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DECserver 300

Software Installation (VMS)

December 1991

This manual provides the procedure to install the DECserver 300 distribution software onto VMS systems, configure these systems as down-line load hosts, and down-line load the DECserver 300 image. This manual is intended for the VMS system manager or network manager.

Supersession/Update Information:	This is a revised manual.
Operating System and Version:	VMS V5.0
Software Version:	DECserver 300 V2.1

This manual applies to Version 2.1 of the DECserver 300 software and Version 5.0 of the VMS operating system, and all subsequent maintenance releases up to the next major product release.

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DECserver 300

Software Installation (VMS)

Order Number: AA-NE45C-TE

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DECserver 300
Software Installation (VMS)
AA-NE45C-TE

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Preface

Intended Audience

This document provides a system manager or network manager the procedures needed to install the terminal server software on a VMS™ load host.

The system manager or network manager should be familiar with both DECnet™ Phase IV network management concepts and the VMS operating system.

Structure of This Document

This document consists of one continuous procedure, which is divided as follows:

- Preparing to install the software
- Using VMSINSTAL
- Using DSVCONFIG
- Down-line loading the software
- Completing the installation
- Installing software on additional VMS hosts

This document also includes:

- What to do if the installation fails
- DECserver™ 300 distribution files

Conventions Used in This Manual

To use this manual effectively, you should be familiar with the conventions discussed in this section:

- All numbers are decimal unless otherwise noted.
- All Ethernet addresses are hexadecimal.

Convention	Meaning
`Special type`	This special type indicates system output or user input. System output is in black type; user input is in red type.
UPPERCASE	VMS commands, node names, directory names, and file names appear in uppercase letters.
italic	Italic type in command syntax indicates variables for which either you or the system supplies a value.
[*key*]	Press the specified key. For example, [Return] means that you should press the Return key.
Ctrl/X	Hold down the Control key and simultaneously press the key specified by *x*. The server displays this key combination as ^*x*.

Installation Procedure

The following lists the topics provided in this document to install the terminal server software on aVMS load host:

- Preparing to install the software
- Using VMSINSTAL
- Using DSVCONFIG
- Down-line loading the software
- Completing the installation
- Installing software on additional VMS hosts

At the end of this manual is a procedure that describes the steps to be taken if the installation fails. The final section of this document provides a list of the distribution files.

Preparing to Install the Software

Perform the following tasks before you install the terminal server software on your system (referred to as the load host in this procedure):

1. Check your load host for the following:

   a. VMS V5.0 or any subsequent maintenance release up to the next major product release is installed.

   b. DECnet VAX[TM] Phase IV is running.

   c. The Ethernet controller is on the same Ethernet as the terminal server.

2. Ensure that the CMKRNL and SYSPRV privileges are set.

3. Verify that the load host has 2500 blocks of available disk space (2000 after installation), and an additional 2048 blocks for each up-line dump.

4. Backup the system before installing the software.

5. Mount the software media on an appropriate device drive, unless you are installing from save sets copied from another load host.

6. Make a note of the terminal server DECnet node address, DECnet node name (supplied by the network manager), and the Ethernet hardware address (supplied by the hardware installer).

Installation requires approximately 5 minutes to complete.

NOTE

License Management Facility (LMF) is not required.

Using VMSINSTAL

Perform the following to install the terminal server software on the load host. To stop the installation at any time, press Ctrl/Y.

