



IP Traffic Export

The IP Traffic Export feature allows users to configure their router to export IP packets that are received on multiple, simultaneous WAN or LAN interfaces. The unaltered IP packets are exported on a single LAN or VLAN interface, thereby, easing deployment of protocol analyzers and monitoring devices.

Feature History for IP Traffic Export

Release	Modification
12.3(4)T	This feature was introduced.
12.2(25)S	This feature was integrated into Cisco IOS Release 12.2(25)S.

Finding Support Information for Platforms and Cisco IOS Software Images

Use Cisco Feature Navigator to find information about platform support and Cisco IOS software image support. Access Cisco Feature Navigator at <http://www.cisco.com/go/fn>. You must have an account on Cisco.com. If you do not have an account or have forgotten your username or password, click **Cancel** at the login dialog box and follow the instructions that appear.

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Restrictions for IP Traffic Export

Platform Restriction

IP traffic export is intended only for software switching platforms; distributed architectures are not supported.

IP Packet Forwarding Performance Impact

When IP traffic export is enabled, a delay is incurred on the outbound interface when packets are captured and transmitted across the interface. Performance delays increase with the increased number of interfaces that are monitored and the increased number of destination hosts.

Exported Traffic Limitation

- The MAC address of the device that is receiving the exported traffic must be on the same VLAN or directly connected to one of the router interfaces. (Use the **show arp** command to determine the MAC address of device that is directly connected to an interface.)
- The outgoing interface for exported traffic must be Ethernet (10/100/1000). (Incoming (monitored) traffic can traverse any interface.)

Information About IP Traffic Export

To use the IP traffic export, you should understand the following concept:

- [Benefits of IP Traffic Export, page 2](#)

Benefits of IP Traffic Export

Simplified IDS Deployment

Without the ability to export IP traffic, the Intrusion Detection System (IDS) probe must be inline with the network device to monitor traffic flow. IP traffic export eliminates the probe placement limitation, allowing users to place an IDS probe in any location within their network or direct all exported traffic to a VLAN that is dedicated for network monitoring. Allowing users to choose the optimal location of their IDS probe reduces processing burdens.

Also, because packet processing that was once performed on the network device can now be performed away from the network device, the need to enable IDS with the Cisco IOS software can be eliminated.

IP Traffic Export Functionality Benefits

Users can configure their router to perform the following tasks:

- Filter copied packets via an access control list (ACL)
- Filter copied packets via sampling, which allows you to export one in every few packets in which you are interested. Use this option when it is not necessary to export all incoming traffic. Also, sampling is useful when a monitored ingress interface can send traffic faster than the egress interface can transmit it.
- Configure bidirectional traffic on an interface. (By default, only incoming traffic is exported.)

How to Use IP Traffic Export

This section contains the following procedures:

- [Configuring IP Traffic Export, page 3](#)
- [Displaying IP Traffic Export Configuration Data, page 5](#)

Configuring IP Traffic Export

Use this task to configure IP traffic export profiles, which enable IP traffic to be exported on an ingress interface and allow you to specify profile attributes, such as the outgoing interface for exporting traffic.



Note

Packet exporting is performed before packet switching or filtering.

IP Traffic Export Profiles Overview

All packet export configurations are specified via IP traffic export profiles, which consist of IP-traffic-export-related command-line interfaces (CLIs) that control various attributes for both incoming and outgoing exported IP traffic. You can configure a router with multiple IP traffic export profiles. (Each profile must have a different name.) You can apply different profiles on different interfaces.

The two different IP traffic export profiles are as follows:

- The global configuration profile, which is configured via the **ip traffic-export profile** command.
- The IP traffic export submode configuration profile, which is configured via any of the following router IP Traffic Export (RITE) commands—**bidirectional**, **incoming**, **interface**, **mac-address**, and **outgoing**.

