Telnet Configuration Commands

Telnet is a simple remote terminal protocol that is part of the Internet Protocol (IP) suite. Telnet allows a user at one site to establish a TCP connection to a login server at another site, then passes the keystrokes from one system to the other. Telnet can accept either an IP address or a domain name as the remote system address.

Use the commands in this chapter to configure Telnet support on your communication server. For configuration information, refer to the *Access and Communication Servers Configuration Guide*. For information about making connections, see the *Cisco Access Connection Guide*.

ip alias

To assign an IP address to the service provided on a TCP port, use the **ip alias** interface configuration command. Use the **no ip alias** command to remove the specified address for the communication server.

> **ip alias** *ip-address tcp-port*
> **no ip alias** *ip-address*

Syntax Description

ip-address	Specifies the IP address for the service.
tcp-port	Specifies the number of the TCP port.

Default

None

Command Mode

Interface configuration

Usage Guidelines

A user attempting to establish a connection is connected to the first free line in a rotary group using the Telnet protocol.

The IP address must be on the same network or subnet as the communication server's main address, and must not be used by another host on that network or subnet. Connecting to the IP address has the same effect as connecting to the communication server's main address, using *tcp-port* as the TCP port.

You can use the **ip alias** command to assign multiple IP addresses to the communication server. For example, in addition to the primary alias address, you can specify addresses that correspond to lines or rotary groups. Using the **ip alias** command in this way makes the process of connecting to a specific rotary group transparent to the user.

When asynchronous mode is implemented, the communication server creates the appropriate IP aliases, which map the asynchronous addresses to the lines they are connected to. This process is automatic and does not require configuration.

Example

The following example configures connections to IP address 131.108.42.42 to act identically to connections made to the server's primary IP address on TCP port 3001. In other words, a user trying to connect is connected to the first free line in rotary group 1 using the Telnet protocol.

```
ip alias 131.108.42.42 3001
```

ip tcp chunk-size

To enable a faster response to user interrupt characters, use the **ip tcp chunk-size** global configuration command.

   ip tcp chunk-size *number*

Syntax Description

number	The number of characters output before the interrupt executes. The suggested value is 80, which will typically abort output within a line or two of where the user types the interrupt character. Values of less than 50 are not recommended for efficiency reasons.

Default

None

Command Mode

Global configuration

Usage Guidelines

When used with a correctly operating host, communication servers implement the Telnet Synchronize and Abort Output signals, which can stop output within one packet's worth of data from the time the user types the interrupt character.

Changing the chunk size (the number of characters output before the interrupt executes) affects neither the size of the packet used nor the TCP window size, either of which would cause serious efficiency problems for the remote host as well as for the communication server. Instead, the Telnet status is checked after the number of characters specified, causing only a relatively minor performance loss.

Example

The following example allows the communication server to execute an interrupt after an output of 100 characters, when an interrupt character or sequence is entered (Ctrl-C, for example):

```
ip tcp chunk-size 100
```

telnet break-on-ip

To cause the system to generate a hardware BREAK signal on the RS-232 line that is associated with a reverse Telnet connection when a Telnet Interrupt-Process command is received on that connection, use the **telnet break-on-ip** line configuration command.

> **telnet break-on-ip**

Syntax Description

This command has no arguments or keywords.

Default

No hardware Break signal is generated when an Interrupt-Process command is received.

Command Mode

Line configuration

Usage Guidelines

This command causes the system to generate a hardware BREAK signal on the RS-232 line that is associated with a reverse Telnet connection. It is useful when a Telnet Interrupt-Process command is received on that connection because it can control the translation of Telnet Interrupt-Process commands into X.25 BREAK indications. It is also a useful workaround in the following situations:

- Several user Telnet programs send an Interrupt-Process command, but cannot send a Telnet BREAK signal.

- Some Telnet programs implement a BREAK signal that sends an Interrupt-Process command.

- Some RS-232 hardware devices use a hardware BREAK signal for various purposes.

A hardware BREAK signal is generated when a Telnet BREAK command is received.

