DECdx/VMS Installation and Information

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This manual describes how to install DECdx/VMS on a VMS operating system.

Operating System and Version: VMS Version 4.7, 5.0 or higher

Software Version: DECdx/VMS Version 1.2

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Preface

Purpose of This Guide

This document explains how to install DECdx software on the VMS operating system.

DECdx lets users transfer documents from a word processor to a VAX host. The transfer procedure places the documents in a DECdx index. DECdx also lets users convert host files to WPS-format files and then transfer them to the WPS. DECdx lets users delete, add, convert and print files.

Keep this document with your distribution kit. You will need to refer to it again if you receive maintenance updates or if you have to reinstall DECdx.

Who Should Use This Guide

This installation manual is for the system manager or user with system manager privileges who wants to install and maintain DECdx Version 1.2 on a VMS operating system.

For More Information

Consult the following documents for details about DECdx/VMS:

- *DECdx Getting Started,* AV-P146A-TK
- *DECdx User's Guide,* AA-U153A-TK
- *DECdx/VMS V1.2 Release Notes*
- The appropriate installation manual for layered products

Conventions

Ctrl/x	Means hold down the Ctrl key while you press the designated letter key. For example: Press Ctrl/C.
Enter	Means type a command response, then press the Return key.
Red Print	Shows text you type to install or maintain DECdx.
Return or <RETURN>	Means press the Return key.
UPPERCASE LETTERS	Identify commands or utilities.

Chapter 1

Installing DECdx on VMS

This chapter describes how to install DECdx Version 1.2 on a VAX with VMS Version 4.7, 5.0, or higher. Installation takes about 15 minutes.

1.1 Installation Requirements

To install DECdx on VMS, your system must have:

- Version 4.7, 5.0, or higher of VMS
- System manager privileges
- About 3650 blocks of disk space during and 500 blocks after installation
- The Software Installation Guide for the appropriate VAX
- A Product Authorization Key (PAK) for the DECdx license on your system, unless installing on VMS V4.7
- DECdx software on appropriate media, listed in the next section

To install DECdx on your system, you must also know how to place a disk in the disk drive or how to mount magnetic tape in the tape drive.

If your system is tailored, consult the DECdx/VMS Version 1.2 System Support Addendum (SSA 26.36.05-A) for the minimum VMS/MicroVMS classes required by DECdx.

1.1.1 Distribution Kit

DECdx Version 1.2 software on media appropriate to your system include:

Order Number	Media
**-Q*708-H5	1 TK50 tape cartridge
**-Q*708-HG	4 TU58 tape cartridges
**-Q*708-HM	1 MT9 1600 BPI magnetic tape
**-Q*708-HY	3 RX01 diskettes

The tape and TK50 cartridge are labeled DDX. The other media are labeled DDX1, DDX2, etc. Check your kit to ensure that it contains all the volumes listed in the bill of materials.

1.2 Preparing to Install DECdx

The following procedure installs DECdx on all VAX/VMS systems, unless otherwise noted.

To prepare for installation:

1. Back up your system disk.

   Installing DECdx software deletes older DX/VMS versions, so you should back up your system disk before attempting software installation. Backup is advisable also because a system failure at a critical point of the installation could leave unusable files.

2. Log in under the system manager's account SYSTEM.
3. Use the SYSHUTDWN command procedure to prevent users from gaining access to the system.

   ```
   $ @SYSHUTDWN.COM
   ```

4. Reboot the system.
5. Set the login quota to 0 by typing:

   ```
   $ SET LOGINS/INTERACTIVE=0
   ```

6. The system disk with the logical name SYS$SYSROOT is the default to receive DECdx. To install DECdx on SYS$SYSROOT, establish this default:

   ```
   $ SET DEFAULT SYS$UPDATE:
   ```

To install DECdx on a system disk other than SYS$SYSROOT, define a logical name for the target disk. For example, if you are installing DECdx on a RK07 disk on the first drive, issue these commands:

```
$ DEFINE TARGET __DMA1:[SYS0.]
$ SET DEFAULT TARGET:[SYSUPD]
```

