



Configuring Data Export for Flexible NetFlow with Flow Exporters

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This document contains information about and instructions for configuring flow exporters to export Flexible NetFlow data to remote systems such as a UNIX server running NetFlow collector.

NetFlow is a Cisco IOS technology that provides statistics on packets flowing through the router. NetFlow is the standard for acquiring IP operational data from IP networks. NetFlow provides data to support network and security monitoring, network planning, traffic analysis, and IP accounting.

Flexible NetFlow improves on original NetFlow by adding the capability to customize the traffic analysis parameters for your specific requirements. Flexible NetFlow facilitates the creation of more complex configurations for traffic analysis and data export through the use of reusable configuration components.

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Finding Feature Information

Your software release may not support all the features documented in this module. For the latest caveats and feature information, see [Bug Search Tool](#) and the release notes for your platform and software release. To find information about the features documented in this module, and to see a list of the releases in which each feature is supported, see the feature information table at the end of this module.

Use Cisco Feature Navigator to find information about platform support and Cisco software image support. To access Cisco Feature Navigator, go to www.cisco.com/go/cfn. An account on Cisco.com is not required.



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Prerequisites for Data Export for Flexible NetFlow with Flow Exporters

- You are familiar with the information in the "Cisco IOS Flexible NetFlow Overview" module.
- The networking device must be running a Cisco IOS or Cisco IOS XE release that supports Flexible NetFlow.

IPv4 Traffic

- The networking device must be configured for IPv4 routing.
- One of the following must be enabled on your router and on any interfaces on which you want to enable Flexible NetFlow: Cisco Express Forwarding or distributed Cisco Express Forwarding.

IPv6 Traffic

- The networking device must be configured for IPv6 routing.
- One of the following must be enabled on your router and on any interfaces on which you want to enable Flexible NetFlow: Cisco Express Forwarding IPv6 or distributed Cisco Express Forwarding.

Restrictions for Data Export for Flexible NetFlow with Flow Exporters

- The NetFlow Version 5 export protocol that was first shipped in Cisco IOS Release 12.4(22)T is supported for flow monitors that use only the following Flexible NetFlow predefined records: netflow-original, original input, and original output.

Information About Data Export for Flexible NetFlow with Flow Exporters

- [Flow Exporters, page 2](#)
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Flow Exporters

Flow exporters are created as separate components in a router's configuration. Exporters are assigned to flow monitors to export the data from the flow monitor cache to a remote system such as a NetFlow collector. Flow monitors can support more than one exporter. Each exporter can be customized to meet the requirements of the flow monitor or monitors in which it is used and the NetFlow collector systems to which it is exporting data.

Benefits of Flexible NetFlow Flow Exporters

Flexible NetFlow allows you to configure many different flow exporters, depending on your requirements. Some of the benefits of Flexible NetFlow flow exporters are as follows:

- Using flow exporters, you can create an exporter for every type of traffic that you want to analyze so that you can send each type of traffic to a different NetFlow collector. Original NetFlow sends the data in a cache for all of the analyzed traffic to a maximum of two export destinations.
- Flow exporters support up to ten exporters per flow monitor. Original NetFlow is limited to only two export destinations per cache.
- Flow exporters can use both TCP and UDP for export.
- In Cisco IOS Release 12.4(20)T and later releases, flow exporters can use class of service (CoS) in the packets that are sent to export destinations to help ensure that the packets are given the correct priority throughout the network. Original NetFlow exporters do not use CoS in the packets that are sent to export destinations.
- In Cisco IOS Release 12.4(20)T and later releases, flow exporter traffic can be encrypted.

How to Configure Data Export for Flexible NetFlow with Flow Exporters

The tasks in this section explain how to export the data that is collected by Flexible NetFlow to a remote system for further analysis and storage.

Flow exporters are used to send the data that you collect with Flexible NetFlow to a remote system such as a NetFlow collector. Flow exporters use UDP as the transport protocol.

