Remote System Manager Installation Guide

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This manual explains how to install the Remote System Manager software on VMS and ULTRIX systems.

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Preface

The Remote System Manager (RSM) is a VMS layered product that centralizes system management of multiple VMS and ULTRIX computer systems. RSM uses VMS, DECnet–VAX, ULTRIX, DECnet–ULTRIX, and VAX Distributed Name Service (DNS) facilities to perform software distribution and installation services and backup and restore services.

Intended Audience

This manual is intended for experienced VMS and ULTRIX system managers and should be used with the *Guide to Setting Up a VMS System* and *Guide to Maintaining a VMS System*.

New and Changed Features

This section describes the new features of RSM Version 2.3 software. This information can help RSM users of Version 2.2 software to identify and use the new and changed features available in Version 2.3 software.

- RSM Version 2.3 software now provides client software and licenses for ULTRIX RISC systems. See the Software Product Description/System Support Addendum (SPD/SSA) for details.
- RSM Version 2.3 now provides Initial System Load (ISL) support for all Digital VAXstations and VAXservers that are supported by VMS Version 5.4. See the SPD/SSA for details.
- RSM Version 2.3 server software requires VMS Version 5.1, 5.2, 5.3, or 5.4 operating system software. RSM Version 2.3 client software requires VMS Version 4.7 to 5.4 operating system software.
- RSM Version 2.3 client software supports ULTRIX Version 4.0 and 4.1 clients.

Document Structure

This manual contains the following chapters and appendixes:

- Chapter 1 describes preinstallation requirements and planning for the server software.
- Chapter 2 provides RSM server installation information that describes the installation procedure, the correct responses to VMSINSTAL prompts, and the Installation Verification Procedure (IVP).
- Chapter 3 provides postinstallation information.
- Chapter 4 provides error handling information.
- Chapter 5 provides installation procedures for RSM VMS clients.
- Chapter 6 provides installation procedures for RSM ULTRIX clients.
- Appendix A describes the files installed by the server and client kits.
- Appendix B contains a sample RSM server installation dialogue.

Associated Documents

The following manuals comprise the RSM documentation set:

- *Remote System Manager Management Guide*
- *Remote System Manager Command Reference*
- *Remote System Manager Installation Guide*

In addition, you should have the following documents available for reference:

- The VMS installation and operations guide for your VAX computer
- *VMS License Management Utility Manual*
- *VMS System Manager's Manual*
- *VAX Distributed Name Service Management Guide*
- *VAX Distributed Name Service Installation Guide*
- *Guide to Maintaining a VMS System*
- *Guide to System and Network Setup*
- *DECnet–ULTRIX Installation Guide*
- *ULTRIX Guide to Software Licensing*

Conventions

`Special type`	Special type in examples indicates system output. Red type indicates user input. In the online version user input wil be shown in **boldface** type.
RET	Press the RETURN key.
UPPERCASE	Uppercase letters in command lines indicate keywords that must be entered. You can enter them in either uppercase or lowercase. You can abbreviate command keywords to the first three characters or the minimum unique abbreviation.
lowercase italics	Lowercase italics in command syntax or examples indicate variables for which either the user or the system supplies a value.
[ ]	Square brackets in installation dialog enclose default answers. To choose the default, press RET. To specify another answer, type the answer after the question and press RET.
Ctrl/*x*	Hold down the CONTROL key while you press the key specified by *x*.

Part I

RSM Server Installation Procedures

Part I describes the procedures for installing the RSM server software.

1

Server Preinstallation Considerations

This chapter describes the preparation necessary for installing the Remote System Manager (RSM) server software. Chapter 5 provides the preinstallation requirements for the RSM VMS client software. Chapter 6 provides the preinstallation requirements for the RSM ULTRIX client software.

Note

Before you install RSM, read the *Remote System Manager Management Guide* for more information about RSM concepts. You should also look at the following information in the management guide: the sample network configuration and installation and the RSM server configuration procedures, including guidelines and recommendations for placing RSM servers in your network. You may also want to consult the management guide during the server postinstallation activities.

1.1 Kit Contents

The RSM software is available on TK50 tape cartridge or 1600-bpi magnetic tape. Contact your Digital representative if any components of the kit are missing.

Both the RSM server and client software are provided on the same distribution medium.

1.2 Required Hardware

The RSM server software can be used on any VAX processor except for MicroVAX I, VAXstation I, VAX–11/725, and VAX–11/730 systems. The VAX processor requires no special hardware other than the hardware needed to support DECnet operations.

1.3 Required Software

To install the RSM server, you must have installed VMS Version 5.1, 5.2, 5.3, or 5.4 software and DECnet–VAX software. In addition, VAX Distributed Name Service (DNS) must be installed and available on at least one node in the network. DNS is required for the Installation Verification Procedure (IVP) and must be installed and available on the network before you execute the IVP (see Section 1.9).