1.3 Registering Your License

If installing on VMS Version 4.7, you do not need to register your license on your VMS system. Go to section 1.4 of this document. If installing on VMS Version 5.0 or higher, you must register and activate the appropriate license on your system.. You do this with the VMSLICENSE procedure, a bundled and supported VMS utility, as follows:

1. Invoke VMSLICENSE:

   ```
   $ @VMSLICENSE
   ```

   The procedure displays the following menu:

   ```
   VMS License Management Utility Options:

       1.  Register a Product Authorization Key
       2.  Amend an existing Product Authorization Key
       3.  Exit this procedure

   Select Option:
   ```

2. Enter 1 (DIGITAL is not currently using option 2). The procedure displays the following message:

   ```
   * Do you have your product authorization key?
   ```

   Be sure you have a document titled "License Software Product, Product Authorization Key" or "Service Update PAK (Product Authorization Key)", which is included in your software distribution kit. Enter Y.

3. The procedure then asks for a value for each item on the PAK. The question prompts correspond to the headings on the PAK.

   Enter data from the corresponding fields.

   Some prompts display a default reply, shown in brackets. To use the default, press the Return key. To replace default data, enter the new data. To cancel the use of default data without entering new data, enter the backslash (\) character.

   Press Ctrl/Z to exit.

4. After asking for all the data and before actually registering this license, the procedure gives you the opportunity to review and correct your responses. The procedure displays the information that you entered, followed by the question:

   ```
   *   Is this information correct?
   ```

   Carefully compare the information on the screen with the information on the PAK. If the information is correct, enter Y.

   If it is incorrect, enter N.

   If you enter any of the information incorrectly, an error message is displayed and the license is not registered. Keep in mind that a CHECKSUM error will result when you enter incorrect information for the other items on the PAK.

   If you answer N to the above question, or if an error message is displayed, the procedure displays the following message:

   ```
   * Do you wish to make corrections?
   ```

   To start over, enter Y. The procedure presents the previously entered data as defaults.

5. If you entered all the information correctly, the procedure displays the following message:

   ```
   DECdx has been registered.
   ```

6. After the license is registered, the procedure asks if you want to activate the license on the current node, as follows:

   ```
   * Do you want to LOAD this license on this system [YES]?
   ```

   If you are registering this license on a standalone system and want to make DECdx available immediately, or if registering in a VAXcluster environment and want to make DECdx available immediately on the current node, press the Return key (for YES). If the license loads successfully, the procedure displays an informational message.

   If you are in a VAXcluster environment but do not want to make DECdx available immediately on the current node, enter N. Activate the license for the selected nodes after exiting the VMSLICENSE command procedure.

7. The procedure displays the following question:

   ```
   * Do you want to register another PAK?
   ```

   Enter N and press Return. The procedure displays the menu as in (1) above. Enter 3.

8. You must activate the DECdx license before you can use the product. To insure that the license is activated, use the following procedure:

   If the node is not running, LMF can activate the license when the node starts up if the node boots from a common system disk having VMS Version 5.0. The system looks at the common LICENSE database in which the license is registered.

   If the node is running, access the system manager's account, SYSTEM. Enter the following command:

   ```
   $ LICENSE LOAD /AUTHORIZATION=number DECdx
   ```

   where "number" is the Authorization Number of your license.

   DECdx is now authorized for use on the current node.

9. To control which nodes in the VAXcluster environment have access to the DECdx license and software, enter the following command:

   ```
   $ LICENSE MODIFY /INCLUDE=(nodename[,nodename...]) DECdx
   ```

10. For a more complete description of the VMSLICENSE command procedure and instructions on how to run it in various environments, see the release notes section of the VMS documentation. In particular, *VMS 5.0 Release Notes Chapter 6* contains much useful information on this subject.

    For details of license activation in a VAXcluster environment, see the *VMS License Management Utility Manual*.

1.4 Installing DECdx

Install DECdx with the VMSINSTAL procedure, a bundled and supported VMS facility.

The VMSINSTAL.COM procedure controls DECdx software installation by command procedures contained in the distribution media. These command procedures send prompts and instructions to the terminal. Most prompts require a Y (Yes) or N (No) response, as appropriate.