- [Restrictions, page 3](#)
- [Configuring the Flow Exporter, page 3](#)
- [Configuring and Enabling Flexible NetFlow with Data Export, page 7](#)

Restrictions

Each flow exporter supports only one destination. If you want to export the data to multiple destinations, you must configure multiple flow exporters and assign them to the flow monitor. Flow exporters are added to flow monitors to enable data export from the flow monitor cache.

**Note**

Only the keywords and arguments required for the Flexible NetFlow commands used in these tasks are explained in these tasks. For information about the other keywords and arguments available for these Flexible NetFlow commands, refer to the *Cisco IOS Flexible NetFlow Command Reference*.

To configure data export for Flexible NetFlow, perform the tasks in this section:

Configuring the Flow Exporter

To configure the flow exporter, perform the following required task.

**Note**

You can export to a destination using either an IPv4 or IPv6 address.

SUMMARY STEPS

1. **enable**
2. **configure terminal**
3. **flow exporter** *exporter-name*
4. **description** *description*
5. **destination** {*ip-address* | *hostname*} [**vrf** *vrf-name*]
6. **export-protocol** {**netflow-v5** | **netflow-v9** | **ipfix**}
7. **dscp** *dscp*
8. **source** *interface-type interface-number*
9. **option** {**exporter-stats** | **interface-table** | **sampler-table** | **vrf-table**} [**timeout** *seconds*]
10. **output-features**
11. **template data timeout** *seconds*
12. **transport udp** *udp-port*
13. **ttl** *seconds*
14. **end**
15. **show flow exporter** *exporter-name*
16. **show running-config flow exporter** *exporter-name*

DETAILED STEPS

	Command or Action	Purpose
Step 1	enable Example: Device> enable	Enables privileged EXEC mode. <ul style="list-style-type: none"> • Enter your password if prompted.
Step 2	configure terminal Example: Device# configure terminal	Enters global configuration mode.
Step 3	flow exporter <i>exporter-name</i> Example: Device(config)# flow exporter EXPORTER-1	Creates the flow exporter and enters Flexible NetFlow flow exporter configuration mode. <ul style="list-style-type: none"> • This command also allows you to modify an existing flow exporter.

	Command or Action	Purpose
Step 4	<p>description <i>description</i></p> <p>Example:</p> <pre>Device(config-flow-exporter)# description Exports to the datacenter</pre>	<p>(Optional) Configures a description to the exporter that will appear in the configuration and the display of the show flow exporter command.</p>
Step 5	<p>destination {<i>ip-address</i> <i>hostname</i>} [vrf <i>vrf-name</i>]</p> <p>Example:</p> <pre>Device(config-flow-exporter)# destination 172.16.10.2</pre>	<p>Specifies the IP address or hostname of the destination system for the exporter.</p> <p>Note You can export to a destination using either an IPv4 or IPv6 address.</p>
Step 6	<p>export-protocol {netflow-v5 netflow-v9 ipfix}</p> <p>Example:</p> <pre>Device(config-flow-exporter)# export- protocol netflow-v9</pre>	<p>Specifies the version of the NetFlow export protocol used by the exporter. The export of extracted fields from NBAR is supported only over IPFIX.</p> <ul style="list-style-type: none"> • Default: netflow-v9.
Step 7	<p>dscp <i>dscp</i></p> <p>Example:</p> <pre>Device(config-flow-exporter)# dscp 63</pre>	<p>(Optional) Configures differentiated services code point (DSCP) parameters for datagrams sent by the exporter.</p> <ul style="list-style-type: none"> • The range for the <i>dscp</i> argument is from 0 to 63. Default: 0.
Step 8	<p>source <i>interface-type interface-number</i></p> <p>Example:</p> <pre>Device(config-flow-exporter)# source ethernet 0/0</pre>	<p>(Optional) Specifies the local interface from which the exporter will use the IP address as the source IP address for exported datagrams.</p>
Step 9	<p>option {exporter-stats interface-table sampler-table vrf-table} [timeout <i>seconds</i>]</p> <p>Example:</p> <pre>Device(config-flow-exporter)# option exporter-stats timeout 120</pre>	<p>(Optional) Configures options data parameters for the exporter.</p> <ul style="list-style-type: none"> • You can configure all three options concurrently. • The range for the <i>seconds</i> argument is 1 to 86,400. Default: 600.

