

Command History

Release	Modification
4.1(2)	This command was introduced.

Usage Guidelines

This command does not require a license.

Examples

This example shows how to configure a port type for the SNMP port-monitor configuration:

```
switch(config)# port-monitor name PM1
switch(config-port-monitor)# port-type all
switch(config-port-monitor)#
```

This example shows how to remove a port-type configuration:

```
switch(config-port-monitor)# no port-type all
switch(config-port-monitor)#
```

Related Commands

Command	Description
port-monitor activate	Activates the specified port-monitor policy.

power efficient-ethernet

To enable Energy Efficient Ethernet (EEE) for the port or port range, use the **power efficient-ethernet** command. To disable this feature, use the **no** form of this command.

power efficient-ethernet auto | sleep threshold aggressive

no power efficient-ethernet auto | sleep threshold aggressive

Syntax Description

auto	Specifies auto negotiation for EEE.
sleep	Specifies the EEE low power idle sleep configuration.
threshold	Specifies the EEE low power idle sleep threshold.
aggressive	Specifies the EEE low power idle aggressive sleep mode.

Defaults

no power efficient-ethernet (that is EEE is off).

Command Modes

Global configuration mode

Supported User Roles

network-admin
vdc-admin

Command History

Release	Modification
6.1(2)	This command was introduced.

Usage Guidelines

This command does not require a license.

Examples

This example shows how to enable auto negotiation for EEE for the port or port range:

```
switch(config-if)# power efficient-ethernet auto
ERROR: Ethernet2/1: Port is not capable of Energy Efficient Ethernet
```

This example shows how to enable EEE LPI threshold aggressive sleep mode:

```
switch(config-if)# power efficient-ethernet sleep threshold aggressive
ERROR: Ethernet2/1: Port is not capable of Energy Efficient Ethernet
```

Related Commands

Command	Description
show module	Displays information about a module.

poweroff module

To power off a module, use the **poweroff module** command. To return power to the module, use the **no** form of this command.

poweroff module *module*

no poweroff module *module*

Syntax Description	<i>module</i>	Module number. The range is from 1 to 18.
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Defaults	None
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Command Modes	Global configuration mode (config)
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SupportedUserRoles	network-admin vdc-admin
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Command History	Release	Modification
	4.0(1)	This command was introduced.

Usage Guidelines	This command does not require a license.
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Examples	This example shows how to power off module 2: switch# poweroff module 2
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Related Commands	Command	Description
	show module	Displays information about a module.

power redundancy-mode

To configure the power supply redundancy mode, use the **power redundancy-mode** command. To disable this mode, use the **no** form of this command.

```
power redundancy-mode { combined [force] | insrc-redundant | ps-redundant [single-input] |
redundant }
```

```
no power redundancy-mode { combined [force] | insrc-redundant | ps-redundant [single-input]
| redundant }
```

Syntax Description

combined	Specifies the combined power supply mode.
force	(Optional) Forces the device to choose the combined mode without prompting the user.
insrc-redundant	Specifies the input source redundancy mode.
ps-redundant	Specifies the power supply redundancy mode.
single-input	(Optional) Specifies a single power input.
redundant	Specifies the full redundancy mode.

Defaults

ps-redundant

Command Modes

Global configuration mode (config)

Supported User Roles

network-admin

Release	Modification
4.2(1)	This command was introduced.

Usage Guidelines

You can use the **power redundancy-mode** command only in the default virtual device context (VDC).

You can configure the power supplies with the following modes:

- Combined mode—This mode does not provide power redundancy. The available power for this mode is the total power capacity of all power supplies.
- Input source redundancy mode—This mode utilizes two electrical grids, each one powering a half module within each power supply. If one power grid goes down, each power supply continues to draw power through its other half module. The available power is the amount of power by the lesser of the two grids through the power supplies.
- Power supply redundancy mode—This mode provides an extra power supply in case an active power supply goes down. The power supply that can supply the most power operates in standby mode. The other one or two power supplies are active. The available power is the amount of power provided by the active power supply units.

