



Packet Classification Using the Frame Relay DLCI Number

The Packet Classification Using the Frame Relay DLCI Number feature allows customers to match and classify traffic based on the Frame Relay data-link connection identifier (DLCI) number associated with a packet. This new match criterion is in addition to the other match criteria, such as the IP precedence, differentiated service code point (DSCP) value, class of service (CoS), currently available.

Feature Specifications for Packet Classification Using the Frame Relay DLCI Number

Feature History

Release	Modification
12.2(13)T	This feature was introduced.

Supported Platforms

For platforms supported in Cisco IOS Release 12.2(13)T, consult Cisco Feature Navigator.

Determining Platform Support Through Cisco Feature Navigator

Cisco IOS software is packaged in feature sets that are supported on specific platforms. To get updated information regarding platform support for this feature, access Cisco Feature Navigator. Cisco Feature Navigator dynamically updates the list of supported platforms as new platform support is added for the feature.

Cisco Feature Navigator is a web-based tool that enables you to quickly determine which Cisco IOS software images support a specific set of features and which features are supported in a specific Cisco IOS image. You can search by feature or release. Under the release section, you can compare releases side by side to display both the features unique to each software release and the features in common.

To access Cisco Feature Navigator, you must have an account on Cisco.com. If you have forgotten or lost your account information, send a blank e-mail to cco-locksmith@cisco.com. An automatic check will verify that your e-mail address is registered with Cisco.com. If the check is successful, account details with a new random password will be e-mailed to you. Qualified users can establish an account on Cisco.com by following the directions found at this URL:

<http://www.cisco.com/register>

Cisco Feature Navigator is updated regularly when major Cisco IOS software releases and technology releases occur. For the most current information, go to the Cisco Feature Navigator home page at the following URL:

<http://www.cisco.com/go/fn>

Availability of Cisco IOS Software Images

Platform support for particular Cisco IOS software releases is dependent on the availability of the software images for those platforms. Software images for some platforms may be deferred, delayed, or changed without prior notice. For updated information about platform support and availability of software images for each Cisco IOS software release, refer to the online release notes or, if supported, Cisco Feature Navigator.

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Information About Packet Classification Using the Frame Relay DLCI Number

To configure Packet Classification Using the Frame Relay DLCI Number, you need to understand the following concepts:

- [Modular Quality of Service Command-Line Interface, page 2](#)
- [DLCI Numbers and Network Addressing, page 3](#)

Modular Quality of Service Command-Line Interface

The Packet Classification Using the Frame Relay DLCI Number feature extends the functionality of the Modular Quality of Service (QoS) Command-Line Interface (CLI) (MQC).

The MQC, a feature included in the Cisco IOS software, allows customers to match traffic on the basis of user-specified criteria (for example, access lists, or IP precedences). Traffic that matches that criteria can be organized into specific classes (class maps) that can, in turn, receive specific user-defined QoS treatment when that class is included in a policy map. The class map is placed in a policy map, and the policy map is then attached to an interface for use on the network.

The MQC is a CLI that allows you to create traffic policies and attach these policies to interfaces.

In the MQC, the **class-map** command is used to define a traffic class (which is then associated with a traffic policy). The purpose of a traffic class is to classify traffic.

The MQC consists of the following three processes:

- Defining a traffic class with the **class-map** command.
- Creating a traffic policy by associating the traffic class with one or more QoS features (using the **policy-map** command).
- Attaching the traffic policy to the interface with the **service-policy** command.

A traffic class contains three major elements: a name, a series of **match** commands, and, if more than one **match** command exists in the traffic class, an instruction on how to evaluate these **match** commands. The traffic class is named in the **class-map** command line; that is, if you enter the **class-map cisco** command while configuring the traffic class in the CLI, the traffic class would be named “cisco”.

The **match** commands are used to specify various criteria for classifying packets. Packets are checked to determine whether they match the criteria specified in the **match** commands. If a packet matches the specified criteria, that packet is considered a member of the class and is forwarded according to the quality of service (QoS) specifications set in the traffic policy. Packets that fail to meet any of the matching criteria are classified as members of the default traffic class.

DLCI Numbers and Network Addressing

A DLCI number is a data link connection identifier. Permanent virtual circuits (PVCs) and switched virtual circuits (SVCs) are identified by a DLCI number. The DLCI number defines a single virtual connection through the WAN and are the Frame Relay equivalent to a hardware address.