To abort the installation procedure at any time, press Ctrl/Y. All files created up to that point are deleted and you are returned to the DCL level. To retry the installation procedure, invoke VMSINSTAL.

1. Invoke VMSINSTAL:

   ```
   $ @VMSINSTAL
   ```

A message similar to this one appears:

```
VAX/VMS Software Product Installation Procedure V5.1

It is 20-Mar-1989 at 21:13.
Enter a question mark (?) at any time for help.
```

System status messages may appear followed by a prompt asking if you want to continue the installation. If you want to continue installation, enter Y or YES:

```
* Do you want to continue anyway [NO]? Y
```

If you enter N or press the Return key to accept the default, VMSINSTAL exits from the installation procedure. Skip to step 11.

If there are no system status messages, VMSINSTAL prompts you for a backup of the system disk. If you backed up your system disk before running VMSINSTAL, press Return to accept the default Yes.

```
* Are you satisfied with the backup of your system disk [YES]?  <RETURN>
```

If you enter N, VMSINSTAL exits from the procedure. Go to step 11.

2. Enter the name of the tape drive or disk drive where the distribution volumes will be mounted. This example uses MFA0. Substitute the logical name for your drive:

```
* Where will the distribution volumes be mounted: MFA0
```

NOTE

The distribution media does not have to be mounted at this point.

3. Enter DDX to input the name of the product to be installed.

```
Enter the products to be processed from the first distribution volume set.
* Products: DDX
```

4. To print or display the DECdx Release Notes during installation, enter N as an option. Otherwise, press Return to accept the default of no options.

```
* Options (none): <RETURN>
```

5. Place the distribution media in the drive you specified in step 2. Enter Y to begin the DECdx installation.

```
Please mount the first volume of the set on MFA0:
* Are you ready? Y
```

If you enter N, the request to insert the volume in the drive and the query "Are you ready?" are repeated.

A message, similar to the following, indicates installation has begun:

```
%MOUNT-I-MOUNTED, DDX mounted on _MFA0:

The following products will be processed:

  DDX V1.2

Beginning installation of DDX V1.2 at 21:15
```

This message is followed by messages specific to DECdx.

6. If you entered option N in step 4, you can print the DECdx Release Notes during installation. Press Return to accept the default 2.

   Enter a print queue name or press Return to print to the default SYS$PRINT.

   Enter Y to continue the installation.

   The following is an example of the Release Notes Options menu:

```
Release Notes Options:

    1.  Display release notes
    2.  Print release notes
    3.  Both 1 and 2
    4.  Copy release notes to SYS$HELP
    5.  Do not display, print or copy release notes

* Select option [2]:
* Queue name [SYS$PRINT]: <RETURN>

Job DDX$012 (queue SYS$PRINT, entry 75) started on HOST$PRINTER
* Do you want to continue the installation? Y
```

7. If installing on VMS Version 5.0 or higher, VMSINSTAL asks if you have a license to run DECdx on your system. If installing on VMS Version 4.7, you will not see this question and should go to step 8.

   Before you can install DECdx, you must have registered the product using the VMSLICENSE command procedure. If you have done this, enter Y. If you have not, enter N to abort the installation. Then invoke VMSLICENSE, register DECdx, and restart the installation procedure.

```
Product:       DECDX
Producer:      DEC
Version:       1.2
Release Date:  20-March-1989

* Does this product have an authorization key registered and loaded? Y
```

8. Normally you want to run the Installation Verification Procedure after DECdx has been installed. Enter Y or press Return to accept the default. If you do not want to run the IVP, enter N.

```
* Do you want to run the IVP after the installation [YES]? <RETURN>
```

NOTE

If the installation procedure halts, see the information outlined in the section Installation Status Messages.

9. Mount the next volume of DECdx if you are installing DECdx from tape cartridges or diskettes.

```
Please mount the next volume of the set on MFA0:.
* Are you ready? Y
```

The prompts to mount the next volume continue until all DECdx files are installed.

If you enter N, the request to insert the volume in the drive and the question "Are you ready?" are repeated.