Command or Action	Purpose
<p>Step 10 output-features</p> <p>Example:</p> <pre>Device(config-flow-exporter)# output-features</pre>	<p>(Optional) Enables sending export packets using quality of service (QoS) and encryption.</p>
<p>Step 11 template data timeout <i>seconds</i></p> <p>Example:</p> <pre>Device(config-flow-exporter)# template data timeout 120</pre>	<p>(Optional) Configure resending of templates based on a timeout.</p> <ul style="list-style-type: none"> The range for the <i>seconds</i> argument is 1 to 86400 (86400 seconds = 24 hours).
<p>Step 12 transport udp <i>udp-port</i></p> <p>Example:</p> <pre>Device(config-flow-exporter)# transport udp 650</pre>	<p>Specifies the UDP port on which the destination system is listening for exported datagrams.</p> <ul style="list-style-type: none"> The range for the <i>udp-port</i> argument is from 1 to 65536.
<p>Step 13 ttl <i>seconds</i></p> <p>Example:</p> <pre>Device(config-flow-exporter)# ttl 15</pre>	<p>(Optional) Configures the time-to-live (TTL) value for datagrams sent by the exporter.</p> <ul style="list-style-type: none"> The range for the <i>seconds</i> argument is from 1 to 255.
<p>Step 14 end</p> <p>Example:</p> <pre>Device(config-flow-exporter)# end</pre>	<p>Exits flow exporter configuration mode and returns to privileged EXEC mode.</p>
<p>Step 15 show flow exporter <i>exporter-name</i></p> <p>Example:</p> <pre>Device# show flow exporter FLOW_EXPORTER-1</pre>	<p>(Optional) Displays the current status of the specified flow exporter.</p>
<p>Step 16 show running-config flow exporter <i>exporter-name</i></p> <p>Example:</p> <pre>Device# show running-config flow exporter FLOW_EXPORTER-1</pre>	<p>(Optional) Displays the configuration of the specified flow exporter.</p>

Configuring and Enabling Flexible NetFlow with Data Export

You must create a flow monitor to configure the types of traffic for which you want to export the cache data. You must enable the flow monitor by applying it to at least one interface to start exporting data. To configure and enable Flexible NetFlow with data export, perform this required task.

Each flow monitor has a separate cache assigned to it. Each flow monitor requires a record to define the contents and layout of its cache entries. The record format can be one of the predefined record formats, or an advanced user may create his or her own record format using the **collect** and **match** commands in Flexible NetFlow flow record configuration mode.



Note

You must remove a flow monitor from all of the interfaces to which you have applied it before you can modify the **record** format of the flow monitor.

When you specify the "NetFlow original," or the "NetFlow IPv4 original input," or the "NetFlow IPv6 original input" predefined record for the flow monitor to emulate original NetFlow, the flow monitor can be used only for analyzing input (ingress) traffic.

When you specify the "NetFlow IPv4 original output" or the "NetFlow IPv6 original output" predefined record for the flow monitor to emulate the Egress NetFlow Accounting feature, the flow monitor can be used only for analyzing output (egress) traffic.

