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How to Use This Manual

This manual provides instructions for using the NetBlazer after it has been set up and configured as described in the *NetBlazer Configuration Guide*. It is intended as a general operations guide for end users needing to perform network transactions. This guide covers all standard NetBlazer models.

This Guide assumes that all NetBlazer setup and configuration has been completed by the system administrator. This manual consists of three sections:

- Chapter 1, Introduction, provides an overview of the NetBlazer's typical applications
- Chapter 2, Using the NetBlazer Commands, overviews the NetBlazer's command environment and its facilities, as well as covering some of the basic operating procedures.
- Chapter 3, Terminal Server, reviews the related information about using the NetBlazer in a terminal server environment.
- Chapter 4, Modem Server, reviews the related information about using the NetBlazer in a modem server environment.

Audience

This guide is intended as an aid to the System Administrator in providing general NetBlazer usage information to his or her system users. This guide addresses the primary needs of the user having basic system privileges.

Related Documentation

Hardware installation of the NetBlazer products are detailed in the *NetBlazer Installation Guides*.

Once the installation of the NetBlazer has been completed, software configuration must be performed. This procedure involves establishing the IP addresses and routes and is covered in the *NetBlazer Configuration Guide*.

A complete listing of the NetBlazer's commands, along with comprehensive descriptions and examples of usage, is contained in the *NetBlazer Command Reference*.

Contents

Introduction 1

This chapter provides an overview of the basic applications in which the NetBlazer is used.

Application Profiles

Typical applications in which the NetBlazer can be used include:

- as an IP router to move IP datagrams between local and distant networks,
- as a terminal server that allows remote users to gain access to the IP networks,
- as a modem server that allows users to establish a connection with a remote computer system.

Instructions on how to use the NetBlazer in each of these applications appear in the following chapters, while the remainder of this chapter provides a brief overview of each.

Using the NetBlazer as an IP Router

As shown in Figure 1-1, the NetBlazer can serve as a dial-up router to transfer IP datagrams between geographically distant sites through the Public Switched Telephone Network (PSTN). It can also serve as a gateway between TCP/IP Ethernet or Token Ring LANs that are connected directly to the NetBlazer.

Before the NetBlazer can be used as an IP router, your system administrator must have configured it to recognize the networks that it can access either directly or indirectly through another gateway or through the PSTN. After this is done, the NetBlazer is essentially transparent to the network users, except that the users can then communicate with an expanded range of networks. The NetBlazer handles all of the tasks required to establish a connection with a distant network without any involvement on the part of the user.

