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ERPS commands

control-vlan

Use **control-vlan** to configure the control VLAN for an ERPS instance.

Use **undo control-vlan** to restore the default.

Syntax

```
control-vlan vlan-id  
undo control-vlan
```

Default

An ERPS instance does not have control VLANs.

Views

ERPS instance view

Predefined user roles

network-admin

Parameters

vlan-id: Specifies the control VLAN by its ID in the range of 2 to 4094.

Usage guidelines

The control VLAN must be a VLAN that has not been created on the device.

Examples

```
# Configure VLAN 100 as the control VLAN for instance 1 of ERPS ring 1.  
<Sysname> system-view  
[Sysname] erps ring 1  
[Sysname-erps-ring1] instance 1  
[Sysname-erps-ring1-inst1] control-vlan 100
```

Related commands

instance

display erps

Use **display erps** to display brief ERPS ring information.

Syntax

```
display erps
```

Views

Any view

Predefined user roles

network-admin

network-operator

Examples

Display brief ERPS ring information.

```
<Sysname> display erps
```

```
ERPS protocol status: Enabled
```

```
ERPS tcn-propagation: Enabled
```

```
Flags: R -- RPL, F -- Faulty, B -- Blocked,
       FS -- Forced switch, MS -- Manual switch
```

Ring	Instance	NodeRole	NodeState	Port0	Port1	Status
1	1	Owner	Idle	R,B		Enabled
1	2	Normal	Idle			Disabled
2	1	Owner	Idle	R,B		Enabled
2	2	Normal	Idle			Disabled

Table 1 Command output

Field	Description
ERPS protocol status	ERPS state: <ul style="list-style-type: none"> Enabled—Globally enabled. Disabled—Globally disabled.
ERPS tcn-propagation	State of the flush packet transparent transmission feature: <ul style="list-style-type: none"> Enabled—Globally enabled. Disabled—Globally disabled.
Ring	ERPS ring ID.
Instance	ERPS instance ID.
NodeRole	Node type: <ul style="list-style-type: none"> Owner. Neighbor. Interconnection. Normal.
NodeState	Node state: <ul style="list-style-type: none"> Idle—The ERPS ring enters the idle state after initialization. Protection—The ERPS ring enters the protection state when a link fails. MS—Manual switching mode. FS—Forced switching mode. Pending—Transient mode between any two states. —ERPS is disabled for the ERPS instance or disabled globally.
Port0	State of port 0: <ul style="list-style-type: none"> R—The port is an RPL port. B—The port is blocked. F—The port is unavailable and the link for the port is faulty. FS—The port is in FS mode. MS—The port is in MS mode. —The port is not an ERPS ring member port. If this field is blank, the port is not in any of the previous states.
Port1	State of port 1: <ul style="list-style-type: none"> R—The port is an RPL port. B—The port is blocked.

Field	Description
	<ul style="list-style-type: none"> • F—The port is unavailable and the link for the port is faulty. • FS—The port is in FS mode. • MS—The port is in MS mode. • ——The port is not an ERPS ring member port. <p>If this field is blank, the port is not in any of the previous states.</p>
Status	<p>State of the ERPS instance:</p> <ul style="list-style-type: none"> • Enabled. • Disabled.

display erps detail

Use `display erps detail` to display detailed ERPS ring information.

Syntax

```
display erps detail ring ring-id [ instance instance-id ]
```

Views

Any view

Predefined user roles

network-admin

network-operator

Parameters

ring *ring-id*: Specifies an ERPS ring by its ID in the range of 1 to 255.

instance *instance-id*: Specifies an ERPS instance by its ID in the range of 1 to 64. If you do not specify this option, this command displays detailed information about all instances for the ERPS ring.

