DECscheduler for VMS

Installation

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This guide explains how to install the DECscheduler software for the VMS operating system.

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About This Guide

This guide describes how to install the DECscheduler for VMS software.

Audience

This document is written for the following personnel:

- Data center operations personnel, including system managers, system operators, and schedulers
- Production application support personnel
- Other VMS users

This guide assumes that DECscheduler installers are familiar with the VMS operating system (Version 5.0 or higher) and system management functions such as setting system privileges and process account quotas. The guide also assumes familiarity with processing Digital command language (DCL) commands in both interactive and batch modes.

Organization

This guide has three chapters and four appendices:

1 — Preparing to Install DECscheduler
Describes what you should know and do before you install DECscheduler.

2 — Installing DECscheduler
Describes how to install DECscheduler.

3 — After Installing DECscheduler
Describes what you should do after you install DECscheduler.

A — Example of a New Installation
Provides a sample log of the procedure to install DECscheduler for the first time.

B — DECscheduler Logical Names
Lists the DECscheduler logical names.

C — DECscheduler Installation Kit Files
Lists the files provided in the installation kit.

D — Determining and Reporting Problems
Describes what to do if you discover an error in the DECscheduler software.

Related Documents

The following documents may be useful to readers of this guide:

- *Guide to VMS Software Installation*
  Describes how to install layered products on VMS systems.
- *VMS Backup Utility Manual*
  Describes how to back up your system disk before installing DECscheduler.
- *VMS License Management Utility Manual*
  Describes how to use the License Management Facility (LMF) to register and load software licenses.
- *DECscheduler for VMS User Information*
  Explains how to use DECscheduler with the DCL, DECwindows, or DECforms interface.
- *DECscheduler for VMS Programming*
  Explains how to use the DECscheduler callable routines on the VMS operating system.

Conventions

The following conventions are used in this guide:

Convention	Meaning
UPPERCASE characters	In command examples, uppercase characters represent elements of a command that you should enter exactly as shown.
Lowercase characters	In command syntax examples, lowercase characters represent elements of a command for which you supply a value. For example: SCHED MODIFY job-specifier
Red `text`	In command examples, red text indicates user input. For example: `* Products: SCHEDULER` Return
[ ]	In the installation example, square brackets enclose the default answer for a question.
Return	Key names appear in a box.
Ctrl *x*	For control key sequences, you hold down the Ctrl key and press another key.

1
Preparing to Install DECscheduler

This chapter discusses the preparations and requirements necessary for installing DECscheduler.

1.1 Checking the Number and Contents of Your Media

Your bill of materials (BOM) and indented bills report (BIL) specify the number and contents of your media. Make sure you verify the contents of your kit with this information. If you find missing or damaged parts in your kit, contact your Digital Customer Services representative.

1.2 Using Online Release Notes

DECscheduler provides online release notes. You can obtain them during the installation or after the installation. To obtain them during the installation, see Section 2.2. To obtain them after the installation, type or print the file:

SYS$HELP:SCHEDULER011.RELEASE_NOTES

1.3 General Requirements

The following sections list three general requirements for installing and using DECscheduler.

1.3.1 Operating System

DECscheduler runs on VMS Version 5.0 or higher.

1.3.2 Software License

Before you can use the DECscheduler software, you must register and load your license for DECscheduler. To register and load your license, you use the VMS License Management Facility (LMF), available with Version 5.0 of the VMS operating system.

The license registration information that you need is contained in the Product Authorization Key (PAK) shipped with the DECscheduler software. The PAK is a paper certificate that contains information about the software license required to run a particular piece of software.

To register a license under VMS, first log in to the system manager's account, SYSTEM. You then have a choice of two ways to perform the registration:

- Invoke the SYS$UPDATE:VMSLICENSE.COM procedure. When it prompts you for information, respond with data from the PAK.

  or

- Issue the DCL command, LICENSE REGISTER, with the appropriate qualifiers that correspond to information on the PAK.

For complete information on using the LMF, see the *VMS License Management Utility Manual* in the VMS Version 5.0 documentation set.

It is best to register your DECscheduler license before you perform the installation. During the installation, the installation procedure asks whether you have registered the DECscheduler license and loaded the appropriate authorization key. If you have not already done so, you can complete the installation; however, you will be unable to run the installation verification procedure (IVP) or use the DECscheduler software.

