# Chapter 3 Customizing the Environment

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## Chapter Overview

NCSA Telnet allows you to customize the environment to suit your special needs and habits. This chapter covers some more advanced aspects of the NCSA Telnet working environment. It describes how to change the configuration settings, set the characteristics of session windows, and customize other NCSA Telnet operations using the Preferences dialog box and the Session menu.

## Using the Configuration Dialog Box

NCSA Telnet allows you to specify certain configuration characteristics from within the application, right before you open a particular connection. For example, you can change the window name for a connection, set the function of the BACKSPACE (or DELETE) key, and specify whether Tektronix graphic images are displayed in separate windows.

To configure a telnet session:

1. Choose Open Connection from the File menu or press -O. The Connection dialog box shown in Figure 3.1 appears.

2. Specify a session name.

3. Click Configure. The Configuration dialog box appears (see Figure 3.2).

**Figure 3.1** Connection Dialog Box

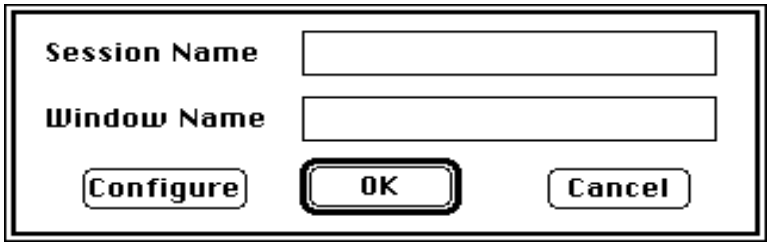
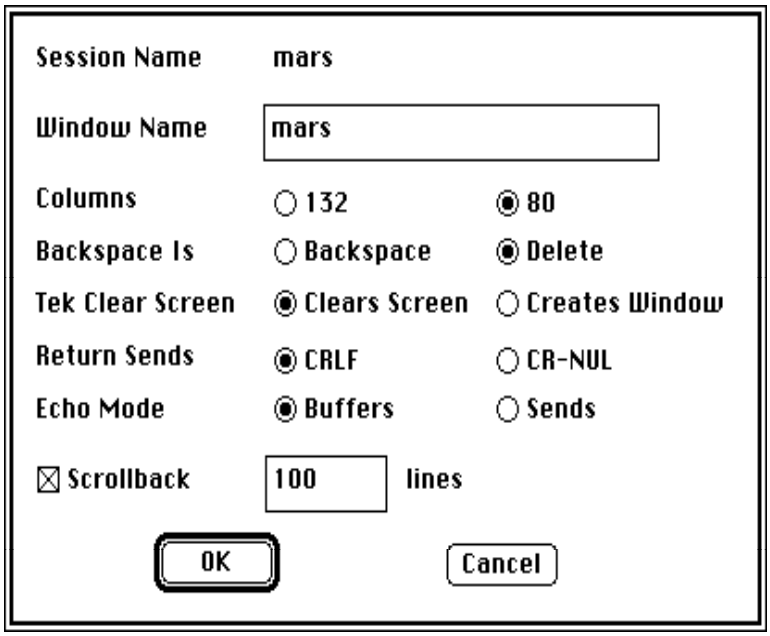



**Figure 3.2** Configuration Dialog Box




**Window Name**

The session name serves as the window name and appears in the session window's title bar, unless you designate a different window name. To designate a window name, enter the desired name in the Window Name box. (The window name may also be specified by entering the name in the Window Name box of the Connection dialog box.)

**Columns**

A session window may contain either 80 or 132 columns. Specify the number of columns to be displayed in your session window by clicking the appropriate radio button in the row labeled Columns.

For information regarding changing the number of lines displayed in a session window, see the section of this chapter entitled "Set Usable Lines."

**NOTE**: When you specify 132 columns, you may not be able to see all of the columns in a session window at one time. You can resize the session window and use the horizontal scrollbar to view obstructed columns.