SUMMARY STEPS

1. **enable**
2. **configure terminal**
3. **ip traffic-export profile** *profile-name*
4. **interface** *interface-name*
5. **bidirectional**
6. **mac-address** *H.H.H*
7. **incoming** {**access-list** {*standard* | *extended* | *named*} | **sample one-in-every** *packet-number*}
8. **outgoing** {**access-list** {*standard* | *extended* | *named*} | **sample one-in-every** *packet-number*}
9. **exit**
10. **interface** *type number*
11. **ip traffic-export apply** *profile-name*

DETAILED STEPS

	Command or Action	Purpose
Step 1	<code>enable</code> Example: Router> enable	Enables privileged EXEC mode. <ul style="list-style-type: none"> Enter your password if prompted.
Step 2	<code>configure terminal</code> Example: Router# configure terminal	Enters global configuration mode.
Step 3	<code>ip traffic-export profile profile-name</code> Example: Router(config)# ip traffic-export profile my_rite	Creates or edits an IP traffic export profile, enables the profile on an ingress interface, and enters RITE configuration mode.
Step 4	<code>interface interface-name</code> Example: Router(config-rite)# interface FastEthernet 0/1	Specifies the outgoing (monitored) interface for exported traffic. Note If you do not issue this command, the profile will not recognize an interface in which to send the captured IP traffic.
Step 5	<code>bidirectional</code> Example: Router(config-rite)# bidirectional	(Optional) Exports incoming and outgoing IP traffic on the monitored interface. Note If this command is not enabled, only incoming traffic is exported.
Step 6	<code>mac-address H.H.H</code> Example: Router(config-rite)# mac-address 00a.8aab.90a0	Specifies the 48-bit address of the destination host that is receiving the exported traffic. Note If you do not issue this command, the profile will not recognize a destination host in which to send the exported packets.
Step 7	<code>incoming {access-list {standard extended named} sample one-in-every packet-number}</code> Example: Router(config-rite)# incoming access-list my_acl	(Optional) Configures filtering for incoming traffic. After you have created a profile via the ip traffic-export profile , this functionality is enabled by default.
Step 8	<code>outgoing {access-list {standard extended named} sample one-in-every packet-number}</code> Example: Router(config-rite)# outgoing sample one-in-every 50	(Optional) Configures filtering for outgoing export traffic. Note If you issue this command, you must also issue the bidirectional command, which enables outgoing traffic to be exported. However, only routed traffic (such as passthrough traffic) is exported; that is, traffic that originates from the network device is not exported.
Step 9	<code>exit</code>	Exits RITE configuration mode.

	Command or Action	Purpose
Step 10	<pre>interface type number</pre> <p>Example: Router(config)# interface FastEthernet0/0</p>	Configures an interface type and enters interface configuration mode.
Step 11	<pre>ip traffic-export apply profile-name</pre> <p>Example: Router(config-if)# ip traffic-export apply my_rite</p>	Enables IP traffic export on an ingress interface.

Troubleshooting Tips

Creating an IP Traffic Export Profile

The **interface** and **mac-address** commands are required to successfully create a profile. If these commands are not issued, you will receive the following profile incomplete message if the **show running config** command is issued:

```
ip traffic-export profile newone
! No outgoing interface configured
! No destination mac-address configured
```

Applying an IP Traffic Export Profile to an interface

The following system logging messages should appear immediately after you activate and deactivate a profile from an interface (via the **ip traffic-export apply profile** command):

- Activated profile:

```
%RITE-5-ACTIVATE: Activated IP traffic export on interface FastEthernet 0/0.
```

- Deactivated profile:

```
%RITE-5-DEACTIVATE: Deactivated IP traffic export on interface FastEthernet 0/0.
```

If you attempt to apply an incomplete profile to an interface, you will receive the following message:

```
Router(config-if)# ip traffic-export apply newone
RITE: profile newone has missing outgoing interface
```

What to Do Next

After you have configured a profile and enabled the profile on an ingress interface, you can monitor IP traffic exporting events and verify your profile configurations. To complete these steps, refer to the following task “[Displaying IP Traffic Export Configuration Data](#).”

Displaying IP Traffic Export Configuration Data

This task allows you to verify IP traffic export parameters such as the monitored ingress interface, which is where the IP traffic is exported, and outgoing and incoming IP packet information, such as configured ACLs. You can also use this task to monitor packets that are captured and then transmitted across an interface to a destination host. Use this optional task to help you troubleshoot any problems with your exported IP traffic configurations.

