Chapter 12

Summary of RSVP Configuration Statements

This chapter provides a reference for each of the RSVP configuration statements. The statements are organized alphabetically.

aggregate

Syntax (aggregate | no-aggregate);

Hierarchy Level [edit protocols rsvp interface *interface-name*]

Description Control the use of RSVP aggregate messages on an interface:

aggregate—Use RSVP aggregate messages.

no-aggregate—Do not use RSVP aggregate messages.

Aggregate messages can pack multiple RSVP messages into a single transmission, thereby reducing network overhead and enhancing efficiency. The number of supportable sessions and processing overhead are significantly improved when aggregation is enabled.

Not all routers connected to a subnet need to support aggregation simultaneously. Each RSVP router negotiates its intention to use aggregate messages on per-neighbor basis. Only when both routers agree are aggregate messages sent.

Default Aggregation is disabled.

Usage Guidelines See “Configure RSVP Aggregation” on page 119.

Required Privilege Level routing—To view this statement in the configuration.
routing-control—To add this statement to the configuration.

authentication-key

Syntax authentication-key *key*;

Hierarchy Level [edit protocols rsvp interface *interface-name*]

Description Authentication key (password). Neighboring routers use the password to verify the authenticity of packets sent from this interface.

RSVP uses HMAC-MD5 authentication, which is defined in RFC 2104, *HMAC: Keyed-Hashing for Message A uthentication* .

All routers that are connected to the same IP subnet must use the same authentication scheme and password.

Options *key*—Authentication password. It can be 1 to 16 contiguous digits or letters. Separate decimal digits with periods. Separate hexadecimal digits with periods and precede the string with 0x. If you include spaces in the password, enclose the entire password in quotation marks (" ").

Usage Guidelines See “Configure RSVP Authentication” on page 120.

Required Privilege Level routing—To view this statement in the configuration.
routing-control—To add this statement to the configuration.

bandwidth

Syntax bandwidth *bps;*

Hierarchy Level [edit protocols rsvp interface *interface-name*]

Description For certain logical interfaces (such as ATM, PVC or frame relay), you cannot determine the correct bandwidth from the hardware. This statement allows you to specify the actual available bandwidth.

Default The hardware raw bandwidth is used.

Options *bps*—Bandwidth is specified in bits per second. You can specify this as an integer value (if you do so, count your zeros carefully, or you can use the abbreviations k (for a thousand), m (for a million), or g (for a billion [also called a thousand million]).
Range: Any positive integer
Default: 0 (no bandwidth is reserved)

Usage Guidelines See “Reserve Bandwidth on an Interface” on page 120

Required Privilege Level routing—To view this statement in the configuration.
routing-control—To add this statement to the configuration.

disable

Syntax disable;

Hierarchy Level [edit protocols rsvp interface *interface-name*]

Description Explicitly disable RSVP on an interface.

Default RSVP is enabled on interfaces configured with the RSVP interface statement.

Usage Guidelines See "Enable RSVP" on page 118.

Required Privilege Level routing—To view this statement in the configuration.
routing-control—To add this statement to the configuration.

hello-interval

Syntax hello-interval *seconds*;

Hierarchy Level [edit protocols rsvp interface *interface-name*]

Description Enable the sending of hello packets on the interface.

If you configure a nonzero hello interval and (2 x keep-multiplier + 1) consecutive hello exchanges with a neighbor are lost, the neighbor and all sessions to and from that neighbor are declared to be down.

Options *seconds*—Length of time between hello packets. A value of 0 disables the sending of hello packets on the interface.
Range: 1 through 60
Default: 3 seconds

Usage Guidelines See "Configure the RSVP Hello Interval" on page 119

Required Privilege Level routing—To view this statement in the configuration.
routing-control—To add this statement to the configuration.

interface

Syntax
```
interface interface-name {
    disable;
    authentication-key key;
    subscription percentage;
}
```

Hierarchy Level [edit protocols rsvp]

Description Enable RSVP on one or more router interfaces.

Default RSVP is disabled on all interfaces.

Options *interface-name*—Name of an interface. To configure all interfaces, you can specify all. For details about specifying interfaces, see the *JUNOS Internet Softw are Configur ation Guide: Interf aces and Chassis* .

The remaining statements are explained separately.

Usage Guidelines See “Enable RSVP” on page 118.

Required Privilege Level routing—To view this statement in the configuration.
routing-control—To add this statement to the configuration.

keep-multiplier

Syntax
```
keep-multiplier number;
```

Hierarchy Level [edit protocols rsvp]

Description Set the keep multiplier value.

Options *number*—Multiplier value.
Range: 1 through 255
Default: 3

Usage Guidelines See “Configure RSVP Timers” on page 121.

Required Privilege Level routing—To view this statement in the configuration.
routing-control—To add this statement to the configuration.

no-aggregate

See aggregate on page 125

refresh-time

Syntax refresh-time *seconds*;

Hierarchy Level [edit protocols rsvp]

Description Set the refresh time.