During installation, VMSINSTAL takes the executable version of the DECdx software from the media and installs it as a system program, DDX.EXE.

After DECdx is installed, VMSINSTAL notifies you with a message similar to the following:

```
The installation of DECdx/VMS V1.2 is successful.

        Installation of DDX V1.2 completed at 21:30
```

10. Enter the names of any other products to be installed. If none, enter EXIT to leave VMSINSTAL.

```
Enter the products to be processed from the next distribution volume set.
* Products: EXIT
```

11. You receive a message similar to the following:

```
       VMSINSTAL procedure done at 21:31.
```

VMSINSTAL returns you to the VMS command level and the $ prompt.

When installation is complete, remove the media from the drive and put it in a safe place for possible future use.

Be sure to back up the system disk.

1.4.1 Sample Installation Procedure

The following is a sample installation procedure using magnetic tape. The procedure begins after the installer has set the default directory to SYS$UPDATE.

```
$ @VMSINSTAL

        VAX/VMS Software Product Installation Procedure V5.1

It is 21-MAR-1989 at 14:51.
Enter a question mark (?) at any time for help.

* Are you satisfied with the backup of your system disk [YES]?
* Where will the distribution volumes be mounted: MUA0:

Enter the products to be processed from the first distribution volume set.
* Products: DDX
* Options (none):

Please mount the first volume of the set on MUA0:
* Are you ready? Y

%MOUNT-I-MOUNTED, DDX mounted on _MUA0:

The following products will be processed:

  DDX V1.2

        Beginning installation of DDX V1.2 at 14:52

%VMSINSTAL-I-RESTORE, Restoring product saveset A ...
%VMSINSTAL-I-RELMOVED, The product's release notes have been successfully moved
 to SYS$HELP.


        Product:      DECDX
        Producer:     DEC
        Version:      1.2
        Release Date: 20-MAR-1989


* Does this product have an authorization key registered and loaded? Y
* Do you want to run the IVP after the installation [YES]?

%DDX-S-RESTORE, All files restored from distribution kit.
%DDX-S-QUERIES, There will be no further questions.
%DDX-I-LINK, Linking objects into DDX image...
%DDX-S-LINK, DDX image created by LINK.
%DDX-I-HELP, Adding DECdx to system help library...
%DDX-S-HELP, DECdx added to system help library.

The file DDX.COM will be put in SYS$MANAGER: for you to include in
your SYSTARTUP procedure.  This defines the command DDX to invoke
DECdx, and should be included either in the system's login command
file, or in each DECdx user's login command file.

%VMSINSTAL-I-MOVEFILES, Files will now be moved to their target directories...

This is the start of the DECdx/VMS V1.2 Installation Verification Procedure.
```

```
In this procedure several DECdx options will be tested in the command
line mode.  Informational messages will be generated documenting the
progress of the test.  If the installation has failed these messages
will give information as to what has gone wrong.

-- DECdx  FD --
Processing File Name:
VMI$ROOT:[SYSMGR]DDX.COM
Processing Document Name:
DECDX TEST
-- DECdx  FD --
Converting File:
VMI$ROOT:[SYSMGR]DDX.COM
To Document:
DECDX TEST
Please wait...
-- DECdx DOCUMENT INDEX --                              VMI$ROOT:[SYSUPD.DDX012]

-------------------------------------------------------------------------------
Document        Create          Modified                            Read   File
Number   Name   Date            Date            Time        Size    Users  Lock
-------------------------------------------------------------------------------

  001  DECDX TEST
               3/21/89         3/21/89         14:56          1     0    Free


-- DECdx Read --
Processing Document:
DECDX TEST
-- DECdx Read --     DECDX TEST

$DDX :== $SYS$SYSTEM:DDX

-- DECdx Delete --
Processing Document:
DECDX TEST
-- DECdx Delete --
Deleting Document:
DECDX TEST
Please wait...

This is the end of the DECdx/VMS V1.2 Installation Verification Procedure.

The installation of DECdx/VMS V1.2 is successful.

        Installation of DDX V1.2 completed at 14:56

Enter the products to be processed from the next distribution volume set.
* Products: EXIT

        VMSINSTAL procedure done at 14:57
```

