

DECserver 100 Terminal Server

User's Pocket Guide

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The *DECserver 100 Terminal Server User's Pocket Guide* contains details on how to operate and use a terminal attached to a DECserver 100. Also described are commands used for displaying information on terminals, the DECserver, and the network.

SUPERSESSION/

UPDATE INFORMATION: This is a new manual.

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digital

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INTRODUCTION

The DECserver 100 Terminal Server gives you access to computers available to you on your local area network. The server allows simultaneous connections to services offered by one or more computers.

Terminal Server Concepts

The following concepts are basic to understanding the facilities available on a DECserver 100 terminal:

Local mode is the environment in which you interact with the terminal server, using the commands in this guide. You are in local mode when you log into the DECserver 100, but you leave local mode whenever you connect to a computer service. You can switch back to local mode at any point.

A **service node** is a network computer system to which the DECserver 100 has access. You can connect to services offered by service nodes.

A **service** is a resource. A service can be equivalent to a service node name or it can be an additional function offered by the service node.

A **session** is the interaction between you and a service. You can have up to four sessions at one time. When one session is active, the others are temporarily inactive. Your current session is the active session or, when you are in local mode, the session most recently active. The four sessions can be on the same or different service nodes.

Service mode is the environment in which you interact with a computer on the network, using its facilities.

Structure of this Guide

This guide is divided into sections that explain the commands which let you do the following:

- “Getting Started” tells you how to log into and log out from the DECserver 100, begin and end sessions with a computer service, and display on-line help.
- “Multiple Sessions” tells you how to create several sessions and switch between them.

- “Additional Facilities” tells you how to show information, broadcast messages to terminals on your server, test your terminal, and lock your keyboard from other users.
- “Specifying Terminal Characteristics” tells you how to specify characters that switch you easily between sessions and modes, specify a preferred service that can be connected automatically, control message reception, and match your server port with the physical characteristics of your terminal.
- “Terminal User Command Summary” lists the user commands of the DECserver 100.
- “Preparing for File Transfers” tells you how to prepare a DECserver 100 terminal that is also a personal computer for transferring files to and from a service node.

CONVENTIONS USED IN THIS GUIDE

Convention Meaning

`dot matrix` Dot matrix indicates examples of system output or user input. System output is in black; user input is in red.

UPPERCASE Uppercase in commands and examples indicates that you should enter the characters as shown (enter either uppercase or lowercase).

italics Italics in commands and examples indicate that either the system supplies a value or you should supply a value.

KEY Indicates that you should press the specified key. **CTRL/x** indicates that you should press the **CTRL** key at the same time as the *x* key, where *x* is a letter.

When you enter commands in local mode, you can erase the last character of the current command by pressing **DEL**, and you can erase the whole command by pressing **CTRL/U**. You can re-type the current command by pressing **CTRL/R**, which is useful after using **DEL** on a hardcopy terminal.

Terminate a command by pressing **RET**.

GETTING STARTED

Logging into the DECserver 100

Press **(RET)** repeatedly until you receive a DECserver 100 prompt.

If the prompt is a number sign (#) accompanied by a beep, enter the login password assigned by the server manager. You cannot see the password when you enter it. For example, with the server password 3579X, the password prompt and response are as follows:

```
# 3579X
```

When you successfully enter the login password, or if a password is not required, an administrative message appears, followed by the user name prompt. For example, a user named Jean Brown might enter the following user name:

```
DECserver 100 Terminal Server V1.0 (BLG)
                                     - LAT V5.0
```

```
Enter username> Jean Brown
```

Alternatively, you can enter **(CTRL/Z)** beside the *Enter username>* prompt, and the terminal name will be entered as your user name.

The **Local>** prompt indicates that you are in local mode.

Obtaining On-line Help

The HELP command displays an on-line reference of DECserver 100 commands. Vertical bars (|) are used to separate alternative options in commands. Do not type the vertical bar in your commands.