Example

In the following example, line 5 is configured with the **telnet break-on-ip** command. The location text notes that this refers to the high-speed modem. The **telnet transparent** command sets end-of-line handling.

```
line 5
location high-speed modem
telnet transparent
telnet break-on-ip
```

Related Commands

Two daggers (††) indicate that the command is documented in the *Cisco Access Connection Guide*.

connect ††
telnet (EXEC) ††
terminal telnet break-on-ip ††
telnet transparent

telnet refuse-negotiations

To set a line using Telnet to refuse to negotiate full duplex, remote echo requests on incoming connections, use the **telnet refuse-negotiations** line configuration command.

> **telnet refuse-negotiations**

Syntax Description

This command has no arguments or keywords.

Default

Command Mode

Line configuration

Usage Guidelines

Use this command on reverse Telnet connections to allow the communication server to refuse full-duplex, remote echo option connection requests from the other end. This command suppresses negotiation of the Telnet Remote Echo and Suppress Go Ahead options.

Example

The following example shows how to set line 5 to refuse full duplex, remote echo requests:

```
line 5
telnet refuse-negotiations
```

Related Commands

Two daggers (††) indicate that the command is documented in the *Cisco Access Connection Guide*.

connect ††
telnet (EXEC) ††
terminal telnet refuse-negotiations ††

telnet speed

To allow the communication server to negotiate transmission speed of the line to a connected device, use the **telnet speed** line configuration command.

telnet speed *default-speed maximum-speed*

Syntax Description

default-speed	Line speed (in bps) that the communication server will use if the device on the other end of the connection has not specified a speed
maximum-speed	Maximum speed (in bps) that the device on the port will use

Default

Command Mode

Line configuration

Usage Guidelines

Negotiates speeds on reverse Telnet lines. You can match line speeds on remote systems in reverse Telnet, on host machines hooked up to a communication server to access the network, or on a group of console lines hooked up to the communication server, when disparate line speeds are in use at the local and remote ends of the connection. Line speed negotiation adheres to the Remote Flow Control option, defined in RFC 1080.

Example

The following example allows the communication server to negotiate a bit rate on the line using the Telnet option. If no speed is negotiated, the line will run at 2400 bits per second. If the remote host requests a speed of greater than 9600 bps, then 9600 will be used.

```
line 5
telnet speed 2400 9600
```

Related Commands

Two daggers (††) indicate that the command is documented in the *Cisco Access Connection Guide*.

connect ††
telnet (EXEC) ††
terminal telnet speed††

telnet sync-on-break

To configure the communication server to cause an incoming connection to send a Telnet Synchronize signal when it receives a Telnet BREAK signal, use the **telnet sync-on-break** line configuration command.

> **telnet sync-on-break**

Syntax Description

This command has no arguments or keywords.

Default

Command Mode

Line configuration

Usage Guidelines

This command causes a reverse Telnet line to send a Telnet Synchronize signal when it receives a Telnet BREAK signal. This option is used very rarely to ensure the ordering of BREAK reception with respect to data characters sent after the BREAK.

Example

In the following example, line 8 is configured with the **telnet sync-on-break** command:

```
line aux 0
telnet sync-on-break
```

Related Commands

Two daggers (††) indicate that the command is documented in the *Cisco Access Connection Guide*.

connect [†]
telnet (EXEC) [†]
terminal telnet sync-on-break [†]

telnet transparent

To configure the communication server to send a CARRIAGE RETURN (CR) as a CR followed by a NULL instead of a CR followed by a LINE FEED (LF), use the **telnet transparent** line configuration command.

> **telnet transparent**

Syntax Description

This command has no arguments or keywords.

Default

CARRIAGE RETURN followed by a LINE FEED.

Command Mode

Line configuration

Usage Guidelines

This command is useful for coping with different interpretations of end-of-line handling in the Telnet protocol specification.

Example

The following example causes the communication server, when sending a CR, to send a CR followed by a NULL character:

```
line 7
telnet transparent
```

Related Commands

Two daggers (††) indicate that the command is documented in the *Cisco Access Connection Guide*.

connect ††
telnet (EXEC) ††
terminal telnet transparent ††