Periodically, through the exchange of signaling messages, a network may announce a new virtual circuit with its corresponding DLCI number. However, protocol addressing is not included in the announcement. The station receiving such an indication will learn of the new connection, but will not be able to address the other side. Without a new configuration or mechanism for discovering the protocol address of the other side, this new virtual circuit is unusable.

For this reason, Inverse Address Resolution Protocol (Inverse ARP) was developed. Inverse ARP allows a Frame Relay network to discover the protocol address associated with the virtual circuit, and ARP is more flexible than relying on static configuration.

How to Configure Packet Classification Using the Frame Relay DLCI Number

This section contains the following procedures. Each procedure is identified as either required or optional.

- [Configuring the Class Map to Match on the Frame Relay DLCI Number, page 4](#) (required)
- [Creating a Policy Map, page 5](#) (required)
- [Attaching the Policy Map to an Interface, page 5](#) (required)
- [Verifying the Configuration, page 6](#) (optional)

Configuring the Class Map to Match on the Frame Relay DLCI Number

Class maps can be used to classify packets into groups based on a user-specified criterion. For example, class maps can be configured to match packets on the basis of the DSCP value or access list number. In this case, the class map is configured to match on the Frame Relay DLCI number associated with the packet. To configure the class map to match on the Frame Relay DLCI number, use the following commands:

SUMMARY STEPS

1. **enable**
2. **configure** {**terminal** | **memory** | **network**}
3. **class-map** *class-map-name*
4. **match fr-dlci** *dlci-number*
5. **exit**

DETAILED STEPS

	Command or Action	Purpose
Step 1	enable Example: Router> enable	Enables higher privilege levels, such as privileged EXEC mode. <ul style="list-style-type: none"> • Enter your password if prompted.
Step 2	configure { terminal memory network }	Enters global configuration mode.
	Example: Router# configure terminal	
Step 3	class-map <i>class-map-name</i> Example: Router(config)# class-map class1	Specifies the name of the class map to be created and enters class-map configuration mode. <p>Note If match-all or match-any are not specified, traffic must match all the match criterion to be classified as part of the class map.</p> <ul style="list-style-type: none"> • Enter name of class map.
Step 4	match fr-dlci <i>dlci-number</i> Example: Router(config-cmap) match fr-dlci 500	Configures the class map created above to match traffic based on the Frame Relay DLCI number associated with the packet. <ul style="list-style-type: none"> • Enter the DLCI number.
Step 5	exit Example: Router(config-cmap)# exit	(Optional) Exits class-map configuration mode.

Creating a Policy Map

Traffic that matches a user-specified criterion can be organized into specific classes (class maps) that can, in turn, receive specific user-defined QoS treatment when that class is included in a policy map. A policy map (traffic policy) is created using the MQC.

To create a policy map using the MQC, refer to the instructions in the “Configuring the Modular Quality of Service Command-Line Interface” chapter of the *Cisco IOS Quality of Service Solutions Configuration Guide*, Release 12.2.

Attaching the Policy Map to an Interface

After a policy map is created, the next step is to attach the policy map to an interface. Policy maps can be attached to either the input or output direction of the interface.

Depending on the needs of your network, you may need to attach the policy map to a subinterface, an ATM PVC, a Frame Relay DLCI, or other type of interface.

To attach the policy map to an interface, use the following commands:

SUMMARY STEPS

1. **enable**
2. **configure** { **terminal** | **memory** | **network** }
3. **interface** *type number*
4. **pvc** [*name*] *vpi/vci* [**ilmi** | **qsaal** | **smds**]
5. **service-policy** { **input** | **output** } *policy-map-name*
6. **exit**

DETAILED STEPS

	Command or Action	Purpose
Step 1	enable Example: Router> enable	Enables higher privilege levels, such as privileged EXEC mode. <ul style="list-style-type: none"> • Enter your password if prompted.
Step 2	configure { terminal memory network } Example: Router# configure terminal	Enters global configuration mode.
Step 3	interface <i>type number</i> Example: Router(config-if)# interface s4/0	Configures an interface (or subinterface) type and enters interface configuration mode. <ul style="list-style-type: none"> • Enter the interface type number.