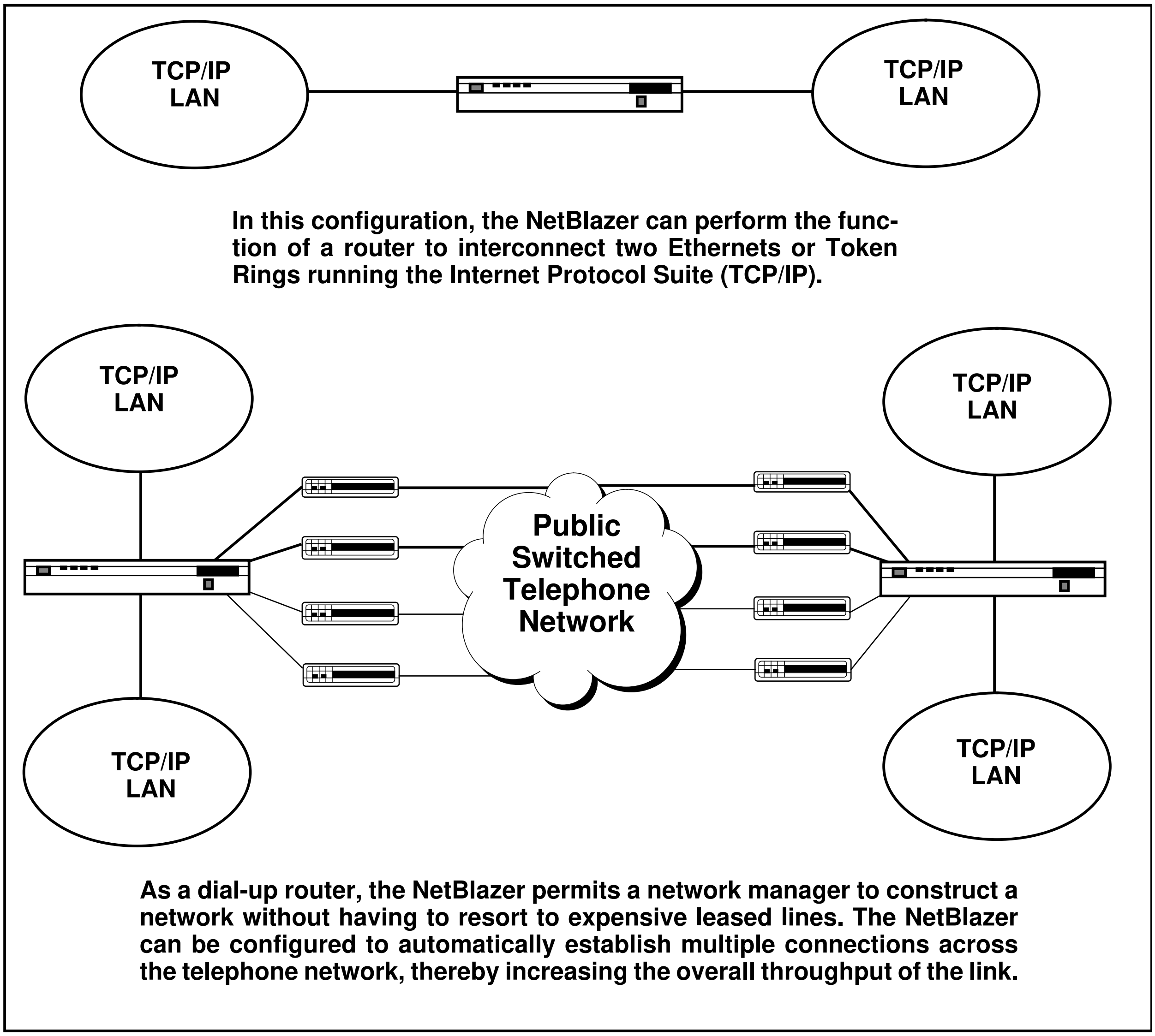


Figure 1-1. Using the NetBlazer as an IP Router

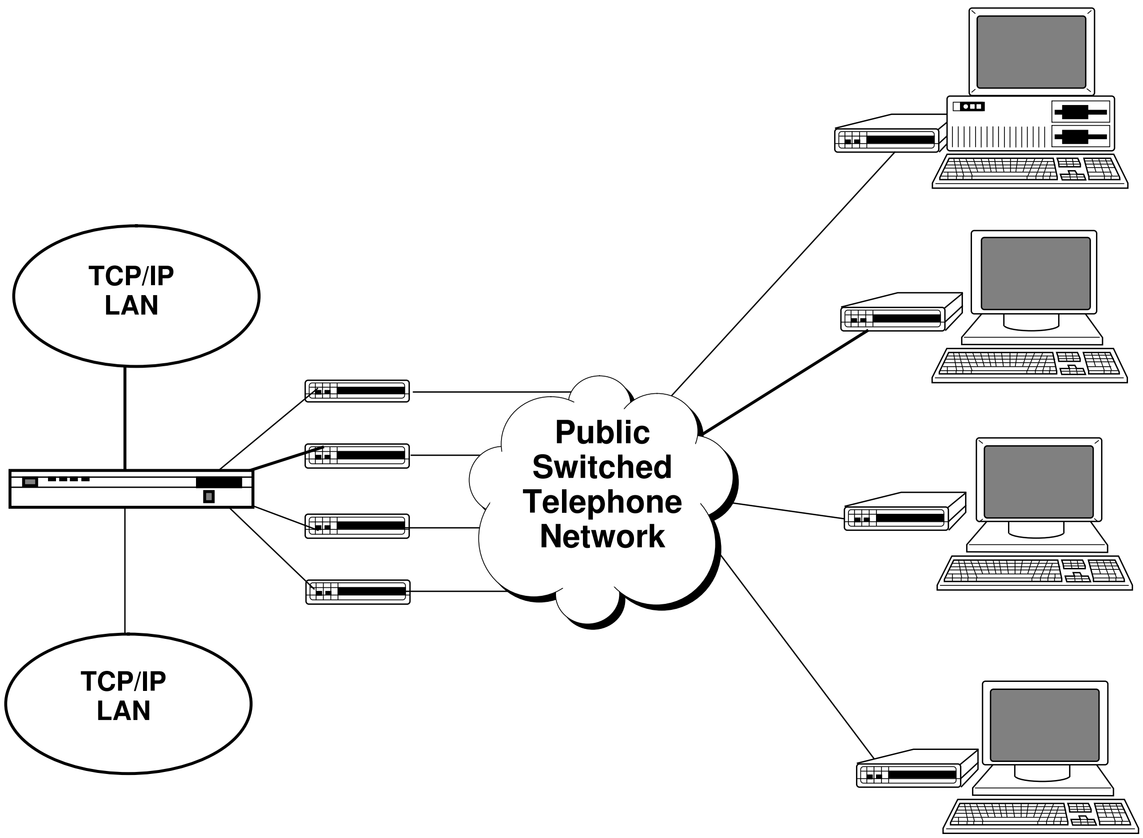
Using the NetBlazer as a Terminal Server

As a terminal server, the NetBlazer allows authorized users at remote locations to log into the NetBlazer and establish a telnet or rlogin connection with a host on the network (see Figure 1-2).

The user at the remote site must have an asynchronous terminal (or computer with communications software) and a modem to call into the NetBlazer through the PSTN. This function is described in *Chapter 3, Using the NetBlazer as a Terminal Server.*

Caller Verification

Upon receiving a call from a remote user, the NetBlazer prompts the caller for a login ID and password, which the NetBlazer uses to verify that the caller is an authorized user. If a valid ID and password have been entered, the user is connected to the NetBlazer and can then issue commands. The user can then type a command to start a telnet session with a host on any IP network, connected directly or indirectly to the NetBlazer.



As a terminal server, the NetBlazer provides the means by which users with terminals and modems gain access to the resources of a larger network. This eliminates the need for special hardware and software on the host computer to manage and control pools of modems for incoming calls.

In addition, a personal computer running compatible networking software can use the NetBlazer as a gateway to the larger network. The PC then has access to all the network services.

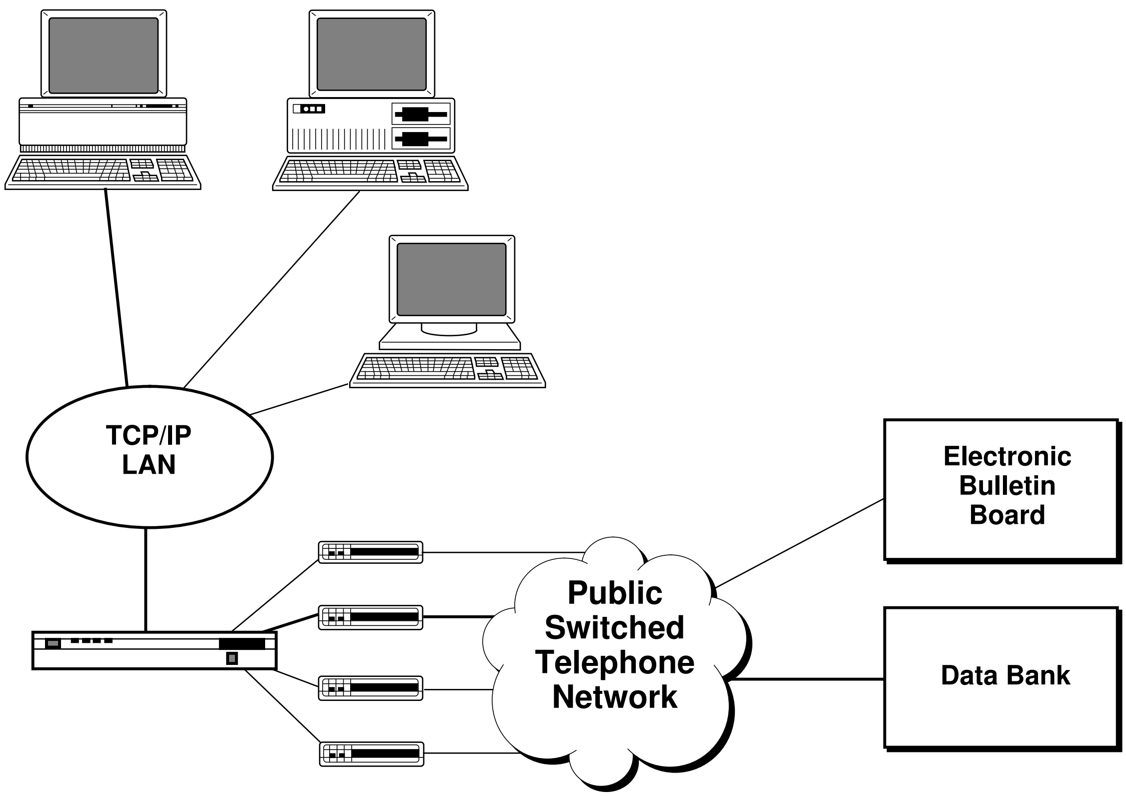
Figure 1-2. Using the NetBlazer as a Terminal Server

