

Terminal Server

Glossary

Order No. AA-KK21B-TK

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This glossary defines terms used in the server documentation sets. It is intended as a reference for all users of server documentation.

Supersession/Update Information: This is a revised manual.

Software Version: DECserver 100 System
DECserver 200 System
DECserver 500 System
Ethernet Terminal Server

digital

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LA120	RSX	
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Preface

The *Terminal Server Glossary* defines terms that are used in the following:

- DECserver 100 documentation set
- DECserver 200 documentation set
- DECserver 500 documentation set
- Ethernet Terminal Server documentation set

To order manuals, refer to the individual documentation sets.

Not all terms in this glossary apply to all servers. Server-specific definitions are noted only when one term has different implications for different servers. For a supplemental glossary of technical terms, refer to *The Digital Dictionary*.

Conventions Used in This Document

Bold print in definitions highlights related terms that are defined elsewhere in the glossary.

The following symbols designate server-specific references:

DS100	DECserver 100 system
DS200	DECserver 200 system
DS500	DECserver 500 system
ETS	Ethernet Terminal Server

Terminal Server Glossary

access control

A process that validates connection, log-in, or file access requests to determine whether the requests can be accepted by the target software. User names and passwords provide the most common means of access control.

active converter

A device that converts RS-232-C signals to DEC423 signals. The converter is considered active because it requires an external power source to operate. *Contrast with passive adapter.*

active rack

An equipment rack in a **satellite equipment room** that contains active equipment (that is, equipment that requires an external power source to operate). *Contrast with passive rack.*

application device

A device that is under the control of an application process running on a **service node**. Such devices include printers, or **terminals** that can have keyboards.

application port

A **logical port** on a **service node** that is mapped to a **terminal server** and server port. A service node applications process uses the logical port during **sessions** with an **application device** at the server port.

architectural layer

A distinct logical subdivision of an **architecture**.

architecture

A set of rules or **protocols** that governs how computer systems operate to perform a specific function.

area

In a network, a group of nodes that can run independently as a subnetwork.

ASCII

American Standard Code for Information Interchange. A set of 8-bit binary numbers representing the alphabet, punctuation, numerals, and other special symbols used in text representation and communications protocols.

asynchronous communications

Communications in which the time periods between character transmissions differ. Each character begins with a start bit and ends with one or more stop bits. Start and stop bits enable the receiving device to recognize the beginning and the end of each character.

asynchronous line

A physical line on which time intervals between transmitted characters can be of varying and unequal length. An asynchronous line is typically used to connect a terminal to a server.

asynchronous multiplexer

An asynchronous communications device that allows several users to share a single circuit. A multiplexer combines the asynchronous data streams of several users into a single stream for transmission over a single medium.

authorized groups

Those groups that the server manager has authorized for use on a port (specified by the privileged port characteristic AUTHORIZED GROUPS). *See also* current groups.

autobaud

The process by which the terminal server software automatically determines the line speed of a terminal attached to the server.

autoconnect

A feature whereby the server automatically attempts to connect a port to a service when the port becomes disconnected from a service, when the user enters a CONNECT command and the specified service is unavailable, or when the user logs in to a port that has a preferred service defined.

backplane

A module that provides data and power interconnections for other modules contained in the server.

backup host

A DECnet system that can perform all load host functions for a server whenever the primary load host is unavailable.



balanced circuit

The condition of a **virtual circuit** in which all **sessions** on the circuit are unused. Both **service node** and server have unused **slot credits** and can use them to terminate the balanced state by starting to transmit slot data.

bandwidth

- (1) The range of frequencies assigned to a **channel** or system; the difference, expressed in hertz (Hz), between the highest and lowest frequencies of the band (the higher the bandwidth, the greater the data throughput capability).
- (2) The capacity of a transmission medium to pass data in a specified amount of time.

baseband Ethernet network

An unmodulated single-channel CSMA/CD network. One station at a time can transmit information on the medium without disruption.

baseband network

A type of **network** that uses a single **channel** for communications signals. *Contrast with broadband network.*

blocking

The condition in a switching system in which a terminal connection request cannot be processed by a host system because the available terminal controllers or internal transmission paths are processing other requests.



boot

To load computer or server memory with sufficient information so that the computer or server can function.

boot modes

The switch-selected server modes that determine which power-up procedure is executed when the server is powered up.

boot program

A program that checks the results of the server **diagnostic self-test program** and, if no fatal errors are detected, initiates **down-line loading**.

broadband Ethernet network

A single CSMA/CD channel modulated to occupy a **bandwidth channel** on a **broadband Ethernet coaxial cable**.