1.3.3 VAXcluster Shared Disk

During the installation, you must specify the device where the product directory is located. Normally, you should accept the default answer of SYS$COMMON; however, if you are installing the DECscheduler in a local area VAXcluster with multiple boot nodes, you should specify a disk that is shared among all nodes in the cluster.

1.4 Installation Procedure Requirements

The following sections list the DECscheduler installation procedure requirements.

1.4.1 Installation Time

The installation should take from 10 to 20 minutes, depending on the type of media you use and your system configuration.

1.4.2 Privileges

To install DECscheduler, you must be logged in to an account that has either the SETPRV privilege or at least the following privileges:

- CMKRNL
- WORLD
- SYSPRV
- SYSNAM
- CMEXEC
- SYSLCK
- DETACH

Note that VMSINSTAL turns off the BYPASS privilege when the installation starts.

1.4.3 Disk Space

Installing DECscheduler requires at least 14,000 blocks of free storage disk space during the installation. After DECscheduler is installed, about 8,000 blocks are used.

To determine the number of free disk blocks on the current system disk, enter the following command at the DCL prompt:

```
$  SHOW DEVICE SYS$SYSDEVICE
```

1.4.4 Process Account Quotas

The account you use to install DECscheduler must have sufficient quotas to enable you to perform the installation. VMSINSTAL requires that the installation account have the following quotas:

- ASTLM = 24
- BIOLM = 18
- BYTLM = 18,000
- DIOLM = 18
- ENQLM = 30
- FILLM = 20

User account quotas are stored in the file SYSUAF.DAT. Use the VMS Authorize Utility to verify and change user account quotas. The following procedure shows how to do this:

1. Set your directory to SYS$SYSTEM:

   ```
   $ SET DEFAULT SYS$SYSTEM
   ```

2. Run the Authorize Utility:

   ```
   $ RUN AUTHORIZE
   UAF>
   ```

3. At the Authorize Utility prompt UAF>, use the SHOW command with an account name to check a particular account. For example:

   ```
   UAF> SHOW SMITH
   ```

4. To change a quota, use the MODIFY command at the UAF> prompt. MODIFY has the following format:

   ```
   UAF> MODIFY account-name/quota-name=nnnn
   ```

   The following example changes the FILLM quota for the SMITH account:

   ```
   UAF> MODIFY SMITH/FILLM=50
   ```

5. Finally, exit from the Authorize Utility:

   ```
   UAF> EXIT
   ```

After you exit from the utility, the VMS operating system displays messages indicating whether or not changes were made. After changes are made, you must log out and log in again for the new quotas to take effect.

For more information on modifying account quotas, see the description of the *VMS Authorize Utility Manual* in the VMS documentation on system management.

1.4.5 VMSINSTAL Requirements

When invoked, VMSINSTAL checks whether or not :

- You have set your default device and directory to SYS$UPDATE.
- You are logged in to a privileged account.
- You have adequate quotas for installation.
- Any users are logged in to the system.

If it detects any problems during the installation, VMSINSTAL notifies you of the problem and asks if you want to continue the installation. In some instances, you can enter YES to continue. To stop the installation process and correct the problem, enter NO or press Return. After the problem is corrected, restart the installation.

1.4.6 System Disk Backup

At the beginning of the installation, VMSINSTAL asks if you have backed up your system disk. Digital recommends that you back up your system disk before installing any software on top of the operating system.

Use the backup procedures established at your site. For details on backing up a system, see the *VMS Backup Utility Manual* in the VMS documentation set.

2
Installing DECscheduler

This chapter provides step-by-step instructions for installing the DECscheduler software.

Use the VMSINSTAL procedure to install and verify the DECscheduler software on the VMS operating system. The VMSINSTAL procedure is automated and self-explanatory. The procedure requires you to mount the software distribution volume when prompted and to respond to questions during the installation. Most questions can be answered with a YES or a NO response.

Each question in the installation is marked with an asterisk (*) at the beginning of the line. Some questions show the default response in brackets—for example, [YES]. If you want to give the default response, press Return.

If you need help with a question, enter a question mark (?) and press Return.

2.1 Halting the Installation

To halt the installation procedure at any time, press Ctrl Y. When you press Ctrl Y, the installation procedure deletes all files that it has created up to that point and exits. You can then start the installation again.