Customization

The NetBlazer can be configured (by the system administrator) to bypass the login process and start a telnet session with a designated host. Then, whenever a call is received on that line, the caller is automatically connected with the specified host as if he or she had called the host directly.

Using the NetBlazer as a Modem Server

As a modem server (see Figure 1-3), the NetBlazer allows authorized users on the LAN to which it is connected to log into the NetBlazer, either through a telnet session or from a remote terminal, and dial out to a remote computer system. This function is described in *Chapter 4, Using the NetBlazer as a Modem Server.*



As a modem server, the NetBlazer provides the means for hosts and end users to get access to a pool of modems by which they can access services unavailable on the local network. This greatly simplifies cabling, configuration, and modem arrangement.

Figure 1-3. Using the NetBlazer as a Modem Server

Using the NetBlazer Commands 2

This chapter provides an overview of the NetBlazer system software. It also introduces the commands available to the user as well as the basic concepts and procedures involved in normal operation including log-on and password procedures, establishing a telnet session, performing dial-out over a telephone line, and logging off the NetBlazer.

The NetBlazer System

The NetBlazer system is a command-oriented high-level "routing language." Its user interface has a somewhat UNIX-like appearance, and is streamlined to provide both a tree-structured command hierarchy and direct paths to desired commands and functions using a *command line* approach in conjunction with the menus.

Although the NetBlazer system is rich with commands and features, most of the commands are associated with set-up and configuration functions performed by the system administrator. Because of this, and the fact that so many of the routing functions the NetBlazer performs occur transparently, the user needs only a handful of commands to manage virtually all required communications interconnection functions.

Hierarchical Command Set

NetBlazer commands are arranged in a tree-structured hierarchy, starting at the top command level, and working down through subcommand levels (see Figure 2-1).

Note: *Commands having subsets are indicated by a > symbol after the name.*

To go to a new command level, enter the name of the new command level and press the Return key. Only the first two or three characters of the command need to be entered to uniquely distinguish it from other commands. For example, to get to the *sessions* command level from anywhere in the command tree, enter either **sessions** or **se** at the command prompt.

Common Commands

Three commands are common to every command tree level: **top**, **up** and **?**.

The **?** command displays a list of possible commands at the current command level. If you enter a command before the **?**, the syntax for that command is displayed.

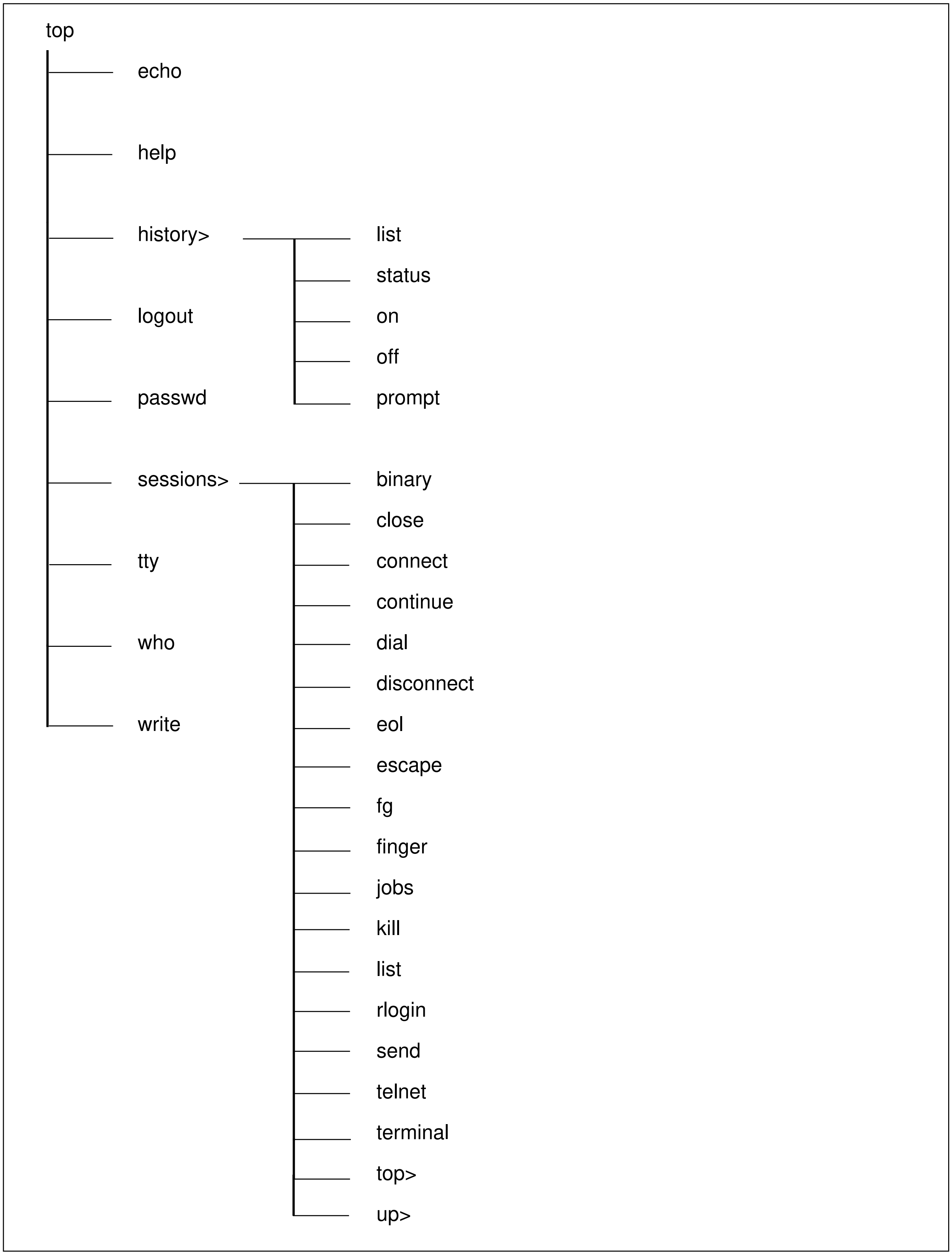


Figure 2-1. User Level Command Tree

The **up** command takes you to the next higher level in the command tree. For instance, if you are currently at the Configure IP command level, entering an **up** command moves you up one level to the Configure command level.