	Command or Action	Purpose
Step 4	<p>pvc <i>[name]</i> <i>vpi/vci</i> [<i>ilmi</i> <i>qsaal</i> <i>smds</i>]</p> <p>Example: Router(config-if)# pvc cisco 0/16 ilmi</p>	<p>(Optional) Creates or assigns a name to an ATM PVC and specifies the encapsulation type on an ATM PVC. Enters ATM VC configuration mode.</p> <p>Note This step is required only if you are attaching the policy map to an ATM PVC. If you are not attaching the policy map to an ATM PVC, skip this step and proceed with Step 5.</p>
Step 5	<p>service-policy {<i>input</i> <i>output</i>} <i>policy-map-name</i></p> <p>Example: Router(config-if)# service-policy input policy1</p>	<p>Specifies the name of the policy map to be attached to the input <i>or</i> output direction of the interface.</p> <p>Note Policy maps can be configured on ingress or egress routers. They can also be attached in the input or output direction of an interface. The direction (input or output) and the router (ingress or egress) to which the policy map should be attached varies according your network configuration. When using the service-policy command to attach the policy map to an interface, be sure to choose the router and the interface direction that are appropriate for your network configuration.</p> <ul style="list-style-type: none"> • Enter the policy map name.
Step 6	<p>exit</p> <p>Example: Router(config-if)# exit</p>	<p>(Optional) Exits interface configuration mode.</p>

Verifying the Configuration

This task allows you to verify that you created the configuration you intended and that the feature is functioning correctly. To verify the configuration, use the following commands:

SUMMARY STEPS

1. **enable**
2. **show class-map** *[class-map-name]*
or
show policy-map interface *interface-name*
3. **exit**

DETAILED STEPS

	Command or Action	Purpose
Step 1	<p>enable</p> <p>Example: Router> enable</p>	<p>Enables higher privilege levels, such as privileged EXEC mode.</p> <ul style="list-style-type: none"> Enter your password if prompted.
Step 2	<p>show class-map [<i>class-map-name</i>] or show policy-map interface <i>interface-name</i></p> <p>Example: Router# show class-map class1 or</p> <p>Example: Router# show policy-map interface s4/0</p>	<p>Displays all information about a class map, including the match criterion.</p> <p>or</p> <p>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.</p> <ul style="list-style-type: none"> Enter the interface name.
Step 3	<p>exit</p> <p>Example: Router# exit</p>	<p>(Optional) Exits EXEC mode.</p>

Troubleshooting Tips

The commands in the “[Verifying the Configuration](#)” section allow you to verify that you achieved the intended configuration and that the feature is functioning correctly. If, after using the **show** commands listed above, you find that the configuration is not correct or the feature is not functioning as expected, perform these operations:

If the configuration is not the one you intended, complete the following procedures:

- Use the **show running-config** command and analyze the output of the command.
- If the policy map does not appear in the output of the **show running-config** command, enable the **logging console** command.
- Attach the policy map to the interface again.

If the packets are not being matched correctly (for example, the packet counters are not incrementing correctly), complete the following procedures:

- Run the **show policy-map** command and analyze the output of the command.
- Run the **show running-config** command and analyze the output of the command.
- Use the **show policy-map interface** command and analyze the output of the command. Check the the following findings:
 - If a policy map applies queueing, and the packets are matching the correct class, but you see unexpected results, compare the number of the packets in the queue with the number of the packets matched.
 - If the interface is congested, and only a small number of the packets are being matched, check the tuning of the tx ring, and evaluate whether the queueing is happening on the tx ring. To do this, use the **show controllers** command, and look at the value of the tx count in the output of the command.

Configuration Examples for Packet Classification Using the Frame Relay DLCI Number

This section provides the following configuration example:

- [Configuring the Frame Relay DLCI Number As a Match Criterion Example, page 8](#)

Configuring the Frame Relay DLCI Number As a Match Criterion Example

In the following example, two PVCs are configured on one serial interface. QoS is provisioned so that one PVC receives 70 percent of the bandwidth and the other PVC receives 25 percent of the bandwidth. When configured as shown below, all traffic belonging to Frame Relay DLCI-102 will be guaranteed 70 percent of the bandwidth, while traffic belonging to Frame Relay DLCI-105 is guaranteed 25 percent of the bandwidth.

```
Router(config)# class-map match-all dlci-102
Router(config-cmap)# match fr-dlci 102

Router(config)# class-map match-all dlci-105
Router(config-cmap)# match fr-dlci 105

Router (config)# policy-map test-policy
Router (config-pmap)# class dlci-102
Router (config-pmap-c)# bandwidth percent 70
Router (config-pmap)# class dlci-105
Router (config-pmap-c)# bandwidth percent 25

Router(config)# interface Serial9/0/0:0
Router(config-if)# service-policy output test-policy
```