broadband Ethernet transceiver

A device (such as Digital's DECOM) that transmits data to and receives data from a **tap** on a **broadband Ethernet coaxial cable**.

broadband network

A type of **network** that supports multiple **channels** on a single medium. Each channel occupies one of many specified frequency **bandwidths**. Broadband LANs often use cable television hardware for signal distribution. *Contrast with baseband network.*

broadcast

On a server, the ability of one **port** to send a single message to one or more ports simultaneously. On an **Ethernet LAN**, the ability of one node to simultaneously transmit a single message to all nodes on the Ethernet. *See also multicast.*

broadcast address

A single **multicast address** (specifically, FF-FF-FF-FF-FF-FF) that is used to send a message to all nodes on the **Ethernet LAN**.

bus-grant module

A special **module** that is installed in an empty **module slot** that exists between occupied module slots in order to ensure the continuity of daisy-chained bus-request and bus-grant signal lines.

cable concentrator

A passive device connecting single-channel cables to a multiple-channel cable.

carrier sense

A signal provided by the **Physical layer** of an **Ethernet LAN** to indicate that one or more nodes are currently transmitting on the **Ethernet channel**.

CCITT

The International Telegraph and Telephone Consultative Committee, the technical committee of the International Telecommunications Union (ITU). CCITT develops recommendations for telecommunications, including data communications.

CCITT V.24

The CCITT communications standard that defines interchange circuits between **data terminal equipment (DTE)** and **data communication equipment (DCE)**.

CCITT V.28

The CCITT communications standard that defines electrical characteristics for unbalanced, double-current interchange circuits.

channel

A means of transmission over a packet-oriented data network. That part of a communications system that connects a message source to a message destination; the path for electrical transmission between two or more points. *See also virtual circuit.*

characteristic

See DECnet characteristics and server characteristics.

circuit

See service circuit ID and virtual circuit.

circuit timer

The LAT protocol timer that determines the minimum interval at which a terminal server transmits Virtual Circuit layer messages.

coaxial cable

A concentric transmission medium (cable) consisting of a center conductor and an outer (shield) conductor.

collision

A condition caused when multiple network transmissions overlap in the physical channel, corrupting data and requiring backoff and data retransmission.

collision detect

A signal provided by the Physical layer of the Ethernet to the Data Link layer to indicate that one or more nodes are contending with the current node's transmission.

configuration

The process of changing a database by adding, deleting, or modifying entries in the database; usually done under program control, for example, TSC or DSVCONFIG.

Configuration Assistance Program

A firmware-based server program that is used interactively to test the server's hardware configuration.

Configuration Verify Program

A firmware-based server program that automatically tests the server's hardware configuration.

connection

A logical path between an interactive terminal user and a service or between an application port on a service node and a service on a server. See also session.

connection management

The process of using a single virtual circuit to create, maintain, and disconnect sessions between a terminal server and the host node.

connection queue

The queue on a terminal server in which connection requests are stored.

connection request

A request for connection to a **service** or **port**, which is stored in the server connection queue. A connection request can be initiated by a **load host** or by a **CONNECT** command at a local-access server port.

console**console device****console terminal**

See **local console**.

Console Commands Interface

A command set that allows interactive use of a server's **diagnostic self-test program**.

console port

For DS500 and ETS, physical port 0, which is used for running the **diagnostic self-test program** and for performing other management tasks (for example, DS500 receives the 900 series of messages at port 0). For other servers, any port assigned to receive the 900 series of messages and to which a **local console** can be connected.

contention

A condition that occurs when two or more nodes attempt to use an **Ethernet** channel at the same time.

credit

A **flow control marker** transmitted in the header information of a **data slot**. A credit permits the LAT node that receives it to send one slot of data to the node that transmits it. If no credits are transmitted, data flow is temporarily halted between the nodes.

CSMA/CD

Carrier-sense, multiple-access with collision detection. This is the generic term for a procedure used by **Ethernet** LANs to manage the physical link. The procedure allows multiple nodes to access the **broadcast** channel at will, avoids **contention** by means of **carrier sense** and deference, and resolves contention by means of collision detection and retransmission.

CTERM

Command **TER**Minal; a wide area network virtual terminal protocol that is layered on **DECnet** protocols.

current groups

The **groups** that a port user has selected for his or her port (specified by the port characteristic **GROUPS**). Current groups is equal to or a subset of **authorized groups**. A user can display and access only those **services** represented by the port's current groups.



current session

The **service session** with which a **port user** is currently interacting.

customization

The process of using SET or DEFINE commands to modify the values of characteristics in the server databases. *Compare with configuration.*

data communication equipment (DCE)

Active computer equipment in a data path that assists in the transmission of data along the path, for example, a **modem**.

data-leads-only

An **asynchronous** data communications line that does not support **modem control signals**.