SUMMARY STEPS

1. **enable**
2. **configure terminal**
3. **flow monitor** *monitor-name*
4. **record** { *record-name* | **netflow-original** | **netflow** { **ipv4** | **ipv6** *record* [**peer**] } }
5. **exporter** *exporter-name*
6. **exit**
7. **interface** *type number*
8. { **ip** | **ipv6** } **flow monitor** *monitor-name* { **input** | **output** }
9. **end**
10. **show flow monitor** [[*name*] *monitor-name* [**cache** [**format** { **csv** | **record** | **table** }]]][**statistics**]]

DETAILED STEPS

	Command or Action	Purpose
Step 1	<p>enable</p> <p>Example:</p> <pre>Router> enable</pre>	<p>Enables privileged EXEC mode.</p> <ul style="list-style-type: none"> • Enter your password if prompted.

Command or Action	Purpose
<p>Step 2 configure terminal</p> <p>Example:</p> <pre>Router# configure terminal</pre>	<p>Enters global configuration mode.</p>
<p>Step 3 flow monitor <i>monitor-name</i></p> <p>Example:</p> <pre>Router(config)# flow monitor FLOW-MONITOR-1</pre>	<p>Creates a flow monitor and enters Flexible NetFlow flow monitor configuration mode.</p> <ul style="list-style-type: none"> This command also allows you to modify an existing flow monitor.
<p>Step 4 record {<i>record-name</i> netflow-original netflow {ipv4 ipv6 <i>record</i> [peer] } }</p> <p>Example:</p> <pre>Router(config-flow-monitor)# record netflow ipv4 original-input</pre>	<p>Specifies the record for the flow monitor.</p>
<p>Step 5 exporter <i>exporter-name</i></p> <p>Example:</p> <pre>Router(config-flow-monitor)# exporter EXPORTER-1</pre>	<p>Specifies the name of an exporter that you created previously.</p>
<p>Step 6 exit</p> <p>Example:</p> <pre>Router(config-flow-monitor)# exit</pre>	<p>Exits Flexible NetFlow flow monitor configuration mode and returns to global configuration mode.</p>
<p>Step 7 interface <i>type number</i></p> <p>Example:</p> <pre>Router(config)# interface ethernet 0/0</pre>	<p>Specifies an interface and enters interface configuration mode.</p>
<p>Step 8 {ip ipv6} flow monitor <i>monitor-name</i> {input output}</p> <p>Example:</p> <pre>Router(config-if)# ip flow monitor FLOW-MONITOR-1 input</pre>	<p>Activates the flow monitor that you created previously by assigning it to the interface to analyze traffic.</p>

	Command or Action	Purpose
Step 9	end Example: Router(config-if)# end	Exits interface configuration mode and returns to privileged EXEC mode.
Step 10	show flow monitor [[name] <i>monitor-name</i> [cache [format {csv record table}]]][statistics]] Example: Router# show flow monitor FLOW-MONITOR-2 cache	(Optional) Displays the status and statistics for a Flexible NetFlow flow monitor. This will verify data export is enabled for the flow monitor cache.

Configuration Examples for Flexible NetFlow Data Export with Flow Exporters

- [Example Configuring Multiple Export Destinations, page 9](#)
- [Example Configuring Sending Export Packets Using QoS, page 10](#)
- [Example Configuring Version 5 Export, page 11](#)

Example Configuring Multiple Export Destinations

The following example shows how to configure multiple export destinations for Flexible NetFlow for IPv4 and IPv6 traffic.

This sample starts in global configuration mode:

```

!
flow exporter EXPORTER-1
 destination 172.16.10.2
 transport udp 90
 exit
!
flow exporter EXPORTER-2
 destination 172.16.10.3
 transport udp 90
 exit
!
flow monitor FLOW-MONITOR-1
 record netflow ipv4 original-input
 exporter EXPORTER-2
 exporter EXPORTER-1
!
!
flow monitor FLOW-MONITOR-2
 record netflow ipv6 original-input
 exporter EXPORTER-2
 exporter EXPORTER-1
!
ip cef
!

