

Troubleshooting Commands

This chapter describes the function and displays the syntax for troubleshooting commands. For more information about defaults and usage guidelines, see the corresponding chapter of the *Configuration Fundamentals Command Reference*.

clear logging

To clear messages from the logging buffer, use the **clear logging** privileged EXEC command.

clear logging

exception core-file

To specify the name of the core dump file, use the **exception core-file** global configuration command. To return to the default core filename, use the **no** form of this command.

exception core-file *name*
no exception core-file

name Name of the core dump file saved on the server.

exception dump

To configure the router to dump a core file to a particular server when the router crashes, use the **exception dump** global configuration command. To disable core dumps, use the **no** form of this command.

exception dump *ip-address*
no exception dump

ip-address IP address of the server that stores the core dump file.

exception memory

To cause the router to create a core dump and reboot when certain memory size parameters are violated, use the **exception memory** global configuration command. To disable the rebooting and core dump, use the **no** form of this command.

```
exception memory {fragment size | minimum size}  
no exception memory {fragment | minimum}
```

| | |
|-----------------------------|--|
| fragment <i>size</i> | The minimum contiguous block of memory in the free pool, in bytes. |
| minimum <i>size</i> | The minimum size of the free memory pool, in bytes. |

exception protocol

To configure the protocol used for core dumps, use the **exception protocol** global configuration command. To configure the router to use the default protocol, use the **no** form of this command.

```
exception protocol {ftp | rcp | tftp}  
no exception protocol
```

| | |
|-------------|---|
| ftp | Use FTP for core dumps. |
| rcp | Use rcp for core dumps. |
| tftp | Use TFTP for core dumps. This is the default. |

ip ftp passive

To configure the router to use only passive FTP connections, use the **ip ftp passive** global configuration command. To allow all types of FTP connections, use the **no** form of this command.

```
ip ftp passive  
no ip ftp passive
```

ip ftp password

To specify the password to be used for FTP connections, use the **ip ftp password** global configuration command. Use the **no** form of this command to return the password to its default.

```
ip ftp password [type] password  
no ip ftp password
```

| | |
|-----------------|--|
| <i>type</i> | (Optional) Type of encryption to use on the password. A value of 0 disables encryption. A value of 7 indicates proprietary encryption. |
| <i>password</i> | Password to use for FTP connections. |

ip ftp source-interface

To specify the source IP address for FTP connections, use the **ip ftp source-interface** global configuration command. Use the **no** form of this command to use the address of the interface where the connection is made.

```
ip ftp source-interface interface  
no ip ftp source-interface
```

interface The interface type and number to use to obtain the source address for FTP connections.

ip ftp username

To configure the username for FTP connections, use the **ip ftp username** global configuration command. To configure the router to attempt anonymous FTP, use the **no** form of this command.

```
ip ftp username username  
no ip ftp username
```

username Username for FTP connections.

logging

To log messages to a syslog server host, use the **logging** global configuration command. The **no** form of this command deletes the syslog server with the specified address from the list of syslogs.

```
logging host  
no logging host
```

host Name or IP address of the host to be used as a syslog server.

logging buffered

To log messages to an internal buffer, use the **logging buffered** global configuration command. The **no** form of this command cancels the use of the buffer. The **default** form of this command returns the buffer size to the default size.

```
logging buffered [size]  
no logging buffered  
default logging buffered
```

size (Optional) Size of the buffer from 4096 to 4294967295 bytes. The default size varies by platform.

logging console

To limit messages logged to the console based on severity, use the **logging console** global configuration command. The **no** form of this command disables logging to the console terminal.

logging console *level*
no logging console

level Limits the logging of messages displayed on the console terminal to a specified level.

logging facility

To configure the syslog facility in which error messages are sent, use the **logging facility** global configuration command. To revert to the default of **local7**, use the **no** form of this command.

logging facility *facility-type*
no logging facility

facility-type Syslog facility.

logging history

To limit syslog messages sent to the router's history table and the SNMP network management station based on severity, use the **logging history** global configuration command. The **no** form of this command returns the logging of syslog messages to the default level.

logging history *level*
no logging history

level Limits the messages saved in the history table and sent to the SNMP network management station to the specified set of levels.

logging history size

To change the number of syslog messages stored in the router's history table, use the **logging history size** global configuration command. The **no** form of this command returns the number of messages to the default value.

logging history size *number*
no logging history size

number Number from 1 to 500 that indicates the maximum number of messages stored in the history table.