Examples

Display detailed information about instance 1 of ERPS ring 1.

```
<Sysname> display erps detail ring 1 instance 1
Ring ID                : 1
Port0                  : Ten-GigabitEthernet1/0/1
Port1                  : Ten-GigabitEthernet1/0/2
Subring                : Yes
Default MAC            : Yes

Instance ID           : 1
Node role              : Owner
Node state             : Idle
Connect (ring/instance): (1/2), (2/3)
Control VLAN          : 100
Protected VLAN         : Reference-instance 0 to 2
Guard timer           : 500 ms
Hold-off timer         : 1 sec
WTR timer              : 5 min
Revertive operation    : Non-revertive
```

```

Enable status      : Yes, Active Status : Yes
R-APS level       : 1
Port              PortRole              PortStatus

```

```

-----
Port0              RPL              Block
Port1              Non-RPL          Up

```

Display detailed information about all instances of ERPS ring 1.

<Sysname> display erps detail ring 1

```

Ring ID           : 1
Port0             : Ten-GigabitEthernet1/0/1
Port1             : Ten-GigabitEthernet1/0/2
Subring           : Yes
Default MAC       : Yes

```

```

Instance ID       : 1
Node role         : Owner
Node state        : Idle
Connect(ring/instance): (1/2), (2/3)
Control VLAN     : 100
Protected VLAN    : Reference-instance 0 to 2
Guard timer      : 500 ms
Hold-off timer    : 1 sec
WTR timer         : 5 min
Revertive operation : Non-revertive
Enable status     : Yes, Active Status : Yes
R-APS level       : 1

```

```

Port              PortRole              PortStatus

```

```

-----
Port0              RPL              Block
Port1              Non-RPL          Up

```

```

Instance ID       : 2
Node role         : Neighbor
Node state        : Idle
Connect(ring/instance): (1/2), (2/3)
Control VLAN     : 200
Protected VLAN    : Reference-instance 3
Guard timer      : 500 ms
Hold-off timer    : 1 sec
Wtr timer         : 5 min
Revertive operation : Non-revertive
Enable status     : Yes, Active Status : Yes
R-APS level       : 1

```

```

Port              PortRole              PortStatus

```

```

-----
Port0              RPL              Block
Port1              Non-RPL          Up

```

Table 2 Command output

Field	Description
Port0	ERPS ring member port 0.
Port1	ERPS ring member port 1.
Subring	ERPS subring status: <ul style="list-style-type: none"> • Yes—The ring is a subring. • No—The ring is not a subring.
Default MAC	Default MAC address status: <ul style="list-style-type: none"> • Yes—The last byte is 1 in the destination MAC address of R-APS packets. • No—The last byte is the ring ID in the destination MAC address of R-APS packets.
Node role	Node type: <ul style="list-style-type: none"> • Owner. • Neighbor. • Interconnection. • Normal.
Node state	Node state: <ul style="list-style-type: none"> • Idle—The ERPS ring enters the idle status after initialization. • Protection—The ERPS ring enters the protection state when a link fails. • MS—Manual switching mode. • FS—Forced switching mode. • Pending—Transient mode between any two states. • —ERPS is disabled for the ERPS instance or disabled globally.
Connect(ring/instance)	Ring or instance associated with the ERPS instance.
Control VLAN	Control VLAN of the ERPS instance.
Protected VLAN	List of VLANs protected by the ERPS instance, which are represented by MSTIs. To view the mapping between MSTIs and VLANs, use the display stp region-configuration command.
Guard timer	Guard timer in milliseconds.
Hold-off timer	Hold-off timer in milliseconds.
WTR timer	WTR timer in minutes.
Revertive operation	Revertive mode: <ul style="list-style-type: none"> • Non-revertive. • Revertive.
Enable status	ERPS status for the instance: <ul style="list-style-type: none"> • Yes—Enabled. • No—Disabled.
Active Status	Global ERPS status and ERPS status for the instance: <ul style="list-style-type: none"> • Yes—Enabled. • No—Disabled.
R-APS level	Level of the R-APS packets.
Port	ERPS ring member port.