The **top** command takes you to the top level of the command tree.

Typographic Conventions

Typographic conventions used throughout this manual include:

<parameter-name>Parameter names enclosed in angle brackets serve as placeholders for information you must supply. Enter the appropriate value for the named parameter.

[optional parameters]Parameters in square brackets are optional. If multiple optional parameters are indicated, they must be entered in the same sequence as shown.

choice 1 | choice 2Vertical bars indicate a choice between two or more items. Choose one of the items unless all items are enclosed in square brackets.

Logging Into and Out of the NetBlazer

Logging Into the NetBlazer

Logging into the NetBlazer normally begins by either dialing into it from a remote location, or by starting a telnet session to it (using either its assigned hostname or IP address) from a device on the network to which the NetBlazer is connected. Your system administrator can furnish you with the hostnames, IP addresses, or telephone numbers for the NetBlazers you can access.

Once connection to the host NetBlazer occurs, the login prompt appears:

```
hostname login:
```

where hostname is the name given to the NetBlazer by the system administrator. At this point, enter your user ID and press the return or enter key. If your system administrator has authorized you as a user of the NetBlazer on which you have connected, the password prompt then appears. Enter the password assigned to you by your system administrator.

Having successfully entered a valid user ID and password, the command prompt then appears. In the example below, the hostname is opal. The command prompt is the top line and always includes the hostname and current level followed by a > symbol. Entering a ? (same as help) produces a list of all available commands. Note that commands ending with the > symbol have a sublevel set of commands:

```
opal:Top> ?
Available commands:
echo            help            history>        logout
passwd          sessions>       tty             top>
who             write           ?
opal:Top>
```

Logging Out of the NetBlazer

When you finished using the NetBlazer, verify that all telnet or dial-out sessions which you started are closed and then log out of the NetBlazer by issuing a **logout** command.

If you still have one or more sessions opened when you attempt to log out, the NetBlazer will prompt you to close all sessions before logging out.

```
NB:Top> logout
You still have open sessions
 #   S#  Type     Rcv-Q Snd-Q State        Remote socket
 0   5   Telnet       0     0 Established  143.191.64.254 (143.191.64.254:23)
continue with logout [n]? n
NB:Top> close 0
Telnet session 0 closed: EOF
NB:Top> logout
```

Passwords

When your system administrator sets you up as a user on the NetBlazer connected to your network, you will most likely be provided with a password along with your user ID. Frequently the user ID and password are the same as that which you normally use on your network host.

Depending on your need, the system administrator may also give you the ability to change your password.

The **passwd** command at the Top command level allows you to change your password, provided the system administrator has enabled this feature.

You can change your password by logging into the NetBlazer and entering the **passwd** command at the Top command level. You are then prompted for your old password and the new password.

```
Telebit's NetBlazer Version Version 1.5

NB login: carol
Password:
NB:Top> passwd
Changing password for carol
Enter old password :
New Password :
Retype Password :
```

The following summary offers an overview of the remaining commands in the context of the functional groups in which they are used.

Using Telnet

Telnet is a UNIX TCP/IP protocol term for establishing a connection to a remote host over the network. Once telnet is established, you can run applications and perform E-mail transfers as though you where physically connected to the remote host. The NetBlazer provides the following commands to start and control a telnet session:

telnet [-b|-8|-raw] [-noesc] [<address>] [<port>]

The **session telnet** command is used to establish a telnet session with a host specified by the <address> parameter. The address is the host's IP address or domain name. This is the most commonly used mode of connecting to a remote host.

The -b option starts a binary telnet session. This has the same result as escaping out of a telnet session, turning on binary for that session, and then continuing the session.

The -8 option starts a telnet session using 8-bit data in non-binary mode.

The -raw option provides a "raw" (no telnet processing at all) TCP connection. This option is used for application specific functions. Contact your system administrator for usage details.

The -noesc option disables escape processing. This prevents the NetBlazer from entering the command mode when an escape sequence is entered. Instead, the escape sequence is passed through to the remote end.

Note: *The -noesc option can not be used if there are other sessions open for the same login (pgroup). Other sessions for the same login must be closed before a* ***telnet -noesc*** *command is accepted.*

The only way to return to the NetBlazer's command mode from a telnet session that was started with the -noesc option is to close the session at the remote end (e.g. logout).

The optional <port> parameter is used to start a telnet with the host system using a port number other than telnet's well-known port number 23.

binary <session-number> [on|off]

This command turns on or off the telnet or rlogin binary facility. This facility allows the NetBlazer to transmit and receive all 256 possible character codes. It is typically used to transfer machine code and other types of software containing microcode. If binary mode is not enabled, the NetBlazer transfers only a subset of the 7-bit ASCII code.

connect <destination-name>|<destination-number>

A user "shorthand" command. Enables an automatic connection to a desired destination without the need to specify a telnet session (provided it is set up by your system administrator). This command allows the use of destination names instead of IP addresses and telephone numbers (similar to the auto-dial memory button on your telephone).