7. Log in to the system manager account.
8. Enter the @SYS$UPDATE VMSINSTAL DS3021 *your-device-identifier* OPTIONS N command to start VMSINSTAL. Substitute your device identifier for *your-device-identifier* where the distribution medium is mounted.
9. If there are any active processes, VMSINSTAL lists them and asks if you want to continue. Enter YES to continue the installation.
10. Press Return if you have backed up your system disk, and enter YES if you mounted the software media on the appropriate device.

```
$ @SYS$UPDATE:VMSINSTAL DS3021  your-device-identifier OPTIONS N

VAX/VMS Software Product Installation Procedure Vn.n

It is 11-APR-1991 at 14:08.
Enter a question mark (?) at any time for help.

%VMSINSTAL-W-ACTIVE, The following processes are still active:
MIKE_VCS
VCS Task 542.1
VCS Task 193.0
* Do you want to continue anyway
[NO]? YES

* Are you satisfied with the backup of your system disk[YES]?

Please mount the first volume of the set on xxxx:.
* Are you ready? Y
%MOUNT-I-MOUNTED, DS3 mounted on SYSTEM$xxxx:
```

Using VMSINSTAL (cont.)

11. Select option 2 (recommended) to print the release notes. Press the Return key to print the release notes on the default printer or specify another print queue.

    If you select option 1, the release notes scroll on your terminal. Be aware that the release notes file can contain as many as 30 screens.

12. Enter YES to continue the installation.

```
The following products will be processed:
DS3 V2.1

Beginning installation of DS3 V2.1 at 14:08

%VMSINSTAL-I-RESTORE, Restoring product save set A...

Release notes included with this kit are always copied to SYS$HELP.

Additional Release Notes Options:

1.  Display release notes
2.  Print release notes
3.  Both 1 and 2
4.  None of the above

* Select option [2]:
* Queue name [SYS$PRINT]:
Job DS3020.RELEASE_NOTES (queue SYS$PRINT, entry 314) started on SYS$PRINT


* Do you want to continue the installation [NO]? YES
```

Using VMSINTAL (cont.)

13. Press the Return key to run the Installation Verification Procedure (IVP), which is recommended. The IVP verifies that the DECSERVER directory exists, all the files from the distribution kit are in the directory, and the release notes are in the SYS$HELP directory.

14. If your system is part of a VAXcluster system, use the CREATE/DIRECTORY command on each VAXcluster node after exiting VMSINSTAL so that the other nodes can execute the terminal server software. You can do this after you finish this installation procedure.

```
* Do you want to run the IVP after installation [YES]?
%VMSINSTAL-I-RESTORE, Restoring product save set B...
%VMSINSTAL-I-SYSDIR, This product creates a system directory [DECSERVER]

If you intend to execute this layered product on other nodes in your VAX-
cluster, and you have the appropriate software license, you must prepare
the system-specific roots on the other nodes by issuing the following com-
mand on each node (using a suitably privileged account):

$ CREATE/DIRECTORY SYS$SPECIFIC:[DECSERVER]
/PROTECTION=(S:RWED,O:RWED, G:WER,W)
```

Using VMSINSTAL (cont.)

15. If you receive one of the following messages, perform the procedure described within the message to update the MOM$LOAD logical name.

One possible message:

```
Your installation is now complete. After exiting from VMSINSTAL:

1. Modify the definition of MOM$LOAD in your system start-up file, SYS$MAN-
AGER:SYSTARTUP_V5.COM, to resemble the following:

$ DEFINE/SYSTEM/EXEC/NAME=NO_ALIAS/NOLOG -
           MOM$LOAD -
           SYS$SYSROOT:[MOM$SYSTEM], -
           SYS$SYSROOT:[DECSERVER]

This command ensures that the location of the server image is defined each
time the system is rebooted, necessary for successful down-line loading.
```

Another possible message:

```
Your installation is now complete. After exiting from VMSINSTAL:

1. Add the following  command to your system start-up file, SYS$MANAG-
ER:SYSTARTUP_V5.COM, to resemble the following:

$ DEFINE/SYSTEM/EXEC/NAME=NO_ALIAS/NOLOG -
           MOM$LOAD -
           SYS$SYSROOT:[DECSERVER]

This command ensures that the location of the server image is defined each
time the system is rebooted, necessary for successful down-line loading.
```

MOM$LOAD is a logical name that your load host uses to find the image file of any product that must be down-line loaded. For each product, MOM$LOAD has an associated equivalent string that specifies the location of the product image file.