Data Link frame

A group of digits transmitted as a unit, over which a coding procedure is usually applied for synchronization, error control, and error detection.

Data Link layer

The second lowest layer in the International Standards Organization (ISO) model for open systems interconnection (OSI). The Data Link layer implements a communication facility on top of the physical **channel** provided by the **Physical layer**.



data slot

One of three types of data in the Slot layer of the LAT architecture: Data-A slots, Data-B slots, and Attention slots. These slots identify different classes of transmitted data between a **terminal server** and a **service node**.

data terminal equipment (DTE)

A computer or **terminal** connected to **data communication equipment (DCE)** that performs input and/or output functions.

data transfer

The act of transmitting data across communications lines from a sender to a receiver.

data transparency

During a **service session**, the server normally intercepts and interprets switch characters and **flow-control** characters. Users can enable **data transparency**, causing such characters to become transparent to the server. The server will not intercept them while they are being exchanged in the user's **current session**, such as during a file transfer or during a block-mode transfer (where the terminal sends a screen of data to the host application).

database

See load host databases and server databases.

datagram

See message frame.

DCE

See data communication equipment.

DEBNT

The Digital Ethernet-to-BI Network and Tape Adapter.

DEC423

An enhanced version of RS-423-A. DEC423 uses line driver and receiver chips that have better filtering and tighter level tolerances than those specified by RS-423-A. Additionally, DEC423 devices include transient suppressors for electrical overstress (EOS) and electrostatic discharge (ESD) protection. When interconnecting DEC423 and RS-232-C interfaces, EOS and ESD protection is required to protect the DEC423 line receivers from the higher voltages produced by the RS-232-C line drivers.

DECconnect System

A Digital communications wiring strategy that uses a faceplate to provide comprehensive video, telephone, data, and network connections to offices in an area or building. Each office faceplate is wired to one or more central communications points, such as a **satellite equipment room**, a computer room, or a telecommunications room.

DECnet

The Digital networking software that uses the **Digital Network Architecture (DNA)** on both **local area networks** and **wide area networks**.

DECnet characteristics

Information that DECnet uses to identify **nodes** on the **network**. This information is in a **load host's** DECnet database and server configuration database. Every server has these DECnet characteristics: **DECnet node name**, **DECnet node address**, **service circuit ID**, and **Ethernet address**.

DECnet databases

Two **load host** databases (permanent and operational) that contain entries for all DECnet **nodes**: the **permanent database** contains permanent entries, which are not affected by **system power up** or **power down**; the **operational database** contains temporary entries, which are lost at **system power down**.

DECnet node address

A unique numeric identification required for each DECnet **node**, assigned by the network manager and recorded on the server's Identification Card. The address is in the form *aa.nnnn*, where *aa* is an optional **area number** (from 2 to 63), and *nnnn* is the **node address** (from 1 to 1023).

DECnet node name

A unique 1- to 6-character alphanumeric identification (including at least one alphabetic character) required for each DECnet node, assigned by the network manager, and recorded on the server's Identification Card.

DECOM

See broadband Ethernet transceiver.

dedicated service

A service to which a port is permanently assigned and to which the port is always connected at login, thus emulating a hard-wired connection.

DELNI

See local network interconnect.

DELUA

The Digital Ethernet Large-Scale-Integration UNIBUS Network Adapter.

DEQNA

The Digital Ethernet Q-bus Network Adapter.

dequeue

To remove the first entry in a queue and to attempt the function for which the entry was queued.

DEREP

The Digital Ethernet Repeater. *See* Ethernet repeater.

DESVA

The Digital Ethernet Network Adapter for MicroVAX 2000 and VAXstation 2000.

DEUNA

The Digital Ethernet UNIBUS Network Adapter.

device

Equipment that connects to a port on a server; for example, terminals, printers, modems, and computers.

device port

See port.

diagnostic self-test program

The set of firmware-based programs that tests the server hardware for failures and that controls the server during power up.

dial-in modem

A modem that receives incoming calls from dial-out modems connected to remote computer equipment.

dial-in/dial-out modem

A **modem** that can both originate calls to and receive calls from **remote computer equipment**.

dial-out modem

A **modem** that originates calls to a remote **dial-in modem**.

Digital Network Architecture (DNA)

The **layers, protocols, and associated rules** that govern the design and operation of **Digital networks**.

direct memory access (DMA)

The process whereby a device directly reads from or writes to memory by addressing physical locations in memory without intervention by the CPU.

DNA

See Digital Network Architecture.

down-line loading

The process of sending the **server image** from a **load host** to the server.

