



MPLS VPN—Show Running VRF

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The MPLS VPN—Show Running VRF feature provides a Cisco IOS command-line interface (CLI) option to display a subset of the running configuration on a router that is linked to a Virtual Private Network (VPN) routing and forwarding (VRF) instance. You can display the configuration of a specific VRF or of all VRFs configured on a router.

On heavily loaded routers, the display of the configuration file might require several pages or screens. As the configuration increases in size and complexity, the possibility of misconfiguration also increases. You might find it difficult to trace a problem on a router where you have several VRFs configured. A command that displays all the elements of the configuration linked to a VRF allows for easier troubleshooting on a per-VRF basis and facilitates comparisons among configurations of different VRFs on the same router.

Finding Feature Information in This Module

Your Cisco IOS software release may not support all of the features documented in this module. To reach links to specific feature documentation in this module and to see a list of the releases in which each feature is supported, use the [“Feature Information for MPLS VPN—Show Running VRF”](#) section on page 18.

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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Prerequisites for MPLS VPN—Show Running VRF

- A Cisco IOS image that supports VRFs installed on the router
- At least one VRF configured on the router
- Cisco Express Forwarding is required for MPLS VPN routing and forwarding.

Restrictions for MPLS VPN—Show Running VRF

Any element of the running configuration of the router that is not linked directly to a VRF is not displayed. For example, a route map associated with a Border Gateway Protocol (BGP) neighbor in a VRF address-family configuration is not displayed. The VRF address-family configuration under BGP is displayed, but the route-map configuration is not. An exception to this general rule is the display of a controller configuration (for more information, see the [“Display of Configuration Not Directly Linked to a VRF”](#) section on page 4).

Information About MPLS VPN—Show Running VRF

Before using the MPLS VPN—Show Running VRF feature, you should understand the following information:

- [Configuration Elements Displayed for the MPLS VPN—Show Running VRF Feature, page 2](#)
- [Display of VRF Routing Protocol Configuration, page 3](#)
- [Display of Configuration Not Directly Linked to a VRF, page 4](#)

Configuration Elements Displayed for the MPLS VPN—Show Running VRF Feature

You can display the running configuration associated with a specific VRF or all VRFs on the router by entering the **show running-config vrf** command. To display the running configuration of a specific VRF, enter the name of the VRF as an argument to the **show running-config vrf** command. For example, for a VRF named vpn3, you enter:

```
Router# show running-config vrf vpn3
```

The **show running-config vrf** command displays the following elements of the running configuration on a router:

- The VRF configuration

This includes any configuration that is applied in the VRF submode.

- The configuration of each interface in the VRF

Entering a **show run vrf *vpn-name*** command is the same as executing a **show running-config interface *type number*** for each interface that you display by use of the **show ip vrf *vpn-name*** command. The interfaces display in the same sorted order that you would expect from the **show ip interface** command.

For a channelized interface, the configuration of the controller is displayed (as shown by the **show run controller *controller-name*** command).

For a subinterface, the configuration of the main interface is displayed.

- The configuration of routing-protocol address-families or processes that are linked with the VRF, including static routing configuration (see the [“Display of VRF Routing Protocol Configuration” section on page 3](#)).

Display of VRF Routing Protocol Configuration

Open Shortest Path First (OSPF), Routing Information Protocol (RIP), Border Gateway Protocol (BGP), Enhanced Interior Gateway Routing Protocol (EIGRP), and static routing are routing protocols that support VRF configuration.

OSPF has one process per VRF. The **show running-config vrf** command display includes the complete configuration of any OSPF process associated with the VRF. For example, the following shows the sample display for OSPF process 101, which is associated with the VRF named *vpn3*:

```
router ospf 101 vrf vpn3
 log-adjacency-changes
 area 1 sham-link 10.43.43.43 10.23.23.23 cost 10
 network 172.17.0.0 0.255.255.255 area 1
```

RIP, BGP, and EIGRP support VRF address-family configuration. If a VRF address family for the VRF exists for any of these routing protocols, a configuration in the following format is displayed:

```
router protocol {AS | PID}
!
address-family ipv4 vrf vrf-name
.
.
.
```

Where the *protocol* argument is one of the following: **rip**, **bgp** or **eigrp**; the *AS* argument is an autonomous system number; the *PID* argument is a process identifier; and the *vrf-name* argument is the name of the associated VRF.

