

# Terminal Server

## Commands and Messages Reference

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This reference manual describes the usage and syntax of all terminal server commands and Terminal Server Configurator (TSC) commands. It also lists and describes the status and error messages issued by the server and by the TSC. This manual is intended for the server manager but is useful for terminal users who want detailed reference information.

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# Preface

The *Terminal Server Commands and Messages Reference* describes all server commands, keywords, and messages used by the and the DECserver 500 server (hereafter referred to as servers). It also includes Terminal Server Configurator (TSC) commands and messages that are used in conjunction with the DECserver 500 server.

Command use can differ somewhat among servers, as noted in the text. The appendixes in this manual include command summaries specific to each server.

## Intended Audience

This manual is intended for terminal server and TSC users who have some familiarity with the server (and the TSC, where applicable), and who are looking for strictly reference information on command syntax and message descriptions. Users of this manual should already have some concept of server management including the interrelationships among the server databases as described in the management guide for their server. Beginning users and nonprivileged users can find instruction and complete command information in their server's user's guide.

## Structure of This Manual

- |           |  |
|-----------|--|
| Chapter 1 | Introduces server command use including how to set user security levels, how to modify and display information in the permanent and operational databases, and how to access on-line help documentation.                     |
| Chapter 2 | Alphabetically lists and describes each server and TSC command, including its privilege level, its function, its syntax, a description of each parameter (including possible values and defaults), and an annotated example. |

Chapter 3	Lists all server and TSC status and error messages and briefly describes each.
Appendix A	Alphabetically lists all command keywords and indicates the minimum abbreviation for each.
Appendix B	Summarizes the complete command set (including characteristics) for the DECserver 200 server.
Appendix C	Summarizes the complete command set (including characteristics) for the DECserver 500 server.

### Associated Documents

Check the Preface of your server's management guide for a complete list of documents for that server. Most servers have the following documentation relating to the use of server commands:

- *User's Guide*  
Describes the user interface and general functions of the server. This guide provides complete information for using all nonprivileged server commands. It is intended for users of interactive terminals connected to server ports.
- *Terminal Server User's Reference Card*  
Describes and gives examples of the most frequently used nonprivileged server commands on a reference card. It is intended for users of interactive terminals connected to server ports.
- *Management Guide*  
Describes the initial and day-to-day management tasks required of the server manager, including detailed information on specifying port, server, and service characteristics in both the permanent and operational databases.
- *Commands Mini-Reference*  
Summarizes all privileged and nonprivileged commands and characteristics in a mini-reference.
- *On-Line Help*  
Provides on-line reference information about using server or TSC commands and keywords.



## Conventions Used in This Manual

Conventions are used throughout this manual to present information simply, clearly, and consistently. Familiarizing yourself with these conventions can help you use this manual effectively.


- In reference sections, differences between the servers are sometimes noted using the following codes:

DS200        Indicates the DECserver 200 server.


DS500        Indicates the DECserver 500 server.

- The RETURN key, which you must press to enter commands, is not shown in command examples.
- All numbers are decimal unless otherwise noted. All Ethernet addresses are given in hexadecimal notation.

The following graphic conventions are used in this manual:



<b>Convention</b>	<b>Meaning</b>
Special type	This special type in examples indicates system output or user input.
Red type	Red type in examples indicates user input.
<b>RET</b>	Press the RETURN key.
UPPERCASE	Uppercase letters in command lines indicate keywords that must be entered. You can enter them in either uppercase or lowercase. You can abbreviate command keywords to the first three characters or the minimum unique abbreviation.
<i>lowercase italics</i>	Lowercase italics in command syntax or examples indicate variables for which either the user or the system supplies a value.
[ ]	Square brackets in command lines indicate that the enclosed values are optional. (Do not type the brackets.)
{ }	Braces in command lines indicate that you must specify one (and only one) of the enclosed values. (Do not type the braces.)



<b>Convention</b>	<b>Meaning</b>
Vertical list of options	A vertical list of options not enclosed within braces or brackets indicates that you may specify any number of options (or none, if defaults apply).
<code>key</code>	Press the specified key.
<code>CTRLx</code>	Hold down the CONTROL key and then press the key specified by <i>x</i> .
<b>Bold</b>	In summaries of characteristics, bold type indicates default values.
/	Indicates related alternative commands or options. For example, SET/DEFINE PORT refers to the SET PORT and/or DEFINE PORT command(s).

The following syntax statement illustrates the graphic conventions used in this manual.

```
(SHOW MONITOR) NODES [node-name] [COUNTERS STATUS SUMMARY]
[ALL]
```

When issuing this command, you must include either **SHOW** or **MONITOR** and the keyword **NODES**. If you wish, you can specify a service node name or include the keyword **ALL**. You can also include one or none of the three choices in the last set of brackets. Where you omit options, the server uses default values.

Keywords can be abbreviated to the shortest form accepted by the server. For example, the following two commands are equivalent:

```
Local> SHOW NODE SALES COUNTERS
```

```
Local> SH NOD SALES CO
```

Remember to press the RETURN key to execute your command.

---

# Using Terminal Server and TSC Commands

This chapter briefly describes the basics of server usage including on-line help documentation, levels of user security, the effects of commands on the permanent and operational databases, defaults for characteristics, types of displays, naming conventions, password specification, and switch selection.

For more information about using the commands in this manual to manage your server, refer to your server's management guide. Nonprivileged user commands are described in detail in the user's guide for your server.

## 1.1 On-Line Help

All servers offer on-line help documentation of some kind. A common help format is described in this section. For server-specific information, consult your server's user's guide or type HELP in response to the local prompt (Local >).

On most servers, you can display brief descriptions for all server commands and characteristics available for the security level of your port (security levels are discussed in Section 1.2.1). Some servers also offer tutorial help information — that is, a brief introduction to using the server and its facilities.

If your server offers tutorial help information, you can access it by entering HELP in response to the user name prompt (Enter username >) or by entering HELP TUTORIAL in response to the local prompt.

```
Local>HELP TUTORIAL
```

The server responds with a series of screens of tutorial information. At the end of each screen, you can press the RETURN key to continue to the next screen or you can enter a question mark (?) (followed by RETURN on the DECserver 500 server) to start again with the first screen. Press **CTRLZ** at any time to exit from help. Whenever you enter tutorial help, the server begins with the first screen.

If your server offers on-line reference information for server commands, enter **HELP** at the prompt.

```
Local> HELP
```

On-line help is also available for the Terminal Server Configurator (TSC). Enter the **HELP** command at the TSC prompt.

```
TSC> HELP
```

The TSC on-line help works the same as the server on-line help. In both cases, on-line help responds with a list of command keywords for which information is available and prompts again.

Topic?

When you enter a command keyword from the list (for example, **DEFINE**), on-line help gives you a brief description of the function performed by the command keyword and lists associated subtopics. The help program then prompts for a subtopic. For example,

```
DEFINE Subtopic? PORT
```

In response to this entry, on-line help lists all **DEFINE PORT** options and prompts again for a subtopic. If you already know which option you want help for, you can skip these intermediate steps by requesting specific help information at the local (or TSC) prompt. For example, to access information about specifying flow control, you can enter this command:

```
Local> HELP DEFINE PORT FLOW CONTROL
```

or

```
TSC> HELP DEFINE PORT FLOW CONTROL
```

To redisplay the options that you can enter in response to a prompt for a topic or subtopic, enter a question mark (?) and, for DS500 only, press the RETURN key. To move to the previous help level prompt, press RETURN at any prompt. To exit from help, enter **CTRL/Z**.

## NOTE

Help information employs the graphic conventions [ ] and { }, as described in the Preface. Do NOT enter these graphic characters in your command lines.

## 1.2 User Security Levels

This manual describes the complete command set available to the server manager operating at a port set to privileged status (see Section 1.2.2). Other users can execute a subset of these commands, depending on the security level of the ports from which those users enter commands.

### 1.2.1 Security Levels of Server Ports

Three possible levels of security are available for server ports: privileged, nonprivileged, and secure. All ports are nonprivileged by default, but the server manager can change a port's security level to suit the needs of the expected user (see Section 1.2.2). The characteristics of each security level are summarized below.

- **Privileged status** — The user at a privileged port has access to the entire server command set, including commands that manage the server, its ports, and its services. Any user who knows the privileged password can set a port's status to privileged and access these commands (see Section 1.2.2). For security reasons, a server normally has only one privileged user — the server manager. A privileged user can execute all the commands described in Chapter 2 of this manual (except any commands that are not supported by the server product being used).
- **Nonprivileged status** — Nonprivileged status is the default for all interactive ports. Users at a nonprivileged port cannot access commands that change the state of the server or other ports, but they can use all commands required to connect to services from an interactive port. Nonprivileged users can also modify certain port characteristics and can display information about the server, its ports, and service nodes. All nonprivileged operations are described in detail in the user's guide for your server. Commands available to nonprivileged users are identified with codes NP or S in Chapter 2 of this manual.
- **Secure status** — Secure status restricts the commands that are available on a port to a subset of the nonprivileged commands. This subset includes those commands that are required to connect to services from that particular port. Secure users have access to only limited display information and cannot use the broadcast feature that is available to other nonprivileged users. All commands that you can enter from a secure port are identified with the code S in Chapter 2 of this manual.

## 1.2.2 Setting a Port's Security Level

The server sets all ports to nonprivileged status by default. To set a port to privileged status so that you can enter privileged server management commands, enter the `SET PRIVILEGED` command. The server then prompts for a password as follows:

```
Local> SET PRIVILEGED
Password>
```

You must enter the correct password to set the port to privileged status. The first time you set privileged status, use the default password `SYSTEM`. Then use the `SET SERVER PRIVILEGED PASSWORD` command to set a secret privileged password for your server (see the example under `SET PRIVILEGED` in Chapter 2). Thereafter, no user can set a port to privileged status without entering the password you defined (unless you reset the server characteristics to their defaults, as described in Section 1.3.1). You should also use the `DEFINE SERVER` command to set your password in the permanent database (described in Section 1.3) so that the password remains in effect through server initializations. (DECserver 500 server managers must run `TSC` to execute the `DEFINE SERVER` command.)

You can use the `SET` and `DEFINE SERVER PASSWORD LIMIT` commands to limit the number of times a user can attempt to enter the privileged password before the server logs out the port. Pressing `CTRL/Z` at the privileged password prompt causes the server to terminate the `SET PRIVILEGED` operation without logging out the port.

Once you have established your privileged status on a port, you can enter the full set of privileged server commands, including the option to change the security level of other ports. To set a port to secure status, specify the `SECURITY ENABLED` option with the `SET/DEFINE PORT` command (see Chapter 2 for details). To return a secure port to nonprivileged status, simply enter `SET/DEFINE PORT` with `SECURITY DISABLED`.

When you complete your privileged operations, return the port to nonprivileged status to prevent unauthorized access to the server. You can either log out of the server or use the `SET NOPRIVILEGED` command. If you temporarily leave a terminal, you can use the `LOCK` command to guard against unauthorized use. Leaving unlocked a port with privileged status allows another user to modify the privileged password, thereby locking you out of privileged status.

## 1.3 Databases

All servers have a permanent database and an operational database that define values for all port, server, and local service characteristics. Values set in the permanent database remain constant through server initializations, while settings in the operational database do not. Since the databases operate differently on the servers, you should read your server's management guide for complete details. Note that for the DECserver 500 product, the permanent database actually resides within the server image on the host system and is customized using TSC commands.

Using the commands described in this manual, you can change the port, server, and service characteristics in one or both databases to customize the operation of your server. You can also display these and other values stored in the databases (see Section 1.3.2).

You use different commands to perform similar operations in each database (see Table 1-1). Only privileged users can modify server and service characteristics. Nonprivileged and secure users can modify some port characteristics.

Table 1-1 lists related server and TSC commands according to the databases they affect. The table briefly describes the command functions and lists the entities that can be specified in each command. Not all servers support all entities and not all entities can be modified in both databases. Check the command summary for your server in this manual's appendixes to determine command usage on your server.

**Table 1-1: Commands Listed by Database**

<b>Permanent Database*</b>	<b>Operational Database</b>	<b>Entity</b>	<b>Command Function</b>
DEFINE	SET	DEVICE ** PORT SERVER SERVICE SESSION ***	Modifies entries for the entity in the database
PURGE	CLEAR	SERVICES	Deletes entries for locally defined services from the database
LIST	SHOW and MONITOR	DEVICES NODES *** PORTS QUEUE *** SERVER SERVICES SESSION *** USAGE ** USERS ***	Displays information from the database

\* These commands are TSC commands for DECserver 500 managers.

\*\* These entities can be specified in TSC commands only.

\*\*\* These entities can be specified in the operational database only (exception: TSC supports a LIST NODE and a LIST USERS command).

Values set in the permanent database remain constant through initializations, power losses, and logins. Whenever you initialize the server, the values stored in the permanent database are copied into the operational database.

You can customize your basic server configuration or a port's configuration by using the DEFINE command to change the defaults for any characteristic in the permanent database. Changes in characteristics take effect after the next server initialization, except changes to DECserver 200 port characteristics, which become effective the next time the affected port is logged in. (Consult your server's management guide for details.) Modifications to the permanent database remain in effect until they are changed again or unless you reset the server to its defaults (see Section 1.3.1).

At server initialization, the operational database is a copy of the values in the permanent database. You can then use SET commands to modify these values to suit your current operations. Changes to server characteristics and to service characteristics in the operational database take effect immediately and remain in effect until they are changed again or until the server is reinitialized. Changes to port characteristics in the operational database are effective until they are changed or until the port is logged out. On the DECserver 500 server, you can use the SAVE PORT command to save current port characteristics in the port's log-in database between logins (but not across initializations).

### 1.3.1 Resetting Database Characteristics to Defaults

You can reset all server, service, and port characteristics in the permanent database to their defaults. Such action is useful if you forget the log-in and privileged passwords that you established. However, Digital Equipment Corporation recommends that you execute software reset only when absolutely necessary. Consult your server's management guide for instructions on how to reset the software characteristics.

Following the reset procedure, the log-in password is once again ACCESS and the privileged password is SYSTEM. To maintain security, you should change these passwords immediately in both databases by using the SET/DEFINE SERVER command (see Chapter 2).

### 1.3.2 Displaying Information from the Databases

You can display information about the different entities from the permanent and operational databases. Several commands display information about the server, its users, ports, nodes, devices, services, sessions, queues, and usage:

LIST	Displays information from the permanent database.
SHOW	Displays information from the operational database, or displays a snapshot of the current status of the requested entity.
MONITOR	Provides a continuously updated screen display of information from the operational database or of the current status of the requested entity.

The privileged MONITOR commands produce displays that continuously update information. On the DECserver 500 server, if the display device supports ANSI escape sequences and you have issued a SET PORT TYPE ANSI command for the port, the changing information is updated in its fixed position on the screen. On terminals that do not support ANSI escape sequences, a new display is generated for each update. MONITOR displays in ANSI escape sequences regardless of the port TYPE setting (see SET/DEFINE PORT). You should not use MONITOR on terminals that do not support ANSI escape sequences. Digital recommends that you use MONITOR commands sparingly because the continuous displays require more server resources than other commands. On the DECserver 500 server, you can run only one MONITOR display at a time.

Press the BREAK key to immediately halt any display. Entering any character during a MONITOR display (or entering `CTRL/O` on the DECserver 500 server) terminates the monitor function after the current display is fully updated.

Depending on the entity specified in the command (see Table 1-1), you can specify that information be displayed for one, all, or a group of that entity. For example, you can display information for all ports, for one or more specific ports, or for all ports having the same access type. The options for each entity are defined in the individual command descriptions in Chapter 2.

You can also choose from up to four different types of screen display, depending on the entity. Some displays are not available to secure users. The display types are:

- |                        |  |
|------------------------|--|
| <b>CHARACTERISTICS</b> | Displays all characteristics that the user or server manager can change using SET or DEFINE commands.  |
| <b>COUNTERS</b>        | Displays counters that tally how many times certain events have occurred since the server manager set the counters to zero. You can evaluate counter statistics to assess the operation of the server. |
| <b>STATUS</b>          | Displays detailed information about the entity, including current, highest, and maximum values for some key fields, interrelationships of entities, additional counters, and more.                     |
| <b>SUMMARY</b>         | Displays a brief summary of information (usually one line) for each entry in a list of entities (for example, a list of services).   |

All displays are described in detail in the management guide for your server.

## 1.4 Naming Conventions

Some commands require you to enter a server, node, port, or service name. All of these names must be a string of 1 to 16 characters and cannot be abbreviated. Allowable characters are A to Z, 0 to 9, \$, - (hyphen), \_ (underscore), and . (period). The DECserver 200 server converts all lowercase letters to uppercase letters.

### CAUTION

DECnet node names (as opposed to LAT node names) must be 1 to 6 alphanumeric characters including at least one alphabetic character.

DECnet node names and server names must be unique on a local area network (LAN) and port names must be unique on a server. Digital recommends that you set the server name to match the DECnet node name for the server (see your server's management guide for details). Service names must be unique for each service on the LAN; however, one service may be offered by multiple service nodes.

Note that these naming conventions do not apply to user names or to server or service identification messages.

## 1.5 Conventions for Specifying Passwords

Unless Chapter 2 states otherwise, all passwords consist of 1 to 6 ASCII characters or 1 to 16 ASCII characters (DS500). When specifying passwords in server commands, you can either enclose the password in quotation marks and include it in the command line, or you can enter the command without the password and let the server prompt you for it. You can omit the password value and be prompted only under the following conditions:

- For DS200, the password characteristic is the only characteristic in the command line.
- For DS500, the password characteristic is the last characteristic in the command line.

When issuing TSC commands, you must specify the password in quotation marks on the command line; TSC does not prompt for omitted passwords (see Chapter 2 for details).

The server does not echo a password that is entered in response to a password prompt. When you specify a new password, the server displays a verification prompt and waits for you to reenter the password. If both entries match, the password is established and the local prompt is displayed. If they do not match, the server returns to the local prompt. Some examples of password specification follow:

```
Local> SET SERVER LOGIN PASSWORD "SECRET"  
Local>
```

```
Local> SET SERVER LOGIN PASSWORD  
Password> SECRET  
Verification> SECRTE  
Local -742- Password verification failed  
Local> SET SERVER LOGIN PASSWORD  
Password> SECRET  
Verification> SECRET  
Local>
```

Press **CTRLZ** at any time to interrupt password processing and return to the local prompt (the DECserver 500 server also responds to the BREAK key).

You can change the server characteristics LOGIN PASSWORD and PRIVILEGED PASSWORD, but you cannot clear them; you can change or clear the service characteristic PASSWORD and the server characteristic MAINTENANCE PASSWORD.

To clear a password, specify empty quotation marks (" ") in place of the password in the command line. Alternatively, on the DECserver 500 server, you can specify NONE (unquoted) in the command line to clear a password.

To clear MAINTENANCE PASSWORD, you can specify "0" in the command line or, for DS200 only, enter 0 in response to the password prompt. (For details, see the command descriptions in Chapter 2.)

## 1.6 Selecting Switch Characters

You can use the SET/DEFINE PORT command to set FORWARD, BACKWARD, and LOCAL switch characters to use when you want to switch between sessions or return to local mode. Use the following guidelines when specifying switch characters.

- Avoid characters that you use for other purposes such as those that you use to enter commands or text on the server or service nodes.
- Avoid characters that are used by many video terminals in their escape sequences such as ~, #, ?, ), [, or (.
- Avoid keyboard keys that generate multiple characters (such as arrow keys).

Recommended switch characters include the back apostrophe ( ` ) character and any control character that is not used by the server or by services to which the port connects.

---

## Command Descriptions

This chapter contains reference information for using the full set of server and Terminal Server Configurator (TSC) commands and options. TSC users should consult their server's software installation guide for information about invoking the TSC utility on their specific load host.