DTE

See data terminal equipment.

dual-purpose server

A **terminal server** with both server software and **service node software**. A dual-purpose server can operate in two ways: (1) as a **service node offering services** on the LAT network, (2) as a **terminal server providing a means** for its ports to connect to network services.

dump file

A file containing a copy of the server's running image, which is stored on the **load host** in the **server directory**. The load host creates this file when it receives an **up-line dump** from the server.

dynamic access

A manager-specified type of access that allows a **port** to alternate between **local access** and **remote access** operations.

Etherjack junction box

A wall-mounted box that houses a **transceiver cable interconnection point**.

Ethernet

A **local area network** that uses **coaxial cable** as a passive communications medium in a CSMA/CD system to interconnect different types of computers, server products, and office equipment at a local site. No switching logic or central computer is needed to establish or control communications.



Ethernet address

A unique combination of six pairs of hexadecimal digits separated by hyphens that identifies a specific node on an Ethernet. *Contrast with DECnet node address.*

Ethernet Citizenship Test

The part of the diagnostic self-test program that verifies server compliance with the Ethernet protocol.

Ethernet Communications Server

A dedicated special-purpose network subsystem that promotes resource sharing among many host systems within a local area network.

Ethernet connector

See Ethernet port.

Ethernet Controller Module

The hardware component of an Ethernet node that implements the CSMA/CD procedure that allows the node to communicate over the Ethernet.

Ethernet interface test

The part of the diagnostic self-test program that verifies whether the Ethernet Controller Module is functioning properly.



Ethernet loopback test

A loopback test that involves at least two Ethernet nodes and possibly a third assistant node. *See also internal loopback test and external loopback test.*

Ethernet port

The connector on the server for the Ethernet transceiver cable.

Ethernet protocol

The set of rules that governs the structure of data transfer on an Ethernet LAN; the protocol determines the format of messages on the Ethernet.

Ethernet repeater

A device (called a DEREPE) that joins two segments of an Ethernet and reinforces signals sent over the segments. The repeaters can be separated by up to 1100 meters (3609 feet) of cable.

external loopback test

An asynchronous port loopback test during which data signals are looped externally through either a standard or a staggered loopback connector that is attached to the port cable interface or to the port cable; an extension of the internal loopback test.

failover

A failure-recovery function provided by terminal servers. Failover occurs automatically when a user's current **service session** is disrupted by the failure of the **service node**. Automatic failover attempts to connect the user to the same **service** on an alternative service node. Automatic failover is attempted only if the service being used is offered by two or more service nodes (as with a VAXcluster service).

field replaceable unit (FRU)

A part of a given product that can be replaced in the field. Typically denotes a **module** or subassembly that can easily be removed from a product.

firmware

See server firmware.

flow control

The set of rules used by a communications **protocol** to ensure that server ports and port devices do not overrun and that a sending network node (or transmitting process) does not overrun a receiving node (or receiving process) with more data than the receiving node or process can accept.

frame

See message frame.

FRU

See field replaceable unit.

groups

Combinations of **service nodes** (and the **service** they offer) and terminal server ports. Each group can have a number of services and ports, and each group is identified by a number from 0 to 255. Groups are used to logically divide networks. A service node can access any server port that is in the same group as the service node. Server managers enable groups corresponding to the services they want port users to access. A port user can connect to services and can display information about services that are in the same group as the port. *See also authorized groups, current groups, server groups, and service groups.*

hardware installation

A three-step process that includes placing the server hardware in the desired location, connecting its cables, and testing its operation (*see diagnostic self-test program*).

heartbeat

A signal generated by certain Ethernet transceivers. The signal is used to verify that the collision detection circuitry is operational.

host

See load host. Contrast with service node.

host-initiated request

A connection request from a **service node** to a server asking that the server initiate a **session** between a service node application (for example, a print queue) and a server port device (for example, a printer). Host-initiated requests reflect the fact that service node software cannot establish **sessions**; only servers establish sessions.

image

image file

See server image.

initialization

The process of running the server's **diagnostic self-test program** and, optionally, **down-line loading** the server with the **server image**.

installation

See hardware installation, software installation, system installation, and verification.

interactive terminal

A device that is under the control of the terminal user and is connected to a server port.

internal loopback test

An **asynchronous port loopback test** during which data is looped internally to the module. All module circuitry is tested except port drivers and receivers. *Contrast with external loopback test.*

keepalive timer

A timer that defines the interval between idle run **messages** sent by the server to **service nodes** on inactive **virtual circuits**. Acknowledgment of these messages by the service nodes allows the server to continually monitor the status of all circuits without consuming excessive Ethernet **bandwidth**.

LAN

See local area network.

LAT

See Local Area Transport.