1.4 Product Authorization Key (PAK)

RSM supports the License Management Facility (LMF) provided by VMS Version 5.0. Before you install RSM server software, you must register a Product Authorization Key (PAK) for the RSM software using the VMS License Management Utility. To register a PAK for RSM, refer to the instructions in the *VMS License Management Utility Manual*.

If you plan to configure the server software to run on a VAXcluster system, make sure all nodes sharing the cluster alias are correctly licensed to run RSM server software. Otherwise, the software does not start.

1.5 Required Disk Space

To install the RSM management server, there must be at least 26,000 blocks of free space on the system disk (SYS$SYSDEVICE:). During normal operations, the RSM software uses 19,000 blocks of system disk space. The remaining blocks reside on a disk that you specify during the installation procedures.

The amount of additional disk space used by the RSM server during normal operations varies according to the type of RSM server: management server, target server, or library server. The management server always includes both a target server and a library server. One management server is required for an RSM environment. Additional RSM servers can be target servers, library servers, or a combination of both a target server and a library server.

The management server includes the user interface and maintains a database used by both the Software Distribution Services (SDS) and the Backup and Restore Services (BRS). The target server stores backup savesets, log files, and listing files. The library server stores copies of operating systems and applications for distribution. Over time, these servers will use large amounts of disk space. To determine the amount of free disk space required for each of these servers, you need to estimate how much data you will store on each of these servers.

To estimate the amount of disk space required by a management server above the amount required for installation, you need to determine the number of operating systems and applications that you will manage for distribution and how many backup schedule entries you will manage. Each operating system and application has an entry in the SDS database that requires 16 blocks. Each backup schedule entry requires about 3 blocks and each history record created for a backup operation requires 5 blocks.

To estimate the amount of disk space a library server requires, you need to determine what operating systems and applications you will store. For example, each copy of the VMS Version 5.0 operating system requires approximately 100,000 blocks. Applications can vary in size from 1000 to 60,000 blocks.

To estimate the amount of disk space a target server requires, you need to determine how many blocks you will back up for each client, how frequently each client is backed up, and how long you need to retain the backed-up data. In addition, for VMS clients add approximately 15 percent for error checking and redundancy information that is automatically stored with the backed-up data. Above this amount, you need to account for log files, which generally require about 3 blocks each, and listing files, which vary in size according to the number of files that are backed up. RSM automatically creates these files and saves them on the disk designated for backups at the target server, even if you store the backups directly on tape.

The *Remote System Manager Management Guide* provides additional guidelines for planning RSM servers, including how to estimate disk space and how to place servers in your network.

1.6 Required System Parameters

This section describes how to check and set the following system parameters:

- Global sections and global pages
- Minimum free process entry slots

If you modify any system parameters, use the information in Section 1.6.3 to help you run the AUTOGEN Utility to recompute system parameters.

1.6.1 Global Sections and Global Pages

Installing the RSM server software also includes installing the DNS client software. For the RSM server to function, you need the following global sections and global pages for both the RSM server software and the DNS client software:

Software	Global Sections	Global Pages
RSM server	11	700
DNS client	9	300
Total	20	1000

If a DNS client already exists on the server from a previously installed product (such as the VAX Distributed File Service), you only need to use the RSM server requirements.

If the current settings for the global sections and global pages are not adequate, VMSINSTAL could fail. Before you install RSM, you should determine the current settings for the SYSGEN parameters GBLSECTIONS and GBLPAGES. To do this, use the VMS Install Utility (INSTALL) and enter the following command:

```
$  INSTALL LIST/GLOBAL/SUMMARY RET
```

This command displays the system global sections and global pages. The last line invokes a display that shows the number of used global sections and the number of used and unused global pages. To view the number of unused global sections, exit from INSTALL and enter the VMS System Generation Utility (SYSGEN), as follows:

```
$  RUN SYS$SYSTEM:SYSGEN RET
SYSGEN>  SHOW GBLSECTIONS RET
```

This command displays the SYSGEN settings for global sections under the heading Current. Subtract the used global sections value from the current SYSGEN value to determine the number of unused global sections.

If the unused global sections or global pages are not adequate for RSM, you must edit the SYS$SYSTEM:MODPARAMS.DAT file to increase the values for the GBLSECTIONS or GBLPAGES parameters. To increase these values, insert either or both of the following statements at the end of the MODPARAMS.DAT file:

```
ADD_GBLSECTIONS=nnn
ADD_GBLPAGES=mmm
```

The variables *nnn* and *mmm* represent the numbers you are adding to the current settings for these SYSGEN parameters so that RSM has sufficient global sections and global pages.

Note

If you modify any system parameters, you must run the AUTOGEN Utility to recompute your system parameters as described in Section 1.6.3.