1.4.2 Installation Status Messages

If the installation procedure fails for any reason, VMSINSTAL displays:

```
*** DECdx Installation Procedure FAILED ***
```

The VMSINSTAL command procedure attempts to determine the reason for the error. It displays a message if it detects any of the following problems:

- Insufficient disk space to complete the installation
- Insufficient system virtual page count parameter
- Insufficient process paging file quota
- Insufficient process working set quota
- Insufficient system maximum working set

If any of these messages appear, follow the instructions in the message. For more information on crash recovery, see the appropriate Software Installation Guide.

1.5 Installation Verification Procedure—IVP

The IVP verifies the completeness and accuracy of the installation. The IVP runs automatically when DECdx is installed. If the IVP is successful, you see the "success" message given in step 9 of the installation procedure. If you see other messages, go to the Installation Status Messages section.

1.6 Release Notes

Release Notes are on line in the file DDX$012.RELEASE_NOTES. A message during installation notifies you that the Release Notes have been copied to the directory SYS$HELP.

Please read the notes for important information on the documentation and software.

Chapter 2

User Support

2.1 User Support at Startup

Most DECdx users are familiar with the WPS menu format. To make DECdx easy to use, DECdx has WPS-like menus as the user interface.

To support the DECdx user, the system manager must:

- Assign a user identification code and a password
- Establish a user file directory
- Supply WPS communications settings information (baud rate, parity, data/stop bits) so that communication takes place
- Help the WPS user with VMS commands and error messages

The *Getting Started Card* (AV-P146A-TK) provides all necessary information for running DECdx.

The *DECdx User's Guide* (AA-U153A-TK) describes the DECdx options and their uses.

Refer to the DECdx/VMS Release Notes to learn how DECdx Version 1.2 is different from DECdx/VMS Version 1.1.

Enter H at the DECdx Menu for online assistance. Help for each option consists of the definition, why the option is used, how it is used, any shortcuts, and where to get more information.

2.1.1 Default Queue Names for DX$PRINT

DECdx documents are queued to the printer assigned to the logical name DX$PRINT. The system manager can define a queue name for DX$PRINT as follows:

- Place the default queue name in the SYSTARTUP.COM file.
- Define DX$PRINT in group process tables to allow groups of DECdx users to print to particular print queues.

In both cases, users can override the system default DECdx print queue by editing their LOGIN.COM files to define DX$PRINT as the queue they want.

If the system manager does not define DX$PRINT at the system level, each user must define DX$PRINT in his/her LOGIN.COM file.

2.1.2 Conversion of DX/VMS Documents

If you want to use documents created under the DX/VMS software with DECdx, you must convert those documents to DECdx format. This conversion is done with the Old-to-New (ON) option.

When users select the ON option, they see this message:

```
Old format files will be deleted following successful conversion.
If you wish to make backup copies, do not proceed with
conversion.
```

This message refers to files created under DX/VMS. The system manager may have to help the user by verifying that backups of the files exist, or by creating a separate directory for copies of the old-format files.

The DECdx installation procedure does not delete the old WNDX file (the DX/VMS index). The ON option uses the WNDX file to assign document names during a multiple document conversion process. After successful multiple conversion, the ON option deletes the old WNDX file.

You can convert all files in an area to DECdx format as a group, or you can convert each file individually. DECdx copies the same document names from the old index to the DECdx index. The old and new document numbers are usually different. More information on DX/VMS and Old-to-New conversion is given in the *DECdx User's Guide* (AA-U153A-TK).

2.1.3 Easycom

Easycom is a command file used by DECmate systems to automate some of the steps required in certain procedures. Easycom commonly logs the user in to the system and reaches the DECdx Document Transfer Menu.

The DECdx documentation mentions no changes to procedures that might be modified by Easycom. If Easycom is used to automate DECdx procedures, the system manager must explain the changes to users.

2.2 Continuing User Support

Once users are familiar with DECdx, they should need very little assistance from the system manager. However, several error messages in the online assistance direct them to the system manager for help. Except for the problem of unlocking documents (see the next section), error messages deal with system-specific problems such as file protection interference and insufficient disk space.