For the basic commands required to interact with network services, enter the HELP command.

```
Local> HELP
```

For commands that allow you to use additional facilities of the server, enter the HELP MORE command.

```
Local> HELP MORE
```

For commands that allow you to specify terminal characteristics, enter the HELP TERMINAL command.

```
Local> HELP TERMINAL
```

Establishing a Session with a Service

To learn the names of all services available to you, enter the `SHOW SERVICES` command. (See “Additional Facilities” for details on `SHOW` commands.)

```
Local > SHOW SERVICES
```

To initiate a session, enter the `CONNECT` command with the name of the service you want. For example, for a service called `PRODUCTION`, enter the following command:

```
Local > CONNECT PRODUCTION
```

You are then in service mode, and you are communicating directly with the requested service.

Returning to Local Mode from Service Mode

To return to local mode without ending your session, press `BREAK` or use your local switch character. The local switch character is a keyboard character that returns you to local mode. “Specifying Terminal Characteristics” tells you how to specify the local switch character.

Resuming Your Session from Local Mode

To resume your current session, enter the `RESUME` command.

```
Local > RESUME
```

Ending a Service Connection

To end the current session while in local mode, enter the `DISCONNECT` command.

```
Local > DISCONNECT
```

Alternatively, a service may permit you to end the current session while in service mode by logging out from the service itself.

Logging Out of the DECserver 100

To log out from the DECserver 100, enter the `LOGOUT` command. This also disconnects all sessions.

```
Local > LOGOUT
```

MULTIPLE SESSIONS

The number of sessions you can have in effect at one time is specified by your server manager, up to a maximum of four. Each session can be with the same service or different services.

Establishing Additional Sessions

To establish a session, enter the **CONNECT** command with the name of the service that you want. For example, for the service **SALES**, enter the following:

```
Local > CONNECT SALES
```

To establish another session, return to local mode by pressing **(BREAK)** or use your local switch character, and enter another **CONNECT** command with the name of the service you want for the new session. For example, to establish another session using the service **GRAPHICS**, enter the following:

```
Local > CONNECT GRAPHICS
```

Resuming Noncurrent Sessions from Local Mode

Each session has a unique session number. To look at your session numbers, enter the **SHOW SESSIONS** command.

```
Local > SHOW SESSIONS
```

You can return to any session from local mode. Enter **RESUME** and the number of the session. For example, to return to session number 2, enter the following:

```
Local > RESUME SESSION 2
```

The **BACKWARDS** and **FORWARDS** commands allow you to resume particular sessions without using the session number.

To return to the last session on the sessions list, enter the **BACKWARDS** command.

```
Local > BACKWARDS
```

To return to the second session on the sessions list, enter the **FORWARDS** command.

```
Local > FORWARDS
```

If you have only two sessions, the noncurrent one is resumed with the **BACKWARDS** or **FORWARDS** command.

Switching Sessions While in Service Mode

You can switch sessions while in service mode by using your BACKWARD switch or FORWARD switch character. "Specifying Terminal Characteristics" tells you how to specify these characteristics.

Disconnecting Noncurrent Sessions

To end a session that is not current, enter the DISCONNECT command and specify the word SESSION and its session number. For example, to disconnect session number 2, enter the following:

```
Local> DISCONNECT SESSION 2
```

To end all your sessions, enter the DISCONNECT ALL command.

```
Local> DISCONNECT ALL
```


ADDITIONAL FACILITIES

DECserver 100 Command Syntax

Command syntax is used in the remainder of this guide. The following conventions apply to syntax, along with the conventions found in the beginning of the guide:

- [] Square brackets indicate that the enclosed text is optional. If there is more than one option, you can choose one and only one of the options. Do not type the brackets when you enter the command.
- { } Braces indicate that you must choose one and only one of the enclosed options. Do not type the braces when you enter the command.

