1 RLDP Commands

Command	Function
rldp detect-interval	Configure an interval for sending Rapid Link Detection Protocol (RLDP) packets by a port.
rldp detect-max	Configure the maximum detection count of RLDP.
rldp enable	Enable the global RLDP detection function.
rldp error-recover interval	Configure a time interval for RLDP to recover failed ports.
rldp neighbor-negotiation	Enable the neighbor negotiation function of RLDP.
rldp port	Enable RLDP detection on a port.
rldp reset	Recover all the failed RLDP ports and restart detection.
show rldp	Display the RLDP state information.
rldp detect-latency	Configure the loop detection latency interval of RLDP.

1.1 rldp detect-interval

Function

Run the **rldp detect-interval** command to configure an interval for sending Rapid Link Detection Protocol (RLDP) packets by a port.

Run the **no** form of this command to remove this configuration.

Run the **default** form of this command to restore the default configuration.

The default interval for sending RLDP packets by a port is **3** seconds.

Syntax

rldp detect-interval *interval*

no rldp detect-interval

default rldp detect-interval

Parameter Description

interval: Interval for sending RLDP packets by a port, in seconds. The value range is from 1 to 15.

Command Modes

Global configuration mode

Default Level

14

Usage Guidelines

The command takes effect for the probe packets and loop packets only.

If Spanning Tree Protocol (STP) has been enabled, you are advised to configure the command according to the rule that the total time calculated using the formula of [(Detection interval × Maximum detection count)] + 1 is smaller than the topology convergence time of STP.

Examples

The following example sets the interval for sending RLDP packets by a port to 5 seconds.

```
Hostname> enable
Hostname# configure terminal
Hostname(config)# rldp detect-interval 5
```

Notifications

N/A

Common Errors

N/A

Platform Description

N/A

Related Commands

N/A

1.2 rldp detect-max

Function

Run the **rldp detect-max** command to configure the maximum detection count of RLDP.

Run the **no** form of this command to remove this configuration.

Run the **default** form of this command to restore the default configuration.

The default maximum detection count of RLDP is **2**.

Syntax

rldp detect-max *max-detect-number*

no rldp detect-max

default rldp detect-max

Parameter Description

max-detect-number: Maximum detection count of RLDP. The value range is from 2 to 10.

Command Modes

Global configuration mode

Default Level

14

Usage Guidelines

Maximum detection time = (Detection interval × Maximum detection count) + 1.

If a neighbor port still fails to respond when the maximum detection time expires, the link is diagnosed as a faulty link.

Examples

The following example sets the maximum detection count of RLDP to 5.

```
Hostname> enable
Hostname# configure terminal
Hostname(config)# rldp detect-max 5
```

Notifications

N/A

Common Errors

N/A

Platform Description

N/A

Related Commands

N/A

1.3 rldp enable

Function

Run the **rldp enable** command to enable the global RLDP detection function.

Run the **no** form of this command to disable this feature.

Run the **default** form of this command to restore the default configuration.

The global RLDP detection function is disabled by default.

Syntax

rldp enable

no rldp enable

default rldp enable

Parameter Description

N/A

Command Modes

Global configuration mode

Default Level

14

Usage Guidelines

Only when the global RLDP detection function is enabled, can RLDP detection take effect on a port.

Examples

The following example enables the global RLDP detection function.

```
Hostname> enable
Hostname# configure terminal
Hostname(config)# rldp enable
```

Notifications

N/A

Common Errors

N/A

Platform Description

N/A

Related Commands

N/A

1.4 rldp error-recover interval

Function

Run the **rldp error-recover interval** command to configure a time interval for RLDP to recover failed ports.

Run the **no** form of this command to remove this configuration.

Run the **default** form of this command to restore the default configuration.

No time interval for RLDP to recover failed ports regularly is configured by default.

Syntax

rldp error-recover interval *interval*

no rldp error-recover interval

default rldp error-recover interval

Parameter Description

interval: Time interval, in seconds. The value range is from 30 to 86400.