2.2.1 Unlocking Documents

A document may remain locked after the user has finished adding, printing, converting (File-to-Document or Old-to-New options), deleting or transferring it. This abnormal locked condition can occur when the user presses Ctrl/C to exit the Read, Print or Document-to-File options. Until the document is unlocked, anyone trying to access the document receives this error message:

```
That document is in use by someone else right now.
```

The online assistance for this error suggests that the user see the system manager if the document remains locked when not in use.

To unlock the document follow this procedure:

1. Check the user's DECdx index. The word "Locked" should appear in the File Lock column for the document.
2. Verify that no one is using the document.
3. At the user's DECdx Main Menu, enter the word CORRECT and the name or number of the locked document. For example:

   ```
   CORRECT Interoffice Mailing List
   ```

Or

```
CORRECT 13
```

4. Check the index to make sure "Free" has replaced "Locked".

Note that the CORRECT command is an invisible menu option. It does not appear on the screen because the system manager may want to restrict its use. CORRECT is not documented in the *DECdx User's Guide*, the *Getting Started Card*, or the online assistance.

2.2.2 File Protection Requirements

The DECdx index must be protected with group write privileges for the documents to be written to or read. Use the following default protection code to allow users to copy documents between group numbers:

```
$ SET PROTECTION=(SYS:RWED,O:RWED,G:RW,W:R) INDEX.DX
$
```

Be sure the directory containing the DECdx index also allows group write privileges.

2.2.3 Temporary Files

Temporary files are created in two ways:

- The user presses Ctrl/C to stop a Top, Bottom, or Overwrite procedure (T-B-0).
- The user exceeds the disk quota in the process of adding text to an existing document.

The following sections explain how to deal with temporary files.

2.2.4 Temporary Files Caused by Stopping a T-B-O Procedure

Temporary files may result when the user presses Ctrl/C to exit the options Add, DF, FD, and Transfer after choosing Top, Bottom or Overwrite. Temporary files have the format TMPnnn.DX and BTMnnn.DX where "nnn" is the same number as the DECdx document number.

Use the following checklist to determine what action is necessary when temporary files appear in the directory.

1. The DOCnnn.DX file and the file to be modified by the T-B-O option are present. Delete any temporary files to insure that the next T-B-O change to the file is successful. The DOCnnn.DX file is either the original file or the original file with the additional information from the T-B-O change.
2. The DOCnnn.DX file has disappeared from the user's directory and the DECdx index has this message after the document name: This document cannot be found in the current area. Follow procedure (a) or (b) to restore the DOCnnn.DX file:
   a. If both TMPnnn.DX and BTMnnn.DX are present (where "nnn" is the same as the number of the missing DOCnnn.DX file), rename the BTMnnn.DX file to DOCnnn.DX. Then delete the TMPnnn.DX file. For example, type these commands at the system prompt:

      ```
      $ RENAME BTM088.DX DOC088.DX
      $ DEL TMP088.DX
      ```

   b. If TMPnnn.DX is the only temporary file and BTMnnn.DX is not present, rename TMPnnn.DX to DOCnnn.DX. For example:

      ```
      $ RENAME TMP002.DX DOC002.DX
      ```

3. The file to be changed by the T-B-O procedure disappears from the user's directory after the user chooses DF and then stops the T-B-O procedure with Ctrl/C. Follow procedure (a) or (b) to restore the converted file:
   a. If both the BTMnnn.DX and TMPnnn.DX files are present, rename the BTMnnn.DX file to the file name of the missing file. Then delete the TMPnnn.DX file. For example, use the following commands:

      ```
      $ RENAME BTM010.DX Status.rpt
      $ DEL TMP010.DX
      ```

   b. If only the TMPnnn.DX file is present, rename the TMPnnn.DX file to the file name of the missing file. For example:

      ```
      $ RENAME TMP030.DX Trip.rpt
      ```

2.2.5 Temporary Files Caused By Insufficient Disk Space

DECdx may create a temporary file if it does not have room to add text to an existing file using the Top, Bottom or Overwrite options. The temporary file, TMPnnn.DX or BTMnnn.DX, is a partial file that contains whatever text was added before the disk quota was exceeded.

