

Chapter 12

Internet Control Message Protocol (ICMP) Statement

icmp

Name

icmp - this clause allows for commands pertaining to the Internet Control Message Protocol (ICMP). Currently, only **traceoptions** is supported.

Syntax

```
icmp {  
    traceoptions  
        [ tracefile [ replace ]  
          [ size tracesize [ k | m ] files tracefiles ] ] [ nostamp ]  
        [ trace_global_options | trace_protocol_packets ]  
        [ except ( trace_global_options | trace_protocol_packets ) ];  
};
```

Parameters

traceoptions - sets tracing options for ICMP interactions

Description

On systems without the BSD routing socket, GateD listens to ICMP messages received by the system. GateD currently supports **redirect**. Processing of ICMP redirect messages is handled by the **redirect** statement. See “Chapter 17 Redirect Processing” on page 91 in *Configuring GateD* for more information about **redirect**.

Currently, the only reason to specify the **icmp** statement is to be able to trace the ICMP messages that GateD receives. These messages may be traced to a separate log file as is allowed by any GateD **traceoptions** clause. This allows for easy separation of non-redirect ICMP messages from redirect messages in the trace file.

Default

no ICMP tracing

Context

global statement

Examples

See `icmp traceoptions`.

See Also

"Chapter 16 Internet Control Message Protocol (ICMP)" on page 89 of *Configuring GateD*
`traceoptions` on page 3

traceoptions

Name

traceoptions - sets the logging options for ICMP interactions

Syntax

```
traceoptions none ;
traceoptions
    [ tracefile [ replace ] [ size tracesize [ k | m ] files tracefiles ]
]
    [ nostamp ] [ trace_global_options | trace_protocol_packets ]
    [ except ( trace_global_options | trace_protocol_packets ) ] ;
```

Parameters

none - Don't trace any ICMP packets.

replace - specifies to start tracing by truncating an existing file. The default is to append to an existing file.

size tracesize [k | m] files tracefiles - Limits the maximum size of the trace file to the specified *tracesize* (minimum 10k). When the trace file reaches the specified size, the file is renamed to file.0, then file.1, then file.2, up to the maximum number of files (the minimum specification is 2).

k - specifies the file size in kilobytes

m - specifies the file size in megabytes

files tracefiles - specifies the maximum number of files

nostamp - specifies that a timestamp should not be prepended to all trace lines

except - the options listed below are not traced.

trace_global_options - global trace options as defined in "Chapter 4 Trace Statements" on page 15 in *Configuring GateD*.

trace_protocol_packets - [detail] [send | receive] (packets | redirect | routerdiscovery | info | error) as defined below:

detail - Use detailed packet tracing.

send - Trace only ICMP packets sent.

receive - Trace only ICMP packets received.

packets - Trace all ICMP packet types.

redirect - Trace only ICMP redirect packets.

routerdiscovery - Trace only ICMP router discovery packets.

info - Trace only ICMP informational packets, which include:

- mask request/response
- info request/response
- echo request/response
- time stamp request/response

error - Trace only ICMP error packets, which include:

- time exceeded
- parameter problem
- unreachable
- source quench

Description

The ICMP command allows control over which packets are traced and logged. It inherits the defaults from the global `traceoptions` command (see `traceoptions`) and overrides them for ICMP. Tracing is controlled on a packet level, or turned off with `none`. The `detail` tag specifies that more detailed information should be logged. Only packets sent or received can be traced, and tracing can be controlled for various types of packets. Finally, types can be combined to get sets, and "`except`" can be used to reject specific tracing.

Default

no ICMP tracing

Context

`icmp` statement

Examples

Example 1

Turn off ICMP tracing.

```
icmp {  
    traceoptions none;  
} ;
```

Example 2

Trace all ICMP packets with detail.

```
icmp {  
    traceoptions detail packets;  
} ;
```

Example 3

Trace only redirect packets sent, with `detail`.

```
icmp {  
    traceoptions detail send redirect;  
} ;
```

Example 4

Trace all ICMP packets except router discovery to separate files with a size of 1024K and 3 total files, replacing them as necessary.

```
icmp {  
    traceoptions "/var/tmp/icmp.log" replace size 1024k files 3  
    detail packets except routerdiscovery;  
} ;
```

Example 5

Trace, in detail, received info and error ICMP packets.

```
icmp {  
    traceoptions detail recv info error;  
} ;
```

Example 6

This example shows another way of tracing, in detail, all sent and received packets.

```
icmp {  
    traceoptions detail redirect routerdiscovery info error;  
} ;
```

See Also

“Chapter 16 Internet Control Message Protocol (ICMP)” on page 89 of *Configuring GateD*

`traceoptions` on page 3

