PTP Commands

This chapter describes the commands used to configure the Precision Time Protocol (PTP).

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announce

To configure options for configuring PTP profile announcement messages, use the **announce** command in PTP profile configuration mode.

announce frequency *frequency*

Syntax Description

frequency *frequency*	Use to specify multiple announce messages per second (2, 4, 8, 16, 32, 64, or 128). Frequency of 4 means that four messages are sent per second.

Command Default

No default behavior or values.

Command Modes

PTP profile configuration

Command History

Release	Modification
Release 6.5.31	This command was introduced.

Task ID

Task ID	Operations
ethernet-services	read, write

Example

The following example shows how to sets the announcement frequency to 8 seconds in the PTP configuration profile.

```
RP/0/RP0/CPU0:router# config terminal
RP/0/RP0/CPU0:router(config)# ptp
RP/0/RP0/CPU0:router(config-ptp)# profile p1
RP/0/RP0/CPU0:router(config-ptp-profile)# announce frequency 8
```

clock profile

To configure the ITU-T Telecom profile and clock type that can be used in all local PTP sessions, use the **clock profile** command in the PTP configuration mode.

clock profile g.8275.1 clock-type T-BC

Syntax Description

clock-type T-BC	Indicates the clock type for G.8275.1 profile. G.8275.1 profile supports T-BC (Telecom Boundary Clock)

Command Default

The default PTP profile defined in the IEEE-1588 standard is used if this configuration is not used.

Command Modes

PTP configuration

Command History

Release	Modification
Release 6.5.31	This command was introduced.

Task ID

Task ID	Operations
ethernet-services	read, write

Example

The following example shows configuring G.8275.1 profile with T-BC clock type:

```
RP/0/RP0/CPU0:router# config terminal
RP/0/RP0/CPU0:router(config)# ptp
RP/0/RP0/CPU0:router(config-ptp)# clock
RP/0/RP0/CPU0:router(config-ptp-clock)# domain 24
RP/0/RP0/CPU0:router(config-ptp-clock)# profile g.8275.1 clock-type T-BC
RP/0/RP0/CPU0:router(config-ptp-clock)# exit
```

clock

To enter Precision Time Protocol (PTP) clock configuration mode and run PTP clock configuration command, use the **clock** command in PTP configuration mode.

clock

Syntax Description

This command has no keywords or arguments.

Command Default

No default behavior or values.

Command Modes

Global PTP configuration

Command History

Release	Modification
Release 6.5.31	This command was introduced.

Task ID

Task ID	Operations
ethernet-services	read, write

Example

The following example shows how to enter PTP clock configuration mode from global configuration mode.

```
RP/0/RP0/CPU0:router# config terminal
RP/0/RP0/CPU0:router(config)# ptp
RP/0/RP0/CPU0:router(config-ptp)# clock
RP/0/RP0/CPU0:router(config-ptp-clock)#
```

delay-request

To configure settings for the PTP delay request message, use the **delay-request** command in PTP profile configuration mode.

delay-request frequency *frequency*

Syntax Description

frequency *frequency*	Specifies multiple announce messages per second (2, 4, 8, 16, 32, 64, or 128). Frequency of 4 means that four messages are sent per second.

Command Default

The default is one second between messages.

Command Modes

PTP configuration mode

Command History

Release	Modification
Release 6.5.31	This command was introduced.

Task ID

Task ID	Operations
ethernet-services	read, write

Example

The following example sets the delay request frequency in the PTP configuration profile to 16 seconds.

```
RP/0/RP0/CPU0:router# config terminal
RP/0/RP0/CPU0:router(config)# ptp
RP/0/RP0/CPU0:router(config-ptp)# profile p1
RP/0/RP0/CPU0:router(config-ptp-profile)# delay-request frequency 16
```

domain

To specify the domain number for the PTP clock, use the **domain** command in PTP clock configuration mode.

domain *number*

Syntax Description

number	Specifies the domain number to use for this clock (0-255).

Command Default

Default is 0.