**Backspace Is**

The BACKSPACE (or DELETE) key may be used to send backspace or delete codes. To assign the function you prefer to this key, select either Backspace or Delete in the row labeled Backspace Is. For more information regarding the BACKSPACE (or DELETE) key, see "Setting the Functions of BACKSPACE (or DELETE), OPTION, and Backquote" in Chapter 2.

**Tek Clear Screen**

The default setting for this option is Clears Screen. The Tek Clear Screen setting applies while you are operating in the Tektronix drawing mode. By default, when a clear screen code is received and you generate a new image, the screen is cleared; that is, any drawing on the screen is overwritten with a new image.

If you change the default by selecting the Creates Window option, and then generate a new image, a new window is created for the image and the contents of the active screen are not overwritten. Each new screen created in this way has as its name the session name and time. For more information regarding Tektronix drawing mode and the clear screen code, refer to Chapter 6, "Tektronix 4014 Emulation."

**Return Sends**

This option allows you to change the type of end-of-line marker sent by the Macintosh and establish compatibility with some 4.3 BSD UNIX systems. The default for this option is CRLF. When CRLF is active, NCSA Telnet sends a carriage return followed by a line feed. Select CR-NUL to instruct NCSA Telnet to send a carriage return followed by NUL, if that is needed by your host.

**Echo Mode**

NCSA Telnet can be set to operate in either of two echo modes: local or remote. In local echo mode, characters are copied to the screen immediately as you type them. In remote echo mode, the characters are sent to the host, which sends them back to be printed. The Echo Mode option only applies when you are operating in local echo mode.

To enter local echo mode, also known as line mode, enable the Local Echo option in the Session menu. The menu item appears checked when local echo mode is active.

You can use the Echo Mode option in the Configuration dialog box to configure Local echo mode to work in either of two ways: the characters you type can be buffered locally and sent when you press RETURN, or they can be sent immediately as you type. To specify the former, select the Buffers option in the Configuration dialog box. To specify that each character be sent immediately as you type it—a process known as *half duplex*—select Sends.

**NOTE**: Keystrokes that include control characters, including tab and return, are always sent immediately as they are typed. Some hosts force local echo mode automatically. If local echo mode is not forced by your host, you may still want to enable it to improve keyboard response time. Local echo mode should be used carefully, because it is incompatible with most full-screen editors.

**Scrollback**

Check the box labeled Scrollback to activate the scrollback feature.

To change the number of lines that NCSA Telnet saves and allows you to view by scrolling, type the desired integer in the text box. The default is usually 120 lines, although this may have been changed by your system

administrator in the configuration file. If you reset the number of scrollback lines and then save this configuration using Save Set, the setting is saved as part of that set (see “Saving Session Characteristics” in Chapter 4).

**NOTE**: The scrollback feature gradually consumes memory for the number of scrollback lines that you specify, so be sure to watch your memory consumption if you specify a high number of scrollback lines.

## Using the Preferences Dialog Box

The options contained in the Preferences dialog box are described in the following sections.

To use the Preferences dialog box:

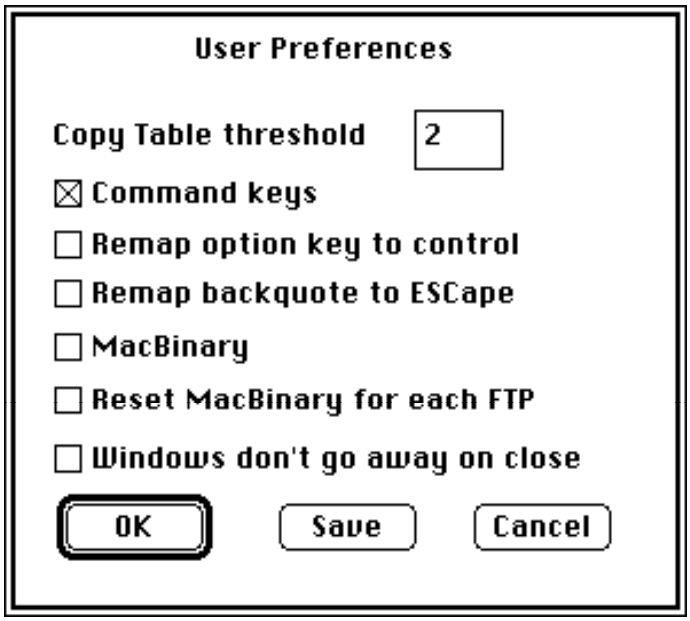
1. Select Preferences from the Edit menu. The Preferences dialog box that appears contains a check box for each option available. The Preferences dialog box is shown in Figure 3.3.