In the following example, QoS is further provisioned for traffic for a PVC (while also guaranteeing bandwidth to the PVC) by using a hierarchical policy. In this configuration example, traffic for PVC 102 (Frame Relay DLCI-102, shown above) is allocated 40 percent of the bandwidth.

```
Router(config)# class-map match-all precedence2
Router(config-cmap)# match ip precedence 2
```

```

Router (config)# policy-map child
Router (config-pmap)# class precedence2
Router (config-pmap-c)# bandwidth percent 40

Router (config)# policy-map test-policy
Router (config-pmap)# class dlci-102
Router (config-pmap-c)# bandwidth percent 70
Router (config-pmap-c)# service-policy child
Router (config-pmap)# class dlci-105
Router (config-pmap-c)# bandwidth percent 25

Router (config)# interface Serial9/0/0:0
Router (config-if)# service-policy output test-policy

```

Additional References

The following sections provide additional references related to Packet Classification Using the Frame Relay DLCI Number:

- [Related Documents, page 9](#)
- [Standards, page 10](#)
- [MIBs, page 10](#)
- [RFCs, page 11](#)
- [Technical Assistance, page 11](#)

Related Documents

Related Topic	Document Title
QoS commands: complete command syntax, command modes, command history, defaults, usage guidelines, and examples	<i>Cisco IOS Quality of Service Solutions Command Reference</i> , Release 12.2
Modular QoS Command-Line Interface (CLI) (MQC)	“Modular Quality of Service Command-Line Interface” section of the <i>Cisco IOS Quality of Service Solutions Configuration Guide</i> , Release 12.2
Information about attaching policy maps to interfaces	“Configuring the Modular Quality of Service Command-Line Interface” section of the <i>Cisco IOS Quality of Service Solutions Configuration Guide</i> , Release 12.2
Information about attaching policy maps to Frame Relay DLCIs	<i>Cisco IOS Wide-Area Networking Configuration Guide</i> , Release 12.2
Additional match criteria that can be used for packet classification	“Configuring the Modular Quality of Service Command-Line Interface” chapter of the <i>Cisco IOS Quality of Service Solutions Configuration Guide</i> , Release 12.2.

Additional References

Related Topic	Document Title
Frame Relay configuration information and information about DLCIs	<i>Cisco IOS Wide-Area Networking Configuration Guide</i> , Release 12.2
Frame Relay commands: complete command syntax, command modes, command history, defaults, usage guidelines, and examples	<i>Cisco IOS Wide-Area Networking Command Reference</i> , Release 12.2

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 ¹	MIBs Link
<ul style="list-style-type: none"> CISCO-CLASS-BASED-QOS-MIB CISCO-CLASS-BASED-QOS-CAPABILITY-MIB 	<p>To obtain lists of supported MIBs by platform and Cisco IOS release, and to download MIB modules, go to the Cisco MIB website on Cisco.com at the following URL:</p> <p>http://www.cisco.com/public/sw-center/netmgmt/cmtk/mibs.shtml</p>

1. Not all supported MIBs are listed.

To locate and download MIBs for selected platforms, Cisco IOS releases, and feature sets, use Cisco MIB Locator found at the following URL:

<http://tools.cisco.com/ITDIT/MIBS/servlet/index>

If Cisco MIB Locator does not support the MIB information that you need, you can also obtain a list of supported MIBs and download MIBs from the Cisco MIBs page at the following URL:

<http://www.cisco.com/public/sw-center/netmgmt/cmtk/mibs.shtml>

To access Cisco MIB Locator, you must have an account on Cisco.com. If you have forgotten or lost your account information, send a blank e-mail to cco-locksmith@cisco.com. An automatic check will verify that your e-mail address is registered with Cisco.com. If the check is successful, account details with a new random password will be e-mailed to you. Qualified users can establish an account on Cisco.com by following the directions found at this URL:

<http://www.cisco.com/register>

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 and modified commands. All other commands used with this feature are documented in the Cisco IOS Release 12.2 T command reference publications.