Command keywords can be abbreviated to the extent that they remain unique. Three characters will suffice for all keywords except **SERVER** and **AUTOCONNECT**, where a minimum of five are required for uniqueness. Note that the names of services or nodes cannot be abbreviated.

As an example, here is the full syntax for the **CONNECT** command.

Syntax:

```
CONNECT [SERVICE] [service-name]
```

The keyword **SERVICE** and the value *service-name* are both optional. However, the value *service-name* is only optional when you have previously specified a preferred service (see "Specifying Terminal Characteristics").

With a service called **PRODUCTION** the following variations of the **CONNECT** command are equivalent:

```
Local> CONNECT SERVICE PRODUCTION  
Local> CON SER PRODUCTION  
Local> C PRODUCTION
```

If you specify **PRODUCTION** as your preferred service, the following command is also equivalent to the above three commands:

```
Local> C
```

Remember to terminate a command by pressing **(RET)**.

Broadcasting a Message

The BROADCAST command allows you to send a one-line message of up to 80 characters to another terminal attached to the DECserver 100. Specify the number of the terminal that you are addressing. (The SHOW USERS command displays user names and terminal numbers of the DECserver 100 terminals.)

Syntax:

BROADCAST TERMINAL *terminal-number text*

If you want to use lowercase letters in the text of your message, enclose it in quotation marks ("").

Locking Your Terminal

The Terminal Server allows you to lock your terminal. Locking your terminal denies access to other people, allowing sessions to remain connected without a security risk while you leave the terminal unattended. Your terminal remains locked until you unlock it by entering your lock password.

When you enter a LOCK command, you are prompted for a lock password. Choose a lock password of up to 6 keyboard characters. Passwords do not appear on the screen when you enter them.

As an example, with the password SECRET the password prompts and responses are as follows:

```
Local> LOCK
Lock Password> SECRET
Verification> SECRET
```

After the password is verified, a server message with the terminal number and an **Unlock Password**> prompt are displayed. To unlock the terminal and return to local mode, enter the same password beside the prompt, as in the following example:

```
Local -019- Terminal 3 locked
Unlock Password> SECRET
```

Showing Information

The DECserver 100 keeps track of information about the network. You can display this information by using the SHOW commands, which are described below.

You can halt a display by pressing **BREAK** or your local switch character.

SHOW COUNTERS — displays counter information about the messages transmitted and received by the server. Counter information is used for diagnosing network problems. See your server manager for more detail.

Syntax:

SHOW COUNTERS

SHOW NODES — displays information about the service nodes on the network. For each node, it shows the node name, availability status of the node, and the system announcement of the node, as well as the total number of DECserver 100 terminals connected to the node.

Syntax:

SHOW NODES $\left[\begin{array}{l} \textit{node-name} \\ \text{ALL} \end{array} \right]$

SHOW NODES displays information about nodes that are connected, that are reachable but not now connected, or whose availability is unknown to the server.

SHOW NODES ALL displays information about currently unreachable nodes as well as those displayed by the previous command. Unreachable nodes have been inactive for at least 30 minutes or have notified the server that they cannot be reached now.

SHOW NODE *node-name* displays detailed information about the requested node, including counter data for the node.

SHOW SERVER — displays information about the DEC-server 100. This information includes the operational server characteristics and the permanent server characteristics (shown in parentheses).

Syntax:

SHOW SERVER

SHOW SERVICES — displays information about the services on the network.

Syntax:

SHOW SERVICES [*service-name*]
 [ALL]

SHOW SERVICES displays the service name, service status, and service announcement. Only services currently available to you are included.

SHOW SERVICES ALL displays the same information for each service as the previous command. Currently unavailable services are included as well as available services.

SHOW SERVICE *service-name* displays the title and status of the service. In addition, for each node supporting that service, it shows the node name, node status, service rating of the node (its capability to process new sessions), and the service announcement.

SHOW SESSIONS — displays the terminal number and user name for a terminal, followed by information about sessions active on the terminal.