- Full redundancy mode—This mode combines power supply redundancy and input source redundancy, which means that the chassis has an extra power supply and one half of each power supply is connected to one electrical grid while the other half of each power supply is connected to the other electrical grid. The available power is the lesser of the available power for power supply redundancy mode and input source redundancy mode.

This command does not require a license.

Examples

This example shows how to configure the power supply redundancy mode:

```
switch# config t  
switch(config)# power redundancy-mode ps-redundant
```

This example shows how to disable the power supply redundancy mode:

```
switch# config t  
switch(config)# no power redundancy-mode ps-redundant
```

Related Commands

Command	Description
show environment power	Displays information about the power capacity and power distribution of the system.

ptp announce

To configure the interval between Precision Time Protocol (PTP) announce messages on an interface or the number of PTP intervals before a timeout occurs on an interface, use the **ptp announce** command. To remove the interval configuration for PTP messages, use the **no** form of this command.

```
ptp announce {interval seconds | timeout count}
```

```
no ptp announce {interval seconds | timeout count}
```

Syntax Description

interval	Specifies the interval between Precision Time Protocol (PTP) announce messages on an interface.
<i>seconds</i>	Log seconds. The range is from 0 to 4.
timeout	Specifies the number of PTP intervals before a timeout occurs on an interface.
<i>count</i>	Timeout count. The range is from 2 to 10.

Defaults

PTP announce interval: 1 (one packet every 2 seconds)

PTP announce timeout: 3

Command Modes

Interface configuration mode (config-if)

Supported User Roles

network-admin
vdc-admin

Command History

Release	Modification
5.2(1)	This command was introduced.

Usage Guidelines

Make sure that you are in the correct virtual device context (VDC). To change the VDC, use the **switchto vdc** command.

Make sure that you have globally enabled PTP on the device and configured the source IP address for PTP communication.

This command does not require a license.

Examples

This example shows how to configure the interval between PTP announce messages on an interface:

```
switch# configure terminal
switch(config)# interface ethernet 5/1
switch(config-if)# ptp announce interval 1
switch(config-if)#
```

This example shows how to remove the interval configuration for PTP messages:

```
switch(config)# interface ethernet 5/1
switch(config-if)# no ptp announce interval 1
switch(config-if)#
```

Related Commands

Command	Description
ptp	Enables or disables PTP on an interface.
ptp delay-request minimum interval	Configures the minimum interval allowed between PTP delay-request messages when the port is in the master state.
ptp sync interval	Configures the interval between PTP synchronization messages on an interface.
ptp vlan vlan	Configures the PTP VLAN value on an interface.

ptp delay-request minimum interval

To configure the minimum interval allowed between Precision Time Protocol (PTP) delay-request messages when the port is in the master state, use the **ptp delay-request minimum interval** command. To remove the minimum interval configuration for PTP delay-request messages, use the **no** form of this command.

ptp delay-request minimum interval *seconds*

no ptp delay-request minimum interval *seconds*

Syntax Description	<i>seconds</i>	Log seconds. The range is from -1 to 6.
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Defaults	2 (one packet every 4 seconds).
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Command Modes	Interface configuration mode (config-if)
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Supported User Roles	network-admin vdc-admin
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Command History	Release	Modification
	5.2(1)	This command was introduced.

Usage Guidelines	Make sure that you are in the correct virtual device context (VDC). To change the VDC, use the switchto vdc command.
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Make sure that you have globally enabled PTP on the device and configured the source IP address for PTP communication.

This command does not require a license.