SUMMARY STEPS

1. **enable**
2. **debug ip traffic-export events**
3. **show ip traffic-export [interface *interface-name* | profile *profile-name*]**

DETAILED STEPS

	Command or Action	Purpose
Step 1	enable Example: Router> enable	Enables privileged EXEC mode. <ul style="list-style-type: none"> • Enter your password if prompted.
Step 2	debug ip traffic-export events Example: Router# debug ip traffic-export events	Enables debugging messages for exported IP traffic packets events.
Step 3	show ip traffic-export [interface <i>interface-name</i> profile <i>profile-name</i>] Example: Router# show ip traffic-export	Displays information related to exported IP traffic events. <ul style="list-style-type: none"> • interface <i>interface-name</i>—Only data associated with the monitored ingress interface is shown. • profile <i>profile-name</i>—Only flow statistics, such as exported packets and the number of bytes, are shown.

Examples

The following sample output from the **show ip traffic-export** command is for the profile “one.” This example is for a single, configured interface. If multiple interfaces are configured, the information shown below is displayed for each interface.

```
Router# show ip traffic-export

Router IP Traffic Export Parameters
Monitored Interface           FastEthernet0/0
  Export Interface             FastEthernet0/1
  Destination MAC address      0030.7131.abfc
  bi-directional traffic export is off
Input IP Traffic Export Information   Packets/Bytes Exported   0/0
  Packets Dropped              0
  Sampling Rate                 one-in-every 1 packets
  No Access List configured
  Profile one is Active
```

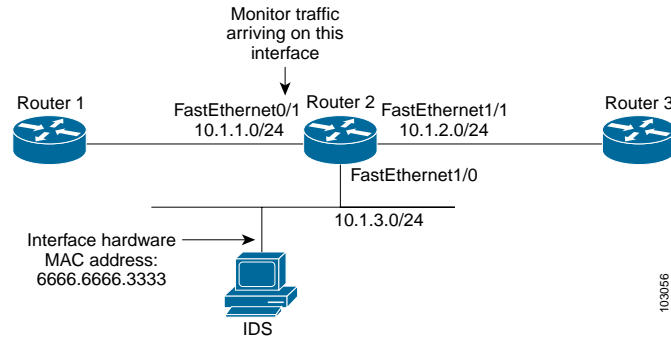
Configuration Examples for IP Traffic Export

This section includes the following configuration example:

- [Exporting IP Traffic Configuration: Example, page 7](#)

Exporting IP Traffic Configuration: Example

Figure 1 and the following sample output from the **show running-config** command illustrate how to configure Router 2 to export the incoming traffic from Router 1 to IDS:



```
Router2# show running-config
```

```
Building configuration...
```

```
Current configuration :2349 bytes
```

```
! Last configuration change at 20:35:39 UTC Wed Oct 8 2003
! NVRAM config last updated at 20:35:39 UTC Wed Oct 8 2003
!
version 12.3
service timestamps debug uptime
service timestamps log uptime
no service password-encryption
service internal
service udp-small-servers
!
hostname rite-3745
!
boot system flash:c3745-js-mz.123-1.8.PI2d
no logging console
enable password lab
!
no aaa new-model
ip subnet-zero
!
no ip domain lookup
!
ip cef
!
ip traffic-export profile my_rite
  interface FastEthernet1/0
    mac-address 6666.6666.3333
!
interface FastEthernet0/0
  ip address 10.0.0.94 255.255.255.0
  duplex auto
  speed auto
!
interface FastEthernet0/1
  ip address 10.1.1.2 255.255.255.0
  duplex auto
  speed auto
```

```

ip traffic-export apply my_rite
!
interface FastEthernet1/0
ip address 10.1.3.2 255.255.255.0
no ip redirects
no cdp enable
!
interface FastEthernet1/1
ip address 10.1.2.2 255.255.255.0
duplex auto
speed auto
!
router ospf 100
log-adjacency-changes
network 10.1.0.0 0.0.255.255 area 0
!
ip http server
ip classless
!
snmp-server engineID local 0000000902000004C1C59140
snmp-server community public RO
snmp-server enable traps tty
!
control-plane
!
dial-peer cor custom
!
gateway
!
line con 0
exec-timeout 0 0
stopbits 1
line aux 0
line vty 0 4
password lab
login
!
ntp clock-period 17175608
ntp server 10.0.0.2
!
end

```

Additional References

The following sections provide references related to IP Traffic Export.