When differences between the servers are noted in this chapter, the following abbreviations are sometimes used:

- DS200 indicates the DECserver 200 server.
- DS500 indicates the DECserver 500 server.

The commands and keywords described in this chapter are summarized in the following appendixes:

- Appendix B — DECserver 200 Command Summary
- Appendix C — DECserver 500 Command Summary

## 2.1 Overview of Commands

Each of the commands described in this chapter is briefly identified in the following summary of server and TSC commands. See the individual command descriptions for details on syntax, keywords, privilege requirements, and server support.

- **BACKWARDS** — Resumes the session preceding your current session in the session list.
- **BROADCAST** — Sends a message to one or more server ports.
- **CLEAR SERVICES** — Deletes specified local services from the operational database.
- **CONNECT** — Connects your port to a service.
- **CONNECT PORT (DS200 only)** — Connects another server port to a service.
- **CRASH** — Shuts down the server, up-line dumps a copy of server memory, and reinitializes the server.
- **DEFINE commands** — Modify values for the specified entity (see Table 1-1) in the permanent database.
- **DISCONNECT** — Disconnects one or more sessions on your port.
- **DISCONNECT PORT (DS200 only)** — Disconnects a session on a dedicated port.
- **EXIT (TSC only)** — Exits you from TSC.
- **FORWARDS** — Resumes the session following your current session in the session list.
- **HELP** — Displays the server or TSC on-line documentation.
- **INITIALIZE** — Reloads the server software following an optional delay and/or diagnostic test.
- **INITIALIZE CANCEL** — Cancels a previous **INITIALIZE** command that specified a value for **DELAY**.
- **LIST commands** — Display information about the specified entity (see Table 1-1) from the permanent database.

- **LOCK** — Locks your terminal from unauthorized use while you are temporarily absent.
- **LOGOUT** — Logs out one or more ports from the server.
- **MONITOR commands** — Produce continuously updated displays about the specified entity (see Table 1-1) from the operational database.
- **PURGE SERVICES** — Deletes specified local services from the permanent database.
- **REMOVE QUEUE** — Removes entries from the server queue of queued connection requests for remote access to ports on the server.
- **RESUME** — Resumes either the current session or a specified session.
- **SAVE PORT (DS500 only)** — Retains the current operational port characteristics after logout.
- **SET commands** — Modify values for the specified entity (see Table 1-1) in the operational database.
- **SET PRIVILEGED** — Sets the port you are using to privileged status so that you can enter privileged commands.
- **SET NOPRIVILEGED** — Resets the port you are using to nonprivileged status so that nonprivileged users cannot enter privileged commands at that port.
- **SHOW commands** — Display information about the specified entity (see Table 1-1) from the operational database.
- **TEST LOOP** — Tests the physical connections between your server and another Ethernet node on the network.
- **TEST PORT** — Sends a test pattern to a port on the server (with or without optional loopback testing).
- **TEST SERVICE** — Tests communications between the server and a service node.
- **ZERO COUNTERS** — Resets the specified counters to zero.

## 2.2 Entering Commands

This section describes command-line editing features for entering server commands. TSC users should consult TSC documentation for a description of that utility's editing conventions.

You can enter server commands in either uppercase or lowercase characters (or a combination of both). Separate the words in a command line by one or more spaces. Special keys that can be used when entering commands are described below:

Key	Function
<code>DEL</code>	Deletes the last character entered in the current command line.
<code>CTRLU</code>	Deletes the entire current command line.
<code>CTRLZ</code>	Operates like <code>CTRLU</code> except when entered in response to a password prompt or password verification prompt. In that case it cancels the password processing, causing the server to return to local mode. Exception: <code>CTRLZ</code> does not unlock a locked terminal (see the LOCK command).
<code>CTRLR</code>	Retypes the current command line (helpful after using <code>DEL</code> on a hardcopy terminal).
<code>RET</code>	Executes the current command line.

Command lines can contain up to 132 characters (DS200) or up to 84 characters (DS500). You can continue a command line onto a second terminal display line, provided you do not press the RETURN key at the end of the first display line.

On most load hosts, when you enter TSC commands, you can press the up-arrow key to recall previously entered TSC commands.

There is no type-ahead facility in local mode.

You can interrupt current local-mode output by pressing the BREAK key or by entering your local switch character. (DECserver 500 users who have disabled the BREAK key can use `CTRLQ`.)

When a command executes (or fails to execute), you may get one of the status or error messages described in Chapter 3. If you make an error in a command line, TSC and the DECserver 200 server reject the entire command line; the DECserver 500 server processes the command line up to the error. If you get an error message, check the command syntax and reenter all or part of the command, as necessary. When a command has executed successfully, the server or TSC displays a prompt (Local> or TSC>).

## 2.3 Command Descriptions

The rest of this chapter lists and describes all server and TSC commands in alphabetical order. Each command description includes a short statement of the command function, the complete command syntax, a description of each parameter (including its possible values and defaults), and an example. You can abbreviate command keywords to the smallest number of characters that distinguishes the keyword to the server or to the TSC. (Appendix A lists all keywords with their minimum abbreviations.)

### NOTE

Not all servers support all commands and keywords described in this chapter. Commands and keywords that are not supported by all servers are flagged with an \* (see the description of codes in the following paragraph). For a summary of the exact commands and keywords supported by your server, refer to the appendixes in this manual or see the commands mini-reference for your server.

The command syntaxes in this chapter employ the graphic conventions outlined in the Preface. In addition, the header line for each command contains one or more of the following codes to delineate command use.

Code	Privilege or Restriction
S	Command is available to users at secure, nonprivileged, and privileged ports.
NP	Command is available to users at nonprivileged (nonsecure) and privileged ports only.
P	Command is available to users at privileged ports only.
T	Command is available only in TSC (for DECserver 500 managers only).
R	Full command usage is restricted for secure and/or nonprivileged users (see the <b>Restrictions</b> section in the command description for details).
*	Command is not supported by all servers. (Keywords that are not supported by all servers are followed by an * in the syntax statement or characteristics list.) Read the <b>Restrictions</b> section or the keyword descriptions for more details on flagged items.

For more information about commands in the S or the NP categories, see the user's guide for your server. For more information about privileged commands and options, consult the management guide for your server.

### 2.3.1 Definitions of Common Variables

The following variables frequently appear in the command descriptions in this chapter. They are described here to avoid repetition.

<i>group-list</i>	One or more decimal codes ranging in value from 0 to 255, each representing a group. Specify multiple codes by separating individual numbers with commas (DS200 also allows blanks as separators), by specifying a range of numbers (in ascending order) using a hyphen, or by using a combination of both. For example, the group list 1,3,5-8,14 specifies groups 1, 3, 5, 6, 7, 8, and 14.
<i>node-name</i>	The name of a LAT network node. See Section 1.4 for guidelines on specifying node names.
<i>password</i>	A string of 1 to 6 ASCII characters (DS200) or 1 to 16 ASCII characters (DS500). Section 1.5 provides details on password specification.
<i>port-list</i>	A list of one or more port numbers (see <i>port-number</i> below). You can specify multiple ports in several ways: you can specify individual port numbers from 1 to 8 (DS200) or from 1 to 128 (DS500) separated by commas (DS200 also allows blanks as separators), you can specify a range of port numbers (in ascending order) using a hyphen, or you can use a combination of both formats. For example, the port list 1,16-32,60,44 specifies ports 1, 16 through 32, 44, and 60.
<i>port-name</i>	A 1- to 16-character name of a server port. See Section 1.4 for guidelines on specifying port names.
<i>port-number</i>	The number of the port connector on the server hardware unit (range: 1 to 8 (DS200) or 0 to 128, depending on the number of line cards (DS500)).
<i>service-name</i>	A 1- to 16-character name assigned to a service on a server. See Section 1.4 for guidelines on specifying service names.



---

## **BACKWARDS**

**(S)**

Use this command to resume the session preceding your current session in the session list produced by the `SHOW SESSIONS` command. Your preceding session is the one with the next lower number to your current session. If your current session is 1, your preceding session is the one at the end of the `SHOW SESSIONS` display.

### **Restriction**

You cannot use `BACKWARDS` on a port that has the `MULTISESSIONS` characteristic set to `ENABLED` (see `SET/DEFINE PORT`).

### **Syntax**

`BACKWARDS`



---

# BROADCAST

(NP — R)

Use this command to send a message to other server ports.

Your message should reach the target port device unless one of the following conditions exists:

1. The port has the port characteristic BROADCAST set to DISABLED. (DS200 displays a warning message in this case.)
2. The port is locked.
3. A currently active session on the port is set to PASSALL or PASTHRU mode (see SET SESSION).
4. The port is logged out.
5. The port has a dedicated service.
6. The port is running a MONITOR display.

## Restriction

Only privileged users can specify ALL or a port list to transmit a message to multiple ports; nonprivileged users must specify a single target port.

## Syntax

```
BROADCAST {PORT port-list } { "message-text"  
          { ALL } } { message-text }
```

### where

PORT *port-list*

specifies one or more ports to receive your message. Nonprivileged DS500 users and all DS200 users can specify one target port only.

## BROADCAST

### ALL

is a privileged parameter specifying that the message is sent to all ports on the server.

### *message-text*

is the text of the message (maximum of 115 characters (DS200) or 72 characters (DS500), as space permits on the command line).

DS200 broadcasts the message in all uppercase letters unless you enclose it in quotation marks; you cannot embed quoted text within the message.

### Example

```
Local> BROADCAST PORT 7 "Lunch today?"
```

This command sends the string "Lunch today?" to port 7. On DS500, which does not recognize quotation marks as message delimiters, the quotation marks are included in the broadcasted message.

---

## CLEAR/PURGE SERVICES

(P)

Use the CLEAR SERVICES command to delete an entry for one or all local services from the operational database. Use the PURGE SERVICES command to do the same in the permanent database.

You get an error message if you enter the CLEAR SERVICES command under the following conditions:

- Sessions are established with the service.
- CONNECT requests are in the server queue for the service.
- The requested service does not exist.

### Restriction:

For DS500, PURGE is a TSC command.

### Syntax:

```
{CLEAR}SERVICES{service-name}  
{PURGE}          {LOCAL}
```

### where

*service-name*

Specifies the name of a service to be deleted.

LOCAL

Specifies that all locally defined services are deleted.

## CLEAR/PURGE SERVICES

### Example

```
Local> PURGE SERVICE LABWORK
```

or

```
TSC> PURGE SERVICE LABWORK
```

**This command clears all information for service LABWORK from the permanent database so that it is no longer a locally defined service.**

---

# CONNECT

## (S)

Use this command to establish a session with a service. You can make a connection in several ways:

- Specify only the service.
- Specify the service on a specific service node or on a specific service node and port. (DS500 users can connect to a specific port without specifying a service node.)
- Enter CONNECT with no parameters to connect to a previously defined preferred service (see the PREFERRED characteristic under SET/DEFINE PORT).

If your port has the MULTISESSIONS characteristic set to ENABLED (see SET/DEFINE PORT), you can use CONNECT to establish one service session per terminal session. For more information about connecting to one or more services, with or without session management, see the user's guide for your server.

If you attempt to connect to a password-protected service, you are prompted for a password. You must enter the password correctly before you can gain access to that service.

### Syntax

```
CONNECT [service-name [NODE node-name] [DESTINATION port-name]]
```

#### where

##### *service-name*

Specifies the service to which you want to connect (default: your preferred service). If the service is offered by multiple service nodes, the server connects you to the node with the highest service rating.

##### NODE *node-name*

Specifies a particular service node to which you want to connect (default: you are connected to the highest-rated node offering the service).

## DESTINATION *port-name*

specifies a particular port to which you want to connect (default: you are connected to the first available port offering the service). DS500 users that specify DESTINATION without specifying NODE are connected to the specified port on the local server node, provided it offers the service.

### Examples

```
Local> CONNECT  
Local> CONNECT SALES  
Local> CONNECT METDATA NODE DATASERVER DESTINATION PORT_6
```

The first command connects the port to its preferred service, provided one is defined. The second command connects the port to the service SALES. The last command connects the port to the service METDATA at port PORT\_\_6 on terminal server DATASERVER.

---

## CONNECT PORT

### (P) \*

Use this command to connect another server port to a service session. For example, use `CONNECT PORT` to connect a printer to a service. (Use the `CONNECT` command on the previous page to connect the port you are currently using to any service.) You can make a connection in several ways:

- Specify only the service.
- Specify the service on a specific service node or on a specific service node and port.
- Enter `CONNECT PORT` with no parameters to connect to the dedicated service previously defined for the target port (see `SET/DEFINE PORT DEDICATED`).

You cannot use this command to connect another port to a password-protected dedicated service. The target port must be set to `LOCAL` or `DYNAMIC` access and must have a dedicated service defined for the port. In addition, the port cannot have a session in progress.

### Restriction

DS500 does not support this command.

### Syntax

```
CONNECT PORT port-number [service-name [NODE node-name] [DEST port-name]]
```

#### where

##### *port-number*

Specifies the number of the port that you want to connect to a service.

##### *service-name*

Specifies the service to which you want to connect the port (default: the dedicated service). If the service is offered by multiple service nodes, the server connects the port to the node with the highest service rating.

## CONNECT PORT

### NODE *node-name*

specifies a particular service node to which you want to connect the port (default: the port is connected to the highest-rated node offering the service).

### DESTINATION *port-name*

specifies a particular (destination) port to which you want to connect the specified port (default: the destination port is connected to the first available port offering the service).

### Example

```
Local> CONNECT PORT 3 PRINT_SERVICE
```

This command connects port 3 to the first available port on the highest-rated node offering the service PRINT\_\_SERVICE.

---

## **CRASH**

**(P)**

Use this command when you have system problems and want to shut down the server and get an up-line dump. When this command is issued, users cannot access the server until the up-line dump completes and the server reinitializes.

### **Syntax**

CRASH

---

## DEFINE DEVICE (T)

Use this command to specify the line-card type of a device on the server. TSC uses this information to test the validity of user-specified port characteristics that relate to modem control (for example, DSRLOGOUT, DTRWAIT, and MODEM CONTROL) or to other line-card-specific features.

### Syntax

```
DEFINE DEVICE {device-name} TYPE {CXA16  
ALL          } {CXB16  
              } {CXY08  
              } {NONE }
```

### where

#### *device-name*

Specifies the line card that is being defined. The format is LC-*n*, where *n* is a value from 1 to 8.

#### ALL

Specifies that all line cards on the server are being defined by TYPE.

#### TYPE

Specifies the line-card type of the specified device(s).

#### CXA16

Specifies a CXA16 line card, which supports 16 DEC423 data-leads-only ports. CXA16 is the default line-card type.

#### CXB16

Specifies a CXB16 line card, which supports 16 RS-422-A data-leads-only ports.

#### CXY08

Specifies a CXY08 line card, which supports 8 RS-232-C ports with modem signal control or with data-leads-only.

## DEFINE DEVICE

NONE

Specifies that the running server accept any valid line card that is connected to the hardware unit in the specified device's slot. When TSC or the server checks the line-card type to test the validity of port characteristics being specified, it equates NONE with CXA16, regardless of what line card is actually connected to the hardware.

### Example

```
TSC> DEFINE DEVICE LC-7 TYPE CXY08
```

This command defines line card LC-7 as a modem-control line card.

---

**DEFINE PORT**

See SET/DEFINE PORT.

---

**DEFINE SERVER**

See SET/DEFINE SERVER.

---

**DEFINE SERVICE**

See SET/DEFINE SERVICE.

---

# DISCONNECT

## (S)

Use this command to terminate all sessions or a specific session. To terminate your current session, simply enter DISCONNECT.

### Syntax

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

#### where

**SESSION *session-number***

Specifies a particular session to be disconnected (default: your current session).

**ALL**

Specifies that all sessions associated with the port are disconnected.

### Examples

```
Local> DISCONNECT  
Local> DISCONNECT SESSION 1  
Local> DISCONNECT ALL
```

The first command disconnects the current session on the port. The second command disconnects session 1. The third command disconnects all sessions on the port.



---

## DISCONNECT PORT (P) \*

Use this command to terminate the session on another port with a dedicated service defined. To disconnect sessions of interactive users, use the LOGOUT PORT command.

### Restriction

DS500 does not support this command.

### Syntax

DISCONNECT PORT *port-number*

**where**

*port-number*

Specifies the port you want to disconnect.



### Example

```
Local> DISCONNECT PORT 3
```

This command disconnects the session on PORT 3.

---

## **EXIT**

**(T)**

Use this TSC command to exit from the TSC utility. You can also use **CTRL/Z** instead of EXIT.

### **Syntax**

EXIT

---

## **FORWARDS**

**(S)**

Use this command to resume the session following your current session in the session list produced by the SHOW SESSIONS command. The FORWARDS command connects you to the session with the next higher session number than your current session. If your current session has the highest session number, FORWARDS connects you to the session with the lowest session number.

### **Restriction**

You cannot use FORWARDS on a port that has the MULTISESSIONS characteristic set to ENABLED (see SET/DEFINE PORT).

### **Syntax**

FORWARDS

---

## HELP

### (S)

Use this command to display on-line tutorial documentation for the server or command reference help information for either the server or the TSC. Chapter 1 provides an overview of the help facility. For specific information about how the help facility operates on your server, see your user's guide.

Help displays differ for privileged, nonprivileged, and secure users. For example, if you enter HELP at a nonprivileged port, the resulting displays include only those commands and characteristics that can be specified by a nonprivileged user.

### Syntax

```
HELP [TUTORIAL  
      [topic [subtopic [subtopic]]]
```

#### where

#### TUTORIAL

Initiates a series of screens documenting the use of the server and its facilities.

#### *topic*

#### *subtopic*

Specifies a command keyword and possible options for which you want to access help information.

### Example

```
Local> HELP DEFINE PORT ACCESS
```

or

```
TSC> HELP DEFINE PORT ACCESS
```

This command initiates on-line help documentation for defining the port characteristic ACCESS in the permanent database.

---

# INITIALIZE

(P)

Use this command to reinitialize the server. By default, the server delays initialization for 1 minute after it processes this command. You can specify no delay, or you can delay initialization for a longer period of time in order to perform an orderly shutdown of normal operations. If desired, you can also execute a diagnostic test on the server.

The syntax of this command is server-specific.

## Syntax

For DS100/DS200:

```
INITIALIZE [SERVER]  DELAY minutes           [COUNT n]  
                    DISABLE  
                    DIAGNOSE { BRIEF }  
                               { FULL }  
                               { NORMAL }
```

For DS500:

```
INITIALIZE [SERVER]  DELAY minutes  
                    DIAGNOSE
```

## where

**DELAY** *minutes*

Specifies that the initialization procedure is delayed by the specified number of minutes (range: 0 to 1440; default: 1 minute).

**DIAGNOSE**

Specifies that a test is done on the server hardware. DS500 passes control of the server hardware to the diagnostic ROM program on the server (see the *DECserver 500 Problem Determination and Service Guide* for details). On DS200, you can specify the self-test you want to perform, as described below. If you omit DIAGNOSE on DS200, the server performs the standard self-test (NORMAL).

# INITIALIZE

## BRIEF

Performs internal self-test functions only.

## FULL

Performs an extended test that includes an in-depth memory test.

## NORMAL

Performs the standard self-test.

## DISABLE

Inhibits the `CONNECT` command and the `AUTOCONNECT` function after initialization. To reenable them, enter `INITIALIZE` again without `DISABLE`.

## COUNT *n*

Specifies that the test repeats *n* times (range: 1 to 32767; default: 1).

## LOOP

Specifies that the test runs indefinitely. You must interrupt the server power source to stop the test.

## Example

```
LocalI> INITIALIZE DELAY 5
```

This command specifies initialization of the server after a period of 5 minutes has elapsed.