If you do not get either of these messages, no modifications to the system start-up file are necessary.

Using VMSINSTAL (cont.)

16. VMSINSTAL is completed. Proceed to step 17.

This IVP command procedure is for informational purposes. You do not need to run it again at this time.

```
2. Configure the server into your host's database.  Execute a command
procedure called DSVCONFIG.COM.   This command procedure is in the
SYS$ROOT:[DECSERVER] directory.  If you have already executed this proce-
dure from previous installations, you only need to configure  additional
units.  All previously defined units will still be configured.

The Installation Verification Procedure (IVP) for the DECserver 300 can be
found in SYS$TEST and may be run at any time by executing the command
procedure DS3$IVP.COM.

VMSINSTAL-I-MOVEFILES, Files will now be moved to their target directo-
ries...

Beginning installation verification procedure for DECserver 300 V2.1 com-
pleted at 14:30

VMSINSTAL procedure done at 14:30
$
```

17. If you are using the optional Terminal Server Manager (TSM) software, do not use the DSVCONFIG procedure; instead, refer to *Terminal Server Manager Installation and Use* to configure the load host database.

DSVCONFIG checks for data file DSVCONFIG.DAT in SYS$SYSROOT:[DECSERVER] or SYS$COMMON:[DECSERVER] for VAXcluster systems. It finds one of three situations:

- The file does not exist. The procedure creates DSVCONFIG.DAT.
- The file exists and is formatted correctly.
- The file exists but not in the correct format. The procedure reformats the file.

Each VAXcluster™ node might have an older version of DSVCONFIG.DAT. In this case, DSVCONFIG copies the terminal server entries from that data file into the DSVCONFIG.DAT file on SYS$COMMON:[DECSERVER], and renames the file in SYS$SPECIFIC so that the DSVCONFIG.DAT file in SYS$COMMON is used thereafter.

CAUTION

Do not execute any DECnet commands that are part of DSVCONFIG separate from the DSVCONFIG procedure. Otherwise, DECnet databases could be changed without changing DSVCONFIG.DAT, causing a synchronization problem.

Using DSVCONFIG (cont.)

18. Set the default to MOM$LOAD and start DSVCONFIG as shown in the example. You might get merging messages if you are on a VAXcluster system.
19. Select option 2 to add a new terminal server.

```
$ SET DEFAULT MOM$LOAD:
$ @DSVCONFIG


You must assign a unique DECnet node  name  and  DECnet  node address for
each new DECserver unit.

Press <RET> to start, or <CTRL/Z> to exit...




DECserver Configuration Procedure Version: Vn.n

Menu of Options
1 - List known DECservers
2 - Add a DECserver
3 - Swap an existing DECserver
4 - Delete an existing DECserver
5 - Restore existing DECservers
CTRL/Z - Exit from this procedure
Your selection? 2
```

Using DSVCONFIG (cont.)

20. Enter the following:
    - DS300 for the DECserver type
    - DECnet node name and address

      DSVCONFIG determines the validity of the node name entered. If you get an error here, choose another node name. The one you specified is in use.
    - Terminal server Ethernet address
21. DSVCONFIG determines the load host service circuit-ID and displays this ID as the default. Press the Return key to select the default service circuit-ID.

    DSVCONFIG adds the entry for the new terminal server to the databases and sets SERVICE ENABLED on the specified service circuit, which is necessary for down-line loading. If you get an error from DECnet while adding a terminal server, use option 4 to remove the entry, correct the problem, then try again.

```
Type ? at any time for help on a question.
Type CTRL/Z for any question to return to the menu without adding the unit.

DECserver type? DS300
DECnet node name for unit? xxxxxx
DECnet node address for unit? xx.xxxx
Ethernet address of unit? xx-xx-xx-xx-xx-xx

DECnet Service Circuit-ID? [UNA-0]

If you get an error message now, the new DECserver unit will not be com-
pletely added, and you should use menu item #4 (Delete an existing
DECserver) to remove it from the list of known DECservers.
```

Using DSVCONFIG (cont.)