LAT Control Program (LCP)

A control program that allows network and system managers to monitor and to control the LAT protocol on **service node** operating systems.

LATplus/VMS software

Software that enables nodes running VAX/VMS V4.2 and later to perform enhanced LAT functions such as printer support.

LCP

See **LAT Control Program**.

line cards

The asynchronous multiplexer modules in the server that contain the device ports.

load file

The server system image file that is stored on the **load host** in the **server directory**. When the load host receives a request for a **down-line load**, it sends the data in this file.

load host

A node on the same Ethernet as the server that can **down-line load** the **server image** to the server and that can receive **up-line dumps** of server memory.

load host's node database

A database that contains information about terminal servers and that allows the load host to perform **down-line load** and **up-line dump** operations. This database is made up of three databases on the load host: the **DECnet operational database**, the **DECnet permanent database**, and the **server configuration database** (that is, **DSVCONFIG.DAT**).

local

(1) Pertaining to equipment or commands originating at or residing at a direct (hard-wired) connection. (2) Refers to a **terminal server** that a user is using on an interactive port device. *Contrast with remote.*

local access

A manager-specified type of access that allows only interactive use of a port; users must connect directly to the port or connect through a **dial-in modem**. *Contrast with remote access.*

local area network (LAN)

A network in which communications are limited to a moderately sized geographic area such as an office building, a warehouse, or a campus.

Local Area Transport (LAT) architecture

A networking model that includes the **LAT protocol** and that manages connections between terminal servers and **service nodes**. The **LAT protocol** is layered on the **Ethernet protocol**.

local console

A terminal that is connected to the server's console port.

local console mode

For DS500, the environment in which the server manager executes the diagnostic self-test program at the local console port.

local console port

See console port.

local mode

The environment in which a user interacts directly with the server by entering server commands at the local prompt. *Contrast with service mode.*

local network interconnect

A device (called a DELNI) that can interconnect up to eight network nodes to a single Ethernet transceiver.

local service

A LAT service offered by the server that the user is logged in to.

logical port

A software-assigned designation for a port that might or might not be associated with a physical port (that is, a hardware connector for a device).

log-in database

For DS500 and ETS, a database that resides on the server in dynamic memory and that contains current operational values for port characteristics that are saved between logins.

loopback connector

A special piece of hardware that, when plugged into a server port, loops signals back to that port for test purposes.

loopback test

A test that requires a sending process to transmit a data message sequence to a receiving process and back again for a specified number of times without generating an error. *See also internal loopback test and external loopback test.*

Maintenance Operations Protocol (MOP)

A maintenance protocol specified in the Digital Network Architecture (DNA) that is used to implement the Remote Console Facility and to perform down-line loads, up-line dumps, and loopback tests.

master

An addressable process on a LAT node that provides communications attachment points for virtual circuits. The master initiates and controls activity over LAT virtual circuits.

master mode

The mode usually associated with the terminal server that initiates communications and control connections with host nodes. *Contrast with slave mode.*

message

The unit of information transmitted by the LAT Virtual Circuit layer to start, run, or stop virtual circuits. A message is contained in one frame assembled by the Data Link layer.

message frame

The basic Ethernet network message unit transmitted by the Data Link layer, which is made up of a preamble and a data stream. The data stream includes the destination node address, the source node address, the protocol type, the message data, and an error detection code.

MMJ connector

A modified modular jack (MMJ) that can accept an MMP connector to support a single data-leads-only channel.

MMP connector

A modified modular plug (MMP) used for a six-conductor Digital office cable connection to an MMJ connector.

modem

MOdulator/DEModulator. A device that converts computer signals to signals that can be sent over a telephone line.

modem control

A system of electrical signals used to control the physical connection and disconnection of modem-type devices.

module

(1) A circuit board. (2) A separate unit or part of a computer program.

module slot

An opening in the server designed for inserting a module so that it connects to the server backplane.

MOP

See Maintenance Operations Protocol.

multicast

Pertaining to a feature of the Ethernet and LAT protocols that provides special multicast addresses whereby a message sent to one address can be transmitted to a number of nodes affiliated with that address.

multicast address

A single physical address used by one or more nodes on an Ethernet. A message sent to this address is transmitted to all affiliated nodes.

multicast message

A message frame whose destination address is a multicast address.

multicast timer

A LAT **service node** characteristic that determines the time interval between each **multicast message**.

name

A unique string of ASCII characters that identifies an entity within the LAT architecture. *See also* DECnet node name, server name, and port name.

NCP

See Network Control Program.

network

A configuration of two or more computers linked to share information and resources. The computers can be either general purpose computers or dedicated computers, such as **terminal server**.