---

## **INITIALIZE CANCEL**

**(P)**

Use this command to terminate a previous INITIALIZE DELAY command (provided the initialization process has not yet begun).

### **Syntax**

**INITIALIZE [SERVER] CANCEL**

---

**LIST DEVICES**

See SHOW/MONITOR/LIST DEVICES.

---

**LIST NODE**

See SHOW/MONITOR/LIST NODES.

---

**LIST PORTS**

See SHOW/MONITOR/LIST PORTS.

---

**LIST SERVER**

See SHOW/MONITOR/LIST SERVER.

---

**LIST SERVICES**

See SHOW/MONITOR/LIST SERVICES.

---

**LIST USERS**

See SHOW/MONITOR/LIST USERS.

---



---

## **LIST USAGE**

**(T)**

Use this command to display information about the permanent database including file name of the image, product type and version number, and the date, time, and DECnet node name of the load host on which the server image file was last customized. For a detailed description of the display, see the management guide for your server.

### **Syntax**

**LIST USAGE**

---

## LOCK

(S)

Use this command to prohibit unauthorized use of your terminal while you are temporarily absent.

The server responds to a LOCK command by prompting for a lock password (provided the server characteristic LOCK is ENABLED). The password is your choice of 1 to 6 characters (DS200) or 1 to 16 characters (DS500). After you enter the password, which is not displayed on your terminal, the server prompts you to enter it again for verification. If both password entries match, the server displays an unlock password prompt (Unlock Password>). Your terminal remains locked until you enter the password again, returning you to local mode. (For more information on specifying passwords, see Section 1.5).

### Example

```
Local> LOCK
Lock Password> FROGS          (not echoed)
Verification> FROGS          (not echoed)
Local -019- Port 6 locked
Unlock Password> FROGS       (not echoed)
Local>
```

If a nonprivileged user forgets the unlock password, a privileged user must log out the port before it can be logged in and used again.

---

## LOGOUT

### (S — R)

Use this command to log out a port on the server and to disconnect any sessions associated with the port.

On ports that have the MULTISESSIONS characteristic set to ENABLED (see SET/DEFINE PORT), LOGOUT logs you out of the current terminal session only and disconnects any associated service session. You must specify LOGOUT PORT to log out of the server. For more information about using LOGOUT on servers that support session management, see the user's guide for the server.

After you log out a port on DS200, the port characteristics in the operational database for that port are reset to the values defined in the permanent database. On DS500, port characteristics are reset to the values in the log-in database including values saved by the last SAVE PORT command (if any). See your server's management guide for details.

If a port is modem controlled, the LOGOUT command causes outgoing modem signals to be dropped.

### Restriction

Only privileged users can specify *port-list* or ALL (DS500 only) to log out port(s) other than the port where the command is entered.

### Syntax

```
LOGOUT [PORT {port-list
              ALL *}]
```

For session management:

```
LOGOUT [PORT]
```

### where

#### *port-list*

Is a privileged option specifying a particular port or ports to log out (default: your own port logs out when you do not enter a port list). DS200 users can specify only one port. If a DS500 user includes his or her own port in a port list, the server does not log out that port.

# LOGOUT

## ALL

Is a privileged option (DS500 only) that logs out all ports but port 0 and the port where the command is entered.

## LOGOUT PORT

Terminates session management and logs you out of the server when the MULTISESSIONS port characteristic is ENABLED.

## Examples

```
Local> LOGOUT  
Local> LOGOUT PORT 5
```

The first command logs out the port where the command is entered and disconnects all sessions at that port. The second command logs out port 5 and disconnects all its sessions.

---

<b>LOOP</b>	See TEST LOOP.
<hr/>	
<b>MONITOR DEVICES</b>	See SHOW/MONITOR/LIST DEVICES.
<hr/>	
<b>MONITOR NODES</b>	See SHOW/MONITOR/LIST NODES.
<hr/>	
<b>MONITOR PORTS</b>	See SHOW/MONITOR/LIST PORTS.
<hr/>	
<b>MONITOR QUEUE</b>	See SHOW/MONITOR QUEUE.
<hr/>	
<b>MONITOR SERVER</b>	See SHOW/MONITOR/LIST SERVER.
<hr/>	
<b>MONITOR SERVICES</b>	See SHOW/MONITOR/LIST SERVICES.
<hr/>	
<b>MONITOR SESSIONS</b>	See SHOW/MONITOR SESSIONS.
<hr/>	
<b>MONITOR USERS</b>	See SHOW/MONITOR/LIST USERS.
<hr/>	
<b>PURGE SERVICES</b>	See CLEAR/PURGE SERVICES.

---

## REMOVE QUEUE

(P)

Use this command to remove queue entries of queued connection requests for remote access to server ports.

When you remove an entry from the server queue, the server sends a message to the service node that requested the remote access. The message reports that the queued entry was deleted by a server user.

### Syntax

```
REMOVE QUEUE { ALL  
              ENTRY entry-number  
              NODE node-name  
              SERVICE service-name }
```

#### where

ALL

Specifies that all entries in the queue are removed from the queue.

ENTRY *entry-number*

Specifies a particular entry that is removed from the queue.

NODE *node-name*

Specifies that all entries initiated at the specified service node are removed from the queue.

SERVICE *service-name*

Specifies that all entries queued for the specified service are removed from the queue.

### Example

```
Local> REMOVE QUEUE ENTRY 2
```

This command removes entry 2 from the server queue.

---

## RESUME

(S)

Use this command in local mode to resume a session.

### Syntax

```
RESUME [SESSION session-number]
```

#### where

SESSION *session-number*

Specifies the session you want to resume. If you omit this parameter, the server resumes your current session.

You cannot specify a session number on a port that has the MULTISESSIONS characteristic set to ENABLED (see SET/DEFINE PORT). See your server's user's guide for more information on resuming sessions while using session management.

### Examples

```
Local> RESUME  
Local> RESUME SESSION 3
```

The first command resumes your current session. The second command resumes session 3 in your session list.

---

## SAVE PORT

(P) \*

Use this DS500 command to change a port's default log-in characteristics to the values currently set in the operational database (except the USERNAME characteristic, which cannot be saved). Thereafter, whenever the port is logged out or whenever a session is terminated on a remote access port, the operational database is reset to these new defaults. These values remain in effect until a new set of characteristics is saved for the port or until the server is reloaded. When the server is reloaded, the operational database is set to match the characteristics in the permanent database. (Use the TSC command DEFINE PORT to change port characteristics, including USERNAME, in the permanent database.) See the *DECserver 500 Management Guide* for a detailed description of the interrelationships between the databases.

### NOTE

All ports are saved as nonprivileged unlocked ports, regardless of the port's status when saved.

### Restriction

This command is valid for DS500 only.

### Syntax

```
SAVE PORT [ port-list ]  
          [ ALL ]
```

#### where

##### *port-list*

Saves the current characteristics for the specified port(s) only (default: the port you are using).

##### ALL

Saves the current characteristics for all ports except port 0.

## Example

```
Local> SAVE PORT 8
```

**This command saves the current characteristics for port 8 as that port's default characteristics in the log-in database.**

---

## SET/DEFINE PORT

### (S — R)

Use these commands to modify port characteristics.

The DEFINE PORT command modifies port characteristics in the permanent database. For DS200, these changes take effect the next time the port is logged in. For DS500, DEFINE is a TSC command; the changes you make take effect the next time you initialize or reload the server.

The SET PORT command modifies port characteristics in the operational database. Such changes take effect immediately but remain in effect only until port logout. For DS200, port characteristics revert to the values in the permanent database at the next login. For DS500, port characteristics revert to the values in the log-in database at the next login. However, a privileged DS500 user can issue the SAVE PORT command for any port to save that port's current operational port characteristics in the log-in database.

#### NOTE

Certain characteristics such as ACCESS, AUTOBAUD, or PASSWORD are not meaningful until the next port login. Therefore, you should use DEFINE commands or SAVE PORT to preserve these characteristics after logout.

#### Restrictions

1. For DS500, DEFINE is a TSC command.
2. For DS200, secure users can issue SET PORT commands but not DEFINE PORT commands. Privileged users and nonprivileged (nonsecure) users can issue both SET PORT and DEFINE PORT commands.
3. Only privileged users can specify port characteristics for ports other than the port being used (see ALL and *port-list*).
4. Secure users can specify only a few characteristics, and some characteristics are reserved for privileged users only. Not all servers support all characteristics. Such restrictions are indicated by codes in the characteristics summary following the command syntax.

## Syntax

On the servers:

```
(SET PORT) [PORT [port-list]] characteristic [characteristic(s)]
(DEFINE ) [ [ALL] ]
```

On the TSC:

```
DEFINE PORT {port-list} characteristic [characteristic(s)]
           {ALL }
```

The *characteristic* options are summarized below. The following codes flag special conditions:

- S Characteristic can be changed by users at secure ports.
- P Characteristic is reserved for users at privileged ports.
- \* Characteristic or keyword is not valid on all servers.

Defaults are shown in **BOLD** type. Read the characteristics descriptions that follow the summary for specific information or consult the management guide for your server.

## NOTE

For DS200, you cannot change any characteristics for the remote management port. For DS500, you can modify only some of the characteristics for port 0, and some defaults are different for that port. See the *DECserver 500 Management Guide* for details.

- P ACCESS { **LOCAL**  
REMOTE  
DYNAMIC  
NONE }
- P ALTERNATE [SPEED] { *speed* } \*  
                          { **NONE** }
- P AUTHORIZED [GROUPS] { *group-list* } [ENABLED]  
                          { ALL } [DISABLED]

## SET/DEFINE PORT

- P AUTOBAUD { **ENABLED** }  
{ **DISABLED** }
- AUTOCONNECT { **ENABLED** }  
{ **DISABLED** }
- S AUTOPROMPT { **ENABLED** }  
{ **DISABLED** }
- S BACKWARD [SWITCH] { *character* }  
{ **NONE** }
- BREAK { **LOCAL** }  
{ **REMOTE** }  
{ **DISABLED** }
- BROADCAST { **ENABLED** }  
{ **DISABLED** }
- CHARACTER [SIZE] { 7 }  
{ 8 }
- P DEDICATED { *service-name* } [ **NONE** ] [ **NONE** ] [ **NONE** ] [ *node-name* ] [ *port-name* ]  
{ **NONE** } [ **NONE** ] [ **NONE** ] [ **NONE** ] [ **NONE** ]
- P DIALUP { **ENABLED** }  
{ **DISABLED** }
- P DSRLOGOUT { **ENABLED** }  
{ **DISABLED** }
- P DTRWAIT { **ENABLED** }  
{ **DISABLED** }
- FLOW [CONTROL] { **CTS** }  
{ **DSR** }  
{ **XON** }  
{ **DISABLED** }
- { **INPUT** } FLOW [CONTROL] { **ENABLED** } \*  
{ **OUTPUT** } { **DISABLED** }
- S FORWARD [SWITCH] { *character* }  
{ **NONE** }
- GROUPS { *group-list* } [ **ENABLED** ] (Valid for SET PORT only)  
{ **ALL** } [ **DISABLED** ]
- P INACTIVITY [LOGOUT] { **ENABLED** }  
{ **DISABLED** }

## SET/DEFINE PORT

- P INTERRUPTS {**ENABLED** }  
{**DISABLED** }
- S LOCAL [SWITCH] {*character* }  
{**NONE** }
- LOSS [NOTIFICATION] {**ENABLED** }  
{**DISABLED** }
- MESSAGE [CODES] {**ENABLED** }  
{**DISABLED** }
- P MODEM [CONTROL] {**ENABLED** }  
{**DISABLED** }
- S MULTISESSIONS {**ENABLED** } \*  
{**DISABLED** }
- P NAME *port-name*
- PARITY {**NONE** }  
{**EVEN** }  
{**ODD** }  
{**MARK \*** }
- P PASSWORD {**ENABLED** }  
{**DISABLED** }
- PREFERRED {*service-name* } [NODE {*node-name*}] [DESTINATION {*port-name*}]  
{**NONE** } [ **NONE** ] [ **NONE** ]
- QUEUING {**ENABLED** } \*  
{**DISABLED** }
- P RING {**ENABLED** } \*  
{**DISABLED** }
- P SECURITY {**ENABLED** }  
{**DISABLED** }
- P SESSION LIMIT {*limit* }  
{**NONE** }
- [INPUT ] SPEED *speed*  
[OUTPUT ]
- S TYPE {**ANSI** }  
{**HARDCOPY** }  
{**SOFTCOPY** }
- USERNAME {*username* }  
{**NONE \*** }
- S VERIFICATION {**ENABLED** }  
{**DISABLED** }

## SET/DEFINE PORT

### **where**

#### *port-list*

Is a privileged parameter specifying one or more ports to which the defined characteristics apply. (You can specify only one port for DS200.) The default for server commands is your own port; TSC commands require that you specify one or more ports or ALL.

### ALL

Is a privileged parameter specifying that the defined characteristics apply to all ports except port 0 (where applicable).

### ACCESS

Is a privileged option that specifies the type of access allowed for the device using the port. Changes in a port's access become effective on port logout (see the note following the SET/DEFINE PORT command description above).

### LOCAL

Allows access to the server local-mode command set. This is the default.

### REMOTE

Allows access (1) to the port device (typically a line printer) by service node applications or (2) to a port device offered as a service.

### DYNAMIC

Allows either remote access or local access to the port.

### NONE

Allows no access to the port.

### ALTERNATE [SPEED]

Is a privileged option that specifies a secondary speed for a multispeed modem. NONE (default) clears a previously set alternate speed.

**NOTE:** ALTERNATE SPEED is not valid for DS500.

### AUTHORIZED [GROUPS]

Is a privileged option that allows you to authorize groups of service nodes to be available to the port. The default is group 0 ENABLED and groups 1–255 DISABLED. Specify ALL to enable or to disable all groups for the port. Use the *group-list* format described in Section 2.3.1 with ENABLED or DISABLED to add groups to or to remove groups from the existing list for the port. Specify *group-list* with neither keyword to replace the existing list with a new one.

### AUTOBAUD

Is a privileged option that specifies whether the server automatically detects the speed, parity, and character size of the port device on login and sets the server port characteristics to match (default: ENABLED). The autobaud function works only if the port device's CHARACTER SIZE and PARITY characteristics are set to 8 and NONE, or 7 and EVEN.

Disable AUTOBAUD for ports set to ACCESS REMOTE or ACCESS DYNAMIC. If you enable AUTOBAUD on ports having a preferred or dedicated service, you must press the RETURN key an extra time to connect to the service. Changes to this characteristic become effective on port logout (see the note following the SET/DEFINE PORT command description above).

### AUTOCONNECT

Specifies whether the server automatically connects the port to a dedicated or preferred service at port login, and reconnects the port upon connection failures (default: DISABLED). If you want to activate the autoconnect feature on the next port login, you must use DEFINE or SAVE PORT (see the note following the SET/DEFINE-PORT command description above).

### AUTOPROMPT

Specifies whether a log-in sequence is automatically initiated for the port when the port connects to a service (default: ENABLED).

### BACKWARD [SWITCH]

Specifies a switch character that allows you to resume the preceding session in your session list without returning to local mode. You can clear an existing switch by specifying NONE (default). NOTE: The BACKWARD switch does not work on a port that has the MULTISESSIONS characteristic set to ENABLED.

## SET/DEFINE PORT

### BREAK

Specifies how the BREAK key is handled during a session.

### LOCAL

Causes the server to interpret a BREAK signal as a local switch character and to return you to local mode. This is the default condition.

### REMOTE

Causes the server to ignore BREAK signals and to pass them to the connected service.

### DISABLED

Causes BREAK signals to be ignored. When BREAK is set to DISABLED, DS200 recognizes BREAK signals once you return to local mode, but DS500 does not.

### BROADCAST

Specifies whether the port receives messages sent from other ports (default: ENABLED).

### CHARACTER [SIZE]

Specifies the number of bits in data characters exchanged between the port and the server (values: 7 or 8 (default)). NOTE: You cannot modify CHARACTER SIZE for a port that is currently in the autobaud process.

### DEDICATED

Is a privileged option that specifies a service to which a local access port is permanently assigned (default: no dedicated service). Entering NONE as the value for *service-name*, NODE, or DESTINATION cancels any previous value entered for that field.

Changes to this characteristic become effective on the next port login (see the note following the SET/DEFINE PORT command description above). For DS200, you must enable the AUTOCONNECT port characteristic when you specify a dedicated service; the port is then automatically connected to the dedicated service at port login.

DS200 users cannot specify DEDICATED with SET PORT. On DS500, you can specify DEDICATED with SET PORT provided the target port is not currently logged in. You cannot enable MULTISESSIONS when you have a dedicated service.

### DIALUP

Is a privileged option that specifies to the service node that the port is considered attached to a dial-up line (default: DISABLED).

### DSRLOGOUT

Is a privileged option that specifies whether the server should log out a modem-controlled port (RS-232-C) whose attached device powers down (default: DISABLED). You can enable DSRLOGOUT only if the port hardware supports modem control signals. If you enable DSRLOGOUT, you must disable MODEM CONTROL.

### DTRWAIT

Is a privileged option that specifies whether the server asserts DTR and RTS signals when a modem-controlled port (RS-232-C) is inactive. DISABLED (the default) causes the server to assert DTR/RTS signals when it is idle; ENABLED causes it to delay asserting DTR/RTS signals until it detects a ring signal from a modem or until a remote connection is made to the port.

Normally, you should specify ENABLED for remote access ports. You cannot enable DTRWAIT if the port does not support modem control signals. Changes to this characteristic become effective on port logout (see the note following the SET/DEFINE PORT command description above).

### FLOW [CONTROL]

Specifies the type of flow control utilized by the server to control data transfer to and from the port.

#### CTS

Specifies Request To Send/Clear To Send (RTS/CTS) modem signal flow control (valid for modem-controlled ports only).

#### DSR

Specifies Data Terminal Ready/Data Set Ready (DTR/DSR) modem signal flow control (valid for modem-controlled ports only).

#### XON

Specifies Transmit On/Transmit Off (XON/XOFF) flow control. XON is the default flow control.

## SET/DEFINE PORT

### DISABLED

Specifies no flow control.

### INPUT/OUTPUT FLOW CONTROL

Specifies flow control direction (default: flow control is enabled in both directions).

NOTE: INPUT/OUTPUT FLOW CONTROL is not valid for DS500.

### FORWARD [SWITCH]

Specifies a switch character that allows you to resume the next session in your session list without returning to local mode. You can clear an existing switch by specifying NONE (default). NOTE: The FORWARD switch does not work on a port that has the MULTISESSIONS characteristic set to ENABLED.

### GROUPS

Specifies which of the groups authorized for the port (see AUTHORIZED GROUPS) are currently enabled on the port (that is, your current groups). Use GROUPS to select the nodes and services you want to display for the port.

When you log in to a port, all authorized groups are enabled for the port; therefore, if port characteristics are reset to their defaults, the default for GROUPS matches the default for AUTHORIZED GROUPS (that is, group 0 ENABLED and groups 1–255 DISABLED).

Use the *group-list* format described in Section 2.3.1 with ENABLED or with DISABLED to add groups or to remove groups (within the authorized list). Specify *group-list* with neither keyword to replace the existing list with a new list. Specify ALL to enable or to disable all authorized groups.

You can specify GROUPS with SET PORT only. On DS500, you can use SAVE PORT to preserve port groups between logins.

### INACTIVITY [LOGOUT]

Is a privileged option that determines whether the server automatically logs out a port currently in local access after a period of inactivity (default: DISABLED). Use the server characteristic INACTIVITY TIMER to specify the time-out period.

### INTERRUPTS

Is a privileged option that specifies whether a local user can use the **BREAK** key to disconnect a remote session at an **ACCESS DYNAMIC** port to log in to the server (default: **DISABLED**).