2.2 The Installation Procedure

To install the DECscheduler software, use the following procedure. See Appendix A for a sample installation.

1. **Invoke VMSINSTAL.**

   To start the installation, invoke the VMSINSTAL command procedure from a privileged account, such as the SYSTEM account. VMSINSTAL is in the directory SYS$UPDATE. Use the following syntax to invoke VMSINSTAL:

   @SYS$UPDATE:VMSINSTAL product-name device-name

   product-name
   The installation name for the component. For DECscheduler, use the following installation name:

   SCHEDULER

   device-name
   The name of the device on which you plan to mount the media. For example, MTA0: is the device name for a tape drive.

   It is not necessary to use the console drive for this installation. However, if you do use the console drive, you should replace any media you removed once the installation is completed.

   Example

   The following example shows the command to invoke VMSINSTAL to install DECscheduler from tape drive MTA0:, as well as the system response:

```
$  @SYS$UPDATE:VMSINSTAL SCHEDULER MTA0: OPTIONS N

VAX/VMS Software Product Installation Procedure V5.2

It is 10-MAR-1990 at 11:23.

Enter a question mark (?) at any time for help.
```

   This example uses the OPTIONS N parameter for printing or displaying release notes. When you invoke VMSINSTAL, use this parameter if you want to print or display the release notes as a part of the installation. You do not have to print the release notes as a part of the installation, and the sample installation in Appendix A does not use this option. See the VMS documentation on VMSINSTAL for more information on VMSINSTAL options.

   If you do not supply the product or the device name, VMSINSTAL prompts you for this information later in the installation procedure.

2. **Check your system backup.**

   You should always back up your system disk before performing an installation. VMSINSTAL asks if you are satisfied with your system backup. If you are satisfied with the backup of your system disk, press Return. Otherwise, enter NO to stop the installation. After you back up your system disk, you can restart the installation:

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

3. **Mount the distribution media.**

   Mount the first distribution volume on the device that you specified when you invoked VMSINSTAL. The device name appears in the line preceding the question. VMSINSTAL then asks if you are ready to continue with the installation.

   If you answer YES, VMSINSTAL displays a message that the media containing the DECscheduler software has been mounted on the specified device and that the installation has begun. For example:

```
Please mount the first volume of the set on MTA0:.
* Are you ready?  YES
%MOUNT-I-MOUNTED, SCHEDULER MOUNTED ON MTA0:.
The following products will be processed:
  SCHEDULER V1.1

    Beginning installation of SCHEDULER V1.1 at 11:24

%VMSINSTAL-I-RESTORE, Restoring product saveset A...
```

   If you entered the wrong device name when you invoked VMSINSTAL and need to restart the installation, enter NO in response to the `Are you ready?` question. To halt the installation for other reasons, press Ctrl Y.

4. **Choose the installation verification procedure (IVP).**

   The installation procedure asks if you want to run the IVP:

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

   The IVP for DECscheduler checks to ensure that the installation is successful. Digital recommends that you run the IVP. To run the IVP, press Return or enter YES. If you do not want to run the IVP, enter NO. Note that you cannot run the IVP if you have not registered and loaded your authorization key.

If you choose not to run the IVP during the installation, you can run it after the installation by entering the command:

```
$ @SYS$TEST:SCHEDULER$IVP.COM
```

The IVP creates a job, runs the job through DECscheduler, reports whether or not the job succeeded, then deletes the job.

5. **Purge files.**

   You have the option to purge files from previous versions of DECscheduler that are superseded by this installation. Purging is recommended; however, if you need to keep files from a previous version, enter NO in response to the question:

   ```
   * Do you want to purge files replaced by this installation [YES]?
   ```

   If you answer YES to this question, the DECscheduler-related files will be purged after the installation.

6. **Check your license registration.**

   The installation procedure asks if you have registered and loaded your authorization key for DECscheduler, then displays information specific to your particular license. For example:

   ```
   Product:      DECSCHEDULER
   Producer:     DEC
   Version:      1.1
   Release Date:  16-NOV-1990
   ```

7. **Restart DECscheduler.**
   (*For updated installations only*)

   If you have a previously installed version of the DECscheduler, the installation procedure asks

   ```
   * Do you want to restart the DECscheduler during this installation [YES]?
   ```

   To enable the new version of DECscheduler, you must restart DECscheduler. Answer YES to enable the new version. If you answer NO, the new version of DECscheduler will not be enabled.