You can enter a destination number assigned to a destination in place of the destination name parameter. To get a list of destination numbers and names, press the return key when you are at the NetBlazer Sessions command level.

```
Top>Sessions> press the Return key
Accessible sites:
1  marketing        Marketing Computer
2  databank         Data Bank Service
```

The above example shows that two sites, marketing and databank, are accessible through the **connect** command for this user. Entering **connect 1** is equivalent to entering **connect marketing**. If you get an "All sites are accessible" message, you probably do not have a destination group assigned to your user ID account.

eol [standard | unix]

End-of-line command sequence. Used in UNIX systems to mark the end of a line. **eol** is functionally equivalent to a Return or Enter keystroke: the sequence of characters the NetBlazer sends to the UNIX host when the Return key is pressed. Activate eol when your UNIX host does not respond to a normal Return. **eol** is normally controlled by the System Administrator.

rlogin [-b|-8] [-noesc] [-l username]

Establishes an interactive session on a remote host using the current NetBlazer user ID as the remote host login ID. If your system is recognized by a “trusted” remote host system, rlogin allows you to simply log into the remote host without requiring additional user name and password authentication.

The -b option starts a binary rlogin session. This has the same result as escaping out of a rlogin session, turning on binary for that session, and then continuing the session.

The -8 option starts an rlogin session using 8-bit data in nonbinary mode.

The -noesc option disables escape processing. This prevents the NetBlazer from entering the command mode when an escape sequence is entered. Instead, the escape sequence is passed through to the remote end.

The -l option is used to override the default user name. This is normally used to specify a different user name when logging onto a remote host that does not recognize the user’s NetBlazer login.

send <session-number> ao|ayt|brk|ec|el|esc|ga|ip|nop|synch

The **send** command issues a special predefined character sequence to the remote host through telnet. It is commonly used to send the session escape character to the remote host through telnet. Table 2-1 defines the available character sequences.

Table 2-1. Send Character Sequences

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.
brk	Sends the telnet brk (break) sequence, which may have significance to the remote system.
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.
esc	Sends the current telnet escape character. The CR or LF that would be expected by a NetBlazer as part of the escape sequence are not sent by this command; they may be sent by the user if required.
ga	Sends the telnet ga (go ahead) sequence, which likely has no 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.
nop	Sends the telnet nop (no operation) sequence.
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 does not work, a lower case "r" may be echoed on the terminal.

Dialing Out to Remote

Dialing out to a remote destination occurs over telephone lines through modems. This provides the economies and flexibility of using a standard telephone line on an on-demand basis.

dial <site-name>

The **dial** command is used to establish a character mode connection with a predefined remote destination specified by the <site-name> parameter. Your system administrator can provide you with a list of dialout destinations.

connect <destination-name>|<destination-number>

A user “shorthand” command. Refer to the description of this command on page 2-6.

Suspending and Switching Between Sessions

Occasionally, it is necessary to have more than one session active, such as accessing a remote database to obtain information needed in an application you are running on a remote host. The NetBlazer provides facilities to switch between sessions by escaping from (suspending) one session and continuing another session.

escape [<character>]

This command allows the user to set the escape character used by the NetBlazer to suspend a session. It is used when the host in a given session uses the same escape character as the default NetBlazer escape character. This prevents the NetBlazer from trapping an escape character intended for a host, or vice-versa.

Entering the command without the <character> parameter, displays the current escape character, normally ctrl-].

list/job

The **list** and **job** commands both display a list of sessions currently running on the NetBlazer.

continue/fg [<session-number>]

The **continue** and **fg** (foreground) commands enable a session to be resumed by specifying the session number obtained from the session list or **fg** command.

If no <session-number> is entered, the NetBlazer prompts you for the session number. If there is only one session active, that session is automatically used.

Terminating a Session

Telnet and dial-out sessions can be terminated using three different commands. Each has a special function:

close [<session-number>]

The **close** command terminates a telnet session in process. Although **kill** will also terminate a telnet session, **close** is recommended because it facilitates a graceful, negotiated termination of the active session.

If no <session-number> is entered, a list of active sessions is displayed and you are prompted for the session number (unless only one session is active).

disconnect [<session-number>]

The **disconnect** command terminates the session specified by the <session-number> parameter. It is intended for dial-out connections, but it can be used to close any session.

If no <session-number> parameter is entered, the NetBlazer prompts you for the session number (unless there is only one session active).

kill [<session-number>]

kill is another means of terminating a session. Because it forces an abrupt session end without negotiation, it should generally be used as a last resort.

If no <session-number> is entered, the NetBlazer displays a list of active sessions and prompts you for the session number.

Getting Information About Other Users

Generally, UNIX host systems have some provisions for maintaining information about its users through a special record in their password files, or **project** or **plan** files. Information such as their real names, telephone numbers, mission, etc. may be found in these files. Occasionally, you may wish to know about other users currently logged on the NetBlazer. Two commands are available for this purpose:

finger [[<user>] @<host>]

The finger command is used to obtain more information about a specific user on the network. Refer to your UNIX documentation for details.

The field <user> is a valid user ID on the system being queried. The field @<host> is the @ character immediately followed by an IP address or a domain name.

If just @<host> field is specified, the host being queried usually displays a list of possible users or a list of currently active users. This depends on the remote host and is not under the control of the NetBlazer.

The following example shows you how to get information about a user named brian from a host system named marketing.telebit.com.

```
NetBlazer:Top> session
NetBlazer:Top>Sessions> finger brian@marketing.telebit.com
```

You can get a list of active users on a host system by simply entering the **finger** command with just the @host parameter as shown in the following example.

```
NetBlazer:Top>Sessions> finger @marketing.telebit.com
```

who

The **who** command displays a list of users currently logged into the NetBlazer.

Should you wish to communicate with someone currently logged into the NetBlazer, the **write** command provides the facilities to send a message to the user.

write <user> [<location>]

The write command is used to immediately send a message directly to another user who is currently logged on to the NetBlazer. The use of this facility (write privilege) is assigned by your system administrator.

The <user> and [<location>] parameters are used to direct the message. A message is sent to all users logged in with a user ID specified by the <user> parameter, unless the <location> is specified. In this case, only the user logged in from the specified location is sent the message.

Other Information

Dynamic Interfaces

Connection Delays

Dynamic interfaces are the on-demand dial-up connections made over telephone lines. Note that when these connections are being made, some delay is involved in getting the initial response (as compared to responses on the network). Dialing, ringing, modem handshaking, and connection negotiation can take about a minute or so. These delays are normal and allowance should be made for them.

Inactive Connection Time-Out

Dynamic connections over telephone lines are automatically disconnected after a preset period of inactivity in order to minimize toll charges (your system administrator can advise you as to the length of this time-out period). Note that the NetBlazer automatically reestablishes the connection with the destination once you resume keyboard activity.