2. Specify a Copy Table Threshold by clicking within its box and entering the desired number by typing on your keyboard.

3. Select or deselect an option by clicking on the box that appears before it. The box becomes checked or unchecked to indicate that the option is activated or deactivated, respectively.

4. Click OK or press RETURN to apply the selected options. Click Save to save the specifications as the default, so that next time you invoke NCSA Telnet, these options are activated automatically. Click Cancel to undo any changes you have made. When you click one of these buttons or press RETURN, you are returned to the application.

**Figure 3.3** Preferences Dialog Box




**Copy Table Threshold**

The Copy Table Threshold value determines the number of spaces which, at a minimum, are replaced by tabs when you issue the Copy Table command from the Edit menu or press -T. Instead of using the standard Copy command, you can use the Copy Table command to copy tables of data from the NCSA Telnet screen onto the Clipboard.

When you use the Copy Table command, all strings of contiguous spaces that are greater than the threshold are turned into tabs before being placed on the Clipboard. This produces a format that can be pasted into most spreadsheets and graphing programs without losing data or requiring additional formatting.

**Command Keys**

By checking the Command keys option in the Preferences dialog box, you obtain access to command key equivalents for commands listed in the individual menus. This option also determines whether the -key functions as the CONTROL key. When the Command keys option is checked, the command key equivalents are listed beside their corresponding items in the menus and  does not translate to CONTROL. For more information regarding command keys, see “Using Keyboard Commands” in Chapter 2.

**Remap Option Key to Control**

Select Remap option key to control if you want the OPTION key to substitute for the CONTROL key. This option is most useful on machines such as the Macintosh Plus, which has no control key of its own.

**NOTE**:  If you are working on a Macintosh Plus and want to use the Command keys option, you should only do so in conjunction with the Remap option key to control option; otherwise, you will not be able to

generate control characters.

For more information regarding changing the function of the OPTION key, see “Setting the Functions of BACKSPACE (or DELETE), OPTION, and Backquote” in Chapter 2.

**Remap Backquote to ESCape**

Select Remap backquote to ESCape when you want to use the Backquote key as the ESC key. When this option is checked, pressing the Backquote key, sends an ASCII ESC character. For more information regarding this option, refer to “Setting the Functions of BACKSPACE (or DELETE), OPTION, and Backquote” in Chapter 2.

**MacBinary**

The MacBinary option controls the default setting for the MacBinary Enabled option in the File menu. When this option is checked, the MacBinary Enabled option (and consequently MacBinary mode) are activated by default when the application is started. See Chapter 5, “File Transfer,” for more information on MacBinary mode.

**Reset MacBinary for Each FTP**

The Reset MacBinary for each FTP option controls whether the MacBinary mode setting is to be returned to its default state upon the initiation of an FTP session. The default state of MacBinary is whatever you last set for the MacBinary option (see the preceding section, “MacBinary”).