22. Press the Return key to continue DSVCONFIG.
23. Press Ctrl/Z to exit DSVCONFIG.

```
Please hit <RETURN> to continue.

DECserver Configuration Procedure Version: Vn.n

Menu of Options

1 - List known DECservers
2 - Add a DECserver
3 - Swap an existing DECserver
4 - Delete an existing DECserver
5 - Restore existing DECservers
CTRL/Z - Exit from this procedure
Your selection? Ctrl/Z
$
```

Down-Line Loading the Software

If you are installing a new terminal server, down-line loading of the software image is done automatically during power up of the hardware. If this is the case, do not perform steps 24 through 28; instead, proceed to step 29.

24. Enter the NCP CONNECT NODE *node-name* command to connect to the terminal server. (Substitute your terminal server DECnet node name for *node-name.)* If a maintenance password has been defined by the terminal server manager, use the following command: CONNECT NODE *node-name* SERVICE PASSWORD *password*. (Substitute your terminal server maintenance password for *password*.)
25. Press the Return key to get the terminal server prompt. Enter the log-in password. ACCESS is the terminal server default log-in password.
26. Enter your user name (a string of 1 to 16 characters).
27. Use the SET PRIVILEGED command and enter the password. The default password is SYSTEM.
28. Use the INITIALIZE command to down-line load the terminal server image to the terminal server. The qualifier, DELAY *xx*, causes the terminal server to wait *xx* minutes before initializing. This permits any existing users time to log off. You must also wait *xx* minutes before you can continue with the procedure.

```
$ MCR NCP
NCP> CONNECT NODE node-name
Console connected (press Ctrl/D when finished)

Return
# ACCESS  (not echoed)
DECserver 300 Terminal Server V2.0 (BLn.n) -
LAT V5.1

Please type HELP if you need assistance
Enter username>  SWINSTALLER
Local> SET PRIVILEGED
Password> SYSTEM (not echoed)
Local> INITIALIZE DELAY xx
```

Down-Line Loading the Software (cont.)

Perform steps 29 through 34 to verify the down-line load.

29. Enter the NCP CONNECT NODE *node-name* command to connect to the terminal server. (Substitute your terminal server DECnet node name for *node-name.)* If a maintenance password has been defined by the terminal server manager, use the following command: CONNECT NODE *node-name* SERVICE PASSWORD *password*. (Substitute your terminal server maintenance password for *password*.)
30. Press the Return key to get the terminal server prompt. Enter the log-in password. ACCESS is the terminal server default log-in password.
31. Read the identification message to ensure the latest version (V*n.n*) of the terminal server image was down-line loaded.
32. Enter your user name (any string of 1 to 16 characters).
33. Press Ctrl/D to return to the NCP prompt.
34. Enter EXIT to return to the VMS system prompt.

If this installation is a software upgrade, either you or the network manager can now reload all existing terminal servers.

```
$ MCR NCP
NCP> CONNECT NODE node-name
Console connected (press CTRL/D when finished)
[Return]

# ACCESS  (not echoed)
DECserver 300 Terminal Server V2.1 (BLn.n) -
LAT V5.1

Please type HELP if you need assistance
Enter username>  SWINSTALLER
Local> [Ctrl/D]
NCP> exit
$
```

Completing the Installation

Perform the following if the installation is complete:

35. Optionally, you should install the kit on at least two load hosts. Also, you should have one load host for every 10 terminal servers.
36. Inform the system manager or network manager that the installation is complete.
37. Give this document to the person who will be managing the terminal server.