   Note

   There is a brief time interval between stopping and restarting DECscheduler. If a DECscheduler job completes during this interval, the status of that job is lost.

If you do not restart DECscheduler at this time, you can enable the new version of the DECscheduler at a later date by performing the following steps:

a. Stop any older versions of DECscheduler by entering

```
$ SCHED STOP/ALL
```

b. Invoke the SYS$STARTUP:SCHEDULER$STARTUP.COM file from the SYSTEM account to start the new DECscheduler:

```
$ @SYS$STARTUP:SCHEDULER$STARTUP.COM
```

If you are not currently logged into the SYSTEM account, but you have an account with CMKRNL privileges, you can start DECscheduler by entering this command:

```
$ SUBMIT/USER=SYSTEM SYS$STARTUP:SCHEDULER$STARTUP.COM
```

8. **Choose a product directory location.**

The installation procedure asks you for the device where the product directory will be located. The default answer is SYS$COMMON; however, if you are installing DECscheduler in a VAXcluster, you should specify a disk that is shared among all nodes in the cluster. Then all nodes in the VAXcluster will have access to the [NSCHED] product directory.

```
* Enter device where [NSCHED] directory is to be
located [SYS$COMMON:]:
```

9. **Choose wide-area network support**

DECscheduler can be built with wide-area network (WAN) support. This allows users to execute DECscheduler commands on remote nodes and to have job dependencies involving remote nodes. You must have a Proxy account on the remote node or use explicit account-and-password access.

```
* Do you want the wide-area network capabilities [YES]?
```

If you want wide-area network support, press Return or enter YES. Otherwise, enter NO.

10. **Choose the callable interface.**

You can install a callable interface with DECscheduler.

```
* Do you want the callable interface [NO]?
```

If you plan on writing programs that access DECscheduler, answer YES to the question. This places the file NSCHED_SUBS.OLB in the product directory [NSCHED$]. NSCHED_SUBS.OLB is the callable routines library to DECscheduler. This optional installation requires about 800 blocks of additional disk space.

11. **Choose the DECwindows interface. (optional)**

    The DECwindows interface provides a graphical, user-friendly interface to DECscheduler. To run the DECwindows interface, you must have a workstation or any X-based display station. The DECwindows interface requires approximately 1300 blocks of disk space.

    ```
    * Do you want the DECwindows interface [NO]?
    ```

12. **Choose the DECforms interface. (optional)**

    The DECforms interface provides a menu-based interface to DECscheduler. The DECforms interface runs on any of the VT100, VT200, or VT300 series of terminals. The DECforms interface requires 800 blocks of disk space.

    ```
    * Do you want the DECforms interface [NO]?
    ```

13. **Exit the VMSINSTAL procedure.**

    After you answer the previous question, the installation completes on its own. When it has completed, VMSINSTAL prompts you for another product to install:

    ```
    * Products:
    ```

    Exit the procedure by entering the EXIT command or pressing Ctrl Z.

You can now log out of the privileged account:

```
$  LOGOUT  Return
SYSTEM     logged out at 10-MAR-1990 11:38:12.32
```

Note that VMSINSTAL deletes or changes entries in the process symbol tables during the installation. Therefore, if you are going to continue using the system manager's account and you want to restore these symbols, you should log out and log in again.

2.3 Comparing a New Installation with an Update Installation

The update installation procedure differs from the new installation procedure in three ways:

- The update installation asks

  ```
  * Do you want to restart the DECscheduler during this installation [YES]?
  ```

  This question gives you the option of not enabling the new DECscheduler until a later time.

- If you answer YES to the restart question, the update procedure later displays the following message when the existing DECscheduler version is stopped:

  ```
  %NSCHED-I-STOPRQST, Stop Requested
  ```

- After you answer all the installation questions, an update installation displays the message:

  ```
  %CREATE-I-EXISTS, SYS$COMMON:[NSCHED] already exists
  ```

  This message indicates that a previous installation created the directory SYS$COMMON:[NSCHED].