- all** (Optional) Specifies that all messages are printed asynchronously, regardless of the severity level.
- limit *number-of-buffers*** (Optional) Specifies the number of buffers to be queued for the terminal after which new messages are dropped. The default value is 20.

logging trap

To limit messages logged to the syslog servers based on severity, use the **logging trap** global configuration command. The command limits the logging of error messages sent to syslog servers to only those messages at the specified level. Use the **no** form of this command to disable logging to syslog servers.

logging trap *level*
no logging trap

level Severity level.

ping (privileged)

Use the **ping** (packet internet groper) privileged EXEC command to diagnose basic network connectivity on Apollo, AppleTalk, Connectionless Network Service (CLNS), DECnet, IP, Novell IPX, VINES, or XNS networks.

ping [*protocol*] {*host* | *address*}

- protocol* (Optional) Protocol keyword, one of **apollo**, **appletalk**, **clns**, **decnet**, **ip**, **ipx**, **vines**, or **xns**.
- host* Host name of system to ping.
- address* Address of system to ping.

ping (user)

Use the **ping** (packet internet groper) user EXEC command to diagnose basic network connectivity on AppleTalk, CLNS, IP, Novell, Apollo, VINES, DECnet, or XNS networks.

ping [*protocol*] {*host* | *address*}

- protocol* (Optional) Protocol keyword, one of **apollo**, **appletalk**, **clns**, **decnet**, **ip**, **ipx**, **vines**, or **xns**.
- host* Host name of system to ping.
- address* Address of system to ping.

service slave-log

To allow slave Versatile Interface Processor (VIP) cards to log important error messages to the console, use the **service slave-log** global configuration command. Use the **no** form of this command to disable slave logging.

```
service slave-log
no service slave-log
```

service tcp-keepalives-in

To generate keepalive packets on idle incoming network connections (initiated by the remote host), use the **service tcp-keepalives-in** global configuration command. The **no** form of this command with the appropriate keyword disables the keepalives.

```
service tcp-keepalives-in
no service tcp-keepalives-in
```

service tcp-keepalives-out

To generate keepalive packets on idle outgoing network connections (initiated by a user), use the **service tcp-keepalives-out** global configuration command. The **no** form of this command with the appropriate keyword disables the keepalives.

```
service tcp-keepalives-out
no service tcp-keepalives-out
```

service timestamps

To configure the system to timestamp debugging or logging messages, use one of the **service timestamps** global configuration commands. Use the **no** form of this command to disable this service.

```
service timestamps type [uptime]
service timestamps type datetime [msec] [localtime] [show-timezone]
no service timestamps type
```

| | |
|----------------------|---|
| <i>type</i> | Type of message to timestamp: debug or log . |
| uptime | (Optional) Timestamp with time since the system was rebooted. |
| datetime | Timestamp with the date and time. |
| msec | (Optional) Include milliseconds in the date and timestamp. |
| localtime | (Optional) Timestamp relative to the local time zone. |
| show-timezone | (Optional) Include the time zone name in the timestamp. |

show c7200

Use the **show c7200** EXEC command to display information about the CPU and midplane for Cisco 7200 series routers.

show c7200

show context

Use the **show context** EXEC command to display information stored in NVRAM when the router crashes. This command works only on the Cisco 7000 family platforms.

show context

show debugging

To display information about the types of debugging that are enabled for your router, use the **show debugging** privileged EXEC command.

show debugging

show environment

Use the **show environment** EXEC command to display temperature and voltage information on the Cisco 7000 series, Cisco 7200 series, and Cisco 7500 series routers.

show environment [all | last | table]

- | | |
|--------------|---|
| all | (Optional) Displays a detailed listing of the power supplies, temperature readings, and voltage readings. |
| last | (Optional) Displays the reason for the last system shutdown that was related to voltage or temperature and the environmental status at that time. |
| table | (Optional) Displays the temperature and voltage thresholds and a table that lists the ranges of environmental measurements that are within specification. |

show gt64010

Use the **show gt64010** EXEC command to display all GT64010 internal registers and interrupt status on the Cisco 7200 series routers.

