



Mirroring Traffic

CHAPTERS

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This guide applies to:

T1500G-8T v2 or above, T1500G-10PS v2 or above, T1500G-10MPS v2 or above, T1500-28PCT v3 or above, T1600G-18TS v2 or above, T1600G-28TS v3 or above, T1600G-28PS v3 or above, T1600G-52TS v3 or above, T1600G-52PS v3 or above, T1700X-16TS v3 or above, T1700G-28TQ v3 or above, T2500G-10TS v2 or above, T2600G-18TS v2 or above, T2600G-28TS v3 or above, T2600G-28MPS v3 or above, T2600G-28SQ v1 or above, T2600G-52TS v3 or above.

1 Mirroring

You can analyze network traffic and troubleshoot network problems using Mirroring. Mirroring allows the switch to send a copy of the traffic that passes through specified sources (ports, LAGs or the CPU) to a destination port. It does not affect the switching of network traffic on source ports, LAGs or the CPU.

1.1 Using the GUI

Choose the menu **MAINTENANCE > Mirroring** to load the following page.

Figure 1-1 Port Mirroring Session List

Port Mirroring Session List				
Session	Destination Port	Mode	Source Interfaces	Operation
1		Ingress Only Egress Only Both		Edit Clear
Total: 1				

The above page displays a mirroring session, and no more session can be created. Click **Edit** to configure this mirroring session on the following page.

Figure 1-2 Configure the Mirroring Session

Destination Port Config

UNIT1

2

4

6

8

10

12

14

16

18

20

22

24

26

28

1

3

5

7

9

11

13

15

17

19

21

23

25

27

Apply

Source Interfaces Config

UNIT1

LAGS

CPU

<input type="checkbox"/>	Port	Ingress	Egress	LAG
<input type="checkbox"/>	1/0/1	Disabled	Disabled	--
<input type="checkbox"/>	1/0/2	Disabled	Disabled	--
<input type="checkbox"/>	1/0/3	Disabled	Disabled	--
<input type="checkbox"/>	1/0/4	Disabled	Disabled	--
<input type="checkbox"/>	1/0/5	Disabled	Disabled	--
<input type="checkbox"/>	1/0/6	Disabled	Disabled	--
<input type="checkbox"/>	1/0/7	Disabled	Disabled	--
<input type="checkbox"/>	1/0/8	Disabled	Disabled	--
<input type="checkbox"/>	1/0/9	Disabled	Disabled	--
<input type="checkbox"/>	1/0/10	Disabled	Disabled	--

Total: 28

Follow these steps to configure the mirroring session:

- 1) In the **Destination Port Config** section, specify a destination port for the mirroring session, and click **Apply**.
- 2) In the **Source Interfaces Config** section, specify the source interfaces and click **Apply**. Traffic passing through the source interfaces will be mirrored to the destination port. There are three source interface types: port, LAG, and CPU. Choose one or more types according to your need.

UNIT1	Select the desired ports as the source interfaces. The switch will send a copy of traffic passing through the port to the destination port.
LAGS	Select the desired LAGs as the source interfaces. The switch will send a copy of traffic passing through the LAG members to the destination port.
CPU	When selected, the switch will send a copy of traffic passing through the CPU to the destination port.
Ingress	With this option enabled, the packets received by the corresponding interface (port, LAG or CPU) will be copied to the destination port. By default, it is disabled.
Egress	With this option enabled, the packets sent by the corresponding interface (port, LAG or CPU) will be copied to the destination port. By default, it is disabled.



Note:

- The member ports of an LAG cannot be set as a destination port or source port.
- A port cannot be set as the destination port and source port at the same time.

1.2 Using the CLI

Follow these steps to configure Mirroring.

Step 1	configure Enter global configuration mode.
Step 2	monitor session <i>session_num</i> destination interface { fastEthernet <i>port</i> gigabitEthernet <i>port</i> ten-gigabitEthernet <i>port</i> } Enable the port mirror function and set the destination port. <i>session_num</i> : The monitor session number. It can only be specified as 1. <i>port</i> : The destination port number. You can specify only one destination port for the mirror session.
Step 3	monitor session <i>session_num</i> source { cpu <i>cpu_numbr</i> interface { fastEthernet <i>port-list</i> gigabitEthernet <i>port-list</i> ten-gigabitEthernet <i>port-list</i> port-channel <i>port-channel-id</i> } } mode Configure ports or LAGs as the monitored interfaces. <i>session_num</i> : The monitor session number. It can only be specified as 1. <i>cpu_number</i> : The CPU number. It can only be specified as 1. <i>port-list</i> : List of source ports. It is multi-optional. <i>mode</i> : The monitor mode. There are three options: rx , tx and both : rx : The incoming packets of the source port will be copied to the destination port. tx : The outgoing packets of the source port will be copied to the destination port. both : Both of the incoming and outgoing packets on source port can be copied to the destination port. <i>Note</i> : You can configure one or more source interface types (ports, LAGs and the CPU) according to your needs.
Step 4	show monitor session Verify the Port Mirror configuration.
Step 5	end Return to privileged EXEC mode.
Step 6	copy running-config startup-config Save the settings in the configuration file.