2.4 Error Recovery

If errors occur during the installation, VMSINSTAL displays failure messages. If the installation fails, the following message is displayed:

```
%VMSINSTAL-E-INSFAIL, The installation of SCHEDULER V1.1 has failed.
```

Errors can occur during the installation if any of the following conditions exist:

- The operating system version is incorrect.
- A version of some prerequisite software is incorrect.
- The system does not have the required quotas for a successful installation.
- System parameter values are insufficient for a successful installation.
- The VMS help library is currently in use.
- The product is improperly licensed.

For descriptions of the error messages that these conditions generate, see the VMS documentation on system messages, recovery procedures, and VMS software installation. If you are notified that any of these conditions exist, take the appropriate action as described in the message. You may need to change a system parameter or increase an authorized quota value.

For information on installation requirements, see Chapter 1.

3
After Installing DECscheduler

After installing DECscheduler, you should do the following:

- Start DECscheduler, if you did not start it during the installation procedure.
- Edit your system startup and shutdown files.
- Reboot your system to verify your edits (optional).
- Start DECscheduler on VAXcluster nodes where you want it to run jobs.
- Ensure that your system account has the required minimum quotas.
- Ensure that the accounts managing DECscheduler have the required privileges.
- Customize your DECscheduler installation by modifying the logical name definitions in the file SYS$STARTUP:SCHEDULER$STARTUP.COM.

3.1 Starting DECscheduler

If you registered and loaded your authorization key before the installing DECscheduler, the installation procedure has already started DECscheduler.

If you did not register and load your authorization key before installing DECscheduler, you must start DECscheduler after the installation procedure. There are two ways to start DECscheduler:

- Enter the following command to invoke the SYS$STARTUP:SCHEDULER$STARTUP.COM file from the SYSTEM account:

```
$ @SYS$STARTUP:SCHEDULER$STARTUP.COM
```

- If you are not currently logged into the SYSTEM account, you can start DECscheduler by entering this command:

```
$  SUBMIT/USER=SYSTEM SYS$STARTUP:SCHEDULER$STARTUP.COM
```

3.2 Editing the System Startup and Shutdown Files

You must edit your operating system startup and shutdown files:

- **System startup command file**
  Edit your system startup command file to cause an automatic startup of DECscheduler when your system is rebooted.

  Add the following command line to the system startup file, SYS$MANAGER:SYSTARTUP_V5.COM:

```
$ @SYS$STARTUP:SCHEDULER$STARTUP.COM
```

  You must place this new command line **after** the line that invokes the network startup command procedure. For example:

```
$ @SYS$MANAGER:STARTNET.COM
      .
      .
      .
$ @SYS$STARTUP:SCHEDULER$STARTUP.COM
```

  Note

  For VMS Version 5.0 or higher, the name of the startup command file is SYSTARTUP_V5.COM.

- Edit your system shutdown file so that DECscheduler will shut down properly when your system performs an orderly shutdown.

  Add the following command line to the system shutdown file, SYS$MANAGER:SYSHUTDWN.COM:

```
$ @NSCHED$:SCHEDULER$SHUTDOWN.COM
```

3.3 Rebooting the System

You can reboot your system after you have installed DECscheduler and edited your system startup command file. A system reboot verifies that DECscheduler is ready for use and ensures that the edits to the system startup command file are correct.

Rebooting the system is an optional step.

3.4 Starting DECscheduler on a VAXcluster

If you have installed DECscheduler on a VAXcluster, you must start DECscheduler on all the nodes that will run DECscheduler jobs. On nodes that will not run jobs, you can install just the DCL interface.

You can start DECscheduler on a node in three ways:

- **Automatically**

  Edit the node's startup command file to start DECscheduler automatically. Section 3.2 describes how to do this.

- **Interactively**

  Log in to the account from which DECscheduler will run (normally the SYSTEM account), and enter the following command:

  ```
  $  @SYS$STARTUP:SCHEDULER$STARTUP.COM
  ```

- **From batch**

  Enter the following command:

  ```
  $  SUBMIT/USER=SYSTEM SYS$STARTUP:SCHEDULER$STARTUP.COM
  ```

To install the interface on a node without starting DECscheduler, enter the following commands. You can enter the commands interactively or place them in the system startup file:

```
$  DEFINE/SYSTEM NSCHED$ SYS$COMMON:[NSCHED]
$  @NSCHED$:INSTALL_INTERFACE.COM
```

If necessary, substitute the appropriate device for SYS$COMMON.