Field	Description
PortRole	Port role: <ul style="list-style-type: none"> RPL—The port is an RPL port. Non-RPL—The port is not an RPL port.
Port Status	Port status: <ul style="list-style-type: none"> Block—The port is blocked. Up—The link is up. Down—The link is down.

display erps statistics

Use `display erps statistics` to display ERPS packet statistics.

Syntax

```
display erps statistics ring-id [ instance instance-id ]
```

Views

Any view

Predefined user roles

network-admin

network-operator

Parameters

ring *ring-id*: Specifies an ERPS ring by its ID in the range of 1 to 255.

instance *instance-id*: Specifies an ERPS instance by its ID in the range of 1 to 64. If you do not specify this option, this command displays packet statistics for all instances of the ERPS ring.

Examples

Display packet statistics for all instances of ERPS ring 1.

```
<Sysname> display erps statistics ring 1
  Statistics for ERPS ring 1 instance 1:
  R-APS      Port0(Tx/Rx)          Port1(Tx/Rx)
  -----
  NR          1/1                    1/1
  NR, RB      0/1                    0/1
  SF          1/0                    1/0
  MS          0/0                    0/0
  FS          0/0                    0/0
  Total      2/2                    2/2

  Statistics for ERPS ring 1 instance 2:
  R-APS      Port0(Tx/Rx)          Port1(Tx/Rx)
  -----
  NR          1/1                    1/1
  NR, RB      0/1                    0/1
  SF          1/0                    1/0
  MS          0/0                    0/0
  FS          0/0                    0/0
```

Table 3 Command output

Field	Description
R-APS	Packet type.
Port0(Tx/Rx)	Packet statistics for port 0: <ul style="list-style-type: none"> • Tx—Transmitted packets. • Rx—Received packets.
Port1(Tx/Rx)	Packet statistics for port 1: <ul style="list-style-type: none"> • Tx—Transmitted packets. • Rx—Received packets.

erps clear

Use **erps clear** to remove the MS mode and FS mode settings for an ERPS ring.

Syntax

```
erps clear ring-id instance instance-id
```

Views

System view

Predefined user roles

network-admin

Parameters

ring *ring-id*: Specifies an ERPS ring by its ID in the range of 1 to 255.

instance *instance-id*: Specifies an ERPS instance by its ID in the range of 1 to 64.

Usage guidelines

After you configure this command, the owner node can ignore the WTR timer and immediately switch traffic to the recovered link upon link recovery.

This command also switches an ERPS ring in non-revertive mode to revertive mode.

Examples

```
# Remove the MS mode and FS mode settings for instance 1 on ERPS ring 1.
```

```
<Sysname> system-view
```

```
[Sysname] erps clear ring 1 instance 1
```

erps enable

Use **erps enable** to enable ERPS globally.

Use **undo erps enable** to restore the default.

Syntax

```
erps enable
```

```
undo erps enable
```

Default

ERPS is disabled globally.

Views

System view

Predefined user roles

network-admin

Examples

```
# Enable ERPS.  
<Sysname> system-view  
[Sysname] erps enable
```

erps ring

Use **erps ring** to create an ERPS ring.

Use **undo erps ring** to delete an ERPS ring.

Syntax

```
erps ring ring-id  
undo erps ring ring-id
```

Default

No ERPS rings exist.

Views

System view

Predefined user roles

network-admin

Parameters

ring *ring-id*: Specifies an ERPS ring by its ID in the range of 1 to 255.

Usage guideline

To delete an ERPS ring successfully, delete all ERPS instances on the ring first.

Examples

```
# Create ERPS ring 1.  
<Sysname> system-view  
[Sysname] erps ring 1  
[Sysname-erps-ring1]
```

Related commands

instance

erps switch

Use **erps switch** to configure the switching mode for an ERPS ring.