Delete the temporary file. If the temporary file is left in the directory, the next Top, Bottom or Overwrite procedure will fail. Before you delete the file, verify that it is the right temporary file. Do this by finding the corresponding DOCnnn.DX file, where "nnn" is the same in both files.

Repeat the T-B-O procedure when there is sufficient disk space for the additional information.

Chapter 3

Notes for the System Manager

3.1 What is DECdx?

DECdx V1.2 is a layered software product that runs on the VMS Version 4.7, 5.0, or higher operating system. DECdx provides WPS document transmission over point-to-point data communication links between DIGITAL word processing systems (WPS) and DIGITAL host systems. DECdx also provides options for using WPS documents on the host.

DECdx allows users to:

- Transfer WPS documents to the host, preserving the WPS formatting
- Create files on the host and then transfer those files to the WPS for editing
- Access the data processing and file management capabilities of the host
- Store large documents on the host
- Share documents

The DECdx/VMS Version 1.2 Software Product Description (SPD 26.36.05) provides basic information on DECdx.

3.1.1 Document Transfer

DECdx software facilitates the transfer of WPS-format documents to a host and the use of those documents on the host. The X option transfers documents by using the DX protocol on the WPS. The DECdx Document-to-File (DF) option translates WPS-format documents to ASCII-format files.

As an alternative to DX, the WPS system also offers a CX (Character transfer) option that has settings such as HD (Host to Document) and DH (Document to Host). The WPS user should choose the CX option when:

- There is no need to preserve the special WPS-format characters in a document.
- The user does not want to use the special DX error-detecting protocol.

For example, the user chooses the WPS CX option with the HD/DH settings to move source (program) files from the host to the WPS and from the WPS to the host.

3.1.2 Document Compatibility

DECdx V1.2 running on VMS is compatible with DECdx V1.0 running on:

- TOPS-20
- RSTS/E
- RSX-11M and RSX-11M-PLUS

Users can move documents to other host systems by magnetic tape and use the documents at the new host without any compatibility problems.

3.1.3 Multiuser Software

When more than one person uses the same account, DECdx detects and prevents multiple user updates of the same document. Limited access prevents users from losing data due to simultaneous access collisions.

3.1.4 Supersession

DECdx Version 1.2 supersedes DECdx Version 1.1 and DX/VMS Version 1.2.

3.2 How DECdx Version 1.2 Differs From Version 1.1

DECdx Version 1.2 provides the same functionality as Version 1.1, but includes support for VMS Version 5.0 and higher, and Digital's License Management Facility.

This kit is designed to install DECdx under VMS Version 4.7 or higher. For Version 4.7, the kit installs DECdx without license compliance. For Version 5.0 and higher, the kit installs a license-compliant DECdx. If you have VMS Version 5.0 or higher, you must have an appropriate Product Authorization Key to install or use DECdx.

3.3 How DECdx Version 1.2 Differs From DX/VMS V1.2

This section explains the differences between DX/VMS and DECdx Version 1.2.

3.3.1 New Features

- Compatibility—Documents stored under VMS using DECdx are compatible with DECdx documents on TOPS-20, RSTS/E, RSX-11M and RSX-11M-PLUS.
- Multiple users capability—DECdx controls multiple users access to documents in the same storage area (directory). DECdx also controls document access through the DECdx index function to avoid document-access collisions.
- ON (Old-to-New) conversion option—The ON option lets users of DX/VMS V1.2 convert existing documents to DECdx format.
- R (Read) option—The Read option on the DECdx Menu lets the user display the contents of a document.
- A (Add) option—The Add option on the DECdx Menu enhances document transfer on the host. The user can now add WPS documents to his/her own DECdx index from other users on the host.
- F (Finished) option—The Finished option on the DECdx Menu lets the user exit from DECdx to command level.

- CORRECT—A document may be unlocked by entering the word CORRECT and the document name or number at the DECdx Menu. See the section Unlocking Documents in Chapter 2 for detailed information.