Related Documents

Related Topic	Document Title
Configuring IDS	The chapter “Configuring Cisco IOS Firewall Intrusion Detection System” in the section “Traffic Filtering and Firewalls” of the <i>Cisco IOS Security Configuration Guide</i> .
Configuring IP	The chapter “Configuring IP Services” in the section “IP Addressing and Services” of the <i>Cisco IOS IP Configuration Guide</i>

Standards

Standards	Title
No new or modified standards are supported by this feature, and support for existing standards has not been modified by this feature.	—

MIBs

MIBs	MIBs Link
No new or modified MIBs are supported by this feature, and support for existing MIBs has not been modified by this feature.	To locate and download MIBs for selected platforms, Cisco IOS releases, and feature sets, use Cisco MIB Locator found at the following URL: http://www.cisco.com/go/mibs

RFCs

RFCs	Title
No new or modified RFCs are supported by this feature, and support for existing RFCs has not been modified by this feature.	—

Technical Assistance

Description	Link
Technical Assistance Center (TAC) home page, containing 30,000 pages of searchable technical content, including links to products, technologies, solutions, technical tips, and tools. Registered Cisco.com users can log in from this page to access even more content.	http://www.cisco.com/public/support/tac/home.shtml

Command Reference

This section documents new commands.

- [bidirectional](#)
- [debug ip traffic-export events](#)
- [incoming](#)
- [interface \(RITE\)](#)
- [ip traffic-export apply](#)
- [ip traffic-export profile](#)

- [mac-address \(RITE\)](#)
- [outgoing](#)

bidirectional

To enable incoming and outgoing IP traffic to be exported across a monitored interface, use the **bidirectional** command in router IP traffic export (RITE) configuration mode. To return to the default functionality, use the **no** form of this command.

bidirectional

no bidirectional

Syntax Description This command has no arguments or keywords.

Defaults If this command is not enabled, only incoming traffic is exported.

Command Modes RITE configuration

Command History	Release	Modification
	12.3(4)T	This command was introduced.
	12.2(25)S	This command was integrated into Cisco IOS Release 12.2(25)S.

Usage Guidelines By default, only incoming IP traffic is exported. If you choose to export outgoing IP traffic, you must issue both the **bidirectional** command, which enables outgoing traffic to be exported, and the **outgoing** command, which specifies how the outgoing traffic will be filtered.

The **ip traffic-export profile** command allows you to begin a profile that can be configured to export IP packets as they arrive or leave a selected router ingress interface. A designated egress interface exports the captured IP packets out of the router. Thus, the router can export unaltered IP packets to a directly connected device.

Examples The following example shows how to export both incoming and outgoing IP traffic on the FastEthernet interface:

```
Router(config)# ip traffic-export profile johndoe
Router(config-rite)# interface FastEthernet1/0.1
Router(config-rite)# bidirectional
Router(config-rite)# incoming access-list 101
Router(config-rite)# outgoing access-list 101
Router(config-rite)# mac-address 6666.6666.3333
```

Related Commands	Command	Description
	interface (RITE)	Specifies the outgoing interface for exporting traffic.
	ip traffic-export profile	Creates or edits an IP traffic export profile and enables the profile on an ingress interface.
	outgoing	Configures filtering for outgoing export traffic.

debug ip traffic-export events

To enable debugging messages for exported IP packet events, use the **debug ip traffic-export** command in privileged EXEC mode. To disable debugging messages, use the **no** form of this command.

debug ip traffic-export events

no debug ip traffic-export events

Syntax Description This command has no arguments or keywords.

Command Modes Privileged EXEC

Command History	Release	Modification
	12.3(4)T	This command was introduced.
	12.2(25)S	This command was integrated into Cisco IOS Release 12.2(25)S.