Syntax

```
erps switch { force | manual } ring ring-id instance instance-id { port0 | port1 }
```

Views

System view

Predefined user roles

network-admin

Parameters

force: Configures the forced switching mode.

manual: Configures the manual switching mode.

port0: Specifies the ERPS ring member port 0.

port1: Specifies the ERPS ring member port 1.

ring *ring-id*: Specifies an ERPS ring by its ID in the range of 1 to 255.

instance *instance-id*: Specifies an ERPS instance by its ID in the range of 1 to 64.

Examples

```
# Configure the forced switching mode for port 1 of instance 1 on ERPS ring 1.
```

```
<Sysname> system-view
```

```
[Sysname] erps switch force ring 1 instance 1 port0
```

erps tcn-propagation

Use **erps tcn-propagation** to enable flush packet transparent transmission for an interconnection node.

Use **undo erps tcn-propagation** to restore the default.

Syntax

```
erps tcn-propagation
```

```
undo erps tcn-propagation
```

Default

Flush packet transparent transmission is disabled for an interconnection node.

Views

System view

Predefined user roles

network-admin

Usage guideline

This command must be used together with the **sub-ring connect** command.

Examples

```
# Enable flush packet transparent transmission for the interconnection node.
```

```
<Sysname> system-view
```

```
[Sysname] erps tcn-propagation
```

Related commands

```
sub-ring connect
```

instance

Use **instance** to create an instance for an ERPS ring.

Use **undo instance** to delete an instance from an ERPS ring.

Syntax

```
instance instance-id  
undo instance instance-id
```

Default

An ERPS ring does not have instances.

Views

ERPS ring view

Predefined user roles

network-admin

Parameters

instance *instance-id*: Specifies an ERPS instance by its ID in the range of 1 to 64.

Usage guidelines

You can create multiple instances for an ERPS ring. Each instance has its own protected VLAN, control VLAN, and RPL owner. Each instance maintains its own state machine and data. You can locate an ERPS instance by its ring ID and VLAN ID.

Examples

```
# Create instance 1 for ERPS ring 1.  
<Sysname> system-view  
[Sysname] erps ring 1  
[Sysname-erps-ring1] instance 1  
[Sysname-erps-ring1-inst1]
```

Related commands

erps ring

instance enable

Use **instance enable** to enable ERPS for an ERPS instance.

Use **undo instance enable** to disable ERPS for an ERPS instance.

Syntax

```
instance enable  
undo instance enable
```

Default

ERPS is disabled for ERPS instances.

Views

ERPS instance view

Predefined user roles

network-admin

Examples

```
# Create ERPS instance 1 and enable ERPS for the instance.
<Sysname> system-view
[Sysname] erps ring 1
[Sysname-erps-ring1] instance 1
[Sysname-erps-ring1-inst1] control-vlan 100
[Sysname-erps-ring1-inst1] protected-vlan reference-instance 0 1 2
[Sysname-erps-ring1-inst1] instance enable
```

Related commands

instance

node-role

Use **node-role** to configure the role for an ERPS node.

Use **undo node-role** to restore the default.

Syntax

```
node-role { { owner | neighbor } rpl | interconnection } { port0 | port1 }
undo node-role
```

Default

An ERPS node is a normal node.

Views

ERPS instance view

Predefined user roles

network-admin

Parameters

owner: Configures the owner node.

neighbor: Configures the neighbor node.

interconnection: Configures the interconnection node for connecting the major ring and subring.

Usage guidelines

For the owner node to work correctly, you must configure only one owner node for an ERPS ring.

You can configure an interconnection node only for a subring.

Examples

```
# Configure instance 1 of ERPS ring 1 as an RPL owner node and configure port 0 as an RPL port.
<Sysname> system-view
[Sysname] erps ring 1
[Sysname-erps-ring1] instance 1
[Sysname-erps-ring1-inst1] node-role owner rpl port0
```

port erps track

Use **port erps track** to associate an ERPS ring member port with a track entry.

Use **undo port erps track** to remove the association between an ERPS ring member port and a track entry.