The following shows a sample display for a BGP with autonomous system number 100 associated with a VRF named *vpn3*:

```
!
router bgp 100
!
address-family ipv4 vrf vpn3
 redistribute connected
 redistribute ospf 101 match external 1 external 2
 no auto-summary
 no synchronization
 exit-address-family
!
```

The **show running-config vrf** command also includes the configuration of any static routes configured in the VRF. For example:

```
ip route vrf vpn1 10.1.1.0 255.255.255.0 10.30.1.1 global
ip route vrf vpn1 10.1.2.0 255.255.255.0 10.125.1.2
```

Display of Configuration Not Directly Linked to a VRF

Any element of the configuration that is not linked directly to a VRF is not displayed. In some instances, the display of the configuration of an element that is not directly linked to a VRF is required.

For example, the **show running-config vrf** command displays the configuration of an E1 controller whose serial subinterfaces are in a VRF. The command displays the controller configuration and the subinterface configuration.

How to Configure MPLS VPN—Show Running VRF

There are no tasks for the MPLS VPN—Show Running VRF feature.

See the [“Related Documents” section on page 4](#) for links to configuration information for MPLS VPNs.

Configuration Examples for MPLS VPN—Show Running VRF

There are no configuration examples for the MPLS VPN—Show Running VRF feature.

See the [“Related Documents” section on page 4](#) for links to configuration information for MPLS VPNs.

Additional References

The following sections provide references related to the MPLS VPN—Show Running VRF feature.

Related Documents

Related Topic	Document Title
Configuration tasks for MPLS VPNs	“MPLS Virtual Private Networks” chapter, <i>Cisco IOS Multiprotocol Label Switching Configuration Guide</i>, Release 12.4
Configuration tasks for MPLS and MPLS applications	“Configuring MPLS” chapter, <i>Cisco IOS Multiprotocol Label Switching Configuration Guide</i>, Release 12.4

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
The Cisco Support website provides extensive online resources, including documentation and tools for troubleshooting and resolving technical issues with Cisco products and technologies. Access to most tools on the Cisco Support website requires a Cisco.com user ID and password. If you have a valid service contract but do not have a user ID or password, you can register on Cisco.com.	http://www.cisco.com/techsupport

Command Reference

This section documents only commands that are new or modified.

- [show running-config vrf](#)
- [show policy-map interface brief](#)

show running-config vrf

To display the subset of the running configuration of a router that is linked to a specific Virtual Private Network (VPN) routing and forwarding (VRF) instance or to all VRFs configured on the router, use the **show running-config vrf** command in user EXEC or privileged EXEC configuration mode.

```
show running-config vrf [vrf-name]
```

Syntax Description

<i>vrf-name</i>	(Optional) Name of the VRF of which you want to display the configuration.
-----------------	--

Command Default

If you do not specify a *vrf-name* argument, the running configurations of all VRFs on the router are displayed.

Command Modes

User EXEC
Privileged EXEC

Command History

Release	Modification
12.2(28)SB	This command was introduced.
12.2(33)SRB	This command was integrated into Cisco IOS Release 12.2(33)SRB.
12.2(33)SXH	This command was integrated into Cisco IOS Release 12.2(33)SXH.

Usage Guidelines

Use the **show running-config vrf** command to display a specific VRF configuration or to display all VRF configurations on the router. To display the configuration of a specific VRF, enter the name of the VRF as an argument to the command.

This command displays the following elements of the VRF configuration:

- The VRF submode configuration
- The routing protocol and static routing configurations associated with the VRF
- The configuration of the interfaces in the VRF, which includes the configuration of any owning controller and physical interface for a subinterface

Examples

The following is sample output from the **show running-config vrf** command. It includes a base VRF configuration for VRF vpn3 and Border Gateway Protocol (BGP) and Open Shortest Path First (OSPF) configurations associated with VRF vpn3.

```
Router# show running-config vrf vpn3

Building configuration...

Current configuration : 604 bytes
ip vrf vpn3
  rd 100:3
  route-target export 100:3
  route-target import 100:3
```

```

!
!
interface Loopback1
 ip vrf forwarding vpn3
 ip address 10.43.43.43 255.255.255.255
!
interface Ethernet6/0
 ip vrf forwarding vpn3
 ip address 172.17.0.1 255.0.0.0
 no ip redirects
 duplex half
!
router bgp 100
!
address-family ipv4 vrf vpn3
 redistribute connected
 redistribute ospf 101 match external 1 external 2
 no auto-summary
 no synchronization
 exit-address-family
!
router ospf 101 vrf vpn3
 log-adjacency-changes
 area 1 sham-link 10.43.43.43 10.23.23.23 cost 10
 network 172.17.0.0 0.255.255.255 area 1
!
end

```

Table 1 describes the significant fields shown in the display.