Examples	This example shows how to configure the minimum interval allowed between PTP delay-request messages:
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```
switch# configure terminal
switch(config)# interface ethernet 5/1
switch(config-if)# ptp delay-request minimum interval 3
switch(config-if)#
```

This example shows how to remove the minimum interval configuration for PTP delay-request messages:

```
switch(config)# interface ethernet 5/1
switch(config-if)# no ptp delay-request minimum interval 3
switch(config-if)#
```

Related Commands

Command	Description
ptp	Enables or disables PTP on an interface.
ptp announce	Configures the interval between PTP announce messages on an interface or the number of PTP intervals before a timeout occurs on an interface.
ptp sync interval	Configures the interval between PTP synchronization messages on an interface.
ptp vlan vlan	Configures the PTP VLAN value on an interface.

ptp domain

To configure a domain number for the Precision Time Protocol (PTP) clock, use the **ptp domain** command. To remove the domain configuration for the PTP clock, use the **no** form of this command.

ptp domain *domain_number*

no ptp domain *domain_number*

Syntax Description	<i>domain_number</i>	Domain number. The range is from 0 to 28.
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Defaults	0
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Command Modes	Global configuration mode (config)
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Supported User Roles	network-admin vdc-admin
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Command History	Release	Modification
	5.2(1)	This command was introduced.

Usage Guidelines	This command does not require a license.
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Examples	This example shows how to configure a domain number for the PTP clock:
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```
switch# configure terminal
switch(config)# ptp domain 6
switch(config)#
```

This example shows how to remove the PTP domain configuration:

```
switch(config)# no ptp domain 6
switch(config)#
```

Related Commands	Command	Description
	feature ptp	Enables or disables PTP on the device.
	ptp source	Configures the source IP address for all PTP packets.
	ptp priority1	Configures the priority1 value to use when advertising this clock.
	ptp priority2	Configures the priority2 value to use when advertising this clock.

Command	Description
show ptp brief	Displays the PTP status.
show ptp clock	Displays the properties of the local clock.

ptp encapsulation

To configure an encapsulation for the Precision Time Protocol (PTP), use the **ptp encapsulation** command. To deactivate the encapsulation, use the **no** form of this command.

ptp encapsulation {layer-2 | layer 3}

no ptp encapsulation {layer-2 | layer 3}

Syntax Description	layer-2	Configures Layer 2 encapsulation. PTP packets are encapsulated within the Ethernet frame. Layer 2 encapsulation is supported in Audio Video Bridging feature.
	layer-3	Configures Layer 3 encapsulation. PTP packets are encapsulated with IP + UDP frame.

Defaults PTP is configured in Layer 2 encapsulation.

Command Modes Global configuration mode (config)

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

Usage Guidelines This command does not require a license.

Examples This example shows how to configure PTP Layer 2 encapsulation:

```
switch# configure terminal
switch(config)# ptp encapsulation layer-2
switch(config)#
```

Related Commands	Command	Description
	ptp mode	Configures the PTP device mode.
	ptp switchlatency-estimated	Configures the maximum estimate switch latency value in nano-secs (ns).
	show ptp corrections	Displays the latest few corrections on this node.
	show ptp parent	Displays parent clock information.
	show ptp time-property	Displays local clock time property information.
	show ptp clock	Displays the properties of the local clock.

ptp mode

To configure the Precision Time Protocol (PTP) device mode, use the **ptp mode** command. To deactivate the device mode, use the **no** form of this command.

ptp mode {**boundary-clock** | **generalized-ptp** | **transparent-clock**}

no ptp mode {**boundary-clock** | **generalized-ptp** | **transparent-clock**}

Syntax Description

boundary-clock	Configures the boundary clock mode.
generalized-ptp	Configures the Generalized PTP (gPTP) mode. This mode is used for Audio Video Bridging feature.
transparent-clock	Configures the transparent clock mode. This peer-to-peer mode is added for experimental purpose, not supported officially.

Defaults

PTP is configured in boundary-clock mode.

Command Modes

Global configuration mode (config)

Command History

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

Examples

This example shows how to configure PTP mode:

```
switch# configure terminal
switch(config)# ptp mode generatlized-ptp
switch(config)#
```

Related Commands

Command	Description
ptp encapsulation	Configures an encapsulation.
ptp switchlatency-estimated	Configures the maximum estimate switch latency value in nano-secs (ns).
show ptp corrections	Displays the latest few corrections on this node.
show ptp delay-summary	Displays link delay and residency delay information for all interfaces. It is used in AVB.
show ptp parent	Displays parent clock information.

ptp switchlatency-estimated

To configure the maximum estimate switch latency value for Precision Time Protocol (PTP), use the **ptp switchlatency-estimated** command. To reset the maximum estimate switch latency value, use the **no** form of this command.

ptp switchlatency-estimated *value*

no ptp switchlatency-estimated *value*

Syntax Description	<i>value</i>	The maximum estimate switch latency value. It is used in AVB. Range: 0 to 2147483647 ns. Default: 5000 ns.
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Defaults	None.
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Command Modes	Global configuration mode (config)
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Command History	Release	Modification
	7.3(0)D1(1)	This command was introduced.