show gt64010

show logging

Use the **show logging** EXEC command to display the state of logging (syslog).

show logging [**history**]

history (Optional) Display information in the syslog history table only.

show memory

Use the **show memory** EXEC command to show statistics about memory, including memory-free pool statistics.

show memory [*memory-type*] [**free**] [**summary**]

memory-type (Optional) Memory type to display (**processor, multibus, io, sram**). If *type* is not specified, statistics for all memory types present are displayed.

free (Optional) Displays free memory statistics.

summary (Optional) Displays a summary of memory usage including the size and number of blocks allocated for each address of the system call that allocated the block.

show pci

Use the **show pci** EXEC command to display information about the peripheral component interconnect (PCI) hardware registers or bridge registers for the Cisco 7200 series routers.

show pci {**hardware** | **bridge** [*register*]}

hardware Displays PCI hardware registers.

bridge Displays PCI bridge registers.

register (Optional) Number of a specific bridge register in the range 0 to 7. If not specified, this command displays information about all registers.

show processes

Use the **show processes** EXEC command to display information about the active processes.

show processes [**cpu**]

cpu (Optional) Displays detailed CPU utilization statistics.

show processes memory

Use the **show processes memory** EXEC command to show memory used.

show processes memory

show protocols

Use the **show protocols** EXEC command to display the configured protocols.

show protocols

show stacks

Use the **show stacks** EXEC command to monitor the stack usage of processes and interrupt routines.

show stacks

show tcp

Use the **show tcp** EXEC command to display the status of TCP connections.

show tcp [*line-number*]

line-number

(Optional) Absolute line number of the line for which you want to display Telnet connection status.

show tcp brief

To display a concise description of TCP connection endpoints, use the **show tcp brief** EXEC command.

show tcp brief [**all**]

all

(Optional) Displays status for all endpoints. Without this keyword, endpoints in the LISTEN state are not shown.

show tdm connections

To display a snapshot of the time-division multiplexing (TDM) bus connection memory in a Cisco AS5200 access server, use the **show tdm connections** EXEC command.

show tdm connections [**motherboard** | **slot number**]

motherboard

(Optional) Motherboard in the Cisco AS5200 access server.

slot number

(Optional) Slot number.

show tdm data

To display a snapshot of the time-division multiplexing (TDM) bus data memory in a Cisco AS5200 access server, use the **show tdm data** EXEC command.

```
show tdm data [motherboard | slot number]
```

motherboard (Optional) Motherboard in the Cisco AS5200 access server.

slot number (Optional) Slot number.

show tech-support

To display general information about the router when reporting a problem, use the **show tech-support** privileged EXEC command.

```
show tech-support [page] [password]
```

page (Optional) Causes the output to display a page of information at a time. Use the return key to display the next line of output or use the space bar to display the next page of information. If not used, the output scrolls (that is, does not stop for page breaks).

password (Optional) Leaves passwords and other security information in the output. If not used, passwords and other security-sensitive information in the output are replaced with the label “<removed>” (this is the default).

test flash

To test Flash memory on MCI and envm Flash EPROM interfaces, use the **test flash** EXEC command.

```
test flash
```

test interfaces

To test the system interfaces on the modular router, use the **test interfaces** EXEC command.

```
test interfaces
```

test memory

To perform a test of Multibus memory (including nonvolatile memory) on the modular router, use the **test memory** EXEC command. The memory test overwrites memory.

```
test memory
```

trace (privileged)

Use the **trace** privileged EXEC command to discover the routes that packets will actually take when traveling to their destination.

trace [*protocol*] [*destination*]

| | |
|--------------------|---|
| <i>protocol</i> | (Optional) Protocols that can be used are appletalk , clns , ip and vines . |
| <i>destination</i> | (Optional) Destination address or host name on the command line. The default parameters for the appropriate protocol are assumed and the tracing action begins. |

trace (user)

Use the **trace** EXEC command to discover the IP routes that packets will actually take when traveling to their destination.

trace [*protocol*] [*destination*]

| | |
|--------------------|---|
| <i>protocol</i> | (Optional) Protocols that can be used are appletalk , clns , ip and vines . |
| <i>destination</i> | (Optional) Destination address or host name on the command line. The default parameters for the appropriate protocol are assumed and the tracing action begins. |