Options *seconds*—Refresh time.
Range: 1 through 65535
Default: 30 seconds

Usage Guidelines See “Configure RSVP Timers” on page 121.

Required Privilege Level routing—To view this statement in the configuration.
routing-control—To add this statement to the configuration.

rsvp

Syntax rsvp { ... }

Hierarchy Level [edit protocols]

Description Enable RSVP routing on the router.

You must include the rsvp statement in the configuration to enable RSVP on the router. See “Minimum RSVP Configuration” on page 118.

Default RSVP is disabled on the router.

Usage Guidelines See “Enable RSVP” on page 118.

Required Privilege Level routing—To view this statement in the configuration.
routing-control—To add this statement to the configuration.

subscription

Syntax subscription *percentage*;

Hierarchy Level [edit protocols rsvp interface *interface-name*]

Description Configure the subscription factor on the interface, which is the percentage of the link bandwidth that can be used for the RSVP reservation process.

You can use the subscription factor to shut down new RSVP sessions on a per-interface basis. If you set the percentage to 0, no new sessions (including those with zero bandwidth requirements) are permitted on the interface. Existing RSVP sessions are not affected by changing the subscription factor. To clear an existing session, issue the clear rsvp session command.

Options *percentage*—Percentage of the interface's bandwidth that RSVP allows to be used for reservations. If you specify a value greater than 100, you are oversubscribing the interface.
Range: 0 through 65000
Default: 100 percent

Usage Guidelines See "Reserve Bandwidth on an Interface" on page 120.

Required Privilege Level routing—To view this statement in the configuration.
routing-control—To add this statement to the configuration.

traceoptions

Syntax

```
traceoptions {
   file filename <replace> <size size> <files number> <no-stamp>
      <(world-readable | no-world-readable)>;
   flag flag <flag-modifier> <disable>;
}
```

Hierarchy Level [edit protocols rsvp]

Description RSVP protocol-level trace options.

Default The default RSVP protocol-level trace options are those inherited from the routing protocols traceoptions statement included at the [edit routing-options] hierarchy level.

Options disable—(Optional) Disable the tracing operation. You can use this option is to disable a single operation when you have defined a broad group of tracing operations, such as all.

filename—Name of the file to receive the output of the tracing operation. Enclose the name within quotation marks. All files are placed in the directory /var/log. We recommend that you place RSVP tracing output in the file rsvp-log.

files *number*—(Optional) Maximum number of trace files. When a trace file named *trace-file* reaches its maximum size, it is renamed *trace-file*.0, then *trace-file*.1, and so on, until the maximum number of trace files is reached. Then, the oldest trace file is overwritten.

If you specify a maximum number of files, you also must specify a maximum file size with the size option.

Range: 2 to 1000.
Default: 2 files

flag—Tracing operation to perform. To specify more than one tracing operation, include multiple flag statements.

RSVP Tracing Flags

error—All detected error conditions

packets—All RSVP messages, including Path, Resv, PathTear, ResvTear, PathErr, ResvErr, and ResvConf messages

path—Path messages

pathtear—PathTear messages

resv—Resv messages

resvtear—ResvTear messages

state—Session state transitions

Global Tracing Flags

all—All tracing operations

general—A combination of the normal and route trace operations

normal—All normal operations
Default: If you do not specify this option, only unusual or abnormal operations are traced.

policy—Policy operations and actions

route—Routing table changes

state—State transitions

task—Interface transactions and processing

timer—Timer usage

flag-modifier—(Optional) Modifier for the tracing flag. You can specify one or more of these modifiers:

detail—Provide detailed trace information.

receive—Packets being received.

send—Packets being transmitted.

no-stamp—(Optional) Do not place timestamp information at the beginning of each line in the trace file.
Default: If you omit this option, timestamp information is placed at the beginning of each line of the tracing output.

no-world-readable—(Optional) Disallow any user to read the log file.

replace—(Optional) Replace an existing trace file if there is one.
Default: If you do not include this option, tracing output is appended to an existing trace file.

size *size*—(Optional) Maximum size of each trace file, in kilobytes (KB), megabytes (MB), or gigabytes (GB). When a trace file named *trace-file* reaches this size, it is renamed *trace-file*.0. When the *trace-file* again reaches its maximum size, *trace-file*.0 is renamed *trace-file*.1 and *trace-file* is renamed *trace-file*.0. This renaming scheme continues until the maximum number of trace files is reached. Then, the oldest trace file is overwritten.

If you specify a maximum file size, you also must specify a maximum number of trace files with the files option.

Syntax: *x*k to specify KB, *x*m to specify MB, or *x*g to specify GB
Range: 10 KB through the maximum file size supported on your system
Default: 1 MB

world-readable—(Optional) Allow any user to read the log file.

Usage Guidelines See “Trace RSVP Protocol Traffic” on page 121.

Required Privilege Level routing and trace—To view this statement in the configuration
routing-control and trace-control—To add this statement to the configuration