Syntax:

```
SHOW SESSIONS [TERMINAL terminal-number]  
              [ALL]
```

SHOW SESSIONS displays the sessions of your terminal.

SHOW SESSIONS TERMINAL *terminal-number* displays sessions of the specified terminal.

SHOW SESSIONS ALL displays the sessions of each terminal, in numerical order.

SHOW TERMINAL — displays the operational and permanent (shown inside parentheses) characteristics of the terminal. The section of the guide entitled “Specifying Terminal Characteristics” describes terminal characteristics.

Syntax:

```
SHOW TERMINAL [terminal-number]  
              [ALL]
```

SHOW TERMINAL displays information about your own terminal.

SHOW TERMINAL *terminal-number* shows information about the specified terminal.

SHOW TERMINAL ALL displays the characteristics of all terminals on the DECserver 100 in sequential order.

SHOW USERS — displays information about each terminal user.

Syntax:

```
SHOW USERS
```

Testing Your Terminal

The TEST command directs the DECserver 100 to send a continuous stream of characters to your terminal screen. Pressing any key stops the display. Errors in these characters can help in diagnosing terminal problems.

TEST produces a continuous series of lines with 72 characters per line by default. However, it is possible to control the width and total number of lines sent with the TEST command.

Syntax:

```
TEST [WIDTH number] [COUNT number]
```

where

WIDTH *number* specifies the width of the stream of characters across your screen. The stream can be from 1 to 132 characters wide. The default is 72.

COUNT *number* specifies the total number of lines of characters that are output. The default is a continuous display.

For example:

```
Local> TEST WIDTH 80 COUNT 24
```

displays 24 lines of 80 characters per line.

SPECIFYING TERMINAL CHARACTERISTICS

Your terminal has operating characteristics that determine how it interacts with the server and the service nodes. You can specify the operating characteristics of your terminal to the server. Until you change an operating characteristic, its value is a default value. (The default is in bold print in the syntax presented below.)

There are two sets of operating characteristics: permanent and operational.

Permanent characteristics are stored by the server and are recalled when you log into the DECserver 100. To specify permanent characteristics, enter a **DEFINE TERMINAL** command. The **DEFINE TERMINAL** command does not take effect until you log out and log in again.

Operational characteristics are those that are actually in effect. (At login, operational and permanent characteristics are identical.) To specify operational characteristics, enter a **SET TERMINAL** command. The **SET TERMINAL** command takes effect immediately and remains in effect until you log out of the DECserver 100 or set the value of the characteristic again.

Syntax:

```
{DEFINE} [TERMINAL] characteristic[ characteristic]  
{SET}
```

It is possible to follow a single **SET TERMINAL** or **DEFINE TERMINAL** command with several characteristics. You must separate the entry for each characteristic by a space, a comma, or both. A maximum of 132 characters can be used on a command line before you press **(RET)**.

The terminal characteristics that you can specify to the server are discussed in the next four sections.

Switch Characters

You can specify three switch characters that move you between modes or between sessions. Each switch is represented by a keyboard character. Caution should be used when specifying a switch character. Because a switch character is intercepted by the server, it cannot have any other function in either local or service modes. An undefined control character is recommended for each switch character. A control character can be specified by pressing **(CTRL)** and holding it down while pressing a keyboard character.

To specify a switch character, replace the keyword *character* (below) with your chosen switch character.

BACKWARD [SWITCH] $\left. \begin{array}{l} \textit{character} \\ \text{NONE} \end{array} \right\}$

specifies whether there is a special character that moves you to the bottom session of your session list.

FORWARD [SWITCH] $\left. \begin{array}{l} \textit{character} \\ \text{NONE} \end{array} \right\}$

specifies whether there is a special character that moves you to the second session from the top of your sessions list.

LOCAL [SWITCH] $\left. \begin{array}{l} \textit{character} \\ \text{NONE} \end{array} \right\}$

specifies whether there is a special character that moves you from a session to local mode.