Command Modes

Global configuration mode

Default Level

14

Usage Guidelines

This command is used to recover failed ports regularly by RLDP.

When an RLDP port is in the error state, RLDP detection is started regularly on the port. If the error has been eliminated, the RLDP port is updated to the normal status; if the error still exists, RLDP detection is still effective on the port, and detection is restarted in the next cycle until the error is removed.

Examples

The following example sets a time interval for RLDP to recover failed ports to 600 seconds.

```
Hostname> enable
Hostname# configure terminal
Hostname(config)# rldp error-recover interval 600
```

Notifications

N/A

Common Errors

N/A

Platform Description

N/A

Related Commands

N/A

1.5 rldp neighbor-negotiation

Function

Run the **rldp neighbor-negotiation** command to enable the neighbor negotiation function of RLDP.

Run the **no** form of this command to disable this feature.

Run the **default** form of this command to restore the default configuration.

The neighbor negotiation function is disabled by default.

Syntax

rldp neighbor-negotiation

no rldp neighbor-negotiation

default rldp neighbor-negotiation

Parameter Description

N/A

Command Modes

Global configuration mode

Default Level

14

Usage Guidelines

After the negotiation function of RLDP is enabled, if a RLDP packet sent by a neighbor is successfully received, it is determined that the negotiation succeeds.

When the negotiation succeeds, the RLDP detection function is started on the port; otherwise, it is not started.

Examples

The following example configures the neighbor negotiation function during RLDP detection.

```
Hostname> enable
Hostname# configure terminal
Hostname(config)# rldp neighbor-negotiation
```

Notifications

N/A

Common Errors

N/A

Platform Description

N/A

Related Commands

N/A

1.6 rldp port

Function

Run the **rldp port** command to enable RLDP detection on a port.

Run the **no** form of this command to disable this feature.

Run the **default** form of this command to restore the default configuration.

RLDP detection is not configured on a port by default.

Syntax

rldp port { **bidirection-detect** | **loop-detect** | **unidirection-detect** } { **block** | **shutdown-port** | **shutdown-svi** | **warning** }

no rldp port { **bidirection-detect** | **loop-detect** | **unidirection-detect** }

default rldp port { **bidirection-detect** | **loop-detect** | **unidirection-detect** }

Parameter Description

bidirection-detect: Configures bidirectional link detection.

loop-detect: Configures loop detection.

unidirection-detect: Configures unidirectional link detection.

block: Disables the MAC address learning and forwarding functions on the port.

shutdown-port: Shuts down the port.

shutdown-svi: Shuts down the switch virtual interface (SVI) where the port is.

warning: Sends an alarm.

Command Modes

Interface configuration mode

Default Level

14

Usage Guidelines

This command can be configured on L2 and L3 physical ports.

Aggregate ports (APs) do not support this command, but the command can be configured on the member ports of an AP.

Examples

The following example enables RLDP detection on port GigabitEthernet 0/1, configures the loop detection type, and sets the failure handling method to block.

```
Hostname> enable
Hostname# configure terminal
Hostname(config)# interface gigabitethernet 0/1
Hostname(config-if-GigabitEthernet 0/1)# rldp port loop-detect block
```

Notifications

N/A

Common Errors

N/A

Platform Description

N/A

Related Commands

N/A

1.7 rldp reset

Function

Run the **rldp reset** command to recover all the failed RLDP ports and restart detection.

Syntax

rldp reset

Parameter Description

N/A

Command Modes

Privileged EXEC mode

Default Level

2

Usage Guidelines

This command is used to restore the status of all failed ports, which can also be restored using the **errdisable recovery** command. For the introduction and specific configuration of the **errdisable recovery** command, refer to "Configuring Ethernet Interface" in *Interface Configuration Guide*.

Examples

The following example recovers all the failed RLDP ports and restarts detection.

```
Hostname> enable
Hostname# rldp reset
```

Notifications

N/A

Common Errors

N/A

Platform Description

N/A

Related Commands

N/A

1.8 show rldp

Function

Run the **show rldp** command to display the RLDP state information.