Note: *Because dialing, ringing, and modem connection negotiation must all occur again when keyboard activity resumes, be sure to make allowance for the connection delays described above. Avoid making keyboard entries until the connection is re-established. Entering commands* before *the connection is made can get you into trouble* after *the connection is made.*

Automatic Sync Backup

Connections to a network destination normally made over a synchronous line (a dedicated route) can be maintained with an automatic backup feature. If set up by your system administrator, this facility attempts to automatically reestablish the connection through a modem over a telephone line should a fault occur on the synchronous line.

When this feature is activated and a fault occurs on the synchronous connection, be sure to make an allowance for the dial-up connection delays previously described while the NetBlazer attempts to reestablish the connection.

History Mechanism

The NetBlazer's history mechanism (when turned on) records the command strings entered into the system. Up to a maximum of 20 of the most recently entered commands are maintained in a list, which you can display using the **history list** command.

The history list is frequently used as a “shorthand” method of repeating commands. After displaying the list, the desired command line (identified with a leading numeric) can be repeated by using the exclamation mark (!) as a shorthand character, followed by the line number you wish to repeat. Table 2-2 summarizes the syntax of the history commands.

Table 2-2. History Command Syntax

Command Syntax	Description
history on [<number of lines>]	Turns on the history mechanism and optionally sets the maximum number of lines in the history list.
history off	Turns off the history mechanism and clears the history list.
history prompt	Displays an event number at the end of each command prompt when history is on.
history status	Displays the current settings of the history mechanism.
history list [<number of lines>]	Displays a list of recent commands (events).
!!	Invokes the last command.
!<event number>	Invokes the command specified by the event number.
!<string>	Invokes the most recent command beginning with <string>.
!?<string>**?**	Invokes the most recent command containing <string>.
!<event>**:p**	Displays and makes current the specified event, but does not invoke the command.
!<event>**:**<number>	References field <number> of the specified event.
!<event>**:**<start>**–**<end>	References fields ranging from <start> to <end> of specified event.
^<old string>**^**<new string>**^**	Replaces <old string> with <new string> in last command.

Command	Function
telnet	Used to establish an interactive session with an IP host. Highest usage.
binary	(on or off) Used to transfer machine code files.
connect	A “shorthand” command to start a telnet session using a telnet destination name setup by your system administrator.
rlogin	Connects to a remote host using the current user ID as the default.
eol	(end-of-line) Marks the end of the line. Activate when your UNIX host does not respond to a Return or Enter keystroke.
send	Used to send a predefined character sequence to a remote host, such as an escape sequence.
dial	Used to establish an interactive session with a remote site through a dial-out connection.
connect	Allows automatic connection to a remote site using a dialout destination name setup by your system administrator.
escape	Allows the user to set the escape character used by the NetBlazer in order to avoid escape character conflicts with the host.
list/job	Displays a list of sessions currently active on the NetBlazer.
continue	Used to re-activate a desired session after it has been suspended.
fg	(foreground) Identical to the continue command.
close	Used to do a graceful, negotiated termination of the active session. Recommended method.
disconnect	Terminates a session over a dial-out connection.
kill	Forces an abrupt termination of session.
finger	Used to obtain more information about a specific user on the network.
who	Displays a list of all users currently logged onto the NetBlazer.
write	Used to send a message directly to another user logged onto the NetBlazer. Will interrupt user’s work.

Using the NetBlazer as a Terminal Server 3

As a terminal server, the NetBlazer allows authorized users at remote locations to log into the NetBlazer and establish a telnet connection with a host on the network. The user at the remote site must have an asynchronous terminal (or computer with communications software) and a modem to call into the NetBlazer through the telephone network.

This chapter provides general instructions for using the NetBlazer as a terminal server.

Logging onto the NetBlazer from a Remote Terminal

Logging into the NetBlazer requires a user ID and password. If you have not been assigned a user ID, contact your system administrator before attempting to log into the NetBlazer.

To log into the NetBlazer from a remote terminal, you must first establish a connection with the NetBlazer by using your modem (or communication program) dial command. For example, to call a NetBlazer at 555-1234 using a Telebit modem dial command, you would enter:

ATDT555-1234<return>

When the connection is established, the NetBlazer presents you with a login prompt.

```
Telebit's NetBlazer Version 1.5

NetBlazer login:
```

Enter your assigned user ID. The NetBlazer then prompts you for a password.

```
Password:
```

Enter your password. If you have logged in correctly, the NetBlazer displays the command prompt.

```
NetBlazer:Top>
```

You can now issue commands to the NetBlazer. To find out who else is logged into the NetBlazer, enter **who** at the command prompt. This displays a list of currently logged-in users.

Establishing a Telnet (Rlogin) Session

You can start a telnet session by issuing a **connect**, **telnet**, or **rlogin** command to the NetBlazer. However, to use the **connect** command, the telnet destination must be predefined in the destination group assigned to your user ID account. To use the **rlogin** command, the NetBlazer must be set up as a "trusted host" on the remote UNIX system by your system administrator.

To find out which sites are accessible through the **connect** command, press the Return key while you are at the Sessions command level. If you have a destination group assigned to your account, a list of destinations is displayed.

```
NetBlazer:Top>Sessions> press the Return key
Accessible sites:
1  mrktng           Marketing Computer
2  databank         Data Bank Service
```

The above example shows that two sites, mrktng and databank, are accessible through the connect command for this user. If you get an "All sites are accessible" message, you probably do not have a destination group assigned to your user ID account.

To start a telnet session using the **connect** command, enter "connect" followed by either a destination name or number listed in your assigned destination group.

```
NetBlazer:Top>Sessions> connect mrktng
Type ^] (decimal 29) to return to NetBlazer
Trying 143.191.10.6:23...
Telnet session 1 connected to 143.191.10.6
```

In this example, entering "connect mrktng" causes the NetBlazer to look up the mrktng destination in the user's assigned destination group to determine the type of connection (telnet or dial) required, and the destination address. In this case the mrktng destination has been predefined to start a telnet session with the host located at IP address 143.191.10.6.