Examples This example shows how to configure the estimated value for switch latency:

```
switch# configure terminal
switch(config)# ptp switchlatency-estimated 1
switch(config)#
```

Related Commands	Command	Description
	ptp encapsulation	Configures an encapsulation.
	ptp mode	Configures the PTP device mode
	show ptp corrections	Displays the latest few corrections on this node.
	show ptp parent	Displays parent clock information.

ptp priority1

To configure the priority1 value when advertising the Precision Time Protocol (PTP) clock, use the **ptp priority1** command. To remove the priority1 value, use the **no** form of this command.

ptp priority1 *priority-number*

no ptp priority1 *priority-number*

Syntax	Description
<i>priority-number</i>	Priority number. The range is from 0 to 255.

Defaults	255
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Command Modes	Global configuration mode (config)
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Supported User Roles	network-admin vdc-admin
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Command History	Release	Modification
	5.2(1)	This command was introduced.

Usage Guidelines	This command does not require a license.
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Examples This example shows how to configure the priority1 value when advertising the PTP clock:

```
switch# configure terminal
switch(config)# ptp priority1 10
```

This example shows how to remove the priority1 value when advertising the PTP clock:

```
switch# configure terminal
switch(config)# no ptp priority1 10
```

Related Commands	Command	Description
	feature ptp	Enables or disables PTP on the device.
	ptp source	Configures the source IP address for all PTP packets.
	ptp domain	Configures the domain number to use for this clock.
	ptp priority2	Configures the priority2 value to use when advertising this clock.
	show ptp brief	Displays the PTP status.
	show ptp clock	Displays the properties of the local clock.

ptp priority2

To configure the priority2 value when advertising the Precision Time Protocol (PTP) clock, use the **ptp priority2** command. To remove the priority2 value when advertising the PTP, use the **no** form of this command.

```
ptp priority2 priority-number
```

```
no ptp priority2 priority-number
```

Syntax Description

<i>priority-number</i>	Priority number. The range is from 0 to 255.
------------------------	--

Defaults

255

Command Modes

Global configuration mode (config)

Supported User Roles

network-admin
vdc-admin

Command History

Release	Modification
5.2(1)	This command was introduced.

Usage Guidelines

This command does not require a license.

Examples

This example shows how to configure the priority2 value when advertising the PTP clock:

```
switch# configure terminal  
switch(config)# ptp priority2 1
```

This example shows how to remove the priority2 value configuration for use when advertising the PTP clock:

```
switch# configure terminal  
switch(config)# no ptp priority2 1
```

Related Commands

Command	Description
feature ptp	Enables or disables PTP on the device.
ptp source	Configures the source IP address for all PTP packets.
ptp domain	Configures the domain number to use for this clock.
ptp priority1	Configures the priority1 value to use when advertising this clock.

Command	Description
show ptp brief	Displays the PTP status.
show ptp clock	Displays the properties of the local clock.

ptp source

To configure the global source for all the Precision Time Protocol (PTP) packets, use the **ptp source** command. To remove the global source for PTP packets, use the **no** form of this command.

```
ptp source ip_address [vrf vrf-id]
```

```
no ptp source ip_address [vrf vrf-id]
```

Syntax Description		
<i>ip_address</i>		IPv4 address of the source.
vrf		Specifies the VRF to be used for hello messages.
<i>vrf-id</i>		Specifies the VRF ID.