Table 1 show running-config vrf Field Descriptions

Field	Description
Current configuration: 604 bytes	Number of bytes (604) in the VRF vpn3 configuration.
ip vrf vpn3	Name of the VRF (vpn3) for which the configuration is displayed.
rd 100:3	Identifies the route distinguisher (100:3) for VRF vpn3.
route-target export 100:3 route-target import 100:3	Specifies the route-target extended community for VRF vpn3. <ul style="list-style-type: none"> Routes tagged with route-target export 100:3 are exported from VRF vpn3. Routes tagged with the route-target import 100:3 are imported into VRF vpn3.
interface loopback1	Virtual interface associated with VRF vpn3.
ip vrf forwarding vpn3	Associates VRF vpn3 with the named interface.
ip address 10.43.43.43 255.255.255.255	IP address of the loopback interface.
interface Ethernet6/0	Interface associated with VRF vpn3.
ip address 172.17.0.1 255.0.0.0	IP address of the Ethernet interface.
router bgp 100	Sets up a BGP routing process for the router with autonomous system number 100.

Table 1 *show running-config vrf Field Descriptions (continued)*

Field	Description
address-family ipv4 vrf vpn3	Sets up a routing session for VRF vpn3 using standard IP Version 4 address prefixes.
redistribute connected	Redistributes routes automatically established by IP on an interface into the BGP routing domain.
redistribute ospf 101 match external 1 external 2	Redistribute routes from the OSPF 101 routing domain into the BGP routing domain.
router ospf 101 vrf vpn3	Set up an OSPF routing process and associates VRF vpn3 with OSPF VRF processes.
area 1 sham-link 10.43.43.43 10.23.23.23 cost 10	Configure a sham-link interface on a provider edge (PE) router in a Multiprotocol Label Switching (MPLS) VPN backbone. <ul style="list-style-type: none"> • 1 is the ID number of the OSPF area assigned to the sham-link. • 10.43.43.43 is the IP address of the source PE router. • 10.23.23.23 is the IP address of the destination PE router. • 10 is the OSPF cost to send IP packets over the sham-link interface.
network 172.17.0.0 0.255.255.255 area 1	Defines the interfaces on which OSPF runs and defines the area ID for those interfaces.

Related Commands

Command	Description
ip vrf	Configures a VRF routing table.
show ip vrf	Displays the set of defined VRFs and associated interfaces.
show ip interface	Displays the usability status of interfaces configured for IP.
show running-config interface	Displays the configuration for a specific interface.

show policy-map interface brief

To display information about only the active policy maps attached to an interface, use the **show policy-map interface brief** command in privileged EXEC mode.

```
show policy-map interface [input | output] brief [policy-map-name] [vrf [vrf-id]] [timestamp]
```

Syntax Description		
input	(Optional) Indicates that only the information about the active input policy maps will be displayed.	
output	(Optional) Indicates that only the information about the active output policy maps will be displayed.	
brief	Indicates that the name of all the active policy maps (both input and output policy maps) and the interfaces to which the policy maps are attached will be displayed. The active input policy maps will be displayed first, followed by the output policy maps.	
<i>policy-map-name</i>	(Optional) Name of an active policy map to be displayed.	
vrf	(Optional) Indicates that the active policy maps for Virtual Private Network (VPN) routing and forwarding (VRF) instances will be displayed.	
<i>vrf-id</i>	(Optional) A specific VRF identifier.	
timestamp	(Optional) Indicates that the date and time when the policy map was attached will be displayed, along with the ID of the user who attached the policy map.	

Command Default If no optional keywords or arguments are specified, all policy maps (even those that are not active) are displayed.

Command Modes Privileged EXEC

Command History	Release	Modification
	12.2(28)SB	This command was introduced.
	12.2(33)SRB	This command was integrated into Cisco IOS Release 12.2(33)SRB.
	12.2(33)SXH	This command was integrated into Cisco IOS Release 12.2(33)SXH.

Usage Guidelines The **show policy-map interface brief** command displays the name of the active policy maps and the interfaces to which those policy maps are attached. An active policy map is one that is attached to an interface.