New Commands

- [match fr-dlci](#)

Modified Commands

- [show class-map](#)
- [show policy-map interface](#)

match fr-dlci

To specify the Frame Relay data-link connection identifier (DLCI) number as a match criterion in a class map, use the **match fr-dlci** command in class-map configuration mode. To remove a previously specified DLCI number as a match criterion, use the **no** form of this command.

match fr-dlci *dlci-number*

no match fr-dlci *dlci-number*

Syntax Description

<i>dlci-number</i>	Number of the DLCI associated with the packet.
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Defaults

This command has no default behavior or values.

Command Modes

Class-map configuration

Command History

Release	Modification
12.2(13)T	This command was introduced.

Usage Guidelines

This match criterion can be used in main interfaces and point-to-multipoint subinterfaces in Frame Relay networks, and it can also be used in hierarchical policy maps.

Examples

In the following example a class map called “class1” has been created and the Frame Relay DLCI number of 500 has been specified as a match criterion. Packets matching this criterion are placed in class1.

```
Router(config)# class-map class1
Router(config-cmap)# match fr-dlci 500
Router(config-cmap)# end
```

Related Commands

Command	Description
show class-map	Displays all class maps and their matching criteria.
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.

show class-map

To display all class maps and their matching criteria, use the **show class-map** command in EXEC mode.

show class-map [*class-map-name*]

Syntax Description	<i>class-map-name</i>	(Optional) Name of the class map. The class map name can be a maximum of 40 alphanumeric characters.
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Defaults This command has no default behavior or values.

Command Modes EXEC

Command History	Release	Modification
	12.0(5)T	This command was introduced.
	12.2(13)T	This command was modified to display the Frame Relay data-link connection identified (DLCI) number as a criterion for matching traffic inside a class map.

Usage Guidelines You can use the **show class-map** command to display all class maps and their matching criteria. If you enter the optional *class-map-name* argument, the specified class map and its matching criteria will be displayed.

Examples In the following example, a class map called “c1” has been defined, and the Frame Relay DLCI number of 500 has been specified as a match criterion:

```
Router# show class-map

class map match-all c1
  match fr-dlci 500
```

Table 1 describes the significant fields shown in the display.

Table 1 *show class-map Field Descriptions¹*

Field	Description
Class-map	Class of traffic being displayed. Output is displayed for each configured class map in the policy. The choice for implementing class matches (for example, match-all or match-any) can also appear next to the traffic class.
Match	Match criteria specified for the class map. Choices include criteria such as the Frame Relay DLCI number, Layer 3 packet length, IP precedence, IP differentiated services code point (DSCP) value, Multiprotocol Label Switching (MPLS) experimental value, access groups, and quality of service (QoS) groups.

1. A number in parentheses may appear next to the class-map name, and match criteria information. The number is for Cisco internal use only and can be disregarded.

Related Commands

Command	Description
class-map	Creates a class map to be used for matching packets to a specified class.
match fr-dlci	Specifies the Frame Relay DLCI number as a match criterion in a class map.
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.

show policy-map interface

To display the packet statistics of all classes that are configured for all service policies either on the specified interface or subinterface or on a specific permanent virtual circuit (PVC) on the interface, use the **show policy-map interface** command in EXEC mode.

show policy-map interface *interface-name* [**vc** [*vpi/*] *vci*][**dlci** *dlci*] [**input** | **output**]

Syntax Description	
<i>interface-name</i>	Name of the interface or subinterface whose policy configuration is to be displayed.
vc	(Optional) For ATM interfaces only, shows the policy configuration for a specified PVC. The name can be up to 16 characters long.
<i>vpi/</i>	(Optional) ATM network virtual path identifier (VPI) for this PVC. On the Cisco 7200 and 7500 series routers, this value ranges from 0 to 255. The <i>vpi</i> and <i>vci</i> arguments cannot both be set to 0; if one is 0, the other cannot be 0.
<i>vci</i>	(Optional) ATM network virtual channel identifier (VCI) for this PVC. This value ranges from 0 to 1 less than the maximum value set for this interface by the atm vc-per-vc command. Typically, the lower values 0 to 31 are reserved for specific traffic (F4 Operation, Administration, and Maintenance (OAM), switched virtual circuit (SVC) signaling, Integrated Local Management Interface (ILMI), and so on) and should not be used. The VCI is a 16-bit field in the header of the ATM cell. The VCI value is unique only on a single link, not throughout the ATM network, because it has local significance only. The <i>vpi</i> and <i>vci</i> arguments cannot both be set to 0; if one is 0, the other cannot be 0.
dlci	(Optional) Indicates a specific PVC for which policy configuration will be displayed.
<i>dlci</i>	(Optional) A specific data-link connection identifier (DLCI) number used on the interface. Policy configuration for the corresponding PVC will be displayed when a DLCI is specified.
input	(Optional) Indicates that the statistics for the attached input policy will be displayed.
output	(Optional) Indicates that the statistics for the attached output policy will be displayed.