Network Control Program (NCP)

The DECnet command interface used to configure, control, monitor, and test DECnet networks.

node

A **network** component consisting of a computer system and the associated network software.

non-LAT host

A computer that depends on its physical connection to a terminal server in order to be offered as a LAT **service**. The server provides the **service node** software for the non-LAT host and offers the system as a service at a server port.

nonprivileged status

The default status for all interactive server ports. Users at nonprivileged ports can use a subset of the privileged command set to: change some **local port** characteristics; display information about the server, its ports, and service nodes; and execute commands required to connect to services. However, nonprivileged users cannot access commands that change the state of the server or other ports.

octet

A group of 8 bits. In the Ethernet protocol, all fields are measured in octets instead of bytes.

on-line help

On-line documentation that describes command syntaxes, including keywords, ranges, and defaults.

operational database

A database containing values that determine the current (volatile) operating conditions of the server (*contrast with permanent database*).

out-of-band data

High-priority data that is passed to the receiving process out of sequence and ahead of other data; switch characters and flow control characters are examples of out-of-band data on a terminal server.

output port

A server port that transmits data but does not receive data.

packet

See message frame.

passive adapter

A connecting device that joins dissimilar connectors and, in some cases, makes dissimilar signal requirements compatible. The adapter is considered passive because it does not require an external power source to operate. *Contrast with active converter*.

passive rack

An equipment rack in a satellite equipment room that contains passive equipment. Passive equipment does not require an external power source to operate.

patch panel

A board with temporary electrical connections and movable wires that facilitate rewiring.

peer-to-peer communications

A LAT architecture feature whereby each terminal server component layer has a corresponding service node component layer.

permanent database

A database containing permanent values that define the basic operating conditions of a server, which are preserved across loads. Modifications to this database change the permanent operating conditions of the server. Nonsecure users can temporarily modify these values in the **operational database**.

Physical layer

The lowest layer in the International Standards Organization (ISO) model for open systems interconnection (OSI). The Physical layer is implemented by the physical channel using a specified medium. The Physical layer transmits **message frames** and insulates the **Data Link layer** from medium-dependent physical characteristics, such as baseband, broadband, or fiber-optic technologies.

port

A physical access point on the server to which a device can connect. Ports can have logical names.

port device

See device.

port name

A port characteristic that identifies a port as a LAT resource on the network as well as a resource on the local server. The port name appears in displays for SHOW PORTS CHARACTERISTICS, SHOW PORTS COUNTERS, and SHOW PORTS STATUS.

power down

To remove power from the server either by unplugging it, or, if the server has an ON/OFF switch, by setting the switch to OFF.

power up

To apply power to the server by plugging it into a live outlet and, on servers having an ON/OFF switch, by setting the switch to ON. The server responds by running the diagnostic tests and requesting a down-line load.

preferred service

A predefined service to which the server attempts to connect a specific port whenever a user at that port issues a CONNECT command without a service name.

privileged status

A port status that can be set by the server manager only (or by any user knowing the privileged password). Users at privileged ports can execute all server commands, including commands that modify the server, its ports, and its services.

protocol

A set of rules within an architecture that governs the flow of data between information processing equipment; a set of conventions between communicating processes regarding the format and content of messages to be exchanged.

queuing

The process of putting connection requests for a service into a waiting list (queue) when the service is currently in use. Requests are dequeued and processed in the order in which they were entered into the queue (first-in/first-out).

rating

See service rating.

RCF

See Remote Console Facility.

release notes

A server distribution text file that the software installer copies to the **server directory** on the **load host** and then prints. The release notes can include any of the following: special instructions for installation, information specific to the current release of the product, and any information omitted from the printed documentation.

remote

Pertaining to equipment located elsewhere on the LAN or to commands executed at another system on the LAN. For example, a **remote terminal server** is a server to which a user can connect over a LAN or over telephone lines. *Contrast with local.*

remote access

A manager-specified type of access that allows only **remote connections** to a port, for example, connections by printers, **applications devices**, and **non-LAT host systems** using a **dial-out modem**. *Contrast with local access.*

remote console

A terminal that is using the **Remote Console Facility** at a **remote DECnet node**.

Remote Console Facility (RCF)

A **load host** function that allows **remote connections** to the server's management port to issue server commands.

remote management port

The port on a server to which the **remote console** is connected. For DS500 and ETS, the logical remote management port is always associated with physical port 0.

remote management session

The process of issuing a series of management commands (either server commands or NCP commands) at a **remote console**.

resource

A device or software application on the LAT network that performs certain functions that can be named as **service** and that can be accessed by terminal servers or service nodes; for example, a computer or a printer.

response time

The time it takes the system to answer a query from a terminal; the time elapsed from when a user enters a character at a terminal keyboard to when the character is echoed (displayed).



retransmit limit

The number of times a LAT **virtual circuit message** is retransmitted to a **service node** when the server has received no acknowledgment message.


