



RSVP Local Policy Support

Feature History

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

This document describes the Resource Reservation Protocol (RSVP) Local Policy Support feature in Cisco IOS Release 12.2(13)T. It identifies the supported platforms, provides configuration examples, and lists related Cisco IOS command line interface (CLI) commands.

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Feature Overview

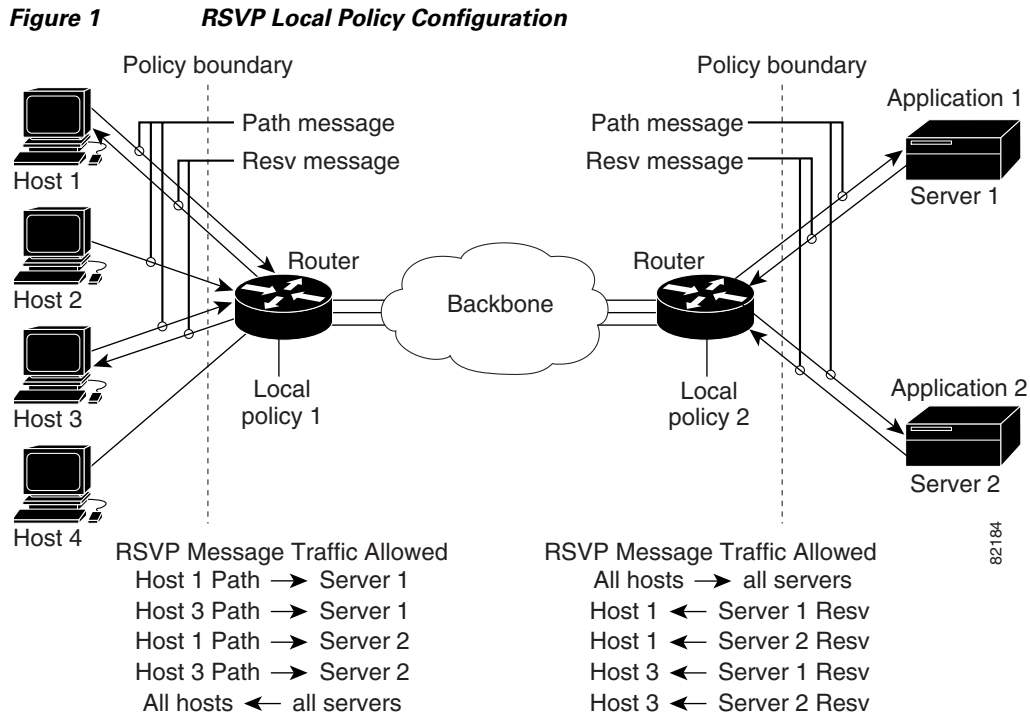
Network administrators need the ability to control the resources that RSVP reservations are allowed to use. For example, they may want to restrict RSVP reservations to certain subnets or from specific network servers.

The RSVP Local Policy Support feature allows network administrators to create default and access control list (ACL)-based policies. These policies, in turn, control how RSVP filters its signalling messages to allow or deny quality of service (QoS), as shown in [Figure 1](#), to networking applications based on the IP addresses of the requesting hosts.



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Benefits

RSVP Reservation Control

Network administrators can restrict the source of RSVP reservations to specific endpoints.

RSVP Reservation Preemption

High priority reservations can preempt existing reservations if there is otherwise no bandwidth available for the new, high priority reservation.

Related Features and Technologies

The RSVP Local Policy Support feature is related to QoS features such as signalling, classification, and congestion management. (See the [“Related Documents”](#) section.)

Related Documents

The following documents provide additional information:

- [“Signalling Overview”](#) module
- [“Configuring RSVP”](#) module
- [“Classifying Network Traffic”](#) module
- [“Congestion Management Overview”](#) module
- [Cisco IOS Quality of Service Solutions Command Reference](#)

Supported Platforms

For supported platforms 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 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.

Supported Standards, MIBs, and RFCs

Standards

No new or modified standards are supported by this feature.

MIBs

No new or modified MIBs are supported 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://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

No new or modified RFCs are supported by this feature.

Prerequisites

RSVP must be configured on two or more routers or on one router and one host within the network before you can use the RSVP Local Policy Support feature.

Configuration Tasks

See the following section for configuration tasks for the RSVP Local Policy Support feature. Each task in the list indicates whether the task is optional or required.

- [Creating an RSVP Local Policy, page 4](#) (required)
- [Specifying Command Line Interface \(CLI\) Submodes, page 4](#) (required)

Creating an RSVP Local Policy

To create an RSVP local policy, use the following command beginning in global configuration mode:

Command	Purpose
Router(config)# ip rsvp policy local {default acl acl [acl1...acl8]}	Creates a local policy to determine how RSVP resources are used in a network.

Specifying Command Line Interface (CLI) Submodes

To specify CLI submodes, use the following command beginning in local policy mode:

Command	Purpose
Router(config-rsvp-policy-local)# {accept forward} {all path path-error rsvp rsvp-error}	Defines the properties of the default or ACL-based local policy that you are creating.