```

```
interface Ethernet 0/0
ip address 172.16.6.2 255.255.255.0
ipv6 address 2001:DB8:2:ABCD::2/48
ip flow monitor FLOW-MONITOR-1 input
ipv6 flow monitor FLOW-MONITOR-2 input
!
```

The following display output shows that the flow monitor is exporting data to the two exporters:

```
Router# show flow monitor FLOW-MONITOR-1
Flow Monitor FLOW-MONITOR-1:
  Description:      User defined
  Flow Record:     netflow original-input
  Flow Exporter:   EXPORTER-1
                  EXPORTER-2

Cache:
  Type:            normal
  Status:          allocated
  Size:            4096 entries / 311316 bytes
  Inactive Timeout: 15 secs
  Active Timeout:  1800 secs
  Update Timeout:  1800 secs
```

Example Configuring Sending Export Packets Using QoS

The following example shows how to enable quality of service (QoS) on Flexible Netflow export packets.



Note

The Flexible NetFlow export packets are transmitted using QoS on Ethernet interface 0/1 (the interface on which the destination is reachable) to the destination host (IP address 10.0.1.2).

This sample starts in global configuration mode:

```
!
flow record FLOW-RECORD-1
match ipv4 source address
collect counter packets
!
flow exporter FLOW-EXPORTER-1
destination 10.0.1.2
output-features
dscp 18
!
flow monitor FLOW-MONITOR-1
record FLOW-RECORD-1
exporter FLOW-EXPORTER-1
cache entries 1024
!
ip cef
!
class-map match-any COS3
!
policy-map PH_LABS_FRL_64k_16k_16k_8k_8k
class COS3
bandwidth percent 2
random-detect dscp-based
random-detect exponential-weighting-constant 1
random-detect dscp 18 200 300 10
!
interface Ethernet 0/0
ip address 10.0.0.1 255.255.255.0
ip flow monitor FLOW-MONITOR-1 input
!
interface Ethernet 0/1
ip address 10.0.1.1 255.255.255.0
service-policy output PH_LABS_FRL_64k_16k_16k_8k_8k
!
```

The following display output shows that the flow monitor is exporting data using output feature support that enables the exported data to use QoS:

```
Router# show flow monitor FLOW-MONITOR-1
Flow Exporter FLOW-EXPORTER-1:
  Description:          User defined
  Transport Configuration:
    Destination IP address: 10.0.1.2
    Source IP address:     10.0.0.1
    Transport Protocol:    UDP
    Destination Port:      9995
    Source Port:           56750
    DSCP:                  0x12
    TTL:                   255
    Output Features:       Used
```

Example Configuring Version 5 Export

The following example shows how to configure version 5 export for Flexible NetFlow.

This sample starts in global configuration mode:

```
!
flow exporter EXPORTER-1
 destination 172.16.10.2
 export-protocol netflow-v5
 transport udp 90
 exit
!
flow monitor FLOW-MONITOR-1
 record netflow ipv4 original-input
 exporter EXPORTER-1
!
ip cef
!
interface Ethernet 0/0
 ip address 172.16.6.2 255.255.255.0
 ip flow monitor FLOW-MONITOR-1 input
!
```

Where to Go Next

For information on advanced Flexible NetFlow configurations for specific purposes such as QoS and bandwidth monitoring, application and user flow monitoring and profiling, and security analysis, refer to the "Customizing Cisco IOS Flexible NetFlow Flow Records and Flow Monitors" module.

If you want to configure flow sampling to reduce the CPU overhead of analyzing traffic, refer to the "Using Cisco IOS Flexible NetFlow Flow Sampling to Reduce the CPU Overhead of Analyzing Traffic" module.

If you want to configure any of the predefined records for Flexible NetFlow, refer to the "Configuring Cisco IOS Flexible NetFlow with Predefined Records" module.