**NOTE**: “Each FTP” corresponds to establishing the FTP command connection and not the individual file transfer.

**Windows Don’t Go Away on Close**

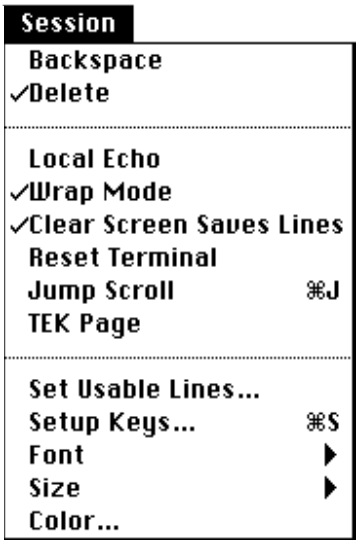
Select Windows don’t go away on close if you want the session window to be displayed on the screen even when its associated connection has been terminated.

This feature allows you to read, copy, and print text that is in a window whose connection has been closed. To close such a window, click in its close box.

## Using the Session Menu

Ten of the thirteen items in the Session menu, depicted in Figure 3.4, concern customizing NCSA Telnet operations and are discussed in the following sections. The other three—Reset Terminal, Jump Scroll, and TEK Page—are briefly introduced here. For more information regarding the latter commands, see Chapter 4, “Advanced Features.”

**Figure 3.4** Session Menu




**Backspace**

Enable the Backspace option to set the function for the BACKSPACE (or DELETE) key to backspace. When the Backspace option is enabled, the option appears checked in the menu. For more information, see "Setting the Functions of BACKSPACE (or DELETE), OPTION, and Backquote" in Chapter 2.

**Delete**

Enable the Delete option to set the function for the BACKSPACE (or DELETE) key to delete. When the Delete option is enabled, the option appears checked in the menu. For more information, see "Setting the Functions of BACKSPACE (or DELETE), OPTION, and Backquote" in Chapter 2.

**Local Echo**

Enable the Local Echo option to enter local echo mode, which is described in the section entitled "Echo Mode." When the Local echo mode is enabled, the option appears checked in the menu.

**Wrap Mode**

Enable the Wrap Mode option to activate wrap mode. In NCSA Telnet, wrap mode controls the status of the wrap setting. When the Wrap Mode option is enabled, the option appears checked in the menu.

The VT102 terminal maintains an internal setting to determine whether characters printed off the right hand side of the screen cause the terminal to wrap or not. If the terminal is set to wrap, the new characters appear on the next line of the screen and the screen is scrolled if necessary. If wrap mode is disabled, each new character replaces the last character on the current line and the cursor neither moves right nor onto the next line.

You may also set the wrap mode in the configuration file (see Chapter 8 for details). Whenever you select the Reset Terminal command in the Session menu, wrap mode is disabled.

**NOTE**: Host software commonly sets the wrap mode, overriding this setting.

**Clear Screen Saves Lines**

This option toggles between saving lines and erasing lines when the clear screen code is received. If the option is checked, all lines currently displayed on the screen are scrolled into the scrollback region before the screen is cleared. If it is not checked, the cleared lines are permanently disposed when the screen is cleared.

**Reset Terminal**

Select Reset Terminal to reset the VT102 screen, for example, when a host program accidentally sets graphics mode or fails to leave graphics mode. The Reset Terminal command resets all VT102 mode settings—disabling wrap mode, resetting graphics mode, resetting the keypad mode to the default, and resetting tabs to every eight spaces.

**Jump Scroll**

Select Jump Scroll to skip to the end of the local buffer.

The Jump Scroll option causes the screen to pause and then jump ahead over scrolling text. The text is placed into scrollback, but the screen update advances to the end of the local network buffer instead of printing every line on the screen.

The purpose of this feature is to save time. For example, when you enter a command that produces a great deal of output, you can use Jump Scroll to avoid waiting for the output to scroll by.

**TEK Page**

Select TEK Page to quickly create or clear a Tektronix emulation window without requiring intervention from host software.

Normally the emulation window appears automatically when the clear screen command sequence is received from the host. But the TEK Page command creates the window immediately. To clear the current session window, use the TEK Page command the same way you would use the Page key on a real Tektronix terminal. For more information regarding the clear screen command and Tektronix emulation, refer to Chapter 4, “Advanced Features.”

**Set Usable Lines**

Select this option to increase or decrease the number of lines displayed per screen in a session window.