Defaults None

Command Modes Global configuration mode (source)

Supported User Roles network-admin
vdc-admin

Command History	Release	Modification
	6.1(1)	vrf option is deprecated in Cisco NX-OS 6.1(1) release.
	5.2(1)	This command was introduced.

Usage Guidelines This command does not require a license.

Examples This example shows how to configure the global source for all PTP packets:

```
switch# configure terminal
switch(config)# ptp source 10.1.1.1
switch(config)#
```

This example shows how to remove the global source configuration for all PTP packets:

```
switch(config)# no ptp source 10.1.1.1
switch(config)#
```

Related Commands	Command	Description
	feature ptp	Enables or disables PTP on the device.
	ptp domain	Configures the domain number to use for this clock.

Command	Description
ptp priority1	Configures the priority1 value to use when advertising this clock.
ptp priority2	Configures the priority2 value to use when advertising this clock.
show ptp brief	Displays the PTP status.
show ptp clock	Displays the properties of the local clock.

ptp sync interval

To configure the interval between Precision Time Protocol (PTP) synchronization messages on an interface, use the **ptp sync interval** command. To remove the interval configuration for PTP messages synchronization, use the **no** form of this command.

ptp sync interval *seconds*

no ptp sync interval *seconds*

Syntax Description

seconds Log seconds. The range is from -1 to 2.

Defaults

2 (one packet every 4 seconds)

Command Modes

Interface configuration mode (config-if)

Supported User Roles

network-admin
vdc-admin

Command History

Release	Modification
5.2(1)	This command was introduced.

Usage Guidelines

Make sure that you are in the correct virtual device context (VDC). To change the VDC, use the **switchto vdc** command.

Make sure that you have globally enabled PTP on the device and configured the source IP address for PTP communication.

This command does not require a license.

Examples

This example shows how to configure the interval between PTP synchronization messages on an interface:

```
switch# configure terminal
switch(config)# interface ethernet 5/1
switch(config-if)# ptp sync interval 1
switch(config-if)#
```

This example shows how to remove the interval configuration for PTP messages synchronization:

```
switch(config)# interface ethernet 5/1
switch(config-if)# no ptp sync interval 1
switch(config-if)#
```


Related Commands	Command	Description
	ptp	Enables or disables PTP on an interface.
	ptp announce	Configures the interval between PTP announce messages on an interface or the number of PTP intervals before a timeout occurs on an interface.
	ptp delay-request minimum interval	Configures the minimum interval allowed between PTP delay-request messages when the port is in the master state.
	ptp vlan vlan	Configures the PTP VLAN value on an interface.

ptp vlan

To configure the Precision Time Protocol (PTP) VLAN value on an interface, use the **ptp vlan** command. To remove the PTP VLAN value from an interface, use the **no** form of this command.

ptp vlan *vlan-number*

no ptp vlan *vlan-number*

Syntax Description	<i>vlan-number</i>	VLAN number. The range is from 1 to 4094.
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Defaults	1
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Command Modes	Interface configuration mode (config-if)
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Supported User Roles	network-admin vdc-admin
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Command History	Release	Modification
	5.2(1)	This command was introduced.

Usage Guidelines	Make sure that you are in the correct virtual device context (VDC). To change the VDC, use the switchto vdc command.
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Make sure that you have globally enabled PTP on the device and configured the source IP address for PTP communication.

This command does not require a license.

Examples	This example shows how to configure the PTP VLAN value on an interface:
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```
switch# configure terminal
switch(config)# interface ethernet 5/5
switch(config-if)# ptp vlan 9
switch(config-if)#
```

This example shows how to remove the PTP VLAN value from an interface:

```
switch(config)# interface ethernet 5/5
switch(config-if)# no vlan 9
```

Related Commands	Command	Description
	ptp	Enables or disables PTP on an interface.
	ptp announce	Configures the interval between PTP announce messages on an interface or the number of PTP intervals before a timeout occurs on an interface.
	ptp delay-request minimum interval	Configures the minimum interval allowed between PTP delay-request messages when the port is in the master state.
	ptp sync interval	Configures the interval between PTP synchronization messages on an interface.