3.5 Checking Your System Account Minimum Quotas

The account from which DECscheduler runs (normally SYSTEM) should be able to execute a detached process with the following minimum quotas:

- ASTLM=200
- FILLM=100
- ENQLM=300
- TQELM=200
- DIOLM=200
- BIOLM=10000
- PGFLQUO=10000

3.6 Checking the Minimum Privileges for DECscheduler

If you do not choose to start DECscheduler under the SYSTEM account, DECscheduler must start under an account that has the following privileges enabled by default:

SYSPRV	SYSNAM	WORLD
SYSLCK	CMEXEC	DETACH
CMKRNL		

To use DECscheduler, individual accounts must have at least the TMPMBX and NETMBX privileges. Use the VMS Authorize Utility to determine whether users have the privileges that they require.

3.7 Customizing Your System

The SYS$STARTUP:SCHEDULER$STARTUP.COM file contains several logical name definitions that you can modify to customize your particular system. Change the values of the logicals as needed, and delete the comments on the appropriate command lines. Table B–1 lists these logicals.

A

Example of a New Installation

This appendix contains an example of the procedure for performing a new installation of the DECscheduler software. The example was run on an operating system that had never had a previous version of DECscheduler installed. There were no users on the system during the installation.

Section 2.2 shows the syntax for invoking VMSINSTAL from the SYS$UPDATE directory with the product and device name, using a single command line. This example shows how to do the same thing one step at a time, with VMSINSTAL prompting you for the product and device names.

You do not need any VMSINSTAL options to run this installation.

```
Username:   SYSTEM [Return]
Password:          [Return]

  Last interactive login on Monday, 03-DEC-1990 10:20
  Last non-interactive login on Thursday, 01-DEC-1990 10:28

$  @sys$update:vmsinstal [Return]

 VAX/VMS Software Product Installation Procedure V5.4

It is 3-DEC-1990 at 11:24.

Enter a question mark (?) at any time for help.
%VMSINSTAL-W-ACTIVE, The following processes are still active:
 SMITH
        JONES
        DAVIS

* Do you want to continue anyway [NO]?  YES [Return]
* Are you satisfied with the backup of your system disk [YES]?  [Return]
* Where will the distribution volumes be mounted:  DISK1:[JONES] [Return]

Enter the products to be processed from the first distribution volume set.
* Products:  SCHEDULER [Return]
* Enter installation options you wish to use (none):  [Return]
The following products will be processed:
  SCHEDULER V1.1
```

Example of a New Installation

```
 Beginning installation of SCHEDULER V1.1 at 11:24

%VMSINSTAL-I-RESTORE, Restoring product save set A ...
%VMSINSTAL-I-RELMOVED, Product's release notes have been moved to SYS$HELP.
* Do you want to run the IVP after the installation [YES]?  Return
* Do you want to purge files replaced by this installation [YES]?  Return

Product:      DECSCHEDULER
Producer:     DEC
Version:      1.1
Release Date: 16-NOV-1990

* Does this product have an authorization key registered and loaded?  YES Return
* Do you want to start DECscheduler after installation [YES]?  Return

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    Enter ? at any prompt if you need additional help.


  DECscheduler files go into the [NSCHED] directory.   You must specify
  the device for this directory.  Usually this will be SYS$COMMON, unless
  you are installing in a VAXcluster which has separate system disks for
  various nodes. (in that case you MUST use a shared disk).  If you installed
  DECscheduler previously, the location of your current job database is the
  default answer and your old job database will be used.

* Enter device where [NSCHED] directory is to be located [SYS$COMMON:]:  Return
* Do you want the wide-area network capabilities [YES]?  Return

  If you plan to write programs that use the callable interface,
  then answer yes to the following question. This will cause the file
  NSCHED_SUBS.OLB to be placed in your [NSCHED] directory.  Disk space
  requirement approximately 900 blocks.

* Do you want the callable interface [NO]?  YES Return
* Do you want the DECwindows interface [NO]?  YES Return
* Do you want the DECforms interface [NO]?  YES Return
%VMSINSTAL-I-SYSDIR, This product creates system disk directory  SYS$COMMON:[NSCHED].

All questions regarding the installation have been asked.
The installation will now proceed on its own.


 Providing wide-area network support...
%VMSINSTAL-I-RESTORE, Restoring product save set B ...
%VMSINSTAL-I-RESTORE, Restoring product save set C ...
 Linking Images...
 Linking the DECwindows interface image (nsched$:scheduler$xui.exe)...
 Linking the DECforms interface image (nsched$:scheduler$forms.exe)...
 Linking completed...
 Providing DCL interface, utilities, and HELP...

 Please take the following actions after the installation completes:

 1 Make sure that your system startup procedure contains the following line
```