The optional keywords and arguments allow you to tailor the information displayed about VPNs, time stamps, and user IDs.

If you do not specify any optional keywords or arguments, all policy maps (even those that are not active) are displayed.

VPN Information Reported

The **show policy-map interface brief** command can be used for VRF interfaces in applications that use VPNs. To specify VRF interfaces, use the **vrf** keyword with the *vrf-id* argument.

Time-stamp and User ID Information Reported

If the optional **timestamp** keyword is used with the **show policy-map interface brief** command, the time and date when a policy map was attached to an interface appear in the display. In addition to the time and date information, the name (that is, the user ID) of the person who attached the policy map to the interface will also be displayed.



Note If the network software is reloaded (reinstalled), the time-stamp information (the time and date information) obtained will not be retained for any of the policy maps attached to interfaces on the network. Instead, the time and date information displayed will be the time and date when the software was reloaded.

Method for Obtaining User Information

The user information included in the display is obtained from the information that you enter when you log in to the router. For example, if you are using the SSH Secure Shell utility to log in to a router, you would typically enter your username and password. However, it is not always possible to obtain the user information. Instances where user information cannot be obtained include the following:

- Not all routers require user information when you log in. Therefore, you may not be prompted to enter your username when you log in to a router.
- If you are connecting to a console port using the Telnet utility in a DOS environment, you do not need to enter user information.
- The user information cannot be retrieved because of system constraints or other factors.

If the user information cannot be obtained, the words “by unknown” will be displayed.

Hierarchical Policy Map Information

For a hierarchical policy map structure, only the information about the parent policy maps is displayed. Information about child policy maps is not displayed.

ATM PVCs

For ATM permanent virtual circuits (PVCs), policy maps do not remain associated with the interface if the ATM PVC is not working properly (that is, the ATM PVC is “down”). Therefore, if an ATM PVC is down, and a policy map is attached to an interface, the **show policy-map interface brief** command does not include information about the policy maps in the command output.

Examples

The information that is displayed by the **show policy-map interface brief** command varies according to the optional keywords and arguments that you specify.

The following sections list the significant keyword and argument combinations used with the command and describe the corresponding information displayed.

show policy-map interface brief Command Example

The **show policy-map interface brief** command displays *all* the attached policy maps (both input policy maps and output policy maps) along with the information about the interfaces to which the policy maps are attached. The input policy maps are displayed first, followed by the output policy maps.

```
Service-policy input: policynam1
  interface s2/0/1
  interface s6/0/0
```

```
Service-policy output: policynam1interface s2/0/1 interface s6/0/0
```

show policy-map interface brief timestamp Command Example

The **show policy-map interface brief timestamp** command displays *all* the attached policy maps (both input policy maps and output policy maps) along with the information about the interfaces to which the policy maps are attached. The input policy maps are displayed first, followed by the output policy maps.

The **timestamp** keyword displays the time and date when the policy map was attached to the specific interface, along with the user ID of the person who attached the policy map to the interface.

```
Service-policy input: parentpolicy1
Service-policy input: childpolicy1
  interface s2/0/1 - applied 20:43:04 on 25/12/01 by user1
  interface s6/0/1 - applied 19:43:04 on 25/12/01 by user1
```

```
Service-policy output: policynam2
  interface s2/0/2 - applied 21:47:04 on 24/12/01 by user1
  interface s6/0/1 - applied 19:43:04 on 25/12/01 by user1
```

show policy-map interface brief *policy-map-name* Command Example

The **show policy-map interface brief *policy-map-name*** command displays the policy map attached as *either* an input policy map *or* an output policy map, along with the information about the interface to which the policy map is attached. Only the policy map specified by the *policy-map-name* argument is displayed.

For example, the display for the **show policy-map interface brief policynam1** command is as follows:

```
Service-policy input: policynam1
  interface s2/0/1
  interface s6/0/0
```

```
Service-policy output: policynam1
  interface s1/0/2
  interface s3/0/0
```

show policy-map interface brief *policy-map-name* timestamp Command Example

The **show policy-map interface brief *policy-map-name* timestamp** command displays the policy map attached as *either* an input policy map *or* an output policy map, along with the information about the interface to which it is attached. Only the policy map specified by the *policy-map-name* argument is displayed.

The **timestamp** keyword displays the time and date when the policy map was attached to the specific interface, along with the user ID of the person who attached the policy map to the interface.

