NAME

telnet − user interface to the TELNET protocol

SYNOPSIS

telnet [*host* [*port*]]

DESCRIPTION

Telnet is used to communicate with another host using the **TELNET** protocol. If *telnet* is invoked without arguments, it enters command mode, indicated by its prompt (telnet>). In this mode, it accepts and executes the commands listed below. If it is invoked with arguments, it performs an **open** command (see below) with those arguments.

Once a connection has been opened, *telnet* enters an input mode. The input mode entered will be either character at a time or line by line depending on what the remote system supports.

In character at a time mode, most text typed is immediately sent to the remote host for processing.

In line by line mode, all text is echoed locally, and (normally) only completed lines are sent to the remote host. The local echo character (initially ^E) may be used to turn off and on the local echo (this would mostly be used to enter passwords without the password being echoed).

In either mode, if the *localchars* toggle is TRUE (the default in line mode; see below), the user's *quit*, *intr*, and *flush* characters are trapped locally, and sent as **TELNET** protocol sequences to the remote side. There are options (see **toggle** *autoflush* and **toggle** *autosynch* below) which cause this action to flush subsequent output to the terminal (until the remote host acknowledges the **TELNET** sequence) and flush previous terminal input (in the case of *quit* and *intr*).

While connected to a remote host, *telnet* command mode may be entered by typing the *telnet* escape character (initially ^]). When in command mode, the normal terminal editing conventions are available.

COMMANDS

The following commands are available. Only enough of each command to uniquely identify it need be typed (this is also true for arguments to the **mode**, **set**, **toggle**, and **display** commands).

open *host* [*port*]

Open a connection to the named host. If no port number is specified, *telnet* will attempt to contact a **TELNET** server at the default port. The host specification may be either a host name (see *hosts*(5)) or an Internet address specified in the dot notation (see *inet*(3N)).

close

Close a **TELNET** session and return to command mode.

quit

Close any open **TELNET** session and exit *telnet*. An end of file (in command mode) will also close a session and exit.

z

Suspend *telnet*. This command only works when the user is using the *csh*(1).

mode *type*

Type is either *line* (for line by line mode) or *character* (for character at a time mode). The remote host is asked for permission to go into the requested mode. If the remote host is capable of entering that mode, the requested mode will be entered.

status

Show the current status of *telnet*. This includes the peer one is connected to, as well as the current mode.

display [*argument...*]

Displays all, or some, of the **set** and **toggle** values (see below).

? [*command*]

Get help. With no arguments, *telnet* prints a help summary. If a command is specified, *telnet* will print the help information for just that command.

send *arguments*

Sends one or more special character sequences to the remote host. The following are the arguments which may be specified (more than one argument may be specified at a time):

escape

Sends the current *telnet* escape character (initially ^]).

synch

Sends the **TELNET SYNCH** sequence. This sequence causes the remote system to discard all previously typed (but not yet read) input. This sequence is sent as TCP urgent data (and may not work if the remote system is a 4.2 BSD system -- if it doesn't work, a lower case r may be echoed on the terminal).

brk

Sends the **TELNET BRK** (Break) sequence, which may have significance to the remote system.

ip

Sends the **TELNET IP** (Interrupt Process) sequence, which should cause the remote system to abort the currently running process.

ao

Sends the **TELNET AO** (Abort Output) sequence, which should cause the remote system to flush all output **from** the remote system **to** the user's terminal.

ayt

Sends the **TELNET AYT** (Are You There) sequence, to which the remote system may or may not choose to respond.

ec

Sends the **TELNET EC** (Erase Character) sequence, which should cause the remote system to erase the last character entered.

el

Sends the **TELNET EL** (Erase Line) sequence, which should cause the remote system to erase the line currently being entered.

ga

Sends the **TELNET GA** (Go Ahead) sequence, which likely has no significance to the remote system.

nop

Sends the **TELNET NOP** (No OPeration) sequence.

?