Example of a New Installation

```
    $   @SYS$STARTUP:SCHEDULER$STARTUP.COM

    You may want to edit SCHEDULER$STARTUP.COM to change default values for
    Max_jobs, or to enable load balancing.

    Users who are currently logged on must log off and then back on again
    to gain access to the Scheduler's DCL command interface.

 2) Make sure that your site specific system shutdown procedure,
    SYS$MANAGER:SYSHUTDWN.COM, contains the following line

    $ @NSCHED$:SCHEDULER$SHUTDOWN

    This will assure a proper shutdown of DECscheduler.

 You may run the Installation Verification Procedure at any time by typing
 the command:
    $ @SYS$TEST:SCHEDULER$IVP.COM

%VMSINSTAL-I-MOVEFILES, Files will now be moved to their target directories...
%RUN-S-PROC_ID, identification of created process is 00000305
%RUN-S-PROC_ID, identification of created process is 00000306

  Beginning the DECscheduler Installation Verification Procedure.


%NSCHED-I-RQSTSUCCSS, Job          1 - Created
DECscheduler job  1 (Name: IVP_JOB) Started on node XYZNODE
DECscheduler Job  1 (Name: IVP_JOB) Completed on node ZYZNODE

%NSCHED-I-FLAGSET, Job IVP_JOB - DELETE Requested

  DECscheduler has been successfully installed.

 Installation of SCHEDULER V1.1 completed at 11:38

Enter the products to be processed from the next distribution volume set.
* Products:)   Ctrl  Z
 VMSINSTAL procedure done at 11:38
$  LO  Return
  SYSTEM       logged out at  3-DEC-1990 11:38:53.70
```

B

DECscheduler Logical Names

Table B–1 describes the DECscheduler logical names. You can find these names in the SYS$STARTUP:SCHEDULER$STARTUP.COM file, which you can edit.

DECscheduler Logical Names

Table B–1 DECscheduler Logicals

Logical	Description
NSCHED$DEFAULT_JOB_MAX	Defines the maximum number of jobs allowed to run at one time. **Default:** 6.
NSCHED$DEFAULT_JOB_PRI	Sets the priority level at which jobs will run. **Default:** level 4.
NSCHED$DEFAULT_LOG	Defines the logging events that will be captured. **Default:** JOB_EVENT and ABNORMAL_EVENT.
NSCHED$LBAL$CPU_WEIGHT	Weighs the memory rating by multiplying the memory rating by the translation of this logical. A valid range is from 0.0 to 1.0. **Default:** 0.5.
NSCHED$LBAL$INTERVAL	Determines the number of seconds between data collection. **Default:** 30.0 seconds.
NSCHED$LBAL$CPU WEIGHT	Weighs the CPU rating by multiplying the CPU rating by the translation of this logical. A valid range is from 0.0 to 1.0. **Default:** 0.5.
NSCHED$LOAD_BALANCE	Turns load balancing on or off. **Default:** ON.
NSCHED$LOGFILE	Names the DECscheduler log file. **Default:** NSCHED$:VERMONT_ CREAMERY.LOG.
NSCHED$NODEPS	Suppresses the display of job dependencies. **Default:** TRUE.
NSCHED$SILENT	Suppresses the connecting messages to remote nodes. **Default:** TRUE.
NSCHED$UID	Defines the location of the DECwindows user interface definition file.

C

DECscheduler Installation Kit Files

Table C–1 lists the installation kit files for the DECscheduler software. There are six categories:

- DECscheduler executor files
- Startup and miscellaneous control files
- Callable interface files
- DCL interface files
- DECwindows interface files
- DECforms interface files

All files reside in the NSCHED$ directory, unless the table indicates otherwise.