For example, the display for the **show policy-map interface brief policynam2 timestamp** command is as follows:

```
Service-policy input: policynam2
  interface s2/0/2 - applied 21:47:04 on 24/12/01 by user1
  interface s6/0/1 - applied 19:43:04 on 25/12/01 by user1
```

```
Service-policy output: policynam2
  interface s4/0/2 - applied 12:47:04 on 24/12/01 by user1
  interface s7/0/1 - applied 14:43:04 on 25/12/01 by user1
```

show policy-map interface output brief Command Example

The **show policy-map interface output brief** command displays the attached *output* policy maps, along with the information about the interfaces to which they are attached.

```
Service-policy output: policynam1
```

show policy-map interface output brief timestamp Command Example

The **show policy-map interface output brief timestamp** command displays the attached *output* policy maps, along with the information about the interfaces to which they are attached.

The **timestamp** keyword displays the time and date when the policy map was attached to the specific interface, along with the user ID of the person who attached the policy map to the interface.

```
Service-policy output: policynam2
  interface s2/0/2 - applied 21:47:04 on 24/12/01 by user1
  interface s6/0/1 - applied 19:43:04 on 25/12/01 by user1
```

show policy-map interface input brief Command Example

The **show policy-map interface input brief** command displays the attached *input* policy maps, along with the information about the interfaces to which they are attached.

```
Service-policy input: policynam2
  interface s2/0/2
  interface s6/0/1
```

show policy-map interface input brief timestamp Command Example

The **show policy-map interface input brief timestamp** command displays the attached *input* policy maps, along with the information about the interfaces to which they are attached.

The **timestamp** keyword displays the time and date when the policy map was attached to the specific interface, along with the user ID of the person who attached the policy map to the interface.

```
Service-policy input: policynam2
  interface s2/0/2 - applied 21:47:04 on 24/12/01 by user1
  interface s6/0/1 - applied 19:43:04 on 25/12/01 by user1
```

show policy-map interface output brief *policy-map-name* Command Example

The **show policy-map interface output brief *policy-map-name*** command displays the attached *output* policy map, along with the information about the interface to which it is attached. Only the policy map specified by the *policy-map-name* argument is displayed.

For example, the display for the **show policy-map interface output brief policynam1** command is as follows:

```
Service-policy output: policynam1
  interface s2/0/1
  interface s6/0/0
```

show policy-map interface output brief *policy-map-name* timestamp Command Example

The **show policy-map interface output brief *policy-map-name* timestamp** command displays the attached *output* policy map, along with the information about the interface to which it is attached. Only the policy map specified by the *policy-map-name* argument is displayed.

The **timestamp** keyword displays the time and date when the policy map was attached to the specific interface, along with the user ID of the person who attached the policy map to the interface.

For example, the display for the **show policy-map interface output brief policyname2 timestamp** command is as follows:

```
Service-policy output: policyname2
  interface s2/0/2 - applied 21:47:04 on 24/12/01 by user1
  interface s6/0/1 - applied 19:43:04 on 25/12/01 by user1
```

show policy-map interface input brief *policy-map-name* Command Example

The **show policy-map interface input brief *policy-map-name*** command displays the attached *input* policy map, along with the information about the interface to which it is attached. Only the policy map specified by the *policy-map-name* argument is displayed.

For example, the display for the **show policy-map interface input brief policyname1** command is as follows:

```
Service-policy input: policyname1
  interface s2/0/1
  interface s6/0/0
```

show policy-map interface input brief *policy-map-name* timestamp Command Example

The **show policy-map interface input brief *policy-map-name* timestamp** command displays the attached *input* policy map, along with the information about the interface to which it is attached. Only the policy map specified by the *policy-map-name* argument is displayed.

The **timestamp** keyword displays the time and date when the policy map was attached to the specific interface, along with the user ID of the person who attached the policy map to the interface.

For example, the display for the **show policy-map interface input brief policyname2 timestamp** command is as follows:

```
Service-policy input: policyname2
  interface s2/0/2 - applied 21:47:04 on 24/12/01 by user1
  interface s6/0/1 - applied 19:43:04 on 25/12/01 by user1
```

show policy-map interface brief vrf Command Example

The **show policy-map interface brief vrf** command displays *all* the policy maps (both input policy maps and output policy maps), along with information about the interfaces and the VRFs to which the policy maps are attached.

```
Service-policy input: policyname1
  VRFA interface s2/0/1
  VRFB interface s6/0/0

Service-policy output: policyname2
  VRFC interface s2/0/2
  VRFB interface s6/0/1
```

show policy-map interface brief vrf timestamp Command Example

The **show policy-map interface brief vrf timestamp** command displays *all* the policy maps (both input policy maps and output policy maps), along with information about the interfaces and the VRFs to which the policy maps are attached.