3.3.2 Functional Changes

Debugging—DECdx is now supplied as an executable image. Therefore, the debugging aid DEBUG code is no longer necessary and is not included.

Simpler Interface—The user does not have to invoke each function with a separate command. The user invokes DECdx with the command DDX at the system prompt.

Command Line Parser—DECdx parses command lines passed by VMS. Command line parsing:

- Permits execution of a function from the operating system level. With DDX defined as an applications task, the user can specify commands as:

  ```
  $ DDX <menu option> <parameter1> <parameter2>
  ```

  For example:

  ```
  $ DDX FD Q1.RPT First Quarter Results <RETURN>
  ```

- Supports "type-ahead" similar to WPS. User-typed characters are buffered, so that DECdx executes the commands as soon as processing allows.

Document Numbers—The document numbers now range from 1 to 200, rather than from 2 to 999.

For most options requiring the document name, DECdx does a lookup in the DECdx index to match the document name to the document number. DECdx equates the document number to the DOCnnn.DX file on the host (where "nnn" is the document number). Through this process, the name or number of a document may be used for most options.

Reserved File Type—The reserved file type for DECdx is .DX, as opposed to the .W11 file type under DX/VMS. The DF conversion function uses either a null file type or a user-supplied file type.

H (Help) option—The Help option offers more extensive online assistance than was available through DX/VMS.

Error Handling—For failures within the product (DECdx) or the environment (VMS), the DECdx user receives an error message. The user can enter H to get help on correcting the error from online assistance.

If the user goes directly to the online assistance, DECdx terminates the current process. The user has to return to the DECdx Menu and reselect the option.

Conversion—The DF (Document-to-File) and FD (File-to-Document) options on the DECdx Menu let the user convert documents from WPS to ASCII and ASCII to WPS formats. These options simplify the earlier WFLX program available under DX/VMS.

The FD and DF options have these characteristics:

- Prompt for file name—Both FD and DF prompt the user for the file name first and the document name second.
- Text conversion default—DF no longer prompts the user for a file type. DECdx assumes conversion to a text file. The user can no longer convert to a BASIC-PLUS or source program file. DF uses either a null file type or whatever file type the user defines.
- WPS-format similarity—Under DX/VMS, the user received a prompt to change the default ruler during FD conversion. DECdx also prompts the user to supply a ruler for the document. If the user does not specify a new ruler, the host default ruler is inserted into the document. If the user chooses the default ruler, the appearance of the original file does not change.

Under DF, the prompt for designating tabs or spaces in the converted file has been eliminated.

Index—The WNDX product used a version number of 0 to indicate a missing or delete-protected document. The DECdx index has the message "This document can not be found in the current area" when the DOCnnn.DX file has been deleted. Delete-protected files are not indicated. DECdx does not have Version Number or Time Elapsed columns in the index.

Delete—The Delete option closely resembles the WPS deletion procedure. The user sees the first eight lines of the document to confirm the deletion.

Printing—The Print option (which replaces the WLPT program) lets the user print the document without exiting to the system level and issuing the PRINT command. The user can specify any printer attached to the host VAX, using a logical name for the printer. The document prints immediately unless the user specifies No at the PD option.

The new DECdx Print Menu allows the user to change print settings similar to the way WPS settings are changed whereas DX/VMS required responses to prompts.

The following are changes to the default print settings:

Old Setting	New Setting
EX 0	DS No
DD LP	--
--	PD Yes
--	SL No

The following value range has been changed:

Old Range	New Range
CP 1 to 999	CP 1 to 10

The setting abbreviations have these meanings:

Setting	Meaning
EX	Extra half lines
DD LP	Destination Device for Line Printer
DS	Double-spaced
PD	Print Document
SL	Save Listing
CP	Copies to Print

Under the Print option, DECdx creates a printable file, PRnnn.DAT, where "nnn" is the document number in the DECdx index. DECdx deletes the PRnnn.DAT file after the document is printed unless the user sets SL Yes.

The DX/VMS restriction of 60 printable lines per page no longer applies.

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