RS-232-C

A communications standard of the Electronic Industries Association (EIA) that defines the electrical and the mechanical requirements for the interconnection of **data terminal equipment (DTE)** and **data communication equipment (DCE)**. RS-232-C supports **modem control** and is generally used for communication over distances of up to 15.3 meters (50 feet).

RS-422-A

A communications standard of the Electronic Industries Association (EIA) that specifies the electrical characteristics of a balanced voltage digital interface circuit (*see* **balanced circuit**). It can be used to specify the interchange of serial binary signals between **data terminal equipment (DTE)** and **data communication equipment (DCE)** or between digital equipment connected by point-to-point circuits. RS-422-A supports **data-leads-only** and is generally used for communicating over distances of up to 1219.2 meters (4000 feet).

RS-423-A



A communications standard of the Electronic Industries Association (EIA) that specifies the electrical characteristics of the unbalanced voltage digital interface circuit. It can be used to specify the interchange of serial binary signals between **data terminal equipment (DTE)** and **data communication equipment (DCE)** or between digital equipment connected by point-to-point circuits. RS-423-A supports **data-leads-only** and is generally used for communicating over distances of up to 304.8 meters (1000 feet).

satellite equipment room (SER)

A location in a **DECconnect System**, such as a room or a cabinet, where device cables from a local group of offices connect to respective voice, video, and/or data communications **networks**.

secure port

A **port** set up by the server manager so that the port user has access limited to a subset of the complete nonprivileged user command set.

secure user

User of a **secure port**. A secure user can use all the commands needed for connecting to **service** but cannot change all the **port** characteristics that users of nonsecure ports can change. Also, a secure user can access only limited display information and cannot use many **local mode** commands available to other nonprivileged users, such as the **broadcast** command.

secure status

A restrictive status that the server manager can impose on a port to limit the execution of commands on that port to a subset of the nonprivileged command set.

segment

In a local area network using a bus topology, electrically continuous pieces of bus made of the same transmission media. Segments can be connected to each other with devices such as repeaters (DEREPs).

SER

See satellite equipment room.

server characteristics

Information in the server's databases that defines the server's operational parameters. The three categories of server characteristics are port characteristics, server characteristics, and service characteristics. Each characteristic has a default value that can be changed.

server configuration database

A load host database that contains the DECnet characteristics and the server type, the load file name, and the dump file name for each server.

server databases

See permanent database, operational database, and log-in database.

server directory

A disk directory on a load host that contains the server's image and other related files.

server firmware

Server software that permanently resides in read-only memory on server modules.

server groups

An itemization of groups that includes any group currently enabled on any port on the server (excluding the console port). These groups are included in the display produced by the SHOW/LIST SERVER SUMMARY command.

server image

A file in the server directory on the load host that contains executable code and, for DS500 and ETS, the server's permanent characteristics.

server name

- (1) A **server characteristic** assigning to the server a unique name that identifies the server to other LAT nodes on the LAN. To avoid confusion, Digital Equipment Corporation suggests that this characteristic be set to match the **DECnet node name** assigned to the server.
- (2) A field displayed locally in some SHOW/LIST SERVER displays.

server node

See **terminal server**.

server port

See **port**.

service

A **network resource** offered by a LAT **service node**.

service announcement

A LAT **protocol message**, which contains a brief description of a **service node** and its **service**, that is **multicast** on the network by the service node to announce its availability.

service circuit ID

A **load host** characteristic that identifies which Ethernet controller on that load host is used to access a specific server for maintenance functions.

service groups

Those **groups** that are enabled for all **local services** offered by the server (specified by the **server characteristic** SERVICE GROUPS). See also **groups**.

service mode

The server environment in which all user input is passed directly to the **service** in the user's **current session** and is not interpreted by the server. *Contrast with local mode.*

service name

A name assigned to a **service** by the server manager or by the **service node** system manager. Users specify this name in a CONNECT command when establishing a **service connection**.

service node

A LAT node that provides a **service** to the terminal servers on the LAN. A terminal server can also be a service node.

service rating

A value assigned to a **service** by the **service node** to indicate its relative capability to accept new **sessions**. The rating is a scale from 0 to 255, where 255 is the greatest capacity. Server software uses this rating to choose a service node when a user attempts to connect to a service that is offered by multiple service nodes.

service session session

A connection between a terminal server user and a service. The connection allows a terminal server user or device using a shared virtual circuit to exchange data with the service node.

session management

A facility provided by some terminal servers that uses TD/SMP to communicate with a server device so that the device can process simultaneous, independent, multiple terminal sessions. On the device, the data exchange of multiple sessions can be processed simultaneously regardless of which session is current.

slave

An addressable process that provides the passive side of the communications attachment point for a LAT virtual circuit. The slave responds to requests from the master.

slave mode

The mode associated with service nodes, which respond to requests from terminal servers. *Contrast with master mode.*

slot

A variable length field in the Virtual Circuit layer run message. The field contains data about one connection (or session) between a terminal server port and a service node. This information includes the slot identification, the type of slot, the slot length, and the user data.