As illustrated below, entering "connect 1" has the same result as entering "connect mrktng."

```
NetBlazer:Top>Sessions>
Accessible sites:
1  mrktng           Marketing Computer
2  databank         Data Bank Service
NetBlazer:Top>Sessions> connect 1
Type ^] (decimal 29) to return to NetBlazer
Trying 143.191.10.6:23...
Telnet session 0 connected to 143.191.10.6
```

To start a telnet session, enter the **telnet** command followed by a host ID. The host ID may be either an IP address or a valid domain name.

```
NetBlazer:Top>Sessions> telnet 143.191.10.6
Type ^] (decimal 29) to return to NetBlazer
Trying 143.191.10.6:23...
Telnet session 0 connected to 143.191.10.6
```

The above example illustrates how to start a telnet session using an IP address. If the NetBlazer has been configured to act as a domain name system client, you could replace the IP address, 143.191.10.6, with a domain name such as marketing.telebit.com, or simply marketing if the NetBlazer domain suffix is set to telebit.com.

To start a telnet session using the automatic login facility, enter the **rlogin** command followed by a host ID. The host ID may be either an IP address or a valid domain name.

Suspending a Telnet Session

You can suspend a telnet session in progress, and return to the NetBlazer command mode to start another telnet or dial-out session with a different host without closing the original session.

To suspend the current telnet session and return to the NetBlazer command, issue a NetBlazer escape character (decimal 29) by holding down the control key and pressing the] (right bracket) key. This is the default escape character used by the NetBlazer.

At this point, you can start the new session by entering a **connect**, **telnet** or **dial** command. The **dial** command is described later in this chapter under Dialing Out to a Remote System.

When you are ready to return to the original telnet session, issue an escape character to the NetBlazer to get back to the NetBlazer command mode. Then enter a **list** command to display a list of your active sessions.

```
NetBlazer:Top>Sessions> list
 #   S# Type   Rcv-Q Snd-Q State       Remote socket     Pgroup
 0 $ 9  Telnet     0     0 Established 143.191.10.6 (143.191.10.6:23)143.191
.10.6:1289
 1 $ 10 Telnet     0     0 Established 143.191.10.6 (143.191.10.6:23)143.191
.10.6:1289
```

If your user ID has system administrative privileges, all active sessions are displayed, and those belonging to you are marked by a $ following the session number. Users that have not been granted system administrative privileges will see only those sessions that belong to them.

Enter "continue" followed by the number of the session which you wish to continue.

```
NetBlazer:Top>Sessions> continue 0
```

The above command returns you to the first telnet session. Entering "continue 1" resumes the second session.

If you enter the **continue** command without a session number, the NetBlazer displays a list of currently active sessions, and prompts you for the session number to continue.

```
NetBlazer:Top>Sessions> continue
 #   S# Type   Rcv-Q Snd-Q State       Remote socket     Pgroup
 0 $ 9  Telnet     0     0 Established 143.191.10.6 (143.191.10.6:23)143.191
.10.6:1289
 1 $ 10 Telnet     0     0 Established 143.191.10.6 (143.191.10.6:23)143.191
.10.6:1289
Which session do you want to continue?
```

Enter the number of the session that you want to continue. Pressing the return key aborts this dialog and returns you to the NetBlazer command mode.

Closing a Telnet Session

Generally, logging out of the host system should close the telnet session and return you to the NetBlazer command mode. However, you can also escape back to the NetBlazer command mode and close the telnet session as described below.

Issue a NetBlazer escape character (decimal 29) by holding down the control key and pressing the] (right bracket) key. This is the default escape character used by the NetBlazer.

Enter a **close** command at the command prompt as shown below.

```
NetBlazer:Top>Sessions> close
 #   S# Type   Rcv-Q Snd-Q State       Remote socket     Pgroup
 0 $ 9  Telnet     0     0 Established 143.191.10.6 (143.191.10.6:23)143.191
.10.6:1289
 1 $ 10 Telnet     0     0 Established 143.191.10.6 (143.191.10.6:23)143.191
.10.6:1289
Which session do you want to close? 1
Telnet session 1 closed: EOF
```

The NetBlazer displays a list of currently active sessions, and prompts you for the session number to close. In this example, entering "1" closes the second session. Pressing the return key aborts this dialog and returns you to the NetBlazer command mode.

To verify that the session has been closed, issue a **list** command at the Sessions command level.

```
NetBlazer:Top>Sessions> list
 #   S# Type   Rcv-Q Snd-Q State       Remote socket     Pgroup
 0 $ 9  Telnet     0     0 Established 143.191.10.6 (143.191.10.6:23)143.191
.10.6:1289
```

Using the NetBlazer as a Modem Server 4

As a modem server, the NetBlazer allows authorized users to log into the NetBlazer, either through a telnet session or from a remote terminal, and dial out to a remote computer system.

The procedure used to log into the NetBlazer from a remote terminal is described under in *Chapter 3, Using the NetBlazer as a Terminal Server*. This section describes how to log into the NetBlazer using telnet and then dial out to a remote system in serial character mode.

Logging into the NetBlazer Using Telnet

Logging into the NetBlazer requires a user ID and password. If you have not been assigned a user ID, contact your system administrator before attempting to log into the NetBlazer.

To log into the NetBlazer over the local network, you must first establish a telnet session with the NetBlazer by issuing a telnet command to your local system. For example, to telnet to a NetBlazer with an IP address of 192.9.200.1, you might enter:

telnet 192.9.200.1

Your system may use a different command or process to establish a telnet session; check your system manual or contact your system administrator for the correct procedure to use.

When the connection is established, the NetBlazer presents you with a login prompt.

```
Telebit NetBlazer Version 1.5

NetBlazer login:
```

Enter your assigned user ID. The NetBlazer then prompts you for a password.

```
Password:
```

Enter your password. If you have logged in correctly, the NetBlazer displays the command prompt.

```
NetBlazer:Top>
```

You can now issue commands to the NetBlazer. To find out who else is logged into the NetBlazer, enter **who** at the command prompt. This displays a list of currently logged-in users.

Changing the Escape Character Setting

If telnet on your computer uses the same escape character as the NetBlazer, you may want to change the setting of the NetBlazer escape character to a value that does not match the telnet escape character. This would prevent telnet from trapping an escape that is intended for the NetBlazer.

Go to the Sessions command level and enter **escape** followed by the control character you want to use to escape to the NetBlazer command mode.

```
NetBlazer:Top> session
NetBlazer:Top>Sessions> escape <ctrl-keystroke>
```

Be sure to enter the desired keystroke exactly as you would use it. For example, if you decide to change the escape character to ctrl-/, you should hold down the control key and press the / key.