The following example shows how to copy the received and transmitted packets on port 1/0/1,2,3 and the CPU to port 1/0/10.

Switch#configure

Switch(config)#monitor session 1 destination interface gigabitEthernet 1/0/10

Switch(config)#monitor session 1 source interface gigabitEthernet 1/0/1-3 both

Switch(config)#monitor session 1 source cpu 1 both

Switch(config)#show monitor session

Monitor Session: 1

Destination Port: Gi1/0/10

Source Ports(Ingress): Gi1/0/1-3

Source Ports(Egress): Gi1/0/1-3

Source CPU(Ingress): cpu1

Source CPU(Egress): cpu1

Switch(config-if)#end

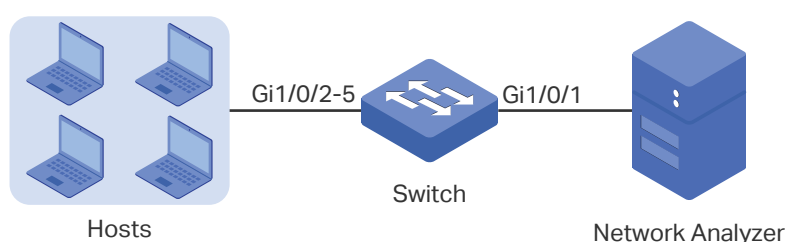
Switch#copy running-config startup-config

2 Configuration Examples

2.1 Network Requirements

As shown below, several hosts and a network analyzer are directly connected to the switch. For network security and troubleshooting, the network manager needs to use the network analyzer to monitor the data packets from the end hosts.

Figure 2-1 Network Topology



2.2 Configuration Scheme

To implement this requirement, you can use Mirroring feature to copy the packets from ports 1/0/2-5 to port 1/0/1. The overview of configuration is as follows:

- 1) Specify ports 1/0/2-5 as the source ports, allowing the switch to copy the packets from the hosts.
- 2) Specify port 1/0/1 as the destination port so that the network analyzer can receive mirrored packets from the hosts.

Demonstrated with T2600G-28TS, the following sections provide configuration procedure in two ways: using the GUI and using the CLI.

2.3 Using the GUI

- 1) Choose the menu **MAINTENANCE > Mirroring** to load the following page. It displays the information of the mirroring session.

Figure 2-2 Mirror Session List

Port Mirroring Session List				
Session	Destination Port	Mode	Source Interfaces	Operation
1		Ingress Only Egress Only Both		Edit Clear
Total: 1				

- 2) Click **Edit** on the above page to load the following page. In the **Destination Port Config** section, select port 1/0/1 as the destination port and click **Apply**.

Figure 2-3 Destination Port Configuration

Destination Port Config

UNIT1

2	4	6	8	10	12	14	16	18	20	22	24	26	28
1	3	5	7	9	11	13	15	17	19	21	23	25	27

Apply

- 3) In the **Source Interfaces Config** section, select ports 1/0/2-5 as the source ports, and enable **Ingress** and **Egress** to allow the received and sent packets to be copied to the destination port. Then click **Apply**.

Figure 2-4 Source Port Configuration

Source Interfaces Config

UNIT1 LAGS CPU

	Port	Ingress	Egress	LAG
		Enable	Enable	
<input type="checkbox"/>	1/0/1	Disabled	Enabled	--
<input checked="" type="checkbox"/>	1/0/2	Enabled	Enabled	--
<input checked="" type="checkbox"/>	1/0/3	Enabled	Enabled	--
<input checked="" type="checkbox"/>	1/0/4	Enabled	Enabled	--
<input checked="" type="checkbox"/>	1/0/5	Enabled	Enabled	--
<input type="checkbox"/>	1/0/6	Disabled	Disabled	--
<input type="checkbox"/>	1/0/7	Disabled	Disabled	--
<input type="checkbox"/>	1/0/8	Disabled	Disabled	--
<input type="checkbox"/>	1/0/9	Disabled	Disabled	--
<input type="checkbox"/>	1/0/10	Disabled	Disabled	--

Total: 28 4 entries selected. Cancel Apply

- 4) Click  Save to save the settings.

2.4 Using the CLI

Switch#configure

Switch(config)#monitor session 1 destination interface gigabitEthernet 1/0/1

Switch(config)#monitor session 1 source interface gigabitEthernet 1/0/2-5 both

Switch(config)#end

Switch#copy running-config startup-config

Verify the Configuration

Switch#show monitor session 1

Monitor Session: 1

Destination Port:	Gi1/0/1
Source Ports(Ingress):	Gi1/0/2-5
Source Ports(Egress):	Gi1/0/2-5

3 Appendix: Default Parameters

Default settings of Switching are listed in th following tables.

Table 3-1 Configurations for Ports

Parameter	Default Setting
Ingress	Disabled
Egress	Disabled