Additional References

Related Documents

Related Topic	Document Title
Cisco IOS commands	Cisco IOS Master Commands List, All Releases
Overview of Flexible NetFlow	"Cisco IOS Flexible NetFlow Overview"
Emulating original NetFlow with Flexible NetFlow	"Getting Started with Configuring Cisco IOS Flexible NetFlow"
Customizing Flexible NetFlow	"Customizing Cisco IOS Flexible NetFlow Flow Records and Flow Monitors"
Configuring flow sampling to reduce the overhead of monitoring traffic with Flexible NetFlow	"Using Cisco IOS Flexible NetFlow Flow Sampling to Reduce the CPU Overhead of Analyzing Traffic"
Configuring Flexible NetFlow using predefined records	"Configuring Cisco IOS Flexible NetFlow with Predefined Records"
Using Flexible NetFlow Top N Talkers to analyze network traffic	"Using Cisco IOS Flexible NetFlow Top N Talkers to Analyze Network Traffic"
Configuring IPv4 multicast statistics support for Flexible NetFlow	"Configuring IPv4 Multicast Statistics Support for Cisco IOS Flexible NetFlow"
Configuration commands for Flexible NetFlow	<i>Cisco IOS Flexible NetFlow Command Reference</i>

Standards

Standard	Title
None	--

MIBs

MIB	MIBs Link
None	To locate and download MIBs for selected platforms, Cisco software releases, and feature sets, use Cisco MIB Locator found at the following URL: http://www.cisco.com/go/mibs

RFCs

RFC	Title
RFC 3954	<i>Cisco Systems NetFlow Services Export Version 9</i>

Technical Assistance

Description	Link
The Cisco Support and Documentation website provides online resources to download documentation, software, and tools. Use these resources to install and configure the software and to troubleshoot and resolve technical issues with Cisco products and technologies. Access to most tools on the Cisco Support and Documentation website requires a Cisco.com user ID and password.	http://www.cisco.com/cisco/web/support/index.html

Feature Information for Flexible NetFlow

The following table provides release information about the feature or features described in this module. This table lists only the software release that introduced support for a given feature in a given software release train. Unless noted otherwise, subsequent releases of that software release train also support that feature.

Use Cisco Feature Navigator to find information about platform support and Cisco software image support. To access Cisco Feature Navigator, go to www.cisco.com/go/cfn. An account on Cisco.com is not required.

Table 1 **Feature Information for Flexible NetFlow**

Feature Name	Releases	Feature Information
Flexible NetFlow	12.2(33)SRC 12.2(50)SY 12.4(9)T 15.0(1)SY 15.0(1)SY1	<p>Flexible NetFlow is introduced.</p> <p>Support for this feature was added for Cisco 7200 series routers in Cisco IOS Release 12.2(33)SRC.</p> <p>The following commands were introduced or modified: cache (Flexible NetFlow), clear flow exporter, clear flow monitor, clear sampler, collect counter, collect flow, collect interface, collect ipv4, collect ipv4 destination, collect ipv4 fragmentation, collect ipv4 section, collect ipv4 source, collect ipv4 total-length, collect ipv4 ttl, collect routing, collect timestamp sys-uptime, collect transport, collect transport icmp ipv4, collect transport tcp, collect transport udp, debug flow exporter, debug flow monitor, debug flow record, debug sampler, description (Flexible NetFlow), destination, dscp (Flexible NetFlow), exporter, flow exporter, flow monitor, flow platform, flow record, ip flow monitor, match flow, match interface (Flexible NetFlow), match ipv4, match ipv4 destination, match ipv4 fragmentation, match ipv4 section, match ipv4 source, match ipv4 total-length, match ipv4 ttl, match routing, match transport, match transport icmp ipv4, match transport tcp, match transport udp, mode (Flexible NetFlow), option (Flexible NetFlow), record, sampler, show flow exporter, show flow interface, show flow monitor, show flow record, show sampler, source (Flexible NetFlow), statistics packet,</p>