NCSA Telnet session windows initially display 24 lines per screen by default, because the actual VT102 terminal screen has room for exactly 24 lines of text. Some host systems, allow you to define a VT102-like

terminal type which has more or fewer than 24 lines.

To increase or decrease the number of lines displayed per screen in a session window:

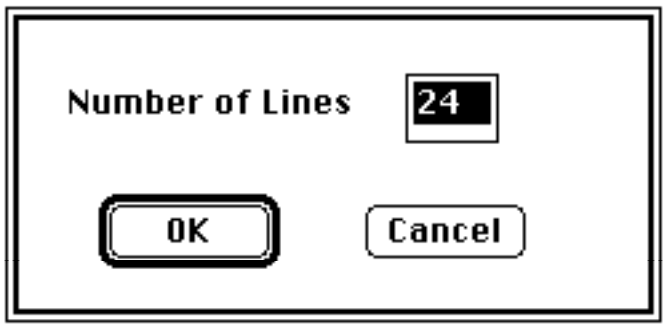
1. Select Set Usable Lines from the Session menu. The Set Lines dialog box appears, showing the current number of lines displayed (see Figure 3.5).

2. Enter a value from 10 to 200 to specify the desired number of lines.

3. Click OK or press RETURN to return to your session window or click Cancel to abort the change.

After you change the number of lines for a screen, the size of the window changes to accommodate the new number of lines.

**Figure 3.5** Set Lines Dialog Box




**Shortcut**

To quickly change the number of lines displayed per screen in a session window, hold down OPTION while adjusting the size of the window using the size box. As the window changes size, NCSA Telnet recalculates the number of lines in the window. When you release the mouse button, the number of usable lines in the window exactly fills the window. This method is equivalent to using the Set Usable Lines command.

**WARNING**: If you do not have a good working knowledge of how your host system makes us of terminals with greater than 24 lines, you are recommended to use only 24-line windows. The following warnings and suggestions assume knowledge of UNIX-based software to control the number of lines for the terminal. Consult your host system documentation or system administrator for more information.

**Warnings and Suggestions**

The termcap file, commonly located in /etc/termcap, can be set up to include the number of lines on the terminal. The default VT100 termcap includes an explicit setting of 24 lines, so even if you enlarge your NCSA Telnet window, the host uses only the top 24 lines. You can create special termcap entries by editing the /etc/termcap file. Copy the VT100 entry to a new name and change the number of lines to your preferred screen size.

Berkeley UNIX-based systems have a special feature in the stty program. The number of rows in a session window can be set to any value, and applications programs such as vi learn your window size from the stty setting. The following command line sets the window size to 33 lines.

```
stty rows 33
```

Using the special macro variable #, you can create a macro that issues this command and automatically substitutes the number of lines for the current window. For example, you could define the macro for -0 as the following.

```
stty rows \#
```

Now, you can set the window size by pressing -0 and then RETURN. The sequence \# is replaced with the proper number of lines.

See "Defining Macros" in Chapter 2 for information about creating and saving macros.

### Setup Keys

Select Setup Keys to select which keys issue the telnet commands Interrupt, Suspend, and Resume (see "Changing the Assigned Keys for Interrupt, Suspend, and Resume" in Chapter 2.)

### Font

The submenu contained under the Font command contains the fonts that you may use to display text in a session window. When you select a font from this submenu, the current window is resized to contain the text and the selected font is used to display all text in the current window.

**NOTE**: Fonts which are proportionally spaced (most fonts except Courier and Monaco) display slowly and appear spread out.

### Size

This option allows you to change the size of text in the current window. The submenu contained under the Size command contains the point sizes that you may use to display text in a session window. The submenu lists all available sizes, displays a check-mark next to the current size, and outlines all sizes present in your system. When you select a size from this submenu, the current window is resized to contain all the resized text and the text is redrawn according to be the specified point size.