Syntax

```
port erps ring ring-id instance instance-id track track-entry-index  
undo port erps ring ring-id instance instance-id track
```

Default

An ERPS ring member port is not associated with track entries.

Views

Interface view

Predefined user roles

network-admin

Parameters

ring *ring-id*: Specifies an ERPS ring by its ID in the range of 1 to 255.

instance *instance-id*: Specifies an ERPS instance by its ID in the range of 1 to 64.

track-entry-index: Specifies a track entry by its ID in the range of 1 to 1024. For more information about specifying the track entry ID, see the **track cfd** command in "Track commands."

Usage guidelines

An ERPS ring member port collaborates with link detection protocols through track entries. ERPS supports only the CC feature of CFD to implement link detection.

Examples

```
# Associate a track entry with Ten-GigabitEthernet 1/0/1 on the RPL owner node in instance 1 of ERPS ring 1.
```

```
<Sysname> system-view  
[Sysname] erps ring 1  
[Sysname-erps-ring1] port0 interface ten-gigabitethernet 1/0/1  
[Sysname-erps-ring1] instance 1  
[Sysname-erps-ring1-inst1] node-role owner rpl port0  
[Sysname-erps-ring1-inst1] quit  
[Sysname-erps-ring1] quit  
[Sysname] interface ten-gigabitethernet 1/0/1  
[Sysname-Ten-GigabitEthernet1/0/1] port erps ring 1 instance 1 track 3
```

Related commands

track cfd

port0

Use **port0** to specify the first member port for an ERPS ring.

Use **undo port0** to restore the default.

Syntax

```
port0 interface interface-type interface-number  
undo port0
```

Default

No member ports exist in an ERPS ring.

Views

ERPS ring view

Predefined user roles

network-admin

Usage guidelines

Do not assign an interface to both an aggregation group and an ERPS ring. If you do so, the interface does not take effect on the ERPS ring and cannot be displayed by using the **display erps detail** command.

Parameters

interface *interface-type interface-number*: Specifies a Layer 2 Ethernet interface or a Layer 2 aggregate interface by its type and number.

Examples

```
# Specify Ten-GigabitEthernet 1/0/1 as the first member port for ERPS ring 1.
<Sysname> system-view
[Sysname] erps ring 1
[Sysname-erps-ring1] port0 interface ten-gigabitethernet 1/0/1
```

port1

Use **port1** to specify the second member port for an ERPS ring.

Use **undo port1** to restore the default.

Syntax

```
port1 interface interface-type interface-number
undo port1
```

Default

No member ports exist in an ERPS ring.

Views

ERPS ring view

Predefined user roles

network-admin

Parameters

interface *interface-type interface-number*: Specifies a Layer 2 Ethernet interface or a Layer 2 aggregate interface by its type and number.

Usage guidelines

Do not assign an interface to both an aggregation group and an ERPS ring. If you do so, the interface does not take effect on the ERPS ring and cannot be displayed by using the **display erps detail** command.

Examples

```
# Specify Ten-GigabitEthernet 1/0/2 as the second member port for ERPS ring 1.
<Sysname> system-view
```

```
[Sysname] erps ring 1
[Sysname-erps-ring1] port1 interface ten-gigabitethernet 1/0/2
```

protected-vlan

Use **protected-vlan** to configure protected VLANs for an ERPS instance.

Use **undo protected-vlan** to delete protected VLANs for an ERPS instance.

Syntax

```
protected-vlan reference-instance instance-id-list
undo protected-vlan [ reference-instance instance-id-list ]
```

Default

No protected VLANs exist in an ERPS instance.

Views

ERPS instance view

Predefined user roles

network-admin

Parameters

instance-id-list: Specifies a space-separated list of up to 10 MSTI items. Each item specifies an MSTI or a range of MSTIs in the form of *instance-id1* to *instance-id2*. The value for *instance-id2* must be greater than or equal to the value for *instance-id1*. The value range for the *instance-id* argument is 0 to 4094. The value 0 indicates CIST. You can use the **display stp region-configuration** command to display the VLAN-to-instance mappings. In PVST mode, the system automatically maps VLANs to MSTIs.