Verify the new escape character by entering the **escape** command without a keystroke parameter.

```
NetBlazer:Top>Sessions> escape
current escape character is ^/ (decimal 28)
```

The above example shows that the NetBlazer escape character has been set to ctrl-/. Note that the new setting is valid only for this login session. If you log out and then log back in, the escape character resets to its default value of ctrl-] (decimal 29).

Dialing Out to a Remote System

You can dial out to a remote computer by issuing a **connect** or **dial** command to the NetBlazer. However, to use the **connect** command, the dialout destination must be predefined in the destination group assigned to your user ID account.

To find out which sites are accessible through the connect command, press the return key while you are at the Sessions command level. If you have a destination group assigned to your account, a list of destinations is displayed.

```
NetBlazer:Top>Sessions> press the Return key
Accessible sites:
1  mrktng           Marketing Computer
2  databank         Data Bank Service
```

The above example shows that two sites, mrktng and databank, are accessible through the connect command for this user. If you get an "All sites are accessible" message, you probably do not have a destination group assigned to your user ID account.

To start a dialout session using the **connect** command, enter "connect" followed by either a destination name or number listed in your assigned destination group.

```
NetBlazer:Top>Sessions> connect databank
Type ^] (decimal 29) to return to NetBlazer
Trying 143.191.10.6:23...
Telnet session 1 connected to 143.191.10.6
```

In this example, entering "connect databank" causes the NetBlazer to look up the databank destination in the user's assigned destination group to determine the type of connection (telnet or dial) required, and the destination address. In this case, the databank destination has been predefined to start a dial-out session using the databank dialout destination record.

As illustrated below, entering "connect 2" has the same result as entering "connect databank."

```
NetBlazer:Top>Sessions>
Accessible sites:
1  mrktng           Marketing Computer
2  databank         Data Bank Service
NetBlazer:Top>Sessions> connect 2
Type ^] (decimal 29) to return to NetBlazer
Trying 143.191.10.6:23...
Telnet session 0 connected to 143.191.10.6
```

To start a dial-out session using the **dial** command, enter "dial" followed by a dial-out name. The dial-out name points to a predefined dialout destination record that supplies the NetBlazer with the telephone number and other information required to establish a connection with the remote system.

```
NetBlazer:Top>Sessions> dial databank
Type ^] (decimal 29) to return to NetBlazer
Trying 143.191.10.6:23...
Telnet session 0 connected to 143.191.10.6
```

Based on information contained in the databank dialout destination record, the NetBlazer automatically selects and preconfigures one of the attached modems and calls the telephone number assigned to the databank dialout destination. Once the connection is established, you can interact with the remote system just as if you had called it directly.

Suspending a Dial-Out Session

You can suspend a dial-out session in progress, and return to the NetBlazer command mode to start another dial-out or telnet session with a different host system without closing the original session.

To suspend the current dial-out session and return to the NetBlazer command mode, issue the escape character that you set earlier to the NetBlazer. If you did not change the escape character, use a ctrl-] (decimal 29) by holding down the control key and pressing the] (right bracket) key. This is the default escape character used by the NetBlazer.

At this point, you can start the new session by entering a **connect**, **dial** or **telnet** command. The **telnet** command is described earlier in this chapter under Establishing a Telnet Session.

When you are ready to return to the original dial-out session, issue an escape character to the NetBlazer to get back to the NetBlazer command mode. Then enter a **list** command to display a list of your active sessions.

```
NetBlazer:Top>Sessions> list
 #   S# Type   Rcv-Q Snd-Q State       Remote socket     Pgroup
 0 $ 9  Telnet     0     0 Established 143.191.10.6 (143.191.10.6:23)143.191
.10.6:1289
 1 $ 10 Telnet     0     0 Established 143.191.10.6 (143.191.10.6:23)143.191
.10.6:1289
```

If your user ID has system administrative privileges, all active sessions are displayed, and those belonging to you are marked by a $ following the session number. Users that have not been granted system administrative privileges will only see those sessions which belong to them.

Enter “continue” followed by the number of the session which you wish to continue.

```
NetBlazer:Top>Sessions> continue 0
```

The above command returns you to the first telnet session. Entering “continue 1” would resume the second session.

If you enter the continue command without a session number, the NetBlazer displays a list of currently active sessions, and prompts you for the session number to continue.

```
NetBlazer:Top>Sessions> continue
 #   S# Type   Rcv-Q Snd-Q State       Remote socket     Pgroup
 0 $ 9  Telnet     0     0 Established 143.191.10.6 (143.191.10.6:23)143.191
.10.6:1289
 1 $ 10 Telnet     0     0 Established 143.191.10.6 (143.191.10.6:23)143.191
.10.6:1289
Which session do you want to continue?
```

Enter the number of the session that you want to continue. Pressing the return key aborts this dialog and returns you to the NetBlazer command mode.

Terminating the Remote Connection

To terminate a dial-out connection, you should escape back to the NetBlazer command mode and issue a disconnect command as described below.

Issue the NetBlazer escape character that you set earlier to the NetBlazer. If you did not change the escape character, use a ctrl-] (decimal 29) by holding down the control key and pressing the] (right bracket) key. This is the default escape character used by the NetBlazer.

Enter a "disconnect" command at the command prompt as shown below.

```
NetBlazer:Top>Sessions> disconnect
 #   S# Type   Rcv-Q Snd-Q State       Remote socket     Pgroup
 0 $ 9  Telnet     0     0 Established 143.191.10.6 (143.191.10.6:23)143.191
.10.6:1289
 1 $ 10 Telnet     0     0 Established 143.191.10.6 (143.191.10.6:23)143.191
.10.6:1289
Which session do you want to close? 1
Telnet session 1 closed: EOF
```

The NetBlazer displays a list of currently active sessions, and prompts you for the session number to close. In this example, entering "1" closes the second session. Pressing the Return key aborts this dialog and returns you to the NetBlazer command mode.

To verify that the session has been closed, issue a **list** command at the Sessions command level.

```
NetBlazer:Top>Sessions> list
 #   S# Type   Rcv-Q Snd-Q State       Remote socket     Pgroup
 0 $ 9  Telnet     0     0 Established 143.191.10.6 (143.191.10.6:23)143.191
.10.6:1289
```