**NOTE**: Sizes which do not appear outlined in the menu must be scaled by the system software and therefore may be slow and not as sharply defined as the non-scaled sizes.

### Color

The color option only applies for Macintoshes that are color-equipped. Select Color to change the foreground and background colors of the current window for both normal text and blinking text. The Color Selection dialog box appears (see Figure 3.6).

To assign a color to text or the background of a session window:

1. Click on the box next to the item to which you wish to assign a color: Normal Text, Normal Background, Blinking Text, or Blinking Background. Click OK, or double-click on the appropriate box to call up the Color Wheel dialog box, shown in Figure 3.7.

2. Select a new color by clicking in the color wheel. The color you select appears in the top rectangle under the heading Choose a color.

3. Click OK or press RETURN to enable the color change and return to the Color Selection dialog box. The box next to the item you selected in Step 1 reflects the color you chose from the Color Wheel dialog box.

4. Repeat Steps1 through 4 to assign colors to other items in the Color Selection dialog box.

5. Click OK when you have finished choosing colors. The colors you selected are applied to your current session window.

For additional information on using the color wheel dialog box, refer to your Macintosh System Software User's Guide.

**Figure 3.6** Color Selection Dialog Box

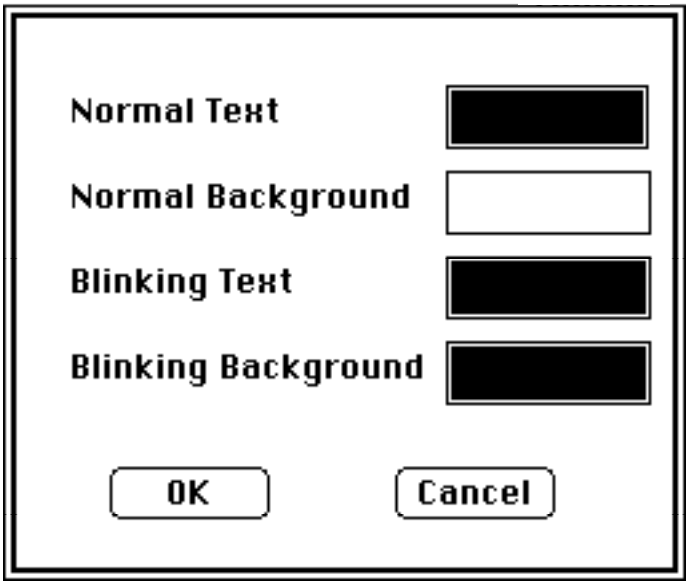
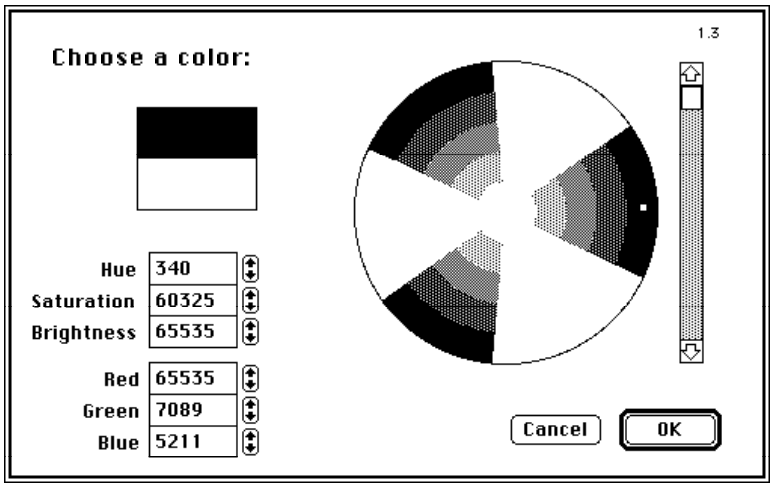



**Figure 3.7** Color Wheel Dialog Box


Choose a color:
1.3
Hue
340
Saturation
60325
Brightness
65535
Red
65535
Green
7089
Blue
5211
Cancel
OK