See the **ip rsvp policy local** command in the [Cisco IOS Quality of Service Solutions Command Reference](#) for more detailed information on submodes.

Verifying RSVP Local Policy Configuration

To verify RSVP local policy configuration, use this procedure:

- Step 1** Enter the **show ip rsvp policy** command to display policy-related information including local and default policies configured, Common Open Policy Service (COPS) servers configured, and the preemption parameter configured—enabled or disabled.



Note There are no COPS servers configured in the following output.

```
Router# show ip rsvp policy

Local policy:

    A=Accept    F=Forward

    Path:-- Resv:-- PathErr:-- ResvErr:-- ACL:104
    Path:-- Resv:-- PathErr:-- ResvErr:-- ACL:None [Default policy]

COPS:

Generic policy settings:
    Default policy: Accept all
    Preemption:     Disabled
```

- Step 2** Enter the **show ip rsvp policy local detail** command to display information about the (selected) local policies currently configured.

```
Router# show ip rsvp policy local detail

Local policy for ACL(s): 104
    Preemption Priority: Start at 0, Hold at 0.
    Local Override: Disabled.

            Accept    Forward
Path:        No       No
Resv:        No       No
PathError:   No       No
ResvError:   No       No

Default local policy:
    Preemption Priority: Start at 0, Hold at 0.
    Local Override: Disabled.

            Accept    Forward
Path:        No       No
Resv:        No       No
PathError:   No       No
ResvError:   No       No

Generic policy settings:
    Default policy: Accept all
    Preemption:     Disabled
```

Monitoring and Maintaining RSVP Local Policy Support

To monitor and maintain the RSVP Local Policy Support feature, use the following commands in EXEC mode:

Command	Purpose
Router# show ip rsvp policy	Displays either the configured COPS servers or the local policies.
Router# show ip rsvp policy local	Displays selected local policies that have been configured.
Router# show ip rsvp reservation detail	Displays detailed RSVP-related receiver information currently in the database.
Router# show ip rsvp sender detail	Displays detailed RSVP-related sender information currently in the database.

Configuration Examples

This section provides a configuration example for the RSVP Local Policy Support feature.

RSVP Local Policy Support Example

In the following example, any RSVP nodes in the 192.168.101.0 subnet can initiate or respond to reservation requests, but all other nodes can respond only to reservation requests. This means that any 192.168.101.x node can send and receive Path, PathError, Resv, or ResvError messages. All other nodes can send only Resv or ResvError messages.

In the following example, ACL 104 is configured for a local policy:

```
Router# configure terminal
Router(config)# access-list 104 permit ip 192.168.101.0 0.0.0.255 any
Router(config)# ip rsvp policy local acl 104
Router(config-rsvp-policy-local)# forward all
Router(config-rsvp-policy-local)# end
```

In the following example, a default local policy is configured:

```
Router(config)# ip rsvp policy local default
Router(config-rsvp-policy-local)# forward resv
Router(config-rsvp-policy-local)# forward resverror
Router(config-rsvp-policy-local)# end
```

Command Reference

The following commands are introduced or modified in the feature or features documented in this module. For information about these commands, see the *Cisco IOS Quality of Service Solutions Command Reference* at http://www.cisco.com/en/US/docs/ios/qos/command/reference/qos_book.html. For information about all Cisco IOS commands, use the Command Lookup Tool at <http://tools.cisco.com/Support/CLILookup> or a Cisco IOS master commands list.

New Commands

- **ip rsvp policy local**
- **ip rsvp policy preempt**
- **show ip rsvp policy local**

Modified Commands

- **show ip rsvp policy**

Glossary

access control list—See ACL.

ACL—access control list. An ACL consists of individual filtering rules grouped together in a single list. It is generally used to provide security filtering, though it may be used to provide a generic packet classification facility.

flow—A stream of data traveling between two endpoints across a network (for example, from one LAN station to another). Multiple flows can be transmitted on a single circuit.

latency—The delay between the time a device receives a packet and the time that packet is forwarded out the destination port.

packet—A logical grouping of information that includes a header containing control information and (usually) user data. Packets most often refer to network layer units of data.

policy—Any defined rule that determines the use of resources within the network. A policy can be based on a user, a device, a subnetwork, a network, or an application.

port scanning—The act of systematically checking a computer's ports to find an access point.

Resource Reservation Protocol—See RSVP.

RSVP—Resource Reservation Protocol. A protocol for reserving network resources to provide quality of service guarantees to application flows.

router—A network layer device that uses one or more metrics to determine the optimal path along which network traffic should be forwarded. Routers forward packets from one network to another based on network layer information.

tunnel—A secure communications path between two peers, such as routers.

Voice over IP—See VoIP.

VoIP—Voice over IP. The ability to carry normal telephony-style voice over an IP-based Internet maintaining telephone-like functionality, reliability, and voice quality.

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