Note: The function of the **BREAK** key is not affected by the local switch character.

Preferred Service

You can specify one service as a preferred service to which you connect by default. To go to the preferred service from local mode, enter a **CONNECT** command without a service name, as in the following example:

```
Local > CONNECT
```

You can switch to local mode from a preferred service, as you can for any service, and you can connect to another service by entering the name of that service as part of your **CONNECT** command.

To go immediately to your preferred service when you log into the DECserver 100, enable the autoconnect feature. When enabled, autoconnect by-passes local mode upon login and tries to connect with the preferred service. Autoconnect keeps control until it completes the connection or until you switch to local mode by pressing the **BREAK** key or your local switch character.

PREFERRED [SERVICE] { *service-name* }
 { NONE }

specifies whether there is a preferred service to which you connect by default.

Use DEFINE TERMINAL with PREFERRED SERVICE, to have it take effect when you log into the DECserver 100.

AUTOCONNECT { ENABLED }
 { DISABLED }

specifies whether your terminal automatically connects to a preferred service (if you have one) when you log into the DECserver 100. Furthermore, whether or not you have a preferred service, if you enable autoconnect, your terminal automatically reconnects a service after an abnormal end of service. You can halt an autoconnect by pressing `BREAK` or your local switch character.

Use DEFINE TERMINAL with AUTOCONNECT, to have it take effect when you log into the DECserver 100.

Messages

Your terminal can receive messages from the server and its users. You can enable or disable characteristics controlling the reception of some types of messages.

BROADCAST { ENABLED }
 { DISABLED }

specifies whether your terminal receives messages sent from other terminals.

MESSAGE [CODES] { ENABLED }
 { DISABLED }

specifies whether or not a three-digit message code appears with server status and error messages.

VERIFICATION { ENABLED }
 { DISABLED }

specifies whether DECserver 100 announcements are displayed at your terminal when you connect or disconnect a service and when you switch sessions.

Terminal Identifiers

You can specify the type of your terminal and change your user name.

TYPE { ANSI
 { **HARDCOPY** }
 SOFTCOPY }

specifies that your terminal port corresponds to one of the following:

ANSI Video terminal with ANSI escape support (VT100, VT200, Digital Personal Computers). ANSI escape support affects the way in which information is displayed on your screen.

HARDCOPY Paper output terminal (LA36, LA120).

SOFTCOPY Video terminal without ANSI escape support (VT52).

The type to which your terminal itself is set must correspond to the operational characteristic specified to the server.

USERNAME "*username*"

specifies the user name for your terminal, allowing you to change your user name after logging into the DEC-server 100. Enclose the user name in quotation marks.

You can only use SET TERMINAL with USERNAME.

Transmission of Information

The following characteristics affect the transmission of information over the physical link between your terminal and the server.

CHARACTER [SIZE] { 7 }
 { 8 }

specifies the number of data bits in the characters exchanged between your terminal and the server. This value must agree with that of the terminal.

[INPUT] FLOW [CONTROL] { ENABLED }
[OUTPUT] { DISABLED }

specifies whether the DECserver 100 can control the transfer of data to or from the terminal by issuing transmission on (XON) and transmission off (XOFF) characters to start and stop the data flow.

If the optional keyword INPUT or OUTPUT is used, only the flow control in the specified direction is changed. If neither keyword is used, flow control is specified for both input and output. Input flow is from your terminal to the server; output flow is from the server to your terminal. See your server manager for more details on flow control.

LOSS [NOTIFICATION] { ENABLED }
{ DISABLED }

specifies whether a beep is sounded on your terminal when a character is typed in and lost due to an error or overrun.

PARITY { EVEN }
{ NONE }
{ ODD }

specifies the parity of the terminal port. This value must agree with that of the terminal itself.

[INPUT] SPEED *speed*
[OUTPUT]

specifies the terminal speed in bits per second. Choose one of the following speeds: 75, 110, 134, 150, 300, 600, 1200, 1800, 2000, 2400, 4800, 9600 (default), and 19200.