Examples The following is sample output from the **debug ip traffic-export events** command:

```
Router# debug ip traffic-export events

RITE:exported input packet # 547
RITE:exported input packet # 548
RITE:exported input packet # 549
RITE:exported input packet # 550
RITE:exported input packet # 551
RITE:exported input packet # 552
RITE:exported input packet # 553
RITE:exported input packet # 554
RITE:exported input packet # 555
RITE:exported input packet # 556
RITE:exported input packet # 557
RITE:exported input packet # 558
RITE:exported input packet # 559
RITE:exported input packet # 560
RITE:exported input packet # 561
RITE:exported input packet # 562
```

Related Commands	Command	Description
	ip traffic-export profile	Creates or edits an IP traffic export profile and enables the profile on an ingress interface.

incoming

To configure filtering for incoming IP traffic, use the **incoming** command in router IP traffic export (RITE) configuration mode. To disable filtering for incoming traffic, use the **no** form of this command.

incoming {**access-list** {*standard* | *extended* | *named*} | **sample one-in-every** *packet-number*}

no incoming {**access-list** {*standard* | *extended* | *named*} | **sample one-in-every** *packet-number*}

Syntax Description

access-list { <i>standard</i> <i>extended</i> <i>named</i> }	An existing numbered (standard or extended) or named access control list (ACL).
sample one-in-every <i>packet-number</i>	Exports only one packet out of every specified number of packets. Valid range for the <i>packet-number</i> argument is 2 to 2147483647 packets. By default, all traffic is exported.

Note The filter is applied only to exported traffic, not normal router traffic.

Defaults

If this command is not enabled, all incoming IP traffic will be filtered via sampling.

Command Modes

RITE configuration

Command History

Release	Modification
12.3(4)T	This command was introduced.
12.2(25)S	This command was integrated into Cisco IOS Release 12.2(25)S.

Usage Guidelines

When configuring a network device for exporting IP traffic, you can issue the **incoming** command to filter unwanted traffic via the following methods:

- ACLs, which accept or deny an IP packet for export
- Sampling, which allows you to export one in every few packets in which you are interested. Use this option when it is not necessary to export all incoming traffic. Also, sampling is useful when a monitored ingress interface can send traffic faster than the egress interface can transmit it.

Examples

The following example shows how to configure the profile “corp1,” which will send captured IP traffic to host “00a.8aab.90a0” at the interface “FastEthernet 0/1.” This profile is also configured to export one in every 50 packets and to allow incoming traffic only from the ACL “ham_ACL.”

```
Router(config)# ip traffic-export profile corp1
Router(config-rite)# interface FastEthernet 0/1
Router(config-rite)# bidirectional
Router(config-rite)# mac-address 00a.8aab.90a0
Router(config-rite)# outgoing sample one-in-every 50
Router(config-rite)# incoming access-list ham_acl
Router(config-rite)# exit
Router(config)# interface FastEthernet 0/0
```

```
Router(config-if)# ip traffic-export apply corpl
```

Related Commands

Command	Description
ip traffic-export profile	Creates or edits an IP traffic export profile and enables the profile on an ingress interface.
outgoing	Configures filtering for outgoing export traffic.

interface (RITE)

To specify the outgoing interface for exporting traffic, use the **interface** command in router IP traffic export (RITE) configuration mode. To disable an interface, use the **no** form of this command.

interface *interface-name*

no interface *interface-name*

Syntax Description

<i>interface-name</i>	Name of interface in which IP packets are exported.
-----------------------	---

Defaults

If this command is not enabled, the exported IP traffic profile does not recognize an interface in which to send captured IP traffic.

Command Modes

RITE configuration

Command History

Release	Modification
12.3(4)T	This command was introduced.
12.2(25)S	This command was integrated into Cisco IOS Release 12.2(25)S.

Usage Guidelines

After you configure an IP traffic export profile via the **ip traffic-export profile** global configuration command, you should issue the **interface** command; otherwise, the profile will be unable to export the captured IP packets. If you do not specify the **interface** command, you will receive a warning, which states that the profile is incomplete, when you attempt to apply the profile to an interface via the **ip traffic-export apply profile** interface configuration command.



Note

Currently, only Ethernet and Fast Ethernet interfaces are supported.