Feature Name	Releases	Feature Information
Flexible NetFlow--IPv4 Unicast Flows	12.2(33)SRC 12.2(50)SY 12.4(9)T 15.0(1)SY 15.0(1)SY1	<p data-bbox="1154 285 1479 344">template data timeout, transport (Flexible NetFlow).</p> <p data-bbox="1154 373 1463 432">Enables Flexible NetFlow to monitor IPv4 traffic.</p> <p data-bbox="1154 449 1463 571">Support for this feature was added for Cisco 7200 series routers in Cisco IOS Release 12.2(33)SRC.</p> <p data-bbox="1154 588 1511 1003">The following commands were introduced or modified: collect routing, debug flow record, collect ipv4, collect ipv4 destination, collect ipv4 fragmentation, collect ipv4 section, collect ipv4 source, ip flow monitor, match ipv4, match ipv4 destination, match ipv4 fragmentation, match ipv4 section, match ipv4 source, match routing, record, show flow monitor, show flow record.</p>
Flexible NetFlow--NetFlow v9 Export Format	12.2(33)SRE 12.2(50)SY 12.4(9)T 15.0(1)SY 15.0(1)SY1	<p data-bbox="1154 1037 1479 1125">Enables sending export packets using the Version 9 export format.</p> <p data-bbox="1154 1142 1511 1297">Support for this feature was added for Cisco 7200 and 7300 Network Processing Engine (NPE) series routers in Cisco IOS Release 12.2(33)SRE.</p> <p data-bbox="1154 1314 1511 1373">No commands were introduced or modified by this feature.</p>

Feature Name	Releases	Feature Information
Flexible NetFlow--IPv6 Unicast Flows	12.2(33)SRE	<p>Enables Flexible NetFlow to monitor IPv6 traffic.</p> <p>Support for this feature was added for Cisco 7200 and 7300 Network Processing Engine (NPE) series routers in Cisco IOS Release 12.2(33)SRE.</p> <p>The following commands were introduced or modified: collect routing, debug flow record, match routing, record, show flow monitor, show flow record, collect ipv6, collect ipv6 destination, collect ipv6 extension map, collect ipv6 fragmentation, collect ipv6 hop-limit, collect ipv6 length, collect ipv6 section, collect ipv6 source, collect transport icmp ipv6, ipv6 flow monitor, match ipv6, match ipv6 destination, match ipv6 extension map, match ipv6 fragmentation, match ipv6 hop-limit, match ipv6 length, match ipv6 section, match ipv6 source, match transport icmp ipv6.</p>
	12.2(50)SY	
	12.4(20)T	
	15.0(1)SY	
	15.0(1)SY1	
Flexible NetFlow--Output Features on Data Export	12.4(20)T	<p>Enables sending export packets using QoS and encryption.</p> <p>The following command was introduced: output-features.</p>
Flexible NetFlow--NetFlow V5 Export Protocol	12.2(33)SRE	<p>Enables sending export packets using the Version 5 export protocol.</p> <p>Support for this feature was added for Cisco 7200 and 7300 Network Processing Engine (NPE) series routers in Cisco IOS Release 12.2(33)SRE.</p> <p>The following command was introduced: export-protocol.</p>
	12.2(50)SY	
	12.4(22)T	
	15.0(1)SY	
	15.0(1)SY1	

Feature Name	Releases	Feature Information
Flexible NetFlow: Export to an IPv6 Address	15.2(2)T	<p>This feature enables Flexible NetFlow to export data to a destination using an IPv6 address.</p> <p>The following commands were introduced or modified: destination</p>
Flexible NetFlow: IPFIX Export Format	15.2(4)M	<p>Enables sending export packets using the IPFIX export protocol. The export of extracted fields from NBAR is only supported over IPFIX.</p> <p>Support for this feature was added for Cisco ASR 1000 Series Aggregation Services routers in Cisco IOS XE Release 3.7S.</p> <p>The following command was introduced: export-protocol.</p>

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