Usage guidelines

If you do not specify the **reference-instance** *instance-id-list* option, the **undo protected-vlan** command deletes all mappings between MSTIs and VLANs in the ERPS instance. The protected VLANs change if the mappings between the MSTIs and VLANs change.

Examples

```
# Configure the protected VLANs for instance 1 of ERPS ring 1.
<Sysname> system-view
[Sysname] erps ring 1
[Sysname-erps-ring1] instance 1
[Sysname-erps-ring1-inst1] protected-vlan reference-instance 0 1 2
```

Related commands

```
display stp region-configuration
```

r-aps level

Use **r-aps level** to configure the level for R-APS packets.

Use **undo r-aps level** to restore the default.

Syntax

```
r-aps level level-value
undo r-aps level
```

Default

The R-APS packet level is 7.

Views

ERPS instance view

Predefined user roles

network-admin

Parameters

level-value: Specifies the R-APS packet level in the range of 0 to 7.

Usage guidelines

The R-APS packet level must be the same for all nodes in an instance of an ERPS ring.

Examples

```
# Configure the R-APS packet level as 1 for instance 1 of ERPS ring 1.
<Sysname> system-view
[Sysname] erps ring 1
[Sysname-erps-ring1] instance 1
[Sysname-erps-ring1-inst1] r-aps level 1
```

r-aps ring-mac

Use **r-aps ring-mac** to configure the ring ID as the last byte of the destination MAC address for R-APS packets.

Use **undo r-aps ring-mac** to restore the default.

Syntax

```
r-aps ring-mac
undo r-aps ring-mac
```

Default

The last byte of the destination MAC address is 1 for the R-APS packets.

Views

ERPS ring view

Predefined user roles

network-admin

Examples

```
# Configure the ID of ERPS ring 2 as the last byte of the destination MAC address for R-APS
packets.
<Sysname> system-view
[Sysname] erps ring 2
[Sysname-erps-ring2] r-aps ring-mac
```

reset erps statistics

Use **reset erps statistics** to clear ERPS packet statistics.

Syntax

```
reset erps statistics ring ring-id [ instance instance-id ]
```

Views

User view

Predefined user roles

network-admin

Parameters

ring *ring-id*: Specifies an ERPS ring by its ID in the range of 1 to 255.

instance *instance-id*: Specifies an ERPS instance by its ID in the range of 1 to 64. If you do not specify this option, this command clears packet statistics for all instances of the ERPS ring.

Examples

```
# Clear packet statistics for instance 1 of ERPS ring 1.  
<Sysname> reset erps statistics ring 1 instance 1
```

Related commands

```
display erps statistics
```

revertive-operation

Use **revertive-operation non-revertive** to set the non-revertive mode for an ERPS ring.

Use **undo revertive-operation** to restore the default.

Syntax

```
revertive-operation non-revertive  
undo revertive-operation
```

Default

An ERPS ring operates in revertive mode.

Views

ERPS instance view

Predefined user roles

network-admin

Usage guidelines

In non-revertive mode, an owner node does not perform any operations when receiving NR packets. You can use the **erps clear** command to restore the revertive mode.

Examples

```
# Set the non-revertive mode for instance 1 of ERPS ring 1.  
<Sysname> system-view  
[Sysname] erps ring 1  
[Sysname-erps-ring1] instance 1  
[Sysname-erps-ring1-inst1] revertive-operation non-revertive
```

ring-type sub-ring

Use `ring-type sub-ring` to configure the ERPS ring as a subring.

Use `undo ring-type sub-ring` to restore the default.

Syntax

```
ring-type sub-ring
undo ring-type
```

Default

An ERPS ring is a major ring.