Prints out help information for the **send** command.

set *argument value*

Set any one of a number of *telnet* variables to a specific value. The special value off turns off the function associated with the variable. The values of variables may be interrogated with the **display** command. The variables which may be specified are:

echo

This is the value (initially ^E) which, when in line by line mode, toggles between doing local echoing of entered characters (for normal processing), and suppressing echoing of entered characters (for entering, say, a password).

escape

This is the *telnet* escape character (initially ^[) which causes entry into *telnet* command mode (when connected to a remote system).

interrupt

If *telnet* is in *localchars* mode (see **toggle** *localchars* below) and the *interrupt* character is typed, a **TELNET IP** sequence (see **send** *ip* above) is sent to the remote host.

The initial value for the interrupt character is taken to be the terminal's **intr** character.

quit

If *telnet* is in *localchars* mode (see **toggle** *localchars* below) and the *quit* character is typed, a **TELNET BRK** sequence (see **send** *brk* above) is sent to the remote host. The initial value for the quit character is taken to be the terminal's **quit** character.

flushoutput

If *telnet* is in *localchars* mode (see **toggle** *localchars* below) and the *flushoutput* character is typed, a **TELNET AO** sequence (see **send** *ao* above) is sent to the remote host. The initial value for the flush character is taken to be the terminal's **flush** character.

erase

If *telnet* is in *localchars* mode (see **toggle** *localchars* below), **and** if *telnet* is operating in character at a time mode, then when this character is typed, a **TELNET EC** sequence (see **send** *ec* above) is sent to the remote system. The initial value for the erase character is taken to be the terminal's **erase** character.

kill

If *telnet* is in *localchars* mode (see **toggle** *localchars* below), **and** if *telnet* is operating in character at a time mode, then when this character is typed, a **TELNET EL** sequence (see **send** *el* above) is sent to the remote system. The initial value for the kill character is taken to be the terminal's **kill** character.

eof

If *telnet* is operating in line by line mode, entering this character as the first character on a line will cause this character to be sent to the remote system. The initial value of the eof character is taken to be the terminal's **eof** character.

toggle *arguments...*

Toggle (between TRUE and FALSE) various flags that control how *telnet* responds to events. More than one argument may be specified. The state of these flags may be interrogated with the **display** command. Valid arguments are:

localchars

If this is TRUE, then the *flush*, *interrupt*, *quit*, *erase*, and *kill* characters (see **set** above) are recognized locally, and transformed into (hopefully) appropriate **TELNET** control sequences (respectively *ao*, *ip*, *brk*, *ec*, and *el*; see **send** above). The initial value for this toggle is TRUE in line by line mode, and FALSE in character at a time mode.

autoflush

If *autoflush* and *localchars* are both TRUE, then when the *ao*, *intr*, or *quit* characters are recognized (and transformed into **TELNET** sequences; see **set** above for details), *telnet* refuses to display any data on the user's terminal until the remote system acknowledges (via a **TELNET** *Timing Mark* option) that it has processed those **TELNET** sequences. The initial value for this toggle is TRUE if the terminal user had not done an "stty noflsh", otherwise FALSE (see *stty(1)).*

autosynch

If *autosynch* and *localchars* are both TRUE, then when either the *intr* or *quit* characters is typed (see **set** above for descriptions of the *intr* and *quit* characters), the resulting **TELNET** sequence sent is followed by the **TELNET SYNCH** sequence. This procedure **should** cause the remote system to begin throwing away all previously typed input until both of the **TELNET** sequences have been read and acted upon. The initial value of this toggle is FALSE.

crmod

Toggle carriage return mode. When this mode is enabled, most carriage return

characters received from the remote host will be mapped into a carriage return followed by a line feed. This mode does not affect those characters typed by the user, only those received from the remote host. This mode is not very useful unless the remote host only sends carriage return, but never line feed. The initial value for this toggle is FALSE.

debug

Toggles socket level debugging (useful only to the *super*user*)*. The initial value for this toggle is FALSE.

options

Toggles the display of some internal *telnet* protocol processing (having to do with **TELNET** options). The initial value for this toggle is FALSE.

netdata

Toggles the display of all network data (in hexadecimal format). The initial value for this toggle is FALSE.

?

Displays the legal **toggle** commands.

BUGS

There is no adequate way for dealing with flow control.

On some remote systems, echo has to be turned off manually when in line by line mode.

There is enough settable state to justify a *.telnetrc* file.

No capability for a *.telnetrc* file is provided.

In line by line mode, the terminal's *eof* character is only recognized (and sent to the remote system) when it is the first character on a line.