### LOCAL [SWITCH]

Specifies a switch character that you can use to reenter local mode from service mode. You can clear an existing switch by specifying **NONE** (default).

### LOSS [NOTIFICATION]

Specifies whether the user is alerted with a beep when a typed character is lost due to data error or overrun (default: **ENABLED**).

### MESSAGE [CODES]

Specifies whether message codes appear with status and error messages (default: **ENABLED**).

### MODEM [CONTROL]

Is a privileged option that specifies whether the server manipulates modem control signals. Specify **DISABLED** (default) for ports connected to devices that do not support modem interactions. If a port is connected to a modem or host system, set **MODEM CONTROL** to **ENABLED**. Changes to this characteristic become effective on port logout (see the note following the **SET/DEFINE PORT** command description above).

### MULTISESSIONS

Specifies whether session management is enabled for the port (default: **DISABLED**). The port device must be a terminal that supports session management, and the port cannot have a dedicated service (see **DEDICATED**). When you disable **MULTISESSIONS** on an active port, all terminal sessions and their associated service sessions are immediately terminated.

**NOTE:** **MULTISESSIONS** is not valid for **DS500**.

### NAME

Is a privileged option that defines a port name (see Section 1.4) that is unique on the server. For **DS200** users, the default is **PORT\_\_n**, where *n* is the port number. For **DS500**, the default is **CONSOLE** for port 0 or **LC-n-n**, where *n-n* designates the line-card number and the port number within that line card.

## SET/DEFINE PORT

### PARITY

Specifies the port parity as ODD, EVEN, MARK DS200 only), or NONE (default). NOTE: You cannot modify PARITY for a port that is currently in the autobaud process.

### PASSWORD

Is a privileged option that specifies whether a password is required for a user to log in to the server (default: DISABLED). You specify the log-in password by setting the server characteristic LOGIN PASSWORD. Changes to this characteristic become effective on the next port login (see the note following the SET/DEFINE PORT command description above).

### PREFERRED

Specifies a preferred network service to which the server attempts to connect the port when you issue a CONNECT command for the port but do not specify a service name. The default is no preferred service.

If you specify a value for NODE and/or DESTINATION, the server does not attempt automatic failover. Entering NONE as the value for the preferred *service-name*, NODE, or DESTINATION cancels any previous value entered for that field.

If you want to automatically connect to a preferred service on the next port login, you must also enable AUTOCONNECT and disable AUTOBAUD using DEFINE PORT or SAVE PORT (see the note following the SET/DEFINE PORT command description above).

If your server supports session management, see your server's user's guide for details about using session management when a preferred service is defined.

### QUEUING

Specifies whether queuing of service connection requests is enabled for the port (default: DISABLED). If you disable QUEUING when requests are already queued, those requests remain in the queue until the service becomes available.

NOTE: QUEUING is not valid for DS500.

### RING

Is a privileged option that specifies whether the port is to assert a periodic RI (ring indicator) modem signal until it detects a DSR signal (default: DISABLED). You need the BC22R cable to enable this feature.

## SET/DEFINE PORT

NOTE: RING is not valid for DS500.

### SECURITY

Is a privileged option that specifies whether secure status on the port is ENABLED or DISABLED. The default status is nonprivileged, nonsecure.

### SESSION LIMIT

Is a privileged option that limits the number of permitted service sessions (range: 0 to 8; default: 4). Specifying NONE permits up to 8 sessions.

### SPEED

Specifies the port speed in bits per second. Permissible values include 50 (DS500 only), 75, 110, 134, 150, 300, 600, 1200, 1800, 2000, 2400, 4800, 7200 (DS500 only), 9600 (default), 19200, and 38400 (DS500 only). NOTE: You cannot modify SPEED for a port that is currently in the autobaud process.

You can change the speed in one direction by specifying INPUT SPEED (the speed from the terminal to the server) or OUTPUT SPEED (the speed from the server to the terminal).

### TYPE

Specifies the port device type as ANSI, HARDCOPY, or SOFTCOPY (default). This characteristic affects local-mode handling of the DELETE key (HARDCOPY displays deleted characters between backslashes), formatting of SHOW/LIST displays (ANSI clears the screen before each display), and formatting of DS500 MONITOR displays (ANSI causes MONITOR displays to be updated in place, rather than scrolled). NOTE: DS200 sends MONITOR displays in ANSI escape sequences, regardless of the specified TYPE.

### USERNAME

Specifies 1 to 16 (DS200) or 1 to 20 (DS500) ASCII characters (enclosed within quotation marks) as a user name to be associated with the port. For DS200, the default is no user name. For DS500, the default is the value specified with the port characteristic NAME (or its default).

If you specify a user name with DEFINE PORT, the user name prompt no longer appears, starting with the next port login (DS200) or server initialization (DS500). To regain the prompt for subsequent logins, enter another DEFINE PORT command and specify a quoted null string (" ") for the USERNAME characteristic. (DS500 also accepts NONE (unquoted) to clear a user name.) NOTE: You cannot use SAVE PORT to retain a user name between logins.

## Command

### VERIFICATION

Specifies whether the server sends informational messages when you connect, disconnect, or switch sessions (default: ENABLED). This command does not affect error and warning messages.

### Examples

```
Local> SET PORT 8 AUTHORIZED 1,2,6-19,25 ENABLED SESSION LIMIT 3  
Local> DEFINE PORT 5 AUTOCONNECT ENABLED PREFERRED DEVELOP
```

or

```
TSC> DEFINE PORT 5 AUTOCONNECT ENABLED PREFERRED DEVELOP
```

The parameters in the first example affect the way port 8 can be used in service mode; these settings remain in effect only until the port is logged out. In the second example, the preferred service DEVELOP is permanently assigned to port 5.

---

## SET PRIVILEGED/NOPRIVILEGED (P)

Use the SET PRIVILEGED command to enable the port you are using to perform privileged operations. When you enter the command, the server prompts you for the privileged password. The first time you use your server, enter the default password SYSTEM. Then use the SET SERVER PRIVILEGED PASSWORD command to immediately set your own password so that no unauthorized users can enter privileged commands. (You should also use the DEFINE SERVER command to set your password in the permanent database so that the password remains in effect through server initializations.) When you complete your privileged operations, use the SET NOPRIVILEGED command to set the port back to nonprivileged status to inhibit unauthorized usage.

If you set your port to privileged status when the port characteristic MULTISESSIONS is enabled, the privileged status applies to all of your terminal sessions.

### Syntax

```
SET {PRIVILEGED }  
    {NOPRIVILEGED }
```

### Example

```
Local> SET PRIVILEGED  
Password> SYSTEM      (not echoed)  
Local> SET SERVER PRIVILEGED PASSWORD  
Password> PLANET      (not echoed)  
Verification> PLANET  (not echoed)  
Local> SET NOPRIVILEGED
```

In this example, the user enters the default password SYSTEM at the password prompt. Having set the port to privileged status, the user changes the privileged password to PLANET and then returns the port to nonprivileged status. The next time someone attempts to enter privileged status on this port, he or she must enter the password PLANET.

---

# SET/DEFINE SERVER

## (P)

Use these commands to specify server characteristics.

The DEFINE SERVER command modifies the permanent database; however, these changes do not take effect until the next server initialization. The SET SERVER command immediately alters the operational database, but these changes are automatically reset to the permanently defined characteristics after the next initialization.

### Restrictions

1. For DS500, DEFINE is a TSC command.
2. You cannot change some server characteristics using a SET command while any sessions are active (or queued) on the server. Such characteristics are preceded by double asterisks (\*\* ) in the list below.

### Syntax

```
{SET } SERVER characteristic [characteristic(s)]  
{DEFINE }
```

The *characteristic* options are summarized below. Defaults are shown in **BOLD** type. \*\* precedes characteristics that you cannot change using a SET command while the server has active sessions. \* follows characteristics or keywords that are not valid on all servers. Read the characteristics descriptions that follow the summary for specific information or consult the management guide for your server.

```
ANNOUNCEMENTS(ENABLED)  
(DISABLED)
```

```
BACKUP HOSTS [host [,host [,host [,host [,host ] ] ] ] ] *
```

```
BROADCAST(ENABLED)  
(DISABLED)
```

## SET/DEFINE SERVER

- \*\* CIRCUIT [TIMER] *milliseconds*  
CONSOLE [PORT] { *port-number* } \*  
                          { NONE }
- DUMP { **ENABLED** } \*  
      { **DISABLED** }
- HEARTBEAT { **ENABLED** }  
           { **DISABLED** }
  
- \*\* IDENTIFICATION { "*id-string*" }  
                   { **NONE** \* }
- INACTIVITY [TIMER] *minutes*
  
- \*\* KEEPALIVE [TIMER] *seconds*  
LINE FREQUENCY { 50 } \*  
                  { 60 }
- LOCK { **ENABLED** }  
      { **DISABLED** }
- LOGIN PASSWORD [ "*password*" ]
- MAINTENANCE PASSWORD [ "*bex-password*" ]  
                          { **NONE** \* }
- MULTICAST [TIMER] *seconds*
  
- \*\* NAME *server-name*  
NODE [LIMIT] { *limit* }  
                  { NONE }
  
- \*\* NUMBER *n*  
PASSWORD LIMIT { *limit* }  
                  { NONE }
- PRIVILEGED PASSWORD [ "*password*" ]
- QUEUE [LIMIT] { *depth* }  
                  { NONE }
  
- \*\* RETRANSMIT [LIMIT] *limit*  
[SERVICE] GROUPS { *group-list* } [ **ENABLED** ]  
                          { ALL } [ **DISABLED** ]
- SESSION LIMIT { *limit* }  
                  { NONE }
- SOFTWARE *filename* \*

## SET/DEFINE SERVER

**where**

### ANNOUNCEMENTS

Specifies whether the server sends multicast messages over the Ethernet to announce the availability of local services (default: ENABLED). No announcements are sent if no local services are defined.

### BACKUP HOSTS

Specifies up to five backup load hosts for down-line loading with the INITIALIZE command and for up-line dumping, where *host* is a DECnet node name of an assigned load host for the server. If the primary load host fails to respond to an INITIALIZE command or a dump request, backup hosts are tried in the order you specify with BACKUP HOSTS. Setting this characteristic clears all previous backup hosts. To clear existing backup hosts and to have no backup hosts, specify BACKUP HOSTS with no host specifications. The default is no backup host.

NOTE: BACKUP HOSTS is valid in TSC DEFINE SERVER commands only.

### BROADCAST

Specifies whether the BROADCAST command is ENABLED (default) or DISABLED for users on port devices.

### CIRCUIT [TIMER]

Specifies the interval between messages sent from the server to service nodes (range: 30 for DS200, or 10 for DS500, up to 200 milliseconds; default: 80). You cannot SET this parameter while any sessions are active.

### CONSOLE [PORT]

Designates one server port as the console port (default: port 1).

NOTE: DS500 users cannot change the console port, which is always port 0.

### DUMP

Specifies whether up-line dumping of server memory is performed when a fatal bugcheck occurs (default: ENABLED).

NOTE: The up-line dump process is permanently enabled on DS500.

### HEARTBEAT

Specifies whether the server reports errors found by its Ethernet collision detection circuitry (default: DISABLED).

### IDENTIFICATION

Specifies a brief description of the server for server displays (default: no identification string).

*id-string* is a string of 1 to 40 ASCII characters. You must enclose the string in quotation marks (" "). To clear an identification string, enter the command with a quoted null string (" "). (DS500 also accepts NONE to clear an identification string.)

You cannot SET this parameter while any sessions are active.

### INACTIVITY [TIMER]

Determines the time-out period for ports having the port characteristic INACTIVITY LOGOUT set to ENABLED (range: 1 to 120 minutes; default: 30). The timer determines the length of time that a port in local access can be logged in with no sessions and (for DS200 only) with no local mode input or output.

### KEEPALIVE [TIMER]

Specifies the interval between messages for circuits on which no data is being transmitted (range: 10 to 180 seconds; default: 20). You cannot SET this parameter while any sessions are active.

### LINE FREQUENCY

Sets the line frequency on the server to match that of the power supply (60 Hz, which is the default, or 50 Hz).

NOTE: LINE FREQUENCY is valid in TSC DEFINE SERVER commands only.

### LOCK

Specifies whether interactive port users can use the LOCK command (default: ENABLED).

### LOGIN PASSWORD

Specifies a password that interactive users must enter when they log in to the server. (You must also set the port characteristic PASSWORD to ENABLED in order for the password prompt to appear at port login.)

## SET/DEFINE SERVER

You can omit the password value if LOGIN PASSWORD is the only characteristic (DS200) or the last characteristic (DS500) in the command line. The server then prompts for the password (see the example in Section 1.5).

The default password is ACCESS. This default is in effect when the server is delivered and when you reset the server characteristics to their default values.

### MAINTENANCE PASSWORD

Specifies a password that must be entered by remote console operators and by persons using the DECnet NCP TRIGGER or LOAD commands to down-line load the server. By default there is no password checking.

This password can be 1 to 16 hexadecimal characters (values 0 to 9 and A through F only). If you enter "0" or a quoted null string (" ") in the command line, the server does not check for a password. (DS500 also accepts NONE to disable password checking.)

DS200 users can omit the password value if MAINTENANCE PASSWORD is the only characteristic in the command line. The server then prompts for the password. Enter the password or 0 in response to the password prompt (see the example in Section 1.5).

For DS500, MAINTENANCE PASSWORD is valid in TSC DEFINE SERVER commands only. You must specify NONE or a password in the command line.

### MULTICAST [TIMER]

Specifies the time to elapse between transmissions of service announcements (range: 10 to 180 seconds; default: 30 for DS200, 60 for DS500).

### NAME

Specifies a 1- to 16-character name for the server. You cannot SET this parameter while any sessions are active.

For DS200, the default is LAT\_\_\_\_\_*nnnnnnnnnnnnnnnn* (where the *n*'s represent the twelve hexadecimal characters in the Ethernet address of the server).

For DS500, the default is the DECnet node name for the server, as specified in the load host DECnet node database.

## SET/DEFINE SERVER

Digital Equipment Corporation recommends that you set the server name to match the DECnet node name for the server (see your server's management guide for details).

### NODE [LIMIT]

Specifies the maximum number of service nodes that the server maintains in its node database (range: 1 to 1000 for DS200, or 1 to 200 for DS500; default: 100). For DS200, NONE implies no limit except the memory constraints of the server; on DS500, NONE is equivalent to 200. NOTE: On DS500, you cannot lower the node limit on a running server; that is, you cannot lower the node limit using a SET command.

### NUMBER

Specifies a number for the server (range: 0 to 32767 for DS200, or 0 to 255 for DS500; default: 0). You cannot SET this parameter while any sessions are active.

### PASSWORD LIMIT

Specifies the number of times a user can try to enter the correct password for any password-protected server operation (range: 0 to 250 for DS200, or 1 to 32 for DS500; default: 3). If you specify NONE, the attempted operation fails after the maximum allowable number of unsuccessful attempts has been reached (for example, 32 for DS500).

### PRIVILEGED PASSWORD

Specifies the password a user must enter following a SET PRIVILEGED command in order to use privileged server commands at the port.

You can omit the password value if PRIVILEGED PASSWORD is the only characteristic (DS200) or the last characteristic (DS500) in the command line. The server then prompts for the password (see the example in Section 1.5).

The default password is SYSTEM. This default is in effect when the server is delivered and when you reset the server characteristics to their default values.

### QUEUE [LIMIT]

Specifies the maximum number of queued connection requests for remote access to server ports. This number is called the depth of the queue. For DS200, the range is 0 to 100 (default: 24). DS500 has a range of 0 to 32 (default: 8). On both servers, a value of 0 disables the queue, and NONE is equivalent to the maximum number of allowable queued connection requests (for example, 100 on DS200).

## SET/DEFINE SERVER

### RETRANSMIT [LIMIT]

Specifies the number of times a LAT message is retransmitted to a service node when the server receives no acknowledgment messages (range: 4 to 120; default: 8). You cannot SET this parameter while any sessions are active.

### [SERVICE] GROUPS

Specifies which groups are assigned to all locally defined services and are enabled for the server when it functions as a service node (default: 0 ENABLED, 1–255 DISABLED). Use the *group-list* format described in Section 2.3.1 with ENABLED or with DISABLED to add groups to or to remove groups from the existing list. Specify *group-list* with neither keyword to replace the existing list with a new one. Specify ALL to enable or to disable all service groups.

### SESSION LIMIT

Specifies the maximum number of active sessions that the server allows at one time. For DS200 users, the range is 0 to 64 (default: 32). On DS500, the range is 0 to 512 (default: 256). NONE means that the limit is equivalent to the maximum number of sessions allowed on the server.

### SOFTWARE

Specifies the file name (1 to 9 characters) of the server software load image (default: PR0801ENG). For more details, refer to the software installation guide for your server.

NOTE: SOFTWARE is not valid for DS500.

## Examples

```
Local> DEFINE SERVER IDENTIFICATION "TECHSALES OFC4"
```

or

```
TSC> DEFINE SERVER IDENTIFICATION "TECHSALES OFC4"  
Local> SET SERVER CIRCUIT 60 KEEPALIVE 30
```

The first example defines an identification for the server. The second command reassigns values for the circuit timer and the keepalive timer. These values revert to the values in the permanent database when the server is reinitialized.

---

## SET/DEFINE SERVICE

(P)

Use this command to specify local services and their characteristics.

The DEFINE SERVICE command modifies the characteristics of local services in the permanent database. These changes take effect the next time the server is initialized. The SET SERVICE command changes the characteristics in the operational database. These changes are effective immediately but are reset to the permanently defined characteristics during the next initialization.

### Restriction

For DS500, DEFINE is a TSC command that requires specification of at least one characteristic.

### Syntax

```
{SET } SERVICE service-name [characteristic [characteristic(s)]]  
{DEFINE }
```

The *characteristic* options are summarized below. Defaults are shown in **BOLD** type. \* follows keywords that are not valid on all servers. Read the characteristics descriptions that follow the summary for specific information or consult the management guide for your server.

```
CONNECTIONS {ENABLED}  
             {DISABLED}
```

```
IDENTIFICATION {"id-string"}  
              {NONE *}
```

```
PASSWORD {"password"}  
        {NONE *}
```

```
PORTS {port-list} [ENABLED]  
      {ALL } [DISABLED]
```

```
QUEUE {ENABLED}  
      {DISABLED}
```

## SET/DEFINE SERVICE

### where

#### *service-name*

Specifies the name of the service you wish to define. You cannot specify LOC, LOCA, or LOCAL as service names. DS200 users can have a maximum of 10 local services defined at one time.

### CONNECTIONS

Specifies whether the server can accept new connections to the specified service (default: ENABLED). Current sessions are unaffected.

### IDENTIFICATION

Specifies a brief description of the service for the server to transmit in multicast messages to advertise the service (default: no description is sent).

*id-string* is a string of 1 to 40 ASCII characters. To clear an identification string, enter the command with a quoted null string (""). (DS500 also accepts NONE to clear an identification string.)

### PASSWORD

Specifies a service access password that a user must supply in order to establish a session with the service (default: no password is required).

You can omit the password value when PASSWORD is the only characteristic (DS200) or the last characteristic (DS500) in the command line. The server then prompts you for it (see the example in Section 1.5).

To clear an existing password, you must enter the command line with a quoted null string (""). (DS500 also accepts NONE to clear a password.) You cannot clear the password at the prompt.

### PORTS

Specifies ports to offer the service (default: ALL DISABLED). Specify *port-list* with ENABLED or with DISABLED to add ports to or to remove ports from the existing port list. Specify *port-list* with neither keyword to replace the existing list with a new one. Specify ALL to enable or to disable use of the service by all ports.

## SET/DEFINE SERVICE

### QUEUE

Specifies whether the server places requests for a local service into the server queue when the service is unavailable (default: ENABLED). Disabling queuing does not affect existing queue entries.