Defaults

The absence of both the forward slash (/) and a *vpi* value causes the *vpi* value to default to 0. If this value is omitted, information for all virtual circuits (VCs) on the specified ATM interface or subinterface is displayed.

Command Modes

EXEC

show policy-map interface

Command History	Release	Modification
	12.0(5)T	This command was introduced.
	12.0(5)XE	This command was incorporated into Cisco IOS Release 12.0(5)XE.
	12.0(7)S	This command was incorporated into Cisco IOS Release 12.0(7)S.
	12.1(1)E	This command was incorporated into Cisco IOS Release 12.1(1)E.
	12.1(2)T	This command was integrated into Cisco IOS Release 12.1(2)T. This command was modified to display information about the policy for all Frame Relay PVCs on the interface, or, if a DLCI is specified, the policy for that specific PVC. This command was also modified to display the total number of packets marked by the QoS set action.
	12.1(3)T	This command was integrated into Cisco IOS Release 12.1(3)T. This command was modified to display per-class accounting statistics.
	12.2(4)T	This command was modified for the Two-Rate Policer. It now can display burst parameters and associated actions.
	12.2(8)T	The command was modified for the Policer Enhancement — Multiple Actions feature. This command now displays the multiple actions configured for packets conforming to, exceeding, or violating a specific rate.
	12.2(13)T	This command was modified to display the Frame Relay DLCI number as a criterion for matching traffic inside a class map.

Usage Guidelines

The **show policy-map interface** command displays the configuration for classes on the specified interface or the specified PVC only if a service policy has been attached to the interface or the PVC.

Examples

The following sample output of the **show policy-map interface** command displays the statistics for the Serial3/1 interface, to which a service policy called “mypolicy” is attached. The Frame Relay DLCI number 500 has been specified as a match criterion for the traffic in the class called “case1”.

```
Router# show policy-map interface Serial3/1

Serial3/1

Service-policy output: mypolicy

Class-map: case1 (match-any)
  169689 packets, 41736286 bytes
  5 minute offered rate 21000 bps, drop rate 0 bps
Match: fr-dlci 500
  84845 packets, 20868266 bytes
  5 minute rate 0 bps
```

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

Table 2 *show policy-map interface Field Descriptions¹*

Field	Description
Service-policy output	Name of the output service policy applied to the specified interface or VC.
Class-map	Class of traffic being displayed. Output is displayed for each configured class in the policy. The choice for implementing class matches (for example, match-all or match-any) can also appear next to the traffic class.
packets and bytes	Number of packets (also shown in bytes) identified as belonging to the class of traffic being displayed.
offered rate	Rate, in kbps, of packets coming into the class.
drop rate	Rate, in kbps, at which packets are dropped from the class. The drop rate is calculated by subtracting the number of successfully transmitted packets from the offered rate.
Match	Match criteria specified for the class of traffic. Choices include criteria such as the Frame Relay DLCI, Layer 3 packet length, IP precedence, IP differentiated services code point (DSCP) value, Multiprotocol Label Switching (MPLS) experimental (EXP) value, access groups, and quality of service (QoS) groups.

1. A number in parentheses may appear next to the service-policy output name, class-map name, and match criteria information. The number is for Cisco internal use only and can be disregarded.

Related Commands

Command	Description
match fr-dlci	Specifies the Frame Relay DLCI number as a match criterion in a class map.
show frame-relay pvc	Displays statistics about PVCs for Frame Relay interfaces.
show policy-map class	Displays the configuration for the specified class of the specified policy map.

■ show policy-map interface