Examples

The following example shows how to configure the profile “corp1,” which will send captured IP traffic to host “00a.8aab.90a0” at the interface “FastEthernet 0/1.” This profile is also configured to export one in every 50 packets and to allow incoming traffic only from the access control list ACL “ham_ACL.”

```
Router(config)# ip traffic-export profile corp1
Router(config-rite)# interface FastEthernet 0/1
Router(config-rite)# bidirectional
Router(config-rite)# mac-address 00a.8aab.90a0
Router(config-rite)# outgoing sample one-in-every 50
Router(config-rite)# incoming access-list ham_acl
Router(config-rite)# exit
Router(config)# interface FastEthernet 0/0
Router(config-if)# ip traffic-export apply corp1
```

Related Commands

Command	Description
ip traffic-export apply profile	Applies an IP traffic export profile to a specific interface.
ip traffic-export profile	Creates or edits an IP traffic export profile and enables the profile on an ingress interface.

ip traffic-export apply

To apply an IP traffic export profile to a specific interface, use the **ip traffic-export apply profile** command in interface configuration mode. To remove an IP traffic export profile from an interface, use the **no** form of this command.

ip traffic-export apply *profile-name*

no ip traffic-export apply *profile-name*

Syntax Description

<i>profile-name</i>	Name of the profile that is to be applied to a specified interface. The <i>profile-name</i> argument must match a name that was specified via the ip traffic-export profile command.
---------------------	--

Defaults

If this command is not issued, a successfully configured profile is not active.

Command Modes

Interface configuration

Command History

Release	Modification
12.3(4)T	This command was introduced.
12.2(25)S	This command was integrated into Cisco IOS Release 12.2(25)S.

Usage Guidelines

After you have configured at least one profile, you should use the **ip traffic-export apply profile** command to activate an IP traffic export on the specified ingress interface.

Examples

The following example shows how to apply the profile “corp1” to interface Fast Ethernet 0/0:

```
Router(config)# ip traffic-export profile corp1
Router(config-rite)# interface FastEthernet 0/1
Router(config-rite)# bidirectional
Router(config-rite)# mac-address 00a.8aab.90a0
Router(config-rite)# outgoing sample one-in-every 50
Router(config-rite)# incoming access-list spam_acl
Router(config-rite)# exit
Router(config)# interface FastEthernet 0/0
Router(config-if)# ip traffic-export apply corp1
```

After the profile is activated on the interface, a logging message such as the following will appear:

```
%RITE-5-ACTIVATE: Activated IP traffic export on interface FastEthernet 0/0.
```

After the profile is removed from the interface, a logging message such as the following will appear:

```
%RITE-5-DEACTIVATE: Deactivated IP traffic export on interface FastEthernet 0/0.
```

If you attempt to apply an incomplete profile to an interface, you will receive the following message:

```
Router(config-if)# ip traffic-export apply newone  
RITE: profile newone has missing outgoing interface
```

Related Commands

Command	Description
ip traffic-export profile	Creates or edits an IP traffic export profile and enables the profile on an ingress interface.

ip traffic-export profile

To create or edit an IP traffic export profile and enable the profile on an ingress interface, use the **ip traffic-export profile** command in global configuration mode. To remove an IP traffic export profile from your router configuration, use the **no** form of this command.

ip traffic-export profile *profile-name*

no ip traffic-export profile *profile-name*

Syntax Description	<i>profile-name</i>	IP traffic export profile name.
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Defaults	A profile does not exist.	
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Command Modes	Global configuration	
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Command History	Release	Modification
	12.3(4)T	This command was introduced.
	12.2(25)S	This command was integrated into Cisco IOS Release 12.2(25)S.

Usage Guidelines

The **ip traffic-export profile** command allows you to begin a profile that can be configured to export IP packets as they arrive on or leave from a selected router ingress interface. A designated egress interface exports the captured IP packets out of the router. Thus, the router can export unaltered IP packets to a directly connected device.

IP Traffic Export Profiles

All exported IP traffic configurations are specified via profiles, which consist of RITE-related command-line interfaces (CLIs) that control various attributes of both incoming and outgoing IP traffic. You can configure a router with multiple profiles. (Each profile must have a different name.) You can apply different profiles on different interfaces.

The two profiles that you should configure are as follows:

- The global configuration profile, which is configured via the **ip traffic-export profile** command.
- The submode configuration profile, which is configured via any of the following RITE commands—**bidirectional**, **incoming**, **interface**, **mac-address**, and **outgoing**.