If the optional keyword INPUT or OUTPUT is used, only the speed in the specified direction is changed. If neither keyword is used, the speed is specified for both input and output. Input speed is the speed from your terminal to the server; output speed is the speed from the server to your terminal.

TERMINAL USER COMMAND SUMMARY

BACKWARDS

BROADCAST TERMINAL *terminal-number text*

CONNECT [SERVICE] [*service-name*]

DISCONNECT [SESSION *session-number*]
[ALL]

FORWARDS

HELP [TERMINAL]
[MORE]

LOCK

LOGOUT

RESUME [SESSION] [*session-number*]

SHOW COUNTERS

SHOW NODES [*node-name*]
[ALL]

SHOW SERVER

SHOW SERVICES [*service-name*]
[ALL]

SHOW SESSIONS [TERMINAL *terminal-number*]
[ALL]

SHOW TERMINAL [*terminal-number*]
[ALL]

SHOW USERS

TEST [TERMINAL] [WIDTH *number*] [COUNT *number*]

Default values of terminal characteristics are in bold print.

{ DEFINE **{** [TERMINAL] *characteristic* [*characteristic*]
SET

where characteristic is one of the following:

AUTOCONNECT **{** ENABLED **{**
{ DISABLED **{**

BACKWARD [SWITCH] **{** *character* **{**
{ NONE **{**

BROADCAST **{** ENABLED **{**
{ DISABLED **{**

CHARACTER [SIZE] **{** 7 **{**
{ 8 **{**

[INPUT] FLOW [CONTROL] **{** ENABLED **{**
[OUTPUT] **{** DISABLED **{**

FORWARD [SWITCH] **{** *character* **{**
{ NONE **{**

LOCAL [SWITCH] **{** *character* **{**
{ NONE **{**

LOSS [NOTIFICATION] **{** ENABLED **{**
{ DISABLED **{**

MESSAGE [CODES] **{** ENABLED **{**
{ DISABLED **{**

PARITY **{** EVEN **{**
{ NONE **{**
{ ODD **{**

PREFERRED [SERVICE] **{** *service-name* **{**
{ NONE **{**

[INPUT] SPEED *speed*
[OUTPUT]

TYPE **{** ANSI **{**
{ HARDCOPY **{**
{ SOFTCOPY **{**

USERNAME "*username*" (with SET only)

VERIFICATION **{** ENABLED **{**
{ DISABLED **{**

PREPARING FOR FILE TRANSFERS

If your terminal is a personal computer, you can transfer files to and from a service node. To avoid disruption of your transmission or interference with your data during file transfers, your terminal must have certain operational characteristics.

If you want to check the operational characteristics of your terminal before you begin file transfers, you can use the `SHOW TERMINAL` command. Operational values are those not in parentheses on the `SHOW TERMINAL` display.

The backward, forward, and local switch characters must have the value of `NONE`. You can change switch values to `NONE`, as shown below.

```
Local> SET BAC NONE FOR NONE LOC NONE
```

The broadcast, flow control, and loss notification characteristics must be `DISABLED`. Since the default value for all these characteristics is `ENABLED`, you may have to set one or more of them as shown below.

```
Local> SET BRO DIS FLO DIS LOS DIS ✕
```

Most file transfer procedures require that the character size be 8. This is the default value, and it is not likely to have been changed.

If you need to specify the character size, change both the character size specified on the server and the physical characteristics of your terminal itself. See your server manager for help.

When you are finished with file transfers, you can reset characteristics with the `SET TERMINAL` command; see "Specifying Terminal Characteristics". Alternatively, if you do not have sessions that you wish to maintain, you can log out of the DECserver 100 and log in again to let the server reestablish the permanent characteristics.

Installation Specific Information

Use this page to record useful information.

Server Manager:

Telephone:

Notes:



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Accuracy	1	2	3	4	5
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