### Examples

```
Local> SET SERVICE DIALOUT PORTS 1,3,6-8 ENABLED QUEUE DISABLED  
Local> DEFINE SERVICE PAY IDENTIFICATION "Accounts Payable"
```

or

```
TSC> DEFINE SERVICE PAY IDENTIFICATION "Accounts Payable"
```

If the service DIALOUT does not exist, the first command creates this service on ports 1, 3, 6, 7, and 8 with queuing disabled. If DIALOUT does exist, this command adds these ports to the existing port list and disables queuing for the service.

The second command establishes the service PAY with identification "Accounts Payable" in the permanent database.

---

## SET SESSION

(S)

Use this command to specify the degree of data transparency for your current session, that is, the last session you entered in service mode.

### NOTE

If you SET SESSION to PASSALL or PASTHRU mode, messages broadcast to your port are ignored while you are using the affected session.

### Syntax

```
SET SESSION { INTERACTIVE  
             { PASTHRU  
             { PASSALL  
             }
```

### where

#### INTERACTIVE

Enables special server characters and messages at the port. This is the default.

#### PASTHRU

Disables all switch characters and server messages at the port while you are using the affected session. Use this option for ASCII file transfers.

#### PASSALL

Disables all switch characters, server messages, and XON/XOFF flow control while you are using the affected session. Use this option for binary file transfers.

### Example

```
Local> SET SESSION PASSALL
```

This command disables all switch characters, flow control characters, and server messages at the port while you are using the affected session.

---

## SHOW/MONITOR/LIST DEVICES

(S — R)\*

Use these commands to display information about one or all devices on the server. SHOW and MONITOR display information from the operational database (MONITOR provides a continuous display). The TSC LIST DEVICES command displays information from the permanent database. For a detailed description of the displays, see the management guide for your server.

### Restrictions

1. This command is valid for DS500 only.
2. LIST is a TSC command.
3. COUNTERS is not valid with LIST.
4. MONITOR is a privileged command.

### Syntax

```
{ SHOW  
  MONITOR  
  LIST } DEVICES [ device-name ] [ CHARACTERISTICS  
                                     COUNTERS  
                                     SUMMARY ]
```

#### where

##### *device-name*

Specifies a device for which information is to be displayed. Possible values for *device-name* are CONSOLE (for the CPU module), NETWORK (for the Ethernet Controller Module), or LC-*n* (for a line card), where *n* is a number from 1 to 8.

##### ALL

Displays information for all available devices on the server. ALL is the default display selection.

## SHOW/MONITOR/LIST DEVICES

### CHARACTERISTICS SUMMARY

Both produce the same display of configuration information about the specified device(s). This is the default display type.

### COUNTERS

Displays current counter values for the specified device(s).

### Examples

```
Local> SHOW DEVICE LC-6 COUNTERS  
TSC> LIST DEVICE NETWORK
```

The first command displays the counters for line card LC-6. The second command displays configuration information from the permanent database for the Ethernet device.




---

## SHOW/MONITOR/LIST NODES (S — R)

Use these commands to display information about service nodes known to the server. SHOW and MONITOR display information from the operational database (MONITOR provides a continuous display). The TSC LIST NODE command displays information about the server (as a service node) from the permanent database. For a detailed description of the displays, see the management guide for your server.

For nonprivileged users, the server displays only those nodes that have at least one of the groups currently selected on the port (as defined by the GROUPS port characteristic). Privileged users can specify ALL to display all nodes in the server database or a specified node regardless of whether the node(s) are included in the port's current group selection. Nodes have Reachable or Unreachable status, depending on whether they currently accept connections from server ports.

### Restrictions

- 
1. LIST NODE is valid only as a TSC command, which displays information for the server as a service node only.
  2. MONITOR is a privileged command.

### Syntax

```
{SHOW } NODES [node-name] [COUNTERS ]  
{MONITOR} [ALL] [STATUS ]  
[SUMMARY ]
```

LIST NODE (TSC only)

#### where

*node-name*

Specifies a service node for which information is displayed.

## SHOW/MONITOR/LIST NODES

### ALL

Displays information for all authorized service nodes currently selected on the port that have the status Reachable, Unknown, or Unreachable. If you do not specify ALL, the default display includes only currently selected nodes that are Reachable or Unknown.

### COUNTERS

Displays current counter values for the specified node(s).

### STATUS

Displays full information about the specified node(s), including name, address, identification string, enabled group codes, services, and more. This is the default display when you specify a node name. The TSC LIST NODE display is a modified version of the STATUS format.

### SUMMARY

Displays one-line summary information for the specified node(s), including node name, status, and identification string. This is the default display when you do not specify a node name.

## Examples

```
Local> SHOW NODES ALL  
Local> SHOW NODE SALES_1  
TSC> LIST NODE
```

The first command produces a one-line summary of information from the operational database about each service node that has the status Reachable, Unreachable, or Unknown. The second command generates a display of status information from the operational database for node SALES\_\_1. The third command displays information from the permanent database about the server as the local service node.

# SHOW/MONITOR/LIST PORTS

## (S — R)

Use these commands to display information about server ports. This information includes the characteristics that you assign with the SET/DEFINE PORT commands. The LIST command displays information from the permanent database; SHOW and MONITOR display information from the operational database (MONITOR provides a continuous display). For a detailed description of the displays, see the management guide for your server.

### Restrictions

1. MONITOR is a privileged command.
2. Users on secure ports cannot include port specifiers (*port-list*, ALL, and ACCESS) in these commands.
3. COUNTERS and STATUS are not valid with LIST PORTS.
4. For DS500, LIST is a TSC command.

### Syntax

$$\left. \begin{array}{l} \text{SHOW} \\ \text{MONITOR} \\ \text{LIST} \end{array} \right\} \text{ PORTS } \left[ \begin{array}{l} \textit{port-list} \\ \text{ALL} \\ \text{ACCESS} \end{array} \left\{ \begin{array}{l} \text{LOCAL} \\ \text{REMOTE} \\ \text{SYNAMIC} \\ \text{NONE} \end{array} \right\} \right] \left[ \begin{array}{l} \text{CHARACTERISTICS} \\ \text{COUNTERS} \\ \text{STATUS} \\ \text{SUMMARY} \end{array} \right]$$

### where

#### *port-list*

Specifies one or more ports for which information is displayed (default: the port you are using, except on TSC LIST commands, which require a port qualifier). (You can specify only one port on DS200.)

#### ALL

Specifies that information for all ports is displayed. (On DS500, ALL does not include port 0.)

# SHOW/MONITOR/LIST PORTS

## ACCESS

Specifies that information is displayed only for ports having ACCESS set to the value you choose (LOCAL, REMOTE, DYNAMIC, NONE). ACCESS is a port characteristic specified with the SET/DEFINE PORT command.

## CHARACTERISTICS

Displays characteristics that can be set for the specified port(s). This is the default when you specify no port, one port, or a port list.

## COUNTERS

Displays current counter values for the specified port(s).

## STATUS

Displays current port status for the specified port(s).

## SUMMARY

Displays one-line summary information for the specified port(s), including port number, accessibility, status, and local services. This is the default when you specify ALL or ACCESS.

## Examples

```
Local> SHOW PORT ACCESS REMOTE SUMMARY  
Local> LIST PORTS ALL
```

or

```
TSC> LIST PORTS ALL
```

The first command displays one line of information for each server port that has its ACCESS characteristic set to REMOTE. The second command displays characteristics from the permanent database for all ports on the server.

## SHOW/MONITOR QUEUE (NP — R)

Use these commands to display information about entries in the server queue. MONITOR provides a continuous display. For a detailed description of the displays, see the management guide for your server.

### Restriction

MONITOR is a privileged command.

### Syntax

```
{SHOW  
MONITOR} QUEUE [ ALL  
ENTRY entry-number *  
NODE node-name  
PORT port-number *  
SERVICE service-name ]
```

### where

#### ALL

Displays information for all queue entries on the server. ALL is the default display selection.

#### ENTRY *entry-number*

Displays information for the specified queue entry only.

NOTE: ENTRY is not valid for DS200.

#### NODE *node-name*

Displays information for all queue entries requested by the specified node.

#### PORT *port-number*

Displays information for all queue entries that could be served by the specified port.

NOTE: PORT is not valid for DS500.

## SHOW/MONITOR QUEUE

SERVICE *service-name*

Displays information for all queue entries for the specified service.

### Example

```
Local> SHOW QUEUE NODE NELSON
```

This command displays information for all queue entries from node NELSON.



---


## SHOW/MONITOR/LIST SERVER (NP — R)

Use these commands to display information about the server. The LIST command displays information from the permanent database; SHOW and MONITOR display information from the operational database (MONITOR provides a continuous display). For a detailed description of the displays, see the management guide for your server.

### Restrictions

1. MONITOR is a privileged command.
2. COUNTERS and STATUS are not valid with LIST.
3. For DS500, LIST is a TSC command.

### Syntax


$$\left. \begin{array}{l} \text{SHOW} \\ \text{MONITOR} \\ \text{LIST} \end{array} \right\} \text{SERVER} \left[ \begin{array}{l} \text{CHARACTERISTICS} \\ \text{COUNTERS} \\ \text{STATUS} \\ \text{SUMMARY} \end{array} \right]$$

### where

#### CHARACTERISTICS

Displays definable characteristics for the server, including a list of groups offered by the server (as specified by SET/DEFINE SERVER SERVICE GROUPS). This is the default display type.

#### COUNTERS

Displays current Ethernet datalink protocol and LAT protocol counter values for the server.

#### STATUS

Displays information about the status of the server.

# SHOW/MONITOR/LIST SERVER

## SUMMARY

Displays summary information for the server, including name, address, identification string, and a summary of all groups currently selected by all ports on the server.

## Examples

```
Local> SHOW SERVER COUNTERS  
Local> LIST SERVER
```

or

```
TSC> LIST SERVER
```

The first command displays the server counters from the operational database. The second command displays server characteristics from the permanent database.

# SHOW/MONITOR/LIST SERVICES

(S — R)

Use these commands to display information about services to which you can connect. The LIST command displays information about local services from the permanent server database. SHOW and MONITOR display information about services that are currently available in the operational database (MONITOR provides a continuous display). For a detailed description of the displays, see the management guide for your server.

## Restrictions

1. MONITOR is a privileged command.
2. For DS500, LIST is a TSC command.
3. STATUS is not valid for LIST SERVICES.
4. SUMMARY and ALL are not valid in the DS200 LIST SERVICES command.

## Syntax

```
{ SHOW  
  MONITOR  
  LIST } SERVICES [ service-name ] [ CHARACTERISTICS ]  
                [ LOCAL  
                ALL ] [ STATUS  
                SUMMARY ]
```

### where

#### *service-name*

Displays information for the specified service(s) only provided they are included in your current groups. If you do not specify a service name or LOCAL, the server displays all services that match your current groups.

#### LOCAL

Displays information for all services offered by the local server that match your current groups (whether available or unavailable). LOCAL is meaningful only in SHOW and MONITOR commands because LIST commands by definition display only local node services.

## SHOW/MONITOR/LIST SERVICES

### ALL

Displays information for all services in the database that match your current groups (whether available or unavailable). Privileged users see all services in the database. ALL is the default selection displayed on SHOW commands. However, if you do not specify ALL in the command, the server displays only the available services.

### CHARACTERISTICS

Displays definable characteristics for the specified local service(s), including name, identification string, ports, and more. For remote services, only the name and identification string are displayed. This is the default when you specify a service name in a TSC LIST command.

### STATUS

Displays information about the specified service(s), including node names and their status, rating, and identification string. This is the default when you specify a service name (except in a TSC LIST command).

### SUMMARY

Displays one-line summary information for the specified service(s), including name, status, and identification. This is the default when you do not specify a service name.

## Examples

```
Local> SHOW SERVICE DEVELOP  
Local> LIST SERVICES LOCAL
```

or

```
TSC> LIST SERVICES LOCAL
```

The first command displays status information about service DEVELOP, including all service nodes offering the service. The second command displays characteristics for all local services from the permanent database.

---

## SHOW/MONITOR SESSIONS (S — R)

Use these commands to display session information from the operational database for one or for all ports on the server. MONITOR provides a continuous display. For a detailed description of the displays, see the management guide for your server.

### Restrictions

1. MONITOR is a privileged command.
2. Secure users cannot specify PORT and ALL.

### Syntax

```
{SHOW }SESSIONS [PORT port-list ]  
{MONITOR} [ALL ]
```

#### where

PORT *port-list*

Displays sessions for the specified port(s) (default: displays sessions for your port). (You can specify only one port for the port list on DS200.)

ALL

Displays sessions for all ports on the server. (ALL is not accepted on secure ports.)

### Example

```
Local1> SHOW SESSIONS PORT 2
```

This command displays session information for port 2.

---

## SHOW/MONITOR/LIST USERS

(NP — R)

Use these commands to display information about port users. SHOW and MONITOR display information from the operational database (MONITOR provides a continuous display). The TSC LIST USERS command displays user names affiliated with ports that have permanent user names (that is, names assigned in a TSC DEFINE PORT USERNAME command). For a detailed description of the displays, see the management guide for your server.

### Restrictions

1. LIST USERS is valid as a TSC command only.
2. MONITOR is a privileged command.

### Syntax

{ SHOW  
MONITOR } USERS  
LIST \*

# TEST LOOP

(P)

Use this command to test the physical connections between your server and another Ethernet node on the network. For more information about loop node testing, see the management guide for your server.

## Syntax

```
[TEST] LOOP e-address1 COUNT n *  
          WIDTH n *  
          HELP { FULL } ASSISTANT e-address2  
              { RECEIVE }  
              { TRANSMIT }
```

### where

#### *e-address1*

Specifies the Ethernet address of the target node. An Ethernet address is a string of 12 hexadecimal digits in the form *nn-nn-nn-nn-nn-nn*.

#### COUNT *n*

Specifies the number of loops (range: 1 to 65535; default: 1).

NOTE: COUNT is not valid for DS200.

#### WIDTH *n*

Specifies the number of characters per loop (range: 0 to 1470; default: 0). When the width is 0, an empty message is sent, but no comparison testing is done.

NOTE: WIDTH is not valid for DS200.

#### HELP

Specifies the type of help desired from an assistant node:

#### FULL

Relays both outgoing and returning server transmissions.

## TEST LOOP

### RECEIVE

Relays transmissions returning to the server.

### TRANSMIT

Relays outgoing server transmissions.

### ASSISTANT *e-address2*

Specifies the Ethernet address of the assistant node.

### Example

```
Local> TEST LOOP 08-00-2B-02-24-43 HELP TRANSMIT ASSISTANT 08-00-2B-00-16-C3
```

This command specifies that node 08-00-2B-00-16-C3 is to relay outgoing server transmissions to target node 08-00-2B-02-24-43.

## TEST PORT (S — R)

Use this command to test a port on the server. This command causes the server to send a stream of characters to the specified port. Irregularities in the rotating ASCII pattern indicate possible problems with the terminal or with the connection of the port to the server. For more information about this test, see the management guide or user's guide for your server.

### Restriction

Only privileged users can specify the LOOPBACK parameter and can test a port other than their own (see the *port-number* parameter).

### Syntax

```
TEST [PORT [port-number [LOOPBACK{EXTERNAL}]]] [COUNT [n [NONE *]]] [WIDTH n]
```

### where

PORT *port-number*

Is a privileged parameter specifying the port to be tested (default: your own port). NOTE: If you are testing a port that is not logged in, you must set the port characteristic AUTOBAUD to DISABLED for that port; on DS500, you can test such a port with AUTOBAUD ENABLED if you also specify LOOPBACK.

LOOPBACK

Is a privileged parameter specifying that test data is looped back from an external port loopback connector or from the internal port hardware (default: no loopback).

COUNT *n*

Specifies the number of test lines to be sent (range: 1 to 65535; default: 23 lines). DS200 users can specify NONE to produce a continuous display, then press any key to terminate it. DS500 users press the BREAK key to terminate a display; they can use **CTRL/O** or the local switch character if the port characteristic BREAK is set to DISABLED.

## TEST PORT

### WIDTH *n*

Specifies the number of characters per line (range: 1 to 132 (DS200) or 1 to 80 (DS500); default: 80).

### Example

```
Local> TEST PORT 3 COUNT 90 WIDTH 60 LOOP INTERNAL
```

This command directs the server to loop internally ninety 60-character lines to port 3.

# TEST SERVICE

## (P)

Use this command to test end-to-end communications between the server and a service node. When the test is completed, the server displays a report of the test results. For more information about this test, see the management guide for your server.

### Restriction

For DS200, you can only enter this command at a port that has the MULTISESSIONS port characteristic disabled.

### Syntax

```
TEST SERVICE service-name   NODE node-name
                               DESTINATION port-name
                               COUNT { n
                                       {NONE}
                               WIDTH n
                               LOOPBACK {EXTERNAL
                                         {INTERNAL}
```

### where

*service-name*

Specifies the name of the service to be tested.

NODE *node-name*

Specifies the service node to be tested (default: the highest rated node that supports the specified service).

DESTINATION *port-name*

Specifies which port offering the service is to be tested.

COUNT *n*

Specifies the number of test buffers to be sent (default: 1). If you enter COUNT NONE, the test is continuous. You can terminate the test by pressing the BREAK key or by entering your local switch character. (DS500 users who have disabled the BREAK key can also use **CTRL/C**.)

## TEST SERVICE

### WIDTH *n*

Specifies the number of characters per buffer (range: 1 to 180; default: 80).

### LOOPBACK

Specifies that test data is looped back from the external target-port connector or from the internal target-port hardware. If you omit LOOPBACK, the test data is returned by the LAT protocol software on the target service node.

### Example

```
Local> TEST SERVICE SALES DESTINATION 6 WIDTH 132 LOOP EXTERNAL
```

This command directs the server to externally loop a one-buffer display of 132-character lines to the service SALES on port 6.

# ZERO COUNTERS

(P)

Use this command to reset counters for the server, nodes, ports, and devices (where applicable). If you enter this command with no parameters, only the server counters are zeroed.

ZERO COUNTERS does not zero the up-time counter in displays. This counter is reset only after an initialization or power up of the server.

## Syntax

```
ZERO [COUNTERS] [ ALL
                  DEVICE device-name *
                  NODE node-name
                  PORT port-list ]
```

### where

#### ALL

Specifies that all counters are set to zero.

#### DEVICE *device-name*

Specifies that counters are set to zero for the specified device only. Specify the device as LC-*n* (where *n* is a value from 1 to 8) if the device is a line card; specify CONSOLE to clear the counters for the CPU and console module; or specify NETWORK to clear the counters for the Ethernet device.

NOTE: DEVICE is not valid for DS200.

#### NODE *node-name*

Specifies that counters for data exchanges between the server and the specified service node be set to zero.

#### PORT *port-list*

Specifies that error counters and status counters for the specified port(s) are set to zero. (You can specify one port only on DS200.)

## ZERO COUNTERS

### Example

```
Local> ZERO COUNTERS NODE SALES_1
```

This command zeros the counters for data exchanges between the service node SALES\_\_1 and the server. The counters listed in the display for SHOW NODE SALES\_\_1 COUNTERS read '0' immediately after you execute this command.

---

## Status and Error Messages

This chapter lists all status and error messages issued by the servers and by the Terminal Server Configurator (TSC) and briefly explains each. For more information about troubleshooting, refer to the documentation for your server (usually the management guide or the problem determination and service guide, depending on the server documentation set).

### 3.1 Server Messages

The following sections describe the format and meaning of the server error and status messages.

#### NOTE

If you make an error in a command line, the DECserver 200 server rejects the entire command line; the DECserver 500 server processes the command line up to the error. You can use SHOW/LIST commands to see which characteristics were successfully updated.

