Chapter 15

Summary of RIPng Configuration Statements

The following sections explain each of the individual statements in the [edit protocols ripng] hierarchy. The statements are organized alphabetically.

export

Syntax export [*policy-names*];

Hierarchy Level [edit protocols ripng group *group-name*]

Description Apply a policy or list of policies to routes being exported to the neighbors.

Options *policy-names*—Name of one or more policies.

Usage Guidelines See “Apply Export Policy” on page 171.

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

See Also import on page 178

group

Syntax

```
group group-name {
    export [ policy-names ];
    metric-out metric;
    preference number;
    neighbor neighbor-name {
        import policy-name;
        metric-in metric;
        receive <none>;
        send <none>;
    }
}
```

Hierarchy Level [edit protocols ripng]

Description Configure a set of RIPng neighbors that share an export policy and metric. The export policy and metric govern what routes to advertise to neighbors in a given group.

Options *group-name*—Name of a group, up to 16 characters long.

The remaining statements are explained separately.

Usage Guidelines See “Configure Group-Specific Properties” on page 170.

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

import

Syntax import [*policy-names*];

Hierarchy Level [edit protocols ripng],
[edit protocols ripng group *group-name* neighbor *neighbor-name*]

Description Apply one or more policies to routes being imported into the local router from the neighbors.

Options *policy-names*—Name of one or more policies.

Usage Guidelines See “Apply Import Policy” on page 170.

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

See Also export on page 177

metric-in

Syntax metric-in *metric*;

Hierarchy Level [edit protocols ripng],
[edit protocols ripng group *group-name* neighbor *neighbor-name*],

Description Metric to add to incoming routes when advertising into RIPng routes that were learned from other protocols. Use this statement to configure the router to prefer RIPng routes learned through a specific neighbor.

Options *metric*—Metric value.
Range: 1 through 16
Default: 1

Usage Guidelines See "Modify the Incoming Metric" on page 169.

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

metric-out

Syntax metric-out *metric*;

Hierarchy Level [edit protocols ripng group *group-name* neighbor *neighbor-name*]

Description Metric value to add to routes transmitted to the neighbor. Use this statement to control how other routers prefer RIPng routes sent from this neighbor.

Options *metric*—Metric value.
Range: 1 through 16
Default: 1

Usage Guidelines See "Modify the Outgoing Metric" on page 171.

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

neighbor

Syntax
```
neighbor neighbor-name {
    import [ policy-names ];
    metric-in metric;
    receive <none>;
    send <none>;
}
```

Hierarchy Level [edit protocols ripng group *group-name*]

Description Configure neighbor-specific RIPng parameters, thereby overriding the defaults set for the router.

Options *neighbor-name*—Name of an interface over which a router communicates to its neighbors.

The remaining statements are explained separately.

Usage Guidelines See “Define RIPng Neighbor Properties” on page 169.

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

preference

Syntax preference *preference*;

Hierarchy Level [edit protocols ripng group *group-name*]

Description Preference of external routes learned by RIPng as compared to those learned from other routing protocols.

Options *preference*—Preference value. A lower value indicates a more-preferred route.
Range: 0 to 4,294,967,295 ($2^{32} – 1$)
Default: 100

Usage Guidelines See “Control Route Preference” on page 171.

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

receive

Syntax receive <none>;

Hierarchy Level [edit protocols ripng],
[edit protocols ripng group *group-name* neighbor *neighbor-name*]

Description Enable or disable receiving of update messages.

Options <none>—(Optional) Disables receiving update messages.

Default: Receive is enabled by default.

Usage Guidelines See “Configure Update Messages” on page 169.

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

See Also send on page 181

ripng

Syntax ripng {...}

Hierarchy Level [edit protocols]

Description Enable RIPng routing on the router.

Default RIPng is disabled on the router.

Usage Guidelines See “Minimum RIPng Configuration” on page 168.

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

send

Syntax send <none>;

Hierarchy Level [edit protocols ripng],
[edit protocols ripng group *group-name* neighbor *neighbor-name*]

Description Enable or disable sending of update messages.

Options <none>—(Optional) Disables sending of update messages.

Default: Send is enabled by default.

Usage Guidelines See “Configure Update Messages” on page 169.

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

See Also receive on page 181

traceoptions

Syntax

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

Hierarchy Level [edit protocols ripng]

Description RIPng protocol-level tracing options.

Default The default RIPng protocol-level trace options are those inherited from the global traceoptions statement.

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

file *name*—Name of the file to receive the output of the tracing operation. Enclose the name in quotation marks. We recommend that you place RIPng tracing output in the file /var/log/ripng-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 must also specify a maximum file size with the size option.

Range: 2 through 1000 files
Default: 1 trace file only

flag *flag*—Tracing operation to perform. To specify more than one tracing operation, include multiple flag statements. The following are the RIPng–specific tracing options:

error—RIPng errors

expiration—RIPng route expiration processing

holddown—RIPng hold-down processing

packets—All RIPng packets

request—RIPng information packets such as request, poll, and poll entry packets

trigger—RIPng triggered updates

update—RIPng update packets

The following are the global tracing options:

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

receive-detail—Provide detailed trace information for packets being received

send—Packets being transmitted

send-detail—Provide detailed trace information for 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) or megabytes (MB). 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 must also 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 RIPng Protocol Traffic" on page 172.

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