Table C–1 Installation Kit Files

File	Description
DECscheduler Executor Files	
DB_UTILITY.EXE	Database compression utility.
NSCHED.EXE	DECscheduler program image.
RETRY.EXE	A program image that tries DECscheduler remote operations.
SCHEDULER$LBAL.EXE	Dynamic load-balancing server. (Run only in a cluster environment.)

(continued on next page)

Table C–1 (Cont.) Installation Kit Files

File	Description
DECscheduler Executor Files	
SCHEDULER$LBAL_MGMT.EXE	Dynamic load-balancing interface.
SCHEDULER$DOO_COMMAND.EXE	Run by jobs that are created by DECscheduler. Protection must be set to W:RE.
SCHEDULER$SHELL.COM	A command shell used to execute jobs.
SCHEDULER$SUMMARIZE_LOG.EXE	Used to generate a log file summary.
VSS.DAT	The job database.
VSS_REPORTS.EXE	A log file reader/reporter utility.
Startup and Miscellaneous Control Files	
INSTALL_DO.COM *	Installs the job command executor SCHEDULER$DOO_ COMMAND.EXE.
INSTALL_INTERFACE.COM*	Installs all DECscheduler user interfaces.
INSTALL_RPCSHARE.COM*	Installs the components needed for DECscheduler remote features.
LBAL_ROUND_ROBIN.COM	Alternative load-balancing procedure that performs round-robin load balancing.
LOAD_BALANCE.COM	Load-balancing command procedure. Performs dynamic load balancing within a VAXcluster. You can customize this command procedure to meet specific user requirements.

*Invoked by SCHEDULER$STARTUP.COM.

(continued on next page)

Table C–1 (Cont.) Installation Kit Files

File	Description
Startup and Miscellaneous Control Files	
SCHEDULER$SHUTDOWN.COM	The DECscheduler shutdown procedure that the site-specific system shutdown procedure should call.
SCHED_REMOTE.COM *	Runs the DECscheduler remote network object.
SCHED_REMOTE.EXE	The DECscheduler remote network object image.
SCHED_RUN.COM*	Runs the DECscheduler program image.
SCHEDULER$STARTUP.COM	Installs the DECscheduler images and starts them running. Resides in the SYS$STARTUP: directory.
SCHEDULER$IVP.COM	The DECscheduler installation verification procedure. Resides in the SYS$TEST: directory.
SCHEDULER011.RELEASE_NOTES	The DECscheduler release notes. Resides in the SYS$HELP: directory.
Callable Interface Files	
NSCHED_SUBS.OLB	A library file containing callable interface routines.
DCL Interface Files	
SCHEDULER.CLD	The DECscheduler command language definition file for the DCL interface.
SCHEDULER.HLB	Thee DECscheduler help file.

* Invoked by SCHEDULER$STARTUP.COM.

(continued on next page)

Table C–1 (Cont.) Installation Kit Files

File	Description
DCL Interface Files	
SCHEDULER$INTERFACE.EXE	The DCL interface program image for general command users.
SCHEDULER$MANAGER.EXE	The DCL interface program image for privileged command users.
SCHEDULER$SHELL_INTERFACE.EXE	The DCL interface shell for the DECscheduler subsystem.
DECwindows Interface Files	
SCHEDULER$XUI.EXE	The DECwindows interface image for DECscheduler.
SCHEDULER$XUI.UID	The user interface database for the DECwindows interface.
DECforms Interface Files	
SCHEDULER$FORMS.EXE	The DECforms interface image for DECscheduler.
SCHEDULER$FORMS.FORM	The DECforms forms definition file.

D

Determining and Reporting Problems

If an error occurs while the DECscheduler software is in use, and you believe that the error is caused by a problem with DECscheduler, take one of the following actions:

- If you have a BASIC or DECsupport Software Agreement, call your Customer Support Center. With these services, you receive telephone support that provides high-level advisory and remedial assistance.
- If you have a Self-Maintenance Software Agreement, submit a Software Performance Report (SPR).
- If you purchased DECscheduler within the past 90 days and you think the problem is caused by a software error, submit a Software Performance Report (SPR).

If you find an error in the DECscheduler documentation, fill out and submit the Reader's Comments form for the document that has the error. Include the section and page number where the error was found.

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