The **timestamp** keyword displays the time and date when the policy map was attached to the specific interface, along with the user ID of the person who attached the policy map to the interface.

```
Service-policy input: policyname1
  VRFA interface s2/0/1 - applied 21:47:04 on 23/12/01 by user1
```

```

VRFB interface s6/0/0 - applied 21:47:04 on 23/12/01 by user1

Service-policy output: policynam2
VRFC interface s2/0/3 - applied 20:47:04 on 23/12/01 by user1
VRFD interface s6/0/2 - applied 20:49:04 on 21/12/01 by user1

```

In some network configurations, the policy map may be attached to the interface initially, and then at a later time, the interface can be configured to act as a VRF interface. In this kind of network configuration, the time-stamp information displays the time when the policy map was attached to the interface. The display does not include the time when the interface was configured to act as a VRF interface. Displaying only the time when the policy map is attached to the interface also applies to the scenarios that are described in the following paragraph for other network configurations.

In other network configurations, a VRF may be attached to multiple interfaces as described in the following scenarios:

- The policy map is also attached to both the interfaces and the VRFs. In this network configuration, all the interfaces should be shown in the display for the VRF, under the policy map name, as follows:

```

Service-policy input: policynam1
VRF1 interface s2/0/1 - applied 21:47:37 on 23/12/01 by user1
      interface atm0/0 - applied 11:37:57 on 21/11/01 by user1

```

- The policy map is not attached to all interfaces to which the specific VRF is attached. In this network configuration, only the VRF interfaces that have that policy map configured are displayed.

show policy-map interface brief *policy-map-name* vrf timestamp Command Example

The **show policy-map interface brief *policy-map-name* vrf timestamp** command displays the policy maps attached as *either* an input policy map *or* an output policy map, along with information about the interface and VRF to which the policy map is attached. Only the policy map specified by the *policy-map-name* argument is displayed.

The **timestamp** keyword displays the time and date when the policy map was attached to the specific interface, along with the user ID of the person who attached the policy map to the interface.

For example, the display for the **show policy-map interface brief policynam1 vrf timestamp** command is as follows:

```

Service-policy input: policynam1
VRF1 interface s2/0/1 - applied 21:47:04 on 23/12/01 by user1

Service-policy output: policynam1
VRF2 interface s6/0/1 - applied 21:47:04 on 23/12/01 by user1

```

show policy-map interface brief *policy-map-name* vrf *vrf-id* timestamp Command Example

The **show policy-map interface brief *policy-map-name* vrf *vrf-id* timestamp** command displays *all* the policy maps (both the input policy maps and the output policy maps), along with information about the interface and VRF to which the policy maps are attached. Only the policy map and VRF specified by the *policy-map-name* argument and the *vrf-id* argument are displayed.

The **timestamp** keyword displays the time and date when the policy map was attached to the specific interface, along with the user ID of the person who attached the policy map to the interface.

For example, the display for **show policy-map interface brief policynam1 vrf VRFA timestamp** command is as follows:

```

Service-policy input: policynam1
VRFA interface s2/0/1 - applied 21:47:04 on 23/12/01 by user1

Service-policy output: policynam1

```

```
VRFA interface s6/0/1 - applied 21:47:04 on 23/12/01 by user1
```

show policy-map interface output brief vrf Command Example

The **show policy-map interface output brief vrf** command displays the attached *output* policy maps, along with information about the interface and VRF to which the policy maps are attached.

```
Service-policy output: policynam2
  VRFC interface s2/0/2
  VRFA interface s6/0/1
```

show policy-map interface output brief vrf timestamp Command Example

The **show policy-map interface output brief vrf timestamp** command displays the attached *output* policy maps, along with information about the interface and VRF to which the policy maps are attached.