#### 3.1.1 Format and Types of Messages

Server error and status messages have the following format:

Local [-*nnn*-] *status-or-error-message-text*

By default, message text is preceded by the 3-digit message code (*nnn*) that indicates the message type (as summarized in Table 3-1). However, you can disable message codes (for all but the 900 series of messages) at any port by using the SET/DEFINE PORT MESSAGE CODES DISABLED command (see Chapter 2).

There are seven classes of status and error messages. Each class has a separate set of message codes. Table 3-1 summarizes the types of messages and lists the message codes for each class.

**Table 3-1: Classes of Status and Error Messages**

<b>Message Codes</b>	<b>Types of Messages</b>
000-099	Informational messages — Normal responses to user commands
100-199	Warning messages — Warnings about unexpected events or unwanted effects
200-299	Connection error messages — Reasons for terminating or not establishing service connections
500-599	Server-specific informational messages — Normal responses to user commands
600-699	Server-specific warning messages — Warnings about unexpected events or unwanted effects
700-799	User error messages — Reasons why user commands are not honored
900-999	Server-specific console messages — Status and error messages issued from the server's read-only memory (ROM)

Messages with codes of 0 to 499 are common to all Digital terminal servers. Messages with codes of 500 to 999 can differ among server types. (Unused message codes within these ranges are reserved for future use.)

### 3.1.2 Message Text and Explanations

For ease of reference, server messages are listed in numerical order by message codes. Italic type is used for variable text within messages. For example, in an actual message, the variable *service-name* is replaced with the name of a particular service.

### 3.1.2.1 000—099 — Informational Messages

Local -010- Session *n* to *service-name* [on node *node-name*] established

This message follows the successful connection to a service (if the port characteristic VERIFICATION is ENABLED). The node name is displayed if it is different from the service name.

Local -011- Session *n* disconnected from *service-name*

This message follows the normal termination of a session, for example, a session terminated with the DISCONNECT command. This message appears only if the port characteristic VERIFICATION is ENABLED.

Local -012- *service-name* session *n* resumed

This message follows the resumption of a session (if the port characteristic VERIFICATION is ENABLED).

Local -013- Continuing attempts to connect to *service-name*

This message follows an unsuccessful CONNECT request or an abnormal termination when the port characteristic AUTOCONNECT is ENABLED. A preceding error message explains the unsuccessful connection or termination. The server reissues this message if the reason for the connection failure changes.

Local -014- All sessions disconnected

This message follows a DISCONNECT ALL command.

Local -016- Attempting failover to *service-name* on node *node-name*

This message follows a timeout to a service node when the server is attempting to connect to the requested service on another node.

Local -017- Queued at position *n* to *service-name* [on node *node-name*]

This message follows the queuing of a connection request when the requested service is already in use and the requesting port has the QUEUING characteristic ENABLED. The node name is displayed if it is different from the service name. This message is issued whenever the queue position changes.

Local -018- Queued access to *service-name* canceled

This message follows user cancellation of a queued connection request.

**Local -019- Port *n* locked**

This message follows successful execution of the LOCK command.

**Local -020- Logged out port *n***

This message follows a LOGOUT command or port logout caused by other conditions.

**Local -030- Session management activated**

This message follows the activation of session management.

**Local -031- Session management terminated**

This message follows the termination of session management when the user logs out of the port or sets MULTISESSIONS to DISABLED.

**Local -032- Session management for session *n* canceled**

This message follows the termination of session management for the specified session; session management remains active for other sessions.

### 3.1.2.2 100—199 — Warning Messages

#### Local -101- *n* other session(s) active

Either you issued a CONNECT request when you already have at least one active session, or you issued a DISCONNECT command when you have more than one active session.

#### Local -102- No other sessions active

You issued a FORWARDS command, BACKWARDS command, or switch character when only one session is active. The current session is successfully resumed.

#### Local -111- Port(s) with broadcast disabled not notified [Broadcast disabled at port *n*]

Your message was not broadcast to one or more ports because the BROADCAST characteristic is DISABLED on those ports. Some servers display the secondary line for each such port.

#### Local -120- WARNING – Access to service is not secure

Session status information cannot be passed between the server and the attached device because modem signals are not present. This is not a problem if the device is a nonsecure printer; however, if the port device is a non-LAT host system, users could access other users' data.

#### Local -198- WARNING – Server shutdown has been canceled

The server manager issued an INITIALIZE CANCEL command.

#### Local -199- WARNING – System shutdown in *n* minutes

This message is issued at regular intervals to all ports following an INITIALIZE command. The message displays the number of minutes remaining until the server is reinitialized. No additional notice follows the 1-minute message.

### 3.1.2.3 200—299 — Connection Error Messages

Local -201- Connection to *service-name* not established  
No response within timeout period

A CONNECT request or autoconnect attempt was unsuccessful. The service node did not respond within the time specified by the RETRANSMIT LIMIT server characteristic. The probable cause is that the service node is down. This condition causes the service node status to change to Unreachable. For more information, refer to the documentation on troubleshooting for your server.

Local -202- Connection to *service-name* not established  
Communication protocol error

A CONNECT request or autoconnect attempt failed because of a LAT protocol error in a message sent by a service node. For more information, refer to the documentation on troubleshooting for your server.

Local -203- Connection to *service-name* not established  
Service node retransmission limit exceeded

A CONNECT request or autoconnect attempt failed because the service node reached its retransmit limit.

Local -206- Connection to *service-name* terminated  
No response within timeout period

An existing connection terminated abnormally because the service node did not respond within the time specified by the RETRANSMIT LIMIT characteristic. The probable cause is that the service node is down. This condition causes the service node status to change to Unreachable. For more information, refer to the documentation on troubleshooting for your server.

Local -207- Connection to *service-name* terminated  
Communication protocol error

An existing connection terminated abnormally because of a LAT protocol error in a message sent by a service node. For more information, refer to the documentation on troubleshooting for your server.

Local -208- Connection to *service-name* terminated  
Service node retransmission limit exceeded

An existing connection to the specified service terminated abnormally because the service node reached its retransmit limit.

**Local -210- Connection not established, queued access timeout**

A port with QUEUING enabled failed on an attempt to connect to a service using queued access, probably because the service node does not support queuing.

**Local -2nn- Connection to *service-name* not established  
*rejection-reason-text***

A CONNECT request or autoconnect attempt failed because the service node rejected the CONNECT request. The rejection reason text explains why the node rejected the request.

---

<b>Code</b>	<b>Rejection Reason Text</b>
-211-	Protocol error: illegal circuit
-212-	Protocol error: credits
-213-	Protocol error: start/run
-214-	Protocol error: maximum < current
-215-	Logic error: duplicate queue entry
-216-	No other users on this virtual circuit
-217-	Insufficient service resources
-218-	Service user disconnect request
-219-	Service not available
-220-	Server user disconnect request
-221-	Insufficient node resources
-222-	System shutdown in progress
-223-	Node user disconnect
-224-	Circuit timer out of range
-225-	Invalid service class
-226-	Invalid message or slot received
-227-	Time limit expired
-228-	No progress being made
-229-	Service not offered on requested port
-230-	Object port name not known
-231-	Invalid password
-232-	Service in use
-233-	No such service
-234-	Service disabled
-235-	Requested entry not in queue
-236-	Immediate access rejected
-237-	Access denied
-238-	Corrupted solicit request
-239-	Invalid/unexpected reason code

For more information about dealing with messages 224 and 226, refer to the documentation on troubleshooting for your server.

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**Local -2nn-** Connection to *service-name* terminated *termination-reason-text*

An existing connection was terminated by the service node. The termination reason text explains why the node terminated the connection.

---

<b>Code</b>	<b>Termination Reason Text</b>
-251-	Protocol error: illegal circuit
-252-	Protocol error: credits
-253-	Protocol error: start/run
-254-	Protocol error: maximum < current
-255-	Logic error: duplicate queue entry
-256-	No other users on this virtual circuit
-257-	Insufficient service resources
-258-	Service user disconnect request
-259-	Service not available
-260-	Server user disconnect request
-261-	Insufficient node resources
-262-	System shutdown in progress
-263-	Node user disconnect
-264-	Circuit timer out of range
-265-	Invalid service class
-266-	Invalid message or slot received
-267-	Time limit expired
-268-	No progress being made
-269-	Service not offered on requested port
-270-	Object port name not known
-271-	Invalid password
-272-	Service in use
-273-	No such service
-274-	Service disabled
-275-	Requested entry not in queue
-276-	Immediate access rejected
-277-	Access denied
-278-	Corrupted solicit request
-279-	Invalid/unexpected reason code

For more information about dealing with messages 264 and 266, refer to the documentation on troubleshooting for your server.

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### 3.1.2.4 500—599 — Informational Messages

Local -501- From port *n*, *username message-text*

A broadcast message has been issued to your port from the specified port and user. The broadcast message text appears on the second line.

Local -511- Test complete *n* bytes written, *n* error(s) detected

A loopback test initiated by a TEST PORT command has completed. The message displays the number of bytes written/read during the test and the number of errors or data discrepancies detected. The number of errors is normally zero. If the number of errors is nonzero, refer to the documentation on troubleshooting for your server.

Local -512- Loop test successful

A TEST LOOP command was executed with no errors.

Local -513- Loop test failure

A TEST LOOP command failed to execute successfully. Either the response timed out, or data returned in the message is corrupt. For more information, refer to the documentation on troubleshooting for your server.

Local -514- Test complete *n* buffers sent, *n* buffer(s) in error

This message follows the execution of a TEST SERVICE command. It displays the number of data packets sent to the requested service and the number of buffers in which at least one byte was in error.

### **3.1.2.5 600—699 — Warning Messages**

**Local -601— Internal memory error in port parameters  
System defaults in effect**

**Parameters in the port's permanent database are corrupt, and factory-set defaults were used during port login. For more information, refer to the documentation on troubleshooting for your server.**

**Local -602— Internal memory error in server parameters  
System defaults in effect**

**Parameters in the permanent server database are corrupt, and factory-set defaults were used during port login. For more information, refer to the documentation on troubleshooting for your server.**

### 3.1.2.6 700—799 — User Error Messages

#### Local -701— Command syntax error

You entered a command incorrectly. Either you omitted a command keyword or a valid keyword was followed by invalid options.

#### Local -702— Keyword “*keyword*” not known or ambiguous

You entered a command incorrectly. The keyword specified by *keyword* either was not recognized by the server, was out of order, or did not have enough characters to make it unique.

#### Local -703— Value invalid or out of range, [“*n*”]

A value (specified by *n* on some servers) is out of range or is invalid under the current circumstances; for example, you cannot set a lower node limit on a running DECserver 500 server.

#### Local -704— Operation requires privilege

You entered a privileged command or option from a nonprivileged port.

#### Local -705— Entry [*entry-id*] not in queue

You specified a nonexistent queue entry in a REMOVE QUEUE or SHOW/MONITOR QUEUE command. Use SHOW QUEUE ALL to check the queue entries.

#### Local -706— Secure operation requires privilege

A command or an option that is not available on secure ports was entered at a port having the SECURITY characteristic ENABLED.

#### Local -707— Existing or queued connections prevent operation

You attempted a CLEAR SERVICE command when there were existing or queued connections to the service. Before executing this command, you must disable queuing and connections on the service and log out of the sessions, if necessary. Consult the management guide for your server.

#### Local -709— Service [*service-name*] not offered by node [*node-name*]

The service you specified is not offered by the node you specified in a CONNECT command. Use SHOW SERVICES and SHOW NODES to check service names and node names.

Local -710- Node [*node-name*] not known

You specified a node name that is either unreachable or unknown to the server. Use SHOW NODES to check node names.

Local -711- Service [*service-name*] not known

You specified a service name that is unknown to the server in a SHOW SERVICES command, a CONNECT command, or an autoconnect attempt. Either the service name is invalid or no nodes in the server database offer the service. For more information, refer to the documentation on troubleshooting for your server.

Local -712- No connection established

You entered a DISCONNECT, RESUME, FORWARDS, or BACKWARDS command when there was no established connection.

Local -713- Connection already established

You entered a CONNECT PORT *n* command for a port on which you already have an active session, or you issued a SET PORT MULTISESSIONS ENABLED command for a port that already has an active session.

Local -714- Preferred service has not been defined

You entered a CONNECT command without a service name when no preferred service is defined. Either SET or DEFINE the PREFERRED port characteristic, or reenter CONNECT with a service name.

Local -715- Service [*service-name*] not currently available

No node offering the service specified in a CONNECT command or autoconnect attempt is currently reachable. For more information, refer to the documentation on troubleshooting for your server.

Local -716- Access to service *service-name* denied

You attempted to connect to a service that you are not authorized to use; that is, your port has no group code in common with any service node that offers the service. For more information, refer to the documentation on troubleshooting for your server.

Local -717- Session [*n*] not established

You attempted to DISCONNECT or RESUME a specific session (identified by *n* on some servers) that does not exist.

#### Local -718- Session limit reached

You issued a CONNECT command for a port that already has the maximum number of active sessions allowed (as specified by the SESSION LIMIT port characteristic). You must disconnect one of the active sessions before you can establish a new one.

#### Local -719- Insufficient resources to complete operation

A command cannot be executed. Retry the command. For more information, refer to the documentation on troubleshooting for your server.

#### Local -721- No dedicated service on port *n*

You issued a CONNECT PORT *n* or a DISCONNECT PORT *n* command to a port that does not have a dedicated service defined. These commands apply only to ports having a dedicated service.

#### Local -722- Server disabled

Your CONNECT request cannot be executed because the server has been disabled by an INITIALIZE DISABLE command. Retry the command after the server has been initialized.

#### Local -724- Service node connection limit reached

You issued a CONNECT command or a TEST SERVICE command that, if executed, would have caused the maximum number of virtual circuits allowed on the server to be exceeded. The server can support only 16 (DS200) or 64 (DS500) virtual circuits at a time.

#### Local -725- Access to node *node-name* denied

Your CONNECT request specifies a node that is not offered as one of your authorized groups.

#### Local -726- Node *node-name* not reachable

Your CONNECT request specifies a node that is currently unreachable. Enter SHOW NODES to see which nodes have the status Reachable.

#### Local -728- Parameter cannot be modified with connection established/pending

Your SET SERVER command specifies characteristics that cannot be changed while connections exist at any port. Either wait until all port users end their sessions; or enter the DEFINE SERVER command to change the characteristics, and then issue an INITIALIZE command to make them operational.

**Local -729- Parameter cannot be modified by a SET command**

You tried to SET a characteristic that cannot be modified in the operational database. For DS200 use DEFINE to specify the characteristic, and then log out the port to effect the change. For DS500 use DEFINE to specify the characteristic, and then execute INITIALIZE to effect the change.

**Local -730- Temporary resource conflict – please try again**

An internal resource conflict temporarily prevents the execution of a command. Retry the command.

**Local -731- Port not configured for loopback test**

You entered a TEST PORT LOOPBACK command without a port number (you cannot loopback to your own port). You can also get this error message on the DECserver 200 server if the port you specified is under session management control or if the port is operating at different input and output speeds.

**Local -733- Port [n] already under test**

You issued a TEST PORT command for a port that is already being tested. Only one port test can be active at a time.

**Local -734- Invalid operation from a remote [management] console**

You attempted a SET/DEFINE PORT or a SHOW/LIST/MONITOR PORT command for the remote management port during a remote management session.

**Local -735- Service [service-name] does not support requested test**

The service or service node that you requested in a TEST SERVICE command does not support the specified test.

**Local -736- Parameter cannot be modified by a DEFINE command**

A characteristic that you specified in a DEFINE command cannot be stored in the permanent database. For example, you can specify the GROUPS characteristic only in a SET command; to establish groups in the permanent database, you must issue a DEFINE command with the AUTHORIZED GROUPS characteristic.

**Local -740- Illegal use of reserved keyword**

You cannot specify LOC, LOCA, or LOCAL as a service name.

**Local -741- Illegal password**

You specified an illegal password. The password must consist of 1 to 6 ASCII characters.

**Local -742- Password verification failed**

The verification password on a LOCK command or a SET PASSWORD command did not match the specified password. Reenter the entire command.

**Local -746- Monitor currently in use**

You issued a MONITOR command when another MONITOR command is still in effect. You must halt the first monitor display before the server can begin a second one.

**Local -747- No entries removed**

You issued a REMOVE QUEUE command for entries that do not exist.

**Local -748- No entries in local system queue**

You issued a REMOVE QUEUE command when there are no entries in the queue.

**Local -750- Another port has this name**

You specified a name that is already assigned to another port in a SET/DEFINE PORT NAME command.

**Local -751- Broadcast command disabled**

You issued a BROADCAST command on a server that has disabled the broadcast facility.

**Local -752- Service limit reached**

You attempted to SET or DEFINE more than 10 services on the server.

**Local -753- Lock command disabled**

You issued a LOCK command on a server that has disabled the lock facility.

**Local -756- Specified server name already in use**

You issued a SET SERVER NAME command specifying a name that already exists in the database.

**Local -761- Port hardware does not support modem signals**

You entered a command relating to modem control on a DEC423 port — a port that does not support modem signals.

**Local -764- Port(s) with permanent usernames defined not affected**

You tried to modify a characteristic that cannot be changed for a port that has a permanent user name.

**Local -770- Invalid operation with multisessions enabled**

You issued a local mode command that cannot be used within session management.

**Local -771- Invalid response from attached device**

An attempt by the server to initiate session management on a device has failed. Session management is terminated.

**Local -772- Queued access failed, error or no response from service**

A queued request was accepted by the service node, but access to the node failed before the connection was completed. Possible causes are as follows: (1) the service node crashed, (2) the server manager removed the queue entry from the local queue, (3) queuing is not enabled on the service or on the service node, (4) the service node queue limit has been exceeded, (5) there is a lack of memory space at the service node, (6) the requesting port and the service node do not share at least one group.

**Local -773- Keyword "*keyword*" not known [or ambiguous]**

You specified a keyword that the server does not recognize.

**Local -774- Keyword "*keyword*" ambiguous**


You have not included enough letters in the keyword to identify it to the server.

**Local -775- No sessions active at any port**

You issued a SHOW SESSIONS ALL command when there were no active sessions at any port.

**Local -776- Invalid port**

The specified port is out of range. Either you specified a number greater than 128, or the line card for the specified port is missing.



**Local -780- Parameter inappropriate for the console port**

You tried to set a characteristic for port 0 that does not make sense (for example: SET PORT 0 AUTOBAUD ENABLED).

**Local -781- Port(s) in autobaud state not changed**

You tried to change the port characteristic CHARACTER SIZE, SPEED, or PARITY for a port that was currently in the autobaud state. Wait and retry the command.

**Local -782- Invalid speed**


You tried to set a speed that the server does not support.

**Local -783- No services will be seen from port**

You issued a SET GROUPS command that disabled all current groups.

**Local -785- Name contains blanks or illegal characters**

You issued a command containing an illegal service name or an illegal node name (see Naming Conventions in Chapter 1).



**Local -786- Name must be from 1 to 16 characters**

Either you omitted a name or you specified a name longer than 16 characters.

**Local -788- Port has dedicated service status**

You issued a command that cannot be executed because the target port has a dedicated service.

**Local -789- Still disconnecting**

You attempted an operation that cannot be performed until a previous DISCONNECT command finishes processing. Wait and try again.

**Local -794- Type only one character or control sequence**

You tried to specify more than one character as a switch character. Reenter the command, using only one character or control sequence.

**Local -795- Logged in ports not changed**

You attempted to SET a port characteristic that cannot be changed while the target port is logged in. For example, you cannot set a port to a DEDICATED service unless the port is logged out. Reissue the command when the port is logged out.

**Local -796- One or more ports not in correct state for operation**

The command you issued did not take effect on one or more ports. Three possible reasons are as follows: (1) the port was in the autobaud or test state, (2) the port was in help mode, (3) the port was displaying local output.