Syntax

show rldp [**interface** *interface-type interface-number*]

Parameter Description

interface *interface-type interface-number*: Configures the RLDP port type and number. If this parameter is not specified, the RLDP state information of all the ports is displayed.

Command Modes

All modes except the user EXEC mode

Default Level

2

Usage Guidelines

N/A

Examples

The following example displays the RLDP state information of all the ports.

```
Hostname> enable
Hostname# show rldp
rldp state         : disable
rldp hello interval: 3
rldp max hello     : 2
rldp local bridge  : 00d0.f822.37da
GigabitEthernet 0/1
port state      : normal
neighbor bridge : 0000.0000.0000
neighbor port   :
unidirection detect information:
     action: shutdown-port
     state : normal
bidirection detect information:
     action: shutdown-port
     state : normal
```

```
loop detect information:
     action: shutdown-port
     state : normal
```

Table 1-1Output Fields of the show rldp Command

Field	Description
rldp state	State of the global RLDP function: ● **enable**: Indicates that the function is enabled. ● **disable**: Indicates that the function is disabled.
rldp hello interval	Interval for sending RLDP packets by a port, in seconds.
rldp max hello	Maximum detection count of RLDP.
rldp local bridge	MAC address of the local system. It is used to differentiate the local device from the neighbor device.
port state	Port state: ● **error**: Indicates that the link is abnormal. ● **normal**: Indicates that the link is normal.
neighbor bridge	MAC address of the neighbor system. It is used to differentiate the local device from the neighbor device.
neighbor port	Port that connects the neighbor device to the local device.
unidirection detect information	Unidirectional link detection information.
bidirection detect information	Bidirectional link detection information.
loop detect information	Loop detection information.
action	Handling policy after a link exception is detected.
state	RLDP detection state of the port: ● **error**: Indicates that the link is abnormal. ● **normal**: Indicates that the link is normal.

The following example displays the RLDP state information of port GigabitEthernet 0/1.

```
Hostname> enable
Hostname# show rldp interface gigabitethernet 0/1
port state      : normal
local bridge    : 00d0.f822.37da
neighbor bridge : 00d0.f823.37db
neighbor port   : GigabitEthernet 0/1
unidirection detect information:
     action: shutdown-port
     state : normal
bidirection detect information:
```

```
    action: shutdown-port
    state : normal
loop detect information:
    action: shutdown-port
    state : normal
```

Table 1-2Output Fields of the show rldp interface Command

Field	Description
port state	Current state of the port: ● **Normal**: Indicates the normal state. ● **Error**: Indicates the failed state.
local bridge	MAC address of the local system. It is used to differentiate the local device from the neighbor device.
neighbor bridge	MAC address of the neighbor system. It is used to differentiate the local device from the neighbor device.
action	Handling policy after a link exception is detected.
state	RLDP detection state of the port: ● **error**: Indicates that the link is abnormal. ● **normal**: Indicates that the link is normal.

Notifications

N/A

Platform Description

N/A

Related Commands

N/A

1.9 rldp detect-latency

Function

Run the **rldp detect-latency** command to configure the loop detection latency interval of RLDP.

Run the **no** form of this command to remove this configuration.

Run the **default** form of this command to restore the default configuration.

The default loop detection latency interval of RLDP is **0** seconds.

Syntax

rldp detect-latency *interval*

no rldp detect-latency

default rldp detect-latency

Parameter Description

interval: Loop detection latency interval of RLDP, in seconds. The value range is from 0 to 3600.

Command Modes

Global configuration mode

Default Level

14

Usage Guidelines

This command is used to suppress RLDP loop detection for core devices. Therefore, the selected latency interval is generally greater than the RLDP loop detection interval of the downlink aggregation device.

Examples

The following example sets the loop detection latency interval of RLDP to 2 seconds.

```
Hostname> enable
Hostname# configure terminal
Hostname(config)# rldp detect-latency 2
```

Notifications

N/A

Common Errors

N/A

Platform Description

N/A

Related Commands

N/A