The **timestamp** keyword displays the time and date when the policy map was attached to the specific interface, along with the user ID of the person who attached the policy map to the interface.

```
Service-policy output: policynam2
  VRFC interface s2/0/2 - applied 21:47:04 on 23/12/01 by user1
  VRFA interface s6/0/1 - applied 21:47:04 on 23/12/01 by user1
```

show policy-map interface input brief vrf Command Example

The **show policy-map interface input brief vrf** command displays the attached *input* policy maps, along with information about the interface and VRF to which the policy maps are attached.

```
Service-policy input: policynam1
  VRFA interface s2/0/1
  VRFB interface s6/0/0
```

```
Service-policy input: policynam2
  VRFC interface s2/0/2
  VRFB interface s6/0/1
```

show policy-map interface input brief vrf timestamp Command Example

The **show policy-map interface input brief vrf timestamp** command displays the attached *input* policy maps, along with information about the interface and VRF to which the policy maps are attached.

The **timestamp** keyword displays the time and date when the policy map was attached to the specific interface, along with the user ID of the person who attached the policy map to the interface.

```
Service-policy input: policynam1
  VRFA interface s2/0/1 - applied 21:47:04 on 23/12/01 by user1
  VRFB interface s6/0/0 - applied 21:47:04 on 23/12/01 by user1
```

```
Service-policy input: policynam2
  VRFC interface s2/0/3 - applied 20:47:04 on 23/12/01 by user1
  VRFD interface s6/0/2 - applied 20:49:04 on 21/12/01 by user1
```

show policy-map interface input brief vrf vrf-id Command Example

The **show policy-map interface input brief vrf vrf-id** command displays the attached *input* policy maps, along with information about the interface and VRF to which the policy maps are attached. Only the policy maps attached to the VRF specified by the *vrf-id* argument are displayed.

For example, the display for the **show policy-map interface input brief vrf VRFA** command is as follows:

```
Service-policy input: policyname1
  VRFA  interface s2/0/1
```

```
Service-policy input: policyname2
  VRFA  interface s6/0/1
```

show policy-map interface output brief vrf vrf-id Command Example

The **show policy-map interface output brief vrf vrf-id** command displays the attached *output* policy maps, along with information about the interface and VRF to which the policy maps are attached. Only the policy maps attached to the VRF specified by the *vrf-id* argument are displayed.

For example, the display for the **show policy-map interface output brief vrf VRFB** command is as follows:

```
Service-policy output: policyname1
  VRFB  interface s2/0/1
```

```
Service-policy output: policyname2
  VRFB  interface s6/0/1
```

show policy-map interface input brief vrf vrf-id timestamp Command Example

The **show policy-map interface input brief vrf vrf-id timestamp** command displays the attached *input* policy maps, along with information about the interface and VRF to which the policy maps are attached. Only the policy maps attached to the VRF specified by the *vrf-id* argument are displayed.

The **timestamp** keyword displays the time and date when the policy map was attached to the specific interface, along with the user ID of the person who attached the policy map to the interface.

For example, the display for the **show policy-map interface input brief vrf VRFA timestamp** command is as follows:

```
Service-policy input: policyname1
  VRFA  interface s2/0/1 - applied 21:47:04 on 23/12/01 by user1
```

```
Service-policy input: policyname2
  VRFA  interface s6/0/1 - applied 21:47:04 on 23/12/01 by user1
```

show policy-map interface output brief vrf vrf-id timestamp Command Example

The **show policy-map interface output brief vrf vrf-id timestamp** command displays the attached *output* policy maps, along with information about the interface and VRF to which the policy maps are attached. Only the policy maps attached to the VRF specified by the *vrf-id* argument are displayed.

The **timestamp** keyword displays the time and date when the policy map was attached to the specific interface, along with the user ID of the person who attached the policy map to the interface.

For example, the display for the **show policy-map interface output brief vrf VRFB timestamp** command is as follows:

```
Service-policy output: policyname1
  VRFB  interface s2/0/1 - applied 21:47:04 on 23/12/01 by user1
```

```
Service-policy output: policyname2
  VRFB  interface s6/0/1 - applied 21:47:04 on 23/12/01 by user1
```

[Table 2](#) describes the significant fields shown in the various displays.

Table 2 *show policy-map interface brief Field Descriptions*

Field	Description
Service-policy output: policyname2	Output policy map name.
Service-policy input: policyname2	Input policy map name.
interface s2/0/1	Interface to which the policy map is attached.
VRFA	VRF to which the policy map is attached.
applied 21:47:04 on 23/12/01	Time and date when the policy map was attached to the interface or VRF.
by user1	User ID of the person who attached the policy map to the interface or VRF.

Related Commands

Command	Description
show policy-map interface	Displays the packet statistics of all classes that are configured for all service policies either on the specified interface or subinterface or on a specific PVC on the interface.