Slot layer

A layer in the LAT architecture that establishes and maintains sessions between terminal server ports and service nodes.

software image

See server image.

software installation

A three-step process that includes copying the server distribution files from the distribution media to the load host, configuring the load host's node database, and verifying the load host installation and the server system installation.

Start slot

A slot used by the Slot layer to request the beginning of a session on a virtual circuit.

Stop slot

A slot used by the Slot layer to terminate a session on a virtual circuit.

**system enclosure**

The server hardware chassis assembly that contains the power supply, the hardware circuitry, and the fan(s).

system exerciser

The part of the **diagnostic self-test program** that tests server operation under simulated load conditions.

system image

See **server image**.

system installation

A two-step process that includes **hardware installation** and **software installation**.

system kernel

The minimum server hardware that is required for server operation. The server system kernel consists of the central processing unit, ROM, RAM, the bus backplane, and the Ethernet Controller Module.

System Kernel Test

The part of the **diagnostic self-test program** that verifies the operation of the system kernel.

**tap**

In a **local area network**, an electrical connection between a **transceiver** and the network cable.

TD/SMP

Terminal Device/Session Management Protocol. An **asynchronous** coded syntax used by the server and a device to manage multiple sessions over a single physical circuit.

terminal

An interactive input/output device having a keyboard and a printer or video screen, which is used to interact with a server or a computer.

terminal server

A dedicated communications system that provides **LAT connections** between its ports and LAT systems. A terminal server establishes **virtual circuits** for sessions between its port devices and service nodes.

Terminal Server Configurator (TSC)

For DS500 and ETS, a utility residing in the **server directory** on the load host that is used to customize the server's **permanent database**. Customization redefines the values to be **down-line loaded** to the server's **operational database**.

Terminal Server Manager (TSM)

Software that runs on a VAX/VMS host system and that allows a manager to monitor and control multiple terminal servers from one location. The terminal servers must be connected to the same Ethernet local area network as the manager's VAX/VMS host system.

terminal session

A single session on a terminal server port that is operating under session management control. The server allows one LAT service session for each terminal session.

transceiver

A piece of hardware that provides an electrical connection to a network cable for a network node. *See also tap.*

transceiver cable

A cable that connects the server Ethernet Controller Module to the transceiver.

TSC

See Terminal Server Configurator.

TSM

See Terminal Server Manager.

up-line dumping

The process of sending a copy of the server's memory to a responding load host, usually following a fatal error. The data is dumped into the unique server dump file in the server directory.

verification

A two-step process to check load host installation and system installation; steps include down-line loading the server image to the server and testing a few server commands from a terminal attached to the server.

virtual circuit

A logical communications path between a server and a service node. A virtual circuit provides a bidirectional, sequential, timer-based, error-free stream of data.

Virtual Circuit layer

A layer of the LAT architecture that provides a reliable transport mechanism between terminal servers and service nodes.

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

If You Live In	Call
New Hampshire, Alaska, or Hawaii	(603) 884-6660
Continental USA and Puerto Rico	(800) 258-1710
Canada	(800) 267-6146

Table 3: How to Order by Mail

If You Live In	Write To
USA or Puerto Rico ¹	Digital Equipment Corporation, P.O. Box CS2008, Nashua, New Hampshire 03061
Canada	Digital Equipment of Canada LTD., 940 Belfast Road, Ottawa, Ontario, Canada K1G 4C2 Attn: A&SG Business Manager
Other	Digital Equipment Corporation, A&SG Business Manager, c/o Digital's local subsidiary or approved distributor

¹Any prepaid order from Puerto Rico must be placed with the local Digital subsidiary:
(809) 754-7575.

Ordering Procedures for Digital Employees

Software Documentation Kits

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.

Hardware Manuals

If you are a Digital employee, you can place your order for hardware manuals by telephone, VAXmail, or DECmail as follows:

- Telephone number: (617) 351-4323 (DTN: 234-4323)
- DECmail address: ORDER@NRO
- VAXmail address: PUFFIN::MCNEIL

NOTE

If you use electronic MAIL, DECmail is preferred over VAXmail.

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