Command Modes

PTP clock configuration

Command History

Release	Modification
Release 6.5.31	This command was introduced.

Task ID

Task ID	Operations
ethernet-services	read, write

Example

The following example sets the domain to 24.

```
RP/0/RP0/CPU0:router# config terminal
RP/0/RP0/CPU0:router(config)# ptp
RP/0/RP0/CPU0:router(config-ptp)# clock
RP/0/RP0/CPU0:router(config-ptp-clock)# domain 24
```

log

To enable logging of changes to the best master clock for Precision Time Protocol (PTP), use the **log best-master-clock changes** command in PTP configuration mode.

log best-master-clock changes

Syntax Description

This command has no keywords or arguments.

Command Default

None

Command Modes

PTP configuration

Command History

Release	Modification
Release 6.5.31	This command was introduced.

Task ID

Task ID	Operations
logging	read, write

Example

The following example sets up PTP to log the best master clock changes.

```
RP/0/RP0/CPU0:router# config terminal
RP/0/RP0/CPU0:router(config)# ptp
RP/0/RP0/CPU0:router(config-ptp)# log best-master-clock changes
```

profile

To enter Precision Time Protocol (PTP) profile configuration mode and run PTP profile configuration commands, use the **profile** command in PTP configuration mode.

profile *name*

Syntax Description

profile *name*	Enters PTP profile configuration mode for the specified profile name.

Command Default

No default behavior or values.

Command Modes

PTP configuration

Command History

Release	Modification
Release 6.5.31	This command was introduced.

Task ID

Task ID	Operations
ethernet-services	read, write

Example

The following example shows how to configure the profile tp128.

```
RP/0/RP0/CPU0:router# config terminal
RP/0/RP0/CPU0:router(config)# ptp
RP/0/RP0/CPU0:router(config-ptp)# profile tp128
```

ptp

To enter Precision Time Protocol (PTP) configuration mode and run PTP configuration commands, use the **ptp** command in global configuration mode.

ptp

Syntax Description

This command has no keywords or arguments.

Command Default

No default behavior or values.

Command Modes

Global configuration

Command History

Release	Modification
Release 6.5.31	This command was introduced.

Task ID

Task ID	Operations
ethernet-services	read, write

Example

The following example shows how to enter PTP configuration mode from global configuration mode.

```
RP/0/RP0/CPU0:router# config terminal
RP/0/RP0/CPU0:router(config)# ptp
RP/0/RP0/CPU0:router(config-ptp)#
```

sync

To configure settings for PTP sync messages, use the **sync** command in PTP profile configuration mode.

sync frequency *frequency*

Syntax Description

frequency *frequency*	Use to specify multiple sync messages per second (2, 4, 8, 16, 32, 64, or 128). Frequency of 4 means that four messages are sent per second.

Command Default

No default behavior or values.

Command Modes

PTP profile configuration

Command History

Release	Modification
Release 6.5.31	This command was introduced.

Task ID

Task ID	Operations
ethernet-services	read, write

Example

The following example sets the PTP sync timeout to 16 milliseconds.

```
RP/0/RP0/CPU0:router# config terminal
RP/0/RP0/CPU0:router(config)# ptp
RP/0/RP0/CPU0:router(config-ptp)# profile p1
RP/0/RP0/CPU0:router(config-ptp-profile)# sync frequency 2000
```

transport

To specify the PTP transport type, use the **transport** command in PTP profile configuration mode.

transport ethernet

Syntax Description

ethernet	Specifies that Ethernet is used as the transport type on the interface.

Command Default

No default behavior or values.

Command Modes

PTP profile configuration

Command History

Release	Modification
Release 6.5.31	This command was introduced.

Task ID

Task ID	Operations
ethernet-services	read, write

Example

The following example sets the transport type to be Ethernet.

```
RP/0/RP0/CPU0:router# config terminal
RP/0/RP0/CPU0:router(config)# ptp
RP/0/RP0/CPU0:router(config-ptp)# profile p1
RP/0/RP0/CPU0:router(config-ptp-profile)# transport ethernet
```