Feature Information for MPLS VPN—Show Running VRF

Table 3 lists the release history for this feature.

Not all commands may be available in your Cisco IOS software release. For release information about a specific command, see the command reference documentation.

Cisco IOS software images are specific to a Cisco IOS software release, a feature set, and a platform. 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.



Note

Table 3 lists only the Cisco IOS software release that introduced support for a given feature in a given Cisco IOS software release train. Unless noted otherwise, subsequent releases of that Cisco IOS software release train also support that feature.

Table 3 Feature Information for MPLS VPN—Show Running VRF

Feature Name	Releases	Feature Information
MPLS VPN—Show Running VRF	12.2(28)SB 12.0(32)SY 12.2(33)SRB 12.2(33)SXH	<p>The MPLS VPN—Show Running VRF feature provides a CLI option to display a subset of the running configuration on a router that is linked to a VRF. You can display the configuration of a specific VRF or of all VRFs configured on a router. A command that displays all the elements of the configuration linked to a VRF allows for easier troubleshooting on a per-VRF basis and facilitates comparisons among configurations of different VRFs on the same router.</p> <p>In 12.2(28)SB, this feature was introduced.</p> <p>In 12.0(32)SY, support was added for a Cisco IOS 12.0SY release.</p> <p>In 12.2(33)SRB, support was added for a Cisco IOS 12.2SR release.</p> <p>In 12.2(33)SXH, support was added for a Cisco IOS 12.2SX release.</p> <p>The following sections provide information about this feature:</p> <ul style="list-style-type: none"> • Configuration Elements Displayed for the MPLS VPN—Show Running VRF Feature, page 2 • Display of VRF Routing Protocol Configuration, page 3 • Display of Configuration Not Directly Linked to a VRF, page 4 <p>The following commands were modified by this feature: show running-config vrf and show policy-map interface brief.</p>

Glossary

BGP—Border Gateway Protocol. An interdomain routing protocol that replaces External Gateway Protocol (EGP). BGP systems exchange reachability information with other BGP systems. BGP is defined by RFC 1163.

EGP—External Gateway Protocol. An internet protocol for exchanging routing information between autonomous systems. EGP is documented in RFC 904. Not to be confused with the general term exterior gateway protocol. EGP is an obsolete protocol that was replaced by Border Gateway Protocol (BGP).

EIGRP—Enhanced Interior Gateway Routing Protocol. Advanced version of Interior Gateway Routing Protocol (IGRP) developed by Cisco. Provides superior convergence properties and operating efficiency, and combines the advantages of link state protocols with those of distance vector protocols.

IGP—Interior Gateway Protocol. An internet protocol used to exchange routing information within an autonomous system. Examples of common Internet IGPs include Interior Gateway Routing Protocol (IGRP), Open Shortest Path First (OSPF), and Routing Information Protocol (RIP).

IGRP—Interior Gateway Routing Protocol. An Interior Gateway Protocol (IGP) developed by Cisco to address the issues associated with routing in large, heterogeneous networks.

MPLS—Multiprotocol Label Switching. A switching method that forwards IP traffic through the use of a label. This label instructs the routers and the switches in the network where to forward each packet based on preestablished IP routing information.

OSPF—Open Shortest Path First. A link-state, hierarchical, Interior Gateway Protocol (IGP) routing algorithm and routing protocol proposed as a successor to Routing Information Protocol (RIP) in the Internet community. OSPF features include least-cost routing, multipath routing, and load balancing. OSPF was derived from an early version of the Intermediate System-to-Intermediate System (IS-IS) protocol.

RIP—Routing Information Protocol. Internal Gateway Protocol (IGP) supplied with UNIX Berkeley Software Distribution (BSD) systems. RIP is the most common IGP in the Internet. It uses hop count as a routing metric.

VPN—Virtual Private Network. The result of a router configuration that enables IP traffic to use tunneling to travel securely over a public TCP/IP network.

VRF—A Virtual Private Network (VPN) routing and forwarding instance. A VRF consists of an IP routing table, a derived forwarding table, a set of interfaces that use the forwarding table, and a set of rules and routing protocols that determine what goes into the forwarding table. In general, a VRF includes the routing information that defines a customer VPN site that is attached to a provider edge (PE) router.

**Note**

Refer to the Cisco [Dictionary of Internetworking Terms and Acronyms](#) for terms not included in this glossary.

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