Installing Software on Additional VMS Hosts

To install the server distribution software onto an additional VMS load host that is not a member of a VAXcluster system, follow these steps:

1. Invoke VMSINSTAL at the original load host, as follows. (Substitute your device drive identifier for *your-device-identifier*.)

   `$ @VMSINSTAL DS3021` *your-device-identifier* `OPTIONS G SYS$UPDATE:`

   OPTIONS G stores the save sets in the SYS$UPDATE directory.

2. Copy the save sets from the original load host to the alternate load host's SYS$UPDATE directory. The save sets are *DS3nnn.A* and *DS3nnn.B*, where *nnn* is the version number of the DECserver 300 software. For example, *nnn* equals 021 for version 2.1.

3. Run VMSINSTAL on the alternate load host.

What To Do If the Installation Fails

Perform the following if the installation fails:

1. If the down-line load fails, it could be that service on the circuit is disabled. The following command shows how to check service circuit BNA-0. Substitute your load host service circuit-ID for BNA-0.

   ```
   $ MCR NCP
   NCP> SHOW CIR BNA-0 CHAR
   ```

   a. If the display shows that the service is disabled, enter the following command to check if there are any users or applications using the circuit:

      ```
      NCP> SHOW KNOWN LINKS
      ```

   b. If there are no known links active, enter the following commands to enable service circuit BNA-0. Enabling the circuit disconnects the active links.

      ```
      NCP> SET CIR BNA-0 STATE OFF
      NCP> SET CIR BNA-0 SERVICE ENABLED
      NCP> SET CIR BNA-0 STATE ON
      NCP> EXIT
      $
      ```

2. If your load host has more than one Ethernet controller, be sure that the correct service circuit-ID was used during the DSVCONFIG procedure. If you do not know the load host service circuit-ID, use the NCP command SHOW ACTIVE CIRCUITS to display active circuit characteristics.

   ```
   NCP> show active circuit

   Active circuit Volatile Summary as of 6-SEP-1991

   Circuit      State      Loopback       Adjacent
                          Name          Routing Node

   SVA-0       on                       4.378 (LKGRT3)

   NCP> exit
   ```

3. If you still have problems, refer to *DECserver 300 Problem Solving* or inform your system manager.

DECserver 300 Distribution Files

File Name	Description
SYS$TEST:DS3$IVP.COM	Installation verification procedure.
The following files are located in SYS$SYSROOT: or SYS$COMMON:[DECSERVER]:	
DSVCONFIG.COM	Configuration procedure.
DSVCONFIG.DAT	Data file used by DSVCONFIG.COM.
TSM$DS3_*nnn*_DEFAULTS.COM	File used by the Terminal Server Manager (TSM) software.
DS3_UNIX_SPOOL.C	The sample C program file is used for DECserver 300 spooling.
DS3_021_CRASH_DISPLAY.COM	Crash dump identification procedure.
DS3__021_RELEASE_NOTES	Release notes.
SH1601ENG.SYS	DECserver 300 software image.
TSM$DS3_V*21*_ADD_LOCAL_SERVICE.COM	File used by the TSM software.
TSM$DS3_*V21*_DEDIC_SERV_PRINTER.COM	File used by the TSM software.
TSM$DS3_*V21*_DEDIC_SERV_TERM.COM	File used by the TSM software.
TSM$DS3_*V21*_DSR_DTR_TERM.COM	File used by the TSM software.
TSM$DS3_*V21*_GET_CHAR.COM	File used by the TSM software.
TSM$DS3_*V21*_HOST_INIT_PRINTER.COM	File used by the TSM software.
TSM$DS3_*V21*_PC_TERM_OR_SERV.COM	File used by the TSM software.
TSM$DS3_*V21*_PORT_DEFAULT.COM	File used by the TSM software.
CHAR_MIB.TXT	Management Information Base (MIB) for user reference.
RFC_1158.TXT	MIB file for user reference.
RS_232_MIB.TXT	MIB file for user reference.