The **interface** and **mac-address** commands are required to successfully create a profile. If these commands are not issued, the user will receive a profile incomplete messages such as the following:

```
ip traffic-export profile newone
! No outgoing interface configured
! No destination mac-address configured
```

After you configure your profiles, you can apply (which will activate) the profile to an interface via the **ip traffic-export apply profile** command.

Examples

The following example shows how to configure the profile “corp1,” which will send captured IP traffic to host “00a.8aab.90a0” at the interface “FastEthernet 0/1.” This profile is also configured to export one in every 50 packets and to allow incoming traffic only from the access control list (ACL) “ham_ACL.”

```
Router(config)# ip traffic-export profile corp1
Router(config-rite)# interface FastEthernet 0/1
Router(config-rite)# bidirectional
Router(config-rite)# mac-address 00a.8aab.90a0
Router(config-rite)# outgoing sample one-in-every 50
Router(config-rite)# incoming access-list ham_acl
Router(config-rite)# exit
Router(config)# interface FastEthernet 0/0
Router(config-if)# ip traffic-export apply corp1
```

Related Commands

Command	Description
bidirectional	Enables incoming and outgoing IP traffic to be exported across a monitored interface.
incoming	Configures filtering for incoming export traffic.
interface (RITE)	Specifies the outgoing interface for exporting traffic
ip traffic-export apply profile	Applies an IP traffic export profile to a specific interface.
mac-address	Specifies the Ethernet address of the destination host.
outgoing	Configures filtering for outgoing export traffic.

mac-address (RITE)

To specify the Ethernet address of the destination host, use the **mac-address** command in router IP traffic export (RITE) configuration mode. To change the MAC address of the destination host, use the **no** form of this command.

mac-address *H.H.H*

no mac-address *H.H.H*

Syntax Description	<i>H.H.H</i>	48-bit MAC address.
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Defaults	A destination host is not known.	
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Command Modes	RITE configuration	
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Command History	Release	Modification
	12.3(4)T	This command was introduced.
	12.2(25)S	This command was integrated into Cisco IOS Release 12.2(25)S.

Usage Guidelines	<p>The mac-address command, which is used to specify the destination host that is receiving the exported traffic, is part of suite of RITE configuration mode commands that are used to control various attributes for both incoming and outgoing IP traffic export.</p>
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The **ip traffic-export profile** command allows you to begin a profile that can be configured to export IP packets as they arrive or leave a selected router ingress interface. A designated egress interface exports the captured IP packets out of the router. Thus, the router can export unaltered IP packets to a directly connected device.

Examples	<p>The following example shows how to configure the profile “corp1,” which will send captured IP traffic to host “00a.8aab.90a0” at the interface “FastEthernet 0/1.” This profile is also configured to export one in every 50 packets and to allow incoming traffic only from the access control lists (ACL) “ham_ACL.”</p>
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```
Router(config)# ip traffic-export profile corp1
Router(config-rite)# interface FastEthernet 0/1
Router(config-rite)# bidirectional
Router(config-rite)# mac-address 00a.8aab.90a0
Router(config-rite)# outgoing sample one-in-every 50
Router(config-rite)# incoming access-list ham_acl
Router(config-rite)# exit
Router(config)# interface FastEthernet 0/0
Router(config-if)# ip traffic-export apply corp1
```

Related Commands

Command	Description
ip traffic-export profile	Creates or edits an IP traffic export profile and enables the profile on an ingress interface.

outgoing

To configure filtering for outgoing export traffic, use the **outgoing** command in router IP traffic export (RITE) configuration mode. To disable filtering for outgoing traffic, use the **no** form of this command.

outgoing {**access-list** {*standard* | *extended* | *named*} | **sample one-in-every** *packet-number*}

no outgoing {**access-list** {*standard* | *extended* | *named*} | **sample one-in-every** *packet-number*}

Syntax Description

access-list {*standard* | *extended* | *named*} An existing numbered (standard or extended) or named access control list (ACL).

Note The filter is applied only to exported traffic.

sample one-in-every *packet-number* Export only one packet out of every specified number of packets. Valid range for the *packet-number* argument is 2 to 2147483647 packets.

Defaults

If this command is not enabled, outgoing IP traffic is not exported.

Command Modes

RITE configuration

Command History

Release	Modification
12.3(4)T	This command was introduced.
12.2(25)S	This command was integrated into Cisco IOS Release 12.2(25)S.

Usage Guidelines

When configuring a network device for IP traffic export, you can issue the **outgoing** command to filter unwanted outgoing traffic via the following methods:

- ACLs, which accept or deny an IP packet for export
- Sampling, which allows you to export one in every few packets in which you are interested. Use this option when it is not necessary to export all incoming traffic. Also, sampling is useful when a monitored ingress interface can send traffic faster than the egress interface can transmit it.



Note

If you issue this command, you must also issue the **bidirectional** command, which enables outgoing traffic to be exported. However, only routed traffic (such as passthrough traffic) is exported; that is, traffic that originates from the network device is not exported.

Examples

The following example shows how to configure the profile “corp1,” which will send captured IP traffic to host “00a.8aab.90a0” at the interface “FastEthernet 0/1.” This profile is also configured to export one in every 50 packets and to allow incoming traffic only from the ACL “ham_ACL.”