**Local -798- No services are known to the local system**

You issued a SHOW SERVICES command when there were no services in the server database.

### 3.1.2.7 900–999 — Console Messages

Messages in this section appear under one of the following circumstances:

- When you enter the INITIALIZE command
- When you power up the server
- When a fatal error occurs

These messages appear only on the console port device; message codes are always enabled for them.

Local –901– Initializing DECserver *address* – ROM BL *n*, H/W Rev *x.x*

or

Local –901– Initializing DECserver *address* – ROM V*n.n.n*

This message occurs on server initialization approximately 10 seconds after power up or after execution of the INITIALIZE command. The message displays the following information:

- Ethernet address of the server (*address*)
- Base level (BL *n* for DS200) or version number (V*n.n.n* for DS500) of the internal ROM firmware
- Current hardware revision level (*x.x*, DS200 only)

Local –902– Waiting for image load

This message normally appears once after the server sends a request-for-load to load hosts during initialization. However, if the load fails or if no load host volunteers, this message is repeated.

Local –903– Loading from host *address*

A load host with the Ethernet address specified by *address* has volunteered to down-line load the server. This message normally occurs once for each initialization.

Local –904– Image load complete

A down-line load has completed successfully. Following this message, the server software takes control of the server.

#### Local -905- Waiting for image dump

The server requested a load host to perform an up-line dump following a server fatal bugcheck or crash. This message appears once for each up-line dump request, which can be repeated up to three times if a dump fails.

#### Local -906- Dumping to host *address*

This message occurs each time the server starts an up-line dump to a dump host.

#### Local -907- Image dump complete

The server successfully completed an up-line dump, and the self-test code is taking control of the server.

#### Local -908- Resetting console terminal

This message occurs after a fatal bugcheck. Immediately after the fatal error, internal ROM software uses the current console port characteristics for status messages. Following up-line dump, the console port characteristics are reset to those stored in the permanent database. This message indicates when the reset occurs.

#### Local -912- Load failure, timeout

A down-line load sequence was interrupted, and a load message was not received within 30 seconds (DS200) or 90 seconds (DS500). The load sequence is restarted. For more information, refer to the documentation on troubleshooting for your server.

#### Local -913- Fatal Bugcheck PC = *n*, SP = *n*, SR = *n*, MEM = *n*, CODE = *n*

A server crash occurred and was recorded in an orderly fashion. The message displays the PC, SP, and SR registers at the time of the crash. Certain errors, such as address errors, include additional information in the MEM field. CODE gives the reason for the crash. For more information, refer to the documentation on troubleshooting for your server.

#### Local -914- Dump failure, timeout

A time-out condition occurred during an up-line dump. A dump is retried up to three times, and the server displays this message each time the dump fails on a timeout.

**Local -915- Transmission failure after ten attempts**

A transmission attempt failed on ten successive retries. For more information, refer to the documentation on troubleshooting for your server.

**Local -916- Illegal load image, load aborted**

The server software being down-line loaded specifies illegal sections of server memory. Ask the system manager of the load host to reinstall the server software and to try initializing the server again. For more information, refer to the documentation on troubleshooting for your server.

**Local -920- Parameter checksum error on port *n***

**Local -921- Factory-set parameters applied to port *n***

These messages occur together for any port on which a checksum error was detected in the permanent characteristics. Digital's preset characteristics defined in Chapter 2 are applied to the port when it is logged in.

**Local -922- Port hardware error on port *n***

**Local -923- Port *n* has been disabled**

These messages occur together for any port on which the self-test detects a fatal hardware error. The port cannot be used.

**Local -924- Modem signal error on port *n***

**Local -925- Port *n* may be used with data leads only**

These messages occur together when the self-test diagnostic detects a modem control signal error on the specified port. The port can be used with data leads only, even if SET PORT MODEM is ENABLED.

**Local -930- Server parameters checksum error**

**Local -931- Factory-set server parameters applied**

These messages occur together when a checksum error is detected in the permanent server characteristics. Digital's preset characteristics defined in Chapter 2 are applied to the server at initialization.

**Local -932- Hardware revision level checksum error**

A checksum error was detected in the hardware revision level of the permanent characteristics.

Local -935- Service characteristics checksum error  
Local -936- Service has been disabled

These messages occur together for any service on which a checksum error is detected in the permanent characteristics. Information on the service is unavailable to the server.

Local -941- Transceiver loopback error  
Local -942- Image load not attempted  
Local -950- Troubleshooting procedures should be followed

These messages occur together when the self-test fails to loopback a signal to the Ethernet transceiver. Usually this means that the server is not properly connected to a transceiver, but it can also indicate a bad transceiver or a bad transceiver cable. Message 950 indicates that the error is not self-recoverable (see the documentation on troubleshooting for your server).

Local -943- Transceiver heartbeat error  
Local -944- Check transceiver type for heartbeat support

These messages occur together when the server HEARTBEAT characteristic is enabled and a self-test did not detect the heartbeat signal. If you are using an H4000 or DELNI, these messages could indicate a transceiver problem. If you are using a third-party transceiver or an 802.3 transceiver that does not support heartbeat, you can ignore this error.

Local -951- DECserver will retry operation in *n* minutes

This message occurs on load failure or with message 941 to indicate when the self-test or the load operation will be retried.

## 3.2 Terminal Server Configurator (TSC) Messages

The following sections describe the format and meaning of the Terminal Server Configurator (TSC) status and error messages.

### NOTE

If you make an error in a command line, TSC rejects the entire command line.

### 3.2.1 Format and Types of Messages

TSC status and error messages have the following format:

*%TSC-t-cccccc, status-or-error-message-text*

**where**

<i>t</i>	is a code indicating the message type:
E (Error)	An error in the command prevents its execution.
F (Fatal)	The command is valid, but an error occurred that precludes further TSC execution.
W (Warning)	The command executed, but other unexpected action was also taken (for example, a string that was too long was truncated).
I (Informational)	These messages accompany E, F, or W messages to provide further information, such as expected values for command fields.
<i>cccccc</i>	is a 6-character alphabetic code that abbreviates the message text.
<i>message-text</i>	is text that explains the error or status condition.

### 3.2.2 Message Text and Explanations

This section lists TSC error and status messages in the following order:

- Error messages
- Fatal messages
- Warning messages
- Informational messages

Within each category, messages are listed in alphabetical order by the 6-character message code. Italic type is used for variable text within messages. For example, in an actual message, the variable *keyword* is replaced by the specific keyword being described.

### 3.2.2.1 Error Messages

%TSC-E-BADCHR, *keyword* contains illegal character(s), “*x*”

You specified one or more illegal characters in a name, identification string, or password associated with the specified keyword. The first illegal character is displayed in quotation marks.

%TSC-E-BADVAL, Value of *keyword* invalid or out of range, “*value*”

The value displayed in quotation marks is invalid or out of range for the specified keyword.

%TSC-E-COMONE, Comments must start in column one

You must flag comment lines (usually in a command file) by including an exclamation point in column 1.

%TSC-E-INCOMP, Incomplete command line

You executed a command line that was missing a required keyword or value at the end.

%TSC-E-MISQUO, Trailing quote not found

You omitted the closing quotation mark (”) on a quoted string.

%TSC-E-NETERR, Network Management Listener error

TSC displays this message if NML fails in an attempt to process a DEFINE SERVER BACKUP HOSTS command or a LIST SERVER command (when backup hosts are already defined). Usually the host system generates its own error messages in addition to those provided by TSC.

%TSC-E-NFOUND, Requested help topic not found

TSC cannot find the requested help topic.

%TSC-E-NONEMP, *keyword* must be from *value* to *value* characters long

You entered a command without a required quoted string. Reenter the command, including a string within the range defined in the message.

%TSC-E-NONETL, Command cannot be executed, no network link

You do not have sufficient privileges to execute a DEFINE SERVER BACKUP HOSTS command.

%TSC-E-NOTAPP, Parameter *keyword* cannot be changed on selected port(s)

You attempted to define port characteristics that conflict with other defined characteristics. For example, you cannot change hardware parameters on the console port or enable modem control on a port having a device type that does not support modem signals.

%TSC-E-PNAMNU, Port names must be unique

You attempted to assign the same port name to more than one port. For example, you specified more than one port in a DEFINE PORT NAME command, or you tried to initialize a port whose default port name is assigned to another port.

%TSC-E-QUOTED, Quoted string expected

Either you forgot to enclose a string in quotation marks, or you forgot to include the string. A pointer indicates the position where the opening quotation marks were expected.

%TSC-E-RMSERR, Record Management Services error

TSC displays this message if RMS fails on a TSC command. Usually the host system generates its own error messages in addition to those provided by TSC.

%TSC-E-RSRVDN, Name is a reserved keyword or abbreviation, "*name*"

You specified a reserved keyword or a valid abbreviation of a reserved keyword when you attempted to define a name. The rejected name is displayed in quotation marks.

%TSC-E-SRVLIM, Predefined service limit (*nnn*) reached, service not added


The predefined limit of services has been reached. You cannot add another service unless you delete (PURGE) one of the defined services.

%TSC-E-SYNERR, Command syntax error, "*keyword*" is not recognized

The keyword displayed in quotation marks is unknown, ambiguous, or invalid in the context in which you specified it. A circumflex ( ^ ) under the command line points to the bad keyword.

%TSC-E-SYSERR, System services error

TSC displays this message if it unsuccessfully tries to use a system service, such as obtaining system time. Usually the host system generates its own error messages in addition to those provided by TSC.



**%TSC-E-TOOBIG, *keyword* too long, "xxxxxxxxxxxxxx"**

The string you entered for the specified keyword exceeds the maximum allowable length. The maximum number of characters allowed in your string is displayed in quotation marks.

**%TSC-E-TOOMNY, Too many entries in list**

You exceeded the maximum number of entries allowed in a list.

**%TSC-E-TYPVER, Command *keyword* illegal for this type or version**

You entered a command that is syntactically correct but that is not supported on the current image or database version.

**%TSC-E-UNKNOD, No such service or node defined**

You specified an undefined service name in a LIST SERVICE command, or you specified a node name different from the server name in a LIST NODE command.

### 3.2.2.2 Fatal Messages

%TSC-F-FATALB, Fatal internal bug was detected, please submit an SPR

A software problem makes continued operation of the configurator unreliable. Exit TSC (if not done automatically), assume the server image is corrupted, and submit a Software Problem Report (SPR).

%TSC-F-IMMDEX, Unable to modify or extend image file, "*file-spec*"

The file displayed in quotation marks opened normally but cannot be edited. TSC exits the file and displays this message. The state of the file is unknown; assume that any changes made during the current session are lost.

%TSC-F-IMREAD, Unable to read image file, "*file-spec*"

The file displayed in quotation marks opened normally but cannot be read. TSC exits the file and displays this message. The state of the file is unknown; assume that any changes made during the current session are lost.

%TSC-F-VERNSP, File has an unsupported database version, "*file-spec*"

The server image file displayed in quotation marks contains a database version number that is not supported by TSC. This file is closed when you exit TSC.

### 3.2.2.3 Warning Messages

**%TSC-W-DEVDIS, MODEM, DSRLOGOUT, DTRWAIT, and/or CTS/DSR FLOW CONTROL disabled**

A DEFINE DEVICE command changed the device type to one that does not support modem signals. TSC examines all corresponding ports and disables the characteristics cited in the message. Message %TSC-I-PRTAFT lists any ports whose modem characteristics have been disabled. Flow control on the affected ports defaults to XON.

**%TSC-W-SPEDIS, Defining a speed has disabled autobaud on some port(s)**

You defined the input speed or output speed for one or more port(s) that had autobaud enabled, causing autobaud to be disabled on those ports (which are listed in a companion %TSC-I-PRTAFT message).

### 3.2.2.4 Informational Messages

%TSC-I-CMDFIL, Unable to open command file, "*file-spec*"

TSC is unable to find, open, or access the specified command file. Usually the host system generates several system-specific messages prior to this one.

%TSC-I-CMDSUP, Option not supported on *version-type(s)*

This message lists version types that do not support a rejected command reported in a previous message.

%TSC-I-DEFBAK, Due to network problems DEFINE BACKUP HOSTS command cannot be used

You cannot use the DEFINE BACKUP HOSTS command because TSC failed to establish a link with the Network Management Listener (NML) utility at startup.

%TSC-I-EXECNN, Unable to obtain executor node name

TSC could not find the name of its host node in a call to the Network Information and Control Exchange (NICE) utility. As a result, the LIST USAGE display fills the node name field with question marks. (NOTE: This display is changed on exit from TSC only if some change was made to the server image.)

%TSC-I-MAXENT, Maximum number of entries in list is *nn*

You entered a command that had too many entries in a list. This message defines the maximum number of entries allowed.

%TSC-I-NETCLO, Network close request unsuccessful

A Network Management Listener link was established, but a subsequent close request was rejected.

%TSC-I-NETCON, Network connection request unsuccessful

A Network Management Listener connection request was rejected.

%TSC-I-NETDIS, Unable to disconnect logical link to network

A Network Management Listener disconnect command was rejected.

%TSC-I-NETOPN, Network open request unsuccessful

A Network Management Listener link was established, but a subsequent call to NML failed because of an open error.

%TSC-I-NETRCV, Error occurred in receiving a network message

A Network Management Listener link was established, and a subsequent send message request to determine a node name or number was accepted, but the read message request came back with an error.

%TSC-I-NETSEN, Error occurred in sending a network message

A Network Management Listener link was established, but a subsequent send message request to determine a node name or number was rejected.

%TSC-I-NETSTS, Status code(s): *code(s)*

This message displays any octal error code(s) resulting from a failed Network Management Listener (NML) call.

%TSC-I-NETUNK, Unknown message type received from network object NML

The response type received from the Network Management Listener is unknown to the TSC.

%TSC-I-NMLERR, Error returned by network object NML

A Network Management Listener call was completed, but the node name/number translation was not made because of an improperly set up field or fields.

%TSC-I-NODTRN, Unable to translate node name to node number,  
“*node-name*”

You specified a node name in a SET SERVER BACKUP HOSTS command that is not listed in the network node database.

%TSC-I-NOHELP, Unable to open help file, “*file-spec*”

TSC is unable to open or to access the help file specified in the message.

%TSC-I-NOTIME, Unable to obtain date and time from system

The host system rejected a TSC date and time request that is used to set the field containing the time when the server image was last changed.

%TSC-I-PRTAFT, Affected port(s): *port-list*

This message lists all ports that are affected by an error reported in a previous message.

%TSC-I-RMSSTS, Status code(s): *code(s)*

This message displays any octal error code(s) resulting from a failed Record Management Service (RMS) call.

%TSC-I-SIZSTR, Maximum size *nn* characters

This message gives the maximum size for a name, identification string, or password.

%TSC-I-SYSSTS, Status code(s): *code(s)*

This message displays any octal error code(s) resulting from a failed host system call.

%TSC-I-UNOPEN, Unable to open image file for writing, "*file-spec*"

The configurator is unable to open the file you specified at the Server image: prompt. The file may be write-protected or another program may be currently accessing the image. This is not a fatal error; the configurator prompts again for a file.

%TSC-I-VALRNG, Expected range *value* to *value*

When you have specified an out-of-range value, this message specifies the range of legal values.

---

## Keyword Abbreviations

This appendix lists all command keywords in alphabetical order. Capitalized letters indicate the minimum abbreviation for each keyword. Keywords that are not used in the same context may have the same abbreviations.

ACcess	Connect
ALL	Connections
ALTErnate	CONsole
ANnouncements	CONTRol
ANsi	COUnT
ASsistant	COUnTers
AUTHorized	CRASH
AUTOBaud	CTs
AUTOConnect	CXA16
AUTOPrompt	CXB16
	CXY08
BAckup	
BAckward	DEDicated
BAckwards	DEFine
BREak	DElay
BRief	DESTination
BROadcast	DEVices
	DIAGnose
CAnceL	Dialup
CHAracter	Disable
CHAracteristics	Disabled
CIrcuit	DISconnect
CLear	DSr
CODeS	DSrlogout

DTrwait	MAintenance
DUmp	MArk
DYnamic	MEssage
	MOdem
ENabled	MOonitor
ENtry	MULTicast
EVen	MULTIsessions
Exit	
EXternal	NAme
	NODE
FLow	NODEs
Forward (characteristic)	NONE
Forwards (command)	NOPrivileged
Frequency	NOTification
Full	NUmber
Groups	ODd
	OUtput
HARdcopy	OverriDe
Heartbeat	
Help	PARity
HOsts	PASsall
	PASsword
Identification	PASThru
INActivity	POrt
INIitialize	POrts
INPUt	PREferred
Interactive	PRIVileged
INternal	Purge
INTerrupts	
	Queue
Keepalive	Queuing
LIMit	REceive
Line	REMOte
List	REMOve
LOCAl	ResuMe
LOCK	RETranSMit
LOGIn	RIng
Logout	
LOOP	SAve
LOOPback	SECurity
LOSS	



SERVER  
SERVICE  
SESSION  
SET  
SHOW  
SIZE  
SOFTCOPY  
SOFTWARE  
SPEED  
STATUS  
SUMMARY  
SWITCH

TEST  
TIMER  
TRANSMIT

TUTORIAL  
TYPE

USAGE  
USERNAME  
USERNAME (TSC)  
USERS

VERIFICATION

WIDTH

XON

ZERO

---

## DECserver 200 Command Summary

This appendix summarizes all DECserver 200 commands and characteristics. See Chapter 2 for detailed descriptions.

This appendix employs the graphics conventions outlined in the Preface.

### B.1 DECserver 200 Commands

BACKWARDS

BROADCAST {PORT *port-number* } {*message-text*' }  
 {ALL } { *message-text* }

CLEAR SERVICES {*service-name* }  
 {LOCAL }

CONNECT [*service-name* [NODE *node-name*] [DESTINATION *port-name*]]

CONNECT PORT *port-number* [*service-name* [NODE *node-name*] [DEST *port-name*]]

CRASH

DEFINE [ PORT [ *port-number* ] ] *characteristic* [*characteristic(s)*]  
 [ ALL ]

(See Section B.2.1 for a list of port characteristics.)

DEFINE SERVER *characteristic* [*characteristic(s)*]

(See Section B.2.2 for a list of server characteristics.)

DEFINE SERVICE *service-name* [*characteristic* [*characteristic(s)*]]

(See Section B.2.3 for a list of service characteristics.)

DISCONNECT [SESSION *session-number*]  
ALL

DISCONNECT PORT *port-number*

FORWARDS

HELP [TUTORIAL  
*topic* [*subtopic* [*subtopic*]]]

INITIALIZE [SERVER] DELAY *minutes* [COUNT *n*]  
DISABLE [LOOP]  
DIAGNOSE {BRIEF  
FULL  
NORMAL}

INITIALIZE [SERVER] CANCEL

LIST PORTS [*port-number*  
ALL  
ACCESS {LOCAL  
REMOTE  
DYNAMIC  
NONE}] [CHARACTERISTICS  
SUMMARY]

LIST SERVER [CHARACTERISTICS  
SUMMARY]

LIST SERVICES [*service-name*] [CHARACTERISTICS]  
LOCAL

LOCK

LOGOUT [PORT *port-number*]

LOOP — See TEST LOOP.

MONITOR commands — See SHOW commands.

PURGE SERVICES {*service-name*  
LOCAL}

REMOVE QUEUE { ALL  
ENTRY *entry-id*  
NODE *node-name*  
SERVICE *service-name* }

RESUME [SESSION *session-number*]

SET NOPRIVILEGED

SET [ PORT [ *port-number* ] ] *characteristic* [*characteristic(s)*]  
[ ALL ]

(See Section B.2.1 for a list of port characteristics.)