Views

ERPS ring view

Predefined user roles

network-admin

Examples

```
# Configure ERPS ring 1 as a subring.
<Sysname> system-view
[Sysname] erps ring 1
[Sysname-erps-ring1] ring-type sub-ring
```

sub-ring connect

Use `sub-ring connect` to associate the subring with an ERPS ring.

Use `undo sub-ring connect` to remove the association.

Syntax

```
sub-ring connect ring ring-id instance instance-id
undo sub-ring connect ring ring-id instance instance-id
```

Default

A subring is not associated with ERPS rings.

Views

ERPS instance view

Predefined user roles

network-admin

Parameters

ring *ring-id*: Specifies an ERPS ring by its ID in the range of 1 to 255.

instance *instance-id*: Specifies an ERPS instance by its ID in the range of 1 to 64.

Examples

```
# Configure ERPS ring 1 as a subring for instance 1, and associate the subring with ERPS ring 2.
<Sysname> system-view
[Sysname] erps ring 2
[Sysname-erps-ring2] instance 1
```

```
[Sysname-erps-ring2] quit
[Sysname] erps ring 1
[Sysname-erps-ring1] ring-type sub-ring
[Sysname-erps-ring1] instance 1
[Sysname-erps-ring1-inst1] sub-ring connect ring 2 instance 1
```

Related commands

ring-type sub-ring

timer guard

Use **timer guard** to set the guard timer for an ERPS instance.

Use **undo timer guard** to restore the default.

Syntax

```
timer guard guard-value
```

```
undo timer guard
```

Default

The guard timer is 500 milliseconds for an ERPS instance.

Views

ERPS instance view

Predefined user roles

network-admin

Parameters

guard-value: Specifies the guard timer in the range of 0 to 2000 milliseconds and in step of 10.

Usage guidelines

The guard timer starts when the link recovers. The system processes only the flush packets before the guard timer expires. The guard timer prevents SF messages from impacting the network.

Examples

```
# Set the guard timer to 30 milliseconds for instance 1 of ERPS ring 1.
<Sysname> system-view
[Sysname] erps ring 1
[Sysname-erps-ring1] instance 1
[Sysname-erps-ring1-inst1] timer guard 30
```

timer hold-off

Use **timer hold-off** to set the hold-off timer for an ERPS instance.

Use **undo timer hold-off** to restore the default.

Syntax

```
timer hold-off hold-off-value
```

```
undo timer hold-off
```

Default

The hold-off timer is 0 milliseconds for an ERPS instance.

Views

ERPS instance view

Predefined user roles

network-admin

Parameters

hold-off-value: Specifies the hold-off timer in the range of 0 to 10000 milliseconds and in step of 100.

Usage guidelines

The hold-off timer starts when the port detects a link fault. If the link fault persists when the hold-off timer expires, the port reports the link fault. The hold-off timer delays the fault report time and might impact the link recovery performance.

Examples

```
# Set the hold-off timer to 300 milliseconds for instance 1 of ERPS ring 1.
<Sysname> system-view
[Sysname] erps ring 1
[Sysname-erps-ring1] instance 1
[Sysname-erps-ring1-inst1] timer hold-off 300
```

timer wtr

Use **timer wtr** to set the WTR timer for an ERPS instance.

Use **undo timer wtr** to restore the default.

Syntax

```
timer wtr wtr-value
undo timer wtr
```

Default

The WTR timer is 5 minutes for an ERPS instance.

Views

ERPS instance view

Predefined user roles

network-admin

Parameters

wtr-value: Specifies the WTR timer in the range of 1 to 12 minutes and in step of 1.

Usage guidelines

This timer prevents intermittent link failures from impacting the network.

Examples

```
# Set the WTR timer to 3 minutes for instance 1 of ERPS ring 1.
<Sysname> system-view
[Sysname] erps ring 1
[Sysname-erps-ring1] instance 1
[Sysname-erps-ring1-inst1] timer wtr 3
```