```
Router(config)# ip traffic-export profile corp1
Router(config-rite)# interface FastEthernet 0/1
Router(config-rite)# bidirectional
```

```

Router(config-rite)# mac-address 00a.8aab.90a0
Router(config-rite)# outgoing sample one-in-every 50
Router(config-rite)# incoming access-list ham_acl
Router(config-rite)# exit
Router(config)# interface FastEthernet 0/0
Router(config-if)# ip traffic-export apply corpl

```

Related Commands

Command	Description
bidirectional	Enables incoming and outgoing IP traffic to be exported across a monitored interface.
ip traffic-export profile	Creates or edits an IP traffic export profile and enables the profile on an ingress interface.
incoming	Configures filtering for incoming IP traffic.

show ip traffic-export

To display information related to router IP traffic export (RITE), use the **show ip traffic-export** command in privileged EXEC mode.

show ip traffic-export [**interface** *interface-name* | **profile** *profile-name*]

Syntax Description	Parameter	Description
	interface <i>interface-name</i>	(Optional) Only data associated with the monitored ingress interface is shown.
	profile <i>profile-name</i>	(Optional) Only flow statistics, such as exported packets and number of bytes, are shown.

Defaults If this command is enabled, all data (both interface- and profile-related data) is shown.

Command Modes Privileged EXEC

Command History	Release	Modification
	12.3(4)T	This command was introduced.
	12.2(25)S	This command was integrated into Cisco IOS Release 12.2(25)S.

Examples The following sample output from the **show ip traffic-export** command is for the profile “one.” This example is for a single configured interface. If multiple interfaces are configured, the information shown below is displayed for each interface.

```
Router# show ip traffic-export

Router IP Traffic Export Parameters
Monitored Interface          FastEthernet0/0
  Export Interface           FastEthernet0/1
  Destination MAC address    0030.7131.abfc
  bi-directional traffic export is off
Input IP Traffic Export Information   Packets/Bytes Exported   0/0
  Packets Dropped            0
  Sampling Rate               one-in-every 1 packets
  No Access List configured
  Profile one is Active
```

Table 1 describes the significant fields shown in the display.

Table 1 *show ip traffic-export Field Descriptions*

Field	Description
Monitored Interface	Interface in which the profile was applied. (This interface is specified via the ip traffic-export apply profile command.)
Export Interface	Interface in which the profile exports all captured IP traffic. (This interface is specified via the ip traffic-export profile command.)
Destination MAC address	Ethernet address of the destination host, which is specified via the mac-address command.
bi-directional traffic export is	Incoming and outgoing IP traffic is exported on the monitored interface (via the bidirectional command). By default, only incoming traffic is exported.
Input IP Traffic Export Information Packets Dropped Sampling Rate No Access List Configured Profile one is Active	Incoming IP traffic information. The sampling rate and ACL can be defined via the incoming command. If the profile is incomplete, the profile will be listed as inactive.

Related Commands

Command	Description
bidirectional	Enables incoming and outgoing IP traffic to be exported across a monitored interface.
ip traffic-export apply profile	Applies an IP traffic export profile to a specific interface.
ip traffic-export profile	Creates or edits an IP traffic export profile and enables the profile on an ingress interface.
incoming	Configures filtering for incoming export traffic.
outgoing	Configures filtering for outgoing export traffic.

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■ show ip traffic-export