SET { PRIVILEGED  
NOPRIVILEGED }

SET SERVER *characteristic* [*characteristic(s)*]

(See Section B.2.2 for a list of server characteristics.)

SET SERVICE *service-name* [*characteristic* [*characteristic(s)*]]

(See Section B.2.3 for a list of service characteristics.)

SET SESSION { INTERACTIVE  
PASTHRU  
PASSALL }

{ SHOW  
MONITOR } NODES [ *node-name* ] [ COUNTERS  
[ ALL ]  
STATUS  
SUMMARY ]

{ SHOW  
MONITOR } PORTS [ *port-number*  
ALL  
ACCESS { LOCAL  
REMOTE  
DYNAMIC  
NONE } ] [ CHARACTERISTICS  
COUNTERS  
STATUS  
SUMMARY ]

{ SHOW  
MONITOR } QUEUE [ ALL  
NODE *node-name*  
PORT *port-name*  
SERVICE *service-name* ]

```
{SHOW } SERVER [CHARACTERISTICS]
{MONITOR}          [COUNTERS]
                   [STATUS]
                   [SUMMARY]
```

```
{SHOW } SERVICES [service-name] [CHARACTERISTICS]
{MONITOR}          [LOCAL]       [STATUS]
                   [ALL]         [SUMMARY]
```

```
{SHOW } SESSIONS [PORT port-number]
{MONITOR}          [ALL]
```

```
{SHOW } USERS
{MONITOR}
```

```
[TEST] LOOP e-address1 [HELP {FULL
                          {RECEIVE
                          {TRANSMIT}} ASSISTANT e-address2]
```

```
TEST [PORT [port-number [LOOPBACK {EXTERNAL}]]] [COUNT{n}] [WIDTH
      [INTERNAL]]]
```

```
TEST SERVICE service-name NODE node-name
                           DESTINATION port-name
                           COUNT {n
                                  {NONE}}
                           WIDTH n
                           LOOPBACK {EXTERNAL
                                      {INTERNAL}}
```

```
ZERO [COUNTERS] [ALL
                 [NODE node-name]
                 [PORT port-number]]
```

## B.2 DECserver 200 Characteristics

Keywords shown in **BOLD** type are the default values preset by Digital Equipment Corporation.

### B.2.1 DECserver 200 Port Characteristics

```
ACCESS {LOCAL
        {REMOTE
        {DYNAMIC
        {NONE}}
```

ALTERNATE [SPEED] {*speed* }  
{**NONE**}

AUTHORIZED [GROUPS] {*group-list* } [ENABLED ]  
{ALL } [DISABLED ]

Default: 0 ENABLED,  
1-255 DISABLED

AUTOBAUD {**ENABLED** }  
{DISABLED }

AUTOCONNECT {ENABLED }  
{**DISABLED**}

AUTOPROMPT {**ENABLED** }  
{DISABLED }

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

BREAK {**LOCAL** }  
{REMOTE }  
{DISABLED }

BROADCAST {**ENABLED** }  
{DISABLED }

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

DEDICATED {*service-name* } [NODE {*node-name* }]  
{**NONE** } [DESTINATION {*port-name* }]  
{**NONE** }

DIALUP {ENABLED }  
{**DISABLED**}

DSRLOGOUT {ENABLED }  
{**DISABLED**}

DTRWAIT {ENABLED }  
{**DISABLED**}

FLOW [CONTROL] {CTS }  
{DSR }  
{**XON** }  
{DISABLED }

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

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

GROUPS {*group-list* } [ **ENABLED** ]  
{ **DISABLED** }

Valid with SET PORT only  
Default: 0 **ENABLED**,  
1-255 **DISABLED**

INACTIVITY [LOGOUT] {**ENABLED** }  
{**DISABLED** }

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

INPUT SPEED *speed* Default: 9600

INTERRUPTS {**ENABLED** }  
{**DISABLED** }

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

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

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

MODEM [CONTROL] {**ENABLED** }  
{**DISABLED** }

MULTISESSIONS {**ENABLED** }  
{**DISABLED** }

NAME *port-name* Default: PORT\_*n*

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

OUTPUT SPEED *speed* Default: 9600

PARITY {**EVEN** }  
{**ODD** }  
{**MARK** }  
{**NONE** }

PASSWORD {ENABLED }  
{DISABLED }

PREFERRED {*service-name* } [ NODE {*node-name* } ] [ DESTINATION {*port-name* } ]  
{NONE } [ {NONE } ] [ {NONE } ]

QUEUING {ENABLED }  
{DISABLED }

RING {ENABLED }  
{DISABLED }

SECURITY {ENABLED }  
{DISABLED }

SESSION LIMIT {*limit* } Default: 4  
{NONE }

[ INPUT ] SPEED *speed* Default: 9600  
[ OUTPUT ]

TYPE {ANSI }  
{HARDCOPY }  
{SOFTCOPY }

USERNAME "*username*" Default: no username

VERIFICATION {ENABLED }  
{DISABLED }

## B.2.2 DECserver 200 Server Characteristics

ANNOUNCEMENTS {ENABLED }  
{DISABLED }

BROADCAST {ENABLED }  
{DISABLED }

CIRCUIT [TIMER] *milliseconds* Default: 80

CONSOLE [PORT] {*port-number* } Default: port 1  
{NONE }

DUMP {ENABLED }  
{DISABLED }

GROUPS — See SERVICE GROUPS.

HEARTBEAT {ENABLED }  
{DISABLED }

IDENTIFICATION “ <i>id-string</i> ”	Default: no ID
INACTIVITY [TIMER] <i>minutes</i>	Default: 30
KEEPALIVE [TIMER] <i>seconds</i>	Default: 20
LOCK { <b>ENABLED</b> DISABLED}	
LOGIN PASSWORD [“ <i>password</i> ”]	Default: ACCESS
MAINTENANCE PASSWORD [“ <i>hex-password</i> ”]	Default: 0, no password checking
MULTICAST [TIMER] <i>seconds</i>	Default: 30
NAME <i>server-name</i>	Default: LAT_XXXXXXXXXXXX
NODE [LIMIT] { <i>limit</i> NONE}	Default: 100
NUMBER <i>n</i>	Default: 0
PASSWORD LIMIT { <i>limit</i> NONE}	Default: 3
PRIVILEGED PASSWORD [“ <i>password</i> ”]	Default: SYSTEM
QUEUE [LIMIT] { <i>depth</i> NONE}	Default: 24
RETRANSMIT [LIMIT] <i>limit</i>	Default: 8
[SERVICE] GROUPS { <i>group-list</i> ALL} [ENABLED DISABLED]	Default: 0 ENABLED, 1–255 DISABLED
SESSION LIMIT { <i>limit</i> NONE}	Default: 32
SOFTWARE <i>filename</i>	Default: PR0801ENG

### B.2.3 DECserver 200 Service Characteristics

CONNECTIONS { <b>ENABLED</b> DISABLED}	
IDENTIFICATION “ <i>id-string</i> ”	Default: no ID
PASSWORD [“ <i>password</i> ”]	Default: no password
PORTS { <i>port-list</i> ALL} [ENABLED DISABLED]	
QUEUE { <b>ENABLED</b> DISABLED}	

---

## DECserver 500 Command Summary

This appendix summarizes all DECserver 500 commands and characteristics. See Chapter 2 for detailed descriptions.

This appendix employs the graphic conventions outlined in the Preface.

### C.1 DECserver 500 Commands

Sections C.1.1 and C.1.2 summarize the server and TSC commands.

#### C.1.1 DECserver 500 Server Commands

BACKWARDS

BROADCAST {PORT *port-list*} *message-text*  
                  {ALL}

CLEAR SERVICES {*service-name*}  
                  {LOCAL}

CONNECT [*service-name* [NODE *node-name*] [DESTINATION *port-name*]]

CRASH

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

FORWARDS

HELP [TUTORIAL  
      [*topic* [*subtopic* [*subtopic*]]]

INITIALIZE [SERVER] [DELAY *minutes*] [DIAGNOSE]

INITIALIZE [SERVER] CANCEL

LOCK

LOGOUT [ PORT { *port-list* }  
          { ALL } ]

LOOP command — See TEST LOOP.

MONITOR commands — See SHOW commands.

REMOVE QUEUE { ALL  
              ENTRY *entry-number*  
              NODE *node-name*  
              SERVICE *service-name* }

RESUME [SESSION *session-number*]

SAVE PORT [ *port-list* ]  
          [ ALL ]

SET NOPRIVILEGED

SET [ PORT [ *port-list* ] ] *characteristic* [*characteristic(s)*]  
      [ ALL ]

(See Section C.2.1 for a list of port characteristics.)

SET { PRIVILEGED }  
      { NOPRIVILEGED }

SET SERVER *characteristic* [*characteristic(s)*]

(See Section C.2.2 for a list of server characteristics.)

SET SERVICE *service-name* [*characteristic* [*characteristic(s)*]]

(See Section C.2.3 for a list of service characteristics.)

SET SESSION { INTERACTIVE }  
              { PASTHRU }  
              { PASSALL }

{ SHOW } DEVICES [ *device-name* ] [ CHARACTERISTICS ]  
{ MONITOR } [ ALL ] [ COUNTERS ]  
                                  [ SUMMARY ]

{SHOW } NODES [ *node-name* ] [ COUNTERS  
{MONITOR} [ ALL ] [ STATUS  
SUMMARY ]

{SHOW } PORTS [ *port-list*  
{MONITOR} [ ALL  
ACCESS { LOCAL  
REMOTE  
DYNAMIC  
NONE } ] [ CHARACTERISTICS  
COUNTERS  
STATUS  
SUMMARY ]

{SHOW } QUEUE [ ALL  
{MONITOR} [ ENTRY *entry-number*  
NODE *node-name*  
SERVICE *service-name* ]

{SHOW } SERVER [ CHARACTERISTICS  
{MONITOR} [ COUNTERS  
STATUS  
SUMMARY ]

{SHOW } SERVICES [ *service-name* ] [ CHARACTERISTICS  
{MONITOR} [ LOCAL  
ALL ] [ STATUS  
SUMMARY ]

{SHOW } SESSIONS [ PORT *port-list*  
{MONITOR} [ ALL ]

{SHOW } USERS  
{MONITOR}

[TEST] LOOP *e-address1* COUNT *n*  
WIDTH *n*  
HELP { FULL  
RECEIVE } ASSISTANT *e-address2*  
TRANSMIT

TEST [ PORT [ *port-number* [ LOOPBACK { EXTERNAL }  
INTERNAL } ] ] [ COUNT *n* ] [ WIDTH *n* ]

TEST SERVICE *service-name* NODE *node-name*  
DESTINATION *port-name*  
COUNT { *n*  
NONE }  
WIDTH *n*  
LOOPBACK { EXTERNAL  
INTERNAL }

ZERO [COUNTERS] [ ALL  
 DEVICE *device-name*  
 NODE *node-name*  
 PORT *port-list* ]

### C.1.2 DECserver 500 TSC Commands

DEFINE DEVICE (*device-name*) TYPE { CXA16  
 ALL { CXB16  
 CXY08  
 NONE }

DEFINE PORT (*port-list*) *characteristic* [*characteristic(s)*]  
 ALL

(See Section C.2.1 for a list of port characteristics.)

DEFINE SERVER *characteristic* [*characteristic(s)*]

(See Section C.2.2 for a list of server characteristics.)

DEFINE SERVICE *service-name characteristic* [*characteristic(s)*]

(See Section C.2.3 for a list of service characteristics.)

EXIT (or CTRLZ)

HELP [*topic* [*subtopic* [*subtopic*]]]

LIST DEVICES [*device-name*] [CHARACTERISTICS]  
 ALL [SUMMARY]

LIST NODE

LIST PORTS (*port-list* ALL ACCESS { LOCAL  
 REMOTE  
 DYNAMIC  
 NONE } ) [CHARACTERISTICS]  
 SUMMARY

LIST SERVER [CHARACTERISTICS]  
 SUMMARY

LIST SERVICES [*service-name*] [CHARACTERISTICS]  
 LOCAL [SUMMARY]  
 ALL



CHARACTER [SIZE] {7  
8}

DEDICATED {*service-name*} [NODE {*node-name*}] [DESTINATION {*port-name*}]  
**NONE** **NONE** **NONE**

DIALUP {ENABLED }  
**DISABLED**

DSRLOGOUT {ENABLED }  
**DISABLED**

DTRWAIT {ENABLED }  
**DISABLED**

FLOW [CONTROL] {CTS  
DSR  
**XON**  
DISABLED }

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

GROUPS {*group-list*} [ENABLED ]  
ALL **DISABLED**

Valid for SET PORT only  
Default: 0 ENABLED,  
1-255 DISABLED

INACTIVITY [LOGOUT] {ENABLED }  
**DISABLED**

INPUT SPEED *speed* Default: 9600

INTERRUPTS {ENABLED }  
**DISABLED**

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

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

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

MODEM [CONTROL] {ENABLED }  
**DISABLED**

NAME *port-name*

Default: LC-*n-n*

OUTPUT SPEED *speed*

Default: 9600

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

PASSWORD { ENABLED }  
          { **DISABLED** }

PREFERRED { *service-name* } [ NODE { *node-name* } ] [ DESTINATION { *port-name* } ]  
          { **NONE** } [ { **NONE** } ] [ { **NONE** } ]

SECURITY { ENABLED }  
          { **DISABLED** }

SESSION [LIMIT] { *limit* }  
          { **NONE** }

Default: 4

[ INPUT ] SPEED *speed*  
[ OUTPUT ]

Default: 9600

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

USERNAME { "*username*" }  
          { **NONE** }

Default: port name

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

## C.2.2 DECserver 500 Server Characteristics

ANNOUNCEMENTS { **ENABLED** }  
                  { **DISABLED** }

BACKUP HOSTS [*host* [, *host* [, *host* [, *host* [, *host* ]]]]]

Valid for DEFINE SERVER only  
Default: no backup host

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

CIRCUIT [TIMER] *milliseconds*

Default: 80

GROUPS — See SERVICE GROUPS.

HEARTBEAT { <b>ENABLED</b> } { <b>DISABLED</b> }	
IDENTIFICATION {" <i>id-string</i> " } { <b>NONE</b> }	
INACTIVITY [TIMER] <i>minutes</i>	Default: 30
KEEPALIVE [TIMER] <i>seconds</i>	Default: 20
LINE FREQUENCY {50 } {60 }	Valid for DEFINE SERVER only
LOCK { <b>ENABLED</b> } { <b>DISABLED</b> }	
LOGIN PASSWORD [{" <i>password</i> "}]	Default: ACCESS
MAINTENANCE PASSWORD [{" <i>hex-password</i> "}] { <b>NONE</b> }	Valid for DEFINE SERVER only
MULTICAST [TIMER] <i>seconds</i>	Default: 60
NAME <i>server-name</i>	Default: DECnet node name of the server
NODE [LIMIT] { <i>limit</i> } { <b>NONE</b> }	Default: 100
NUMBER <i>n</i>	Default: 0
PASSWORD LIMIT { <i>limit</i> } { <b>NONE</b> }	Default: 3
PRIVILEGED PASSWORD [{" <i>password</i> "}]	Default: SYSTEM
QUEUE [LIMIT] { <i>depth</i> } { <b>NONE</b> }	Default: 8
RETRANSMIT [LIMIT] <i>limit</i>	Default: 8
[SERVICE] GROUPS { <i>group-list</i> } [ENABLED ] {ALL } [DISABLED ]	Default: 0 ENABLED, 1-255 DISABLED
SESSION LIMIT { <i>limit</i> } { <b>NONE</b> }	Default: 256

### C.2.3 DECserver 500 Service Characteristics

CONNECTIONS { <b>ENABLED</b> } { <b>DISABLED</b> }
IDENTIFICATION {" <i>id-string</i> " } { <b>NONE</b> }

PASSWORD [“*password*”]  
[NONE]

PORTS {*port-list*} [ENABLED]  
{ALL} [DISABLED]

QUEUE {ENABLED}  
{DISABLED}

---

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# How to Order Documents

## Introduction

All the information you need to order additional documents is provided here. The ordering procedure you use depends on:

- Whether you are a customer or a Digital employee
- Your location: USA or Puerto Rico, Canada, or other
- Your means of placing the order: telephone, electronic mail, or regular mail




The specific ordering procedures and the order numbers for software and hardware manuals are provided in the following sections.

## Order Numbers

For software manuals, use the documentation kit order number. For hardware manuals, use the document order number. There are software documentation kits for these operating systems: VMS, RSX-11M-PLUS, Micro/RSX, and ULTRIX-32.

### VMS Software Documentation Kit

The VMS documentation kit order number is QLZ07-GZ. The kit contains one of each of the following manuals:

- *Using DECserver 200 Documents*
  - *DECserver 200 Software Installation Guide (VMS)*
  - *DECserver 200 User's Guide*
- 

- *Terminal Server User's Reference Card*
- *DECserver 200 Management Guide*
- *Terminal Server Commands and Messages Reference*
- *DECserver 200 Commands Mini-Reference*
- *Local Area Transport (LAT) Network Concepts*
- *DECserver 200 Problem Determination Guide*
- *LATplus/VMS Service Node Management Guide*
- *Terminal Server Glossary*

### **RSX-11M-PLUS Software Documentation Kit**

The RSX-11M-PLUS documentation kit order number is QRZ07-GZ. This kit contains the same manuals as the VMS documentation kit with two exceptions: (1) the RSX-11M-PLUS kit does not contain the *LATplus/VMS Service Node Management Guide* and (2) the RSX-11M-PLUS kit contains the *DECserver 200 Software Installation Guide (RSX-11M-PLUS)* instead of the VMS version.

### **Micro/RSX Software Documentation Kit**

The Micro/RSX documentation kit order number is QYZ07-GZ. This kit contains the same manuals as the VMS documentation kit with two exceptions: (1) the Micro/RSX kit does not contain the *LATplus/VMS Service Node Management Guide* and (2) the Micro/RSX kit contains the *DECserver 200 Software Installation Guide (Micro/RSX)* instead of the VMS version.

### **ULTRIX-32 Software Documentation Kit**

The ULTRIX-32 documentation kit order number is QLZ15-GZ. This kit contains the same manuals as the VMS documentation kit with two exceptions: (1) the ULTRIX-32 kit does not contain the *LATplus/VMS Service Node Management Guide* and (2) the ULTRIX-32 kit contains the *DECserver 200 Software Installation Guide (ULTRIX-32)* instead of the VMS version.

### **User Documentation Kit**

The user documentation kit order number is QLZ06-GZ. This kit is intended for terminal users and contains only two manuals: the *DECserver 200 User's Guide* and the *Terminal Server User's Reference Card*.

## TSM Documentation Kit

The TSM documentation kit order number is QLZ42-GZ. This kit is intended for the installer and manager of the TSM software product and contains two manuals: the *Guide to Terminal Server Manager* and the *Terminal Server Manager Software Installation Guide*.

## Hardware Documents

The order numbers for the hardware manuals are listed in Table 1.

**Table 1: Hardware Documents**

Manual Title	Order Number
<i>DECserver 200 Hardware Installation/Owner's Guide</i>	EK-D200C-IN
<i>DECserver 200 Identification Card</i>	EK-D200T-ID
<i>DECserver 200 Technical Manual</i>	EK-DECS2-TM

## Ordering Procedures for Customers

If you are a customer, refer to Tables 2 and 3 for ordering information.

**Table 2: How to Order by Telephone**

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<sup>1</sup>Any prepaid order from Puerto Rico must be placed with the local Digital subsidiary: (809) 754-7575.

## Ordering Procedures for Digital Employees

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If you are a Digital employee, use the "Internal Software Order Form" to order software documentation kits. The form is available from office services and the Software Distribution Center (SDC). Complete the form according to instructions and mail it.

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- Telephone number: (617) 351-4323 (DTN: 234-4323)
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### NOTE

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