1.6.2 Minimum Free Process Entry Slots

The RSM server software requires at least 10 free process entry slots. Display the number of free process entry slots by entering the following DCL command:

```
$  SHOW MEMORY/SLOTS  RET
              System Memory Resources on 13-APR-1991 13:21:28.12
Slot Usage (slots):         Total       Free    Resident     Swapped
  Process Entry Slots          28         13          15           0
  Balance Set Slots            25         12          13           0
$
```

The example shows that 13 free slots are available. If there are fewer than 10 free slots, you must edit the SYS$SYSTEM:MODPARAMS.DAT file to increase the number of free slots. Insert the following statement at the end of the MODPARAMS.DAT file:

```
ADD_MAXPROCESSCNT=nnn
```

The variable *nnn* represents the number you are adding to the current settings for this parameter so that RSM has a sufficient number of free slots.

1.6.3 Recomputing New System Parameters

If you modified any system parameters (GBLSECTIONS, GBLPAGES, or MAXPROCESSCNT), you must run the Autogen Utility to recompute your system parameters. Enter the following command:

```
$  @SYS$UPDATE:AUTOGEN SAVPARAMS REBOOT  RET
```

These parameters are not dynamic, so you need to reboot your system. AUTOGEN performs an automatic shutdown and reboot when it finishes executing.

1.7 Account and Quota Requirements

You must have the following privileges to install RSM server software: SYSPRV, SYSNAM, OPER, PHY_IO, NETMBX, and TMPMBX. Digital recommends that you use the system manager account (SYSTEM) to install RSM server software.

After you install the server software, you can invoke RSM from any account that holds the RSM$MANAGE rights and has a proxy established to the RSM$MANAGER account. See Chapter 2 for more information.

The RSM server installation procedure creates two nonprivileged accounts: RSM$MANAGER and RSM$VMSINSTL. The installation procedure prompts for a user identification code (UIC) to assign to the RSM$MANAGER account. The default UIC is [300,301]. If this UIC is in use, you must assign an unused UIC for the RSM$MANAGER account. For the RSM$VMSINSTL account, the RSM installation procedure automatically assigns the next unused UIC in the same group that was assigned for the RSM$MANAGER account.

By default, RSM assigns [300,301] and [300,302] for its two UICs. If you do not use the default UICs, you need to select a group with two unused member codes.

If disk quotas are enabled on the server disk, the installation procedure assigns the following quotas:

Account	Quota
RSM$MANAGER	The RSM disk size
RSM$VMSINSTL	1000 blocks

The RSM$MANAGER account has a large quota because RSM uses this account to store backup savesets, operating systems, and applications.

The RSM$VMSINSTL account is used to grant RSM clients access to the library server. This account only creates NETSERVER.LOG files.

1.8 Installation Time

Installation time for an RSM server depends on the processor, distribution media, and system load. An average server installation takes less than 30 minutes.

1.9 VAX Distributed Name Service

The VAX Distributed Name Service (DNS) provides a networkwide naming scheme for assigning unique names to network resources. Resources, also known as objects, can include computer systems, user accounts, mailboxes, directories, files, printers, and other network entities.

Your network's DNS manager assigns unique object names and attributes, such as a network address, to each object on the network. DNS object names and attributes reside in a networkwide database called the DNS namespace. Thus, when you perform an operation, you can refer to a resource using only its object name; DNS supplies the necessary attributes (such as the network address) needed to complete your operation. When you use RSM to add an RSM server or client to the RSM database, you actually add the name and all associated attributes for the server or client to the DNS namespace.

A DNS namespace can have one of two structures: a single-directory namespace or a hierarchical namespace. The single-directory namespace consists of one directory, the root directory, where all object names are stored. The hierarchical namespace consists of a hierarchy of directories under the root directory. Object names can be stored in any directory in the hierarchy. The syntax of the object names for the RSM servers and clients depends on whether your namespace has a single-directory or a hierarchical structure.

Before you install RSM software, ask your DNS manager about the following RSM requirements:

- The account where you plan to install and use RSM needs read, write, and delete access to the DNS directory where your RSM server and client system names will exist. The RSM$MANAGER account also needs read access to the same DNS directory. Ask the DNS manager to add the necessary access to your accounts.

Note

The DNS manager must issue two DNS ADD ACCESS commands for each account that needs access to the DNS directory. One command must include the /FLAGS=DEFAULT qualifier to give your account access to objects in the directory named in the command line. The other command does not use the /FLAGS qualifier and gives your account access to the directory named in the command line.

- If you plan to run the Installation Verification Procedure (IVP), the installation procedure prompts you to specify a complete DNS name that does not exist in the DNS namespace. For example, if the DNS directory is .SALES.FORECAST.*object-name*, you might specify a name like .SALES.FORECAST.IVPTEST. The IVP uses this name to test RSM functions and deletes the name when the procedure completes.
- When RSM installs the DNS client software, you must supply the DECnet node name of one DNS server on the network. The DNS client software uses the DECnet node name to access the DNS server.
- During RSM server configuration, you need to specify the RSM server's complete DNS name. For example, if the DNS directory is .SALES.FORECAST.*object-name*, you might specify a name like .SALES.FORECAST.RSM_MANAGEMENT_SERVER.

Note

If you plan to install multiple RSM management servers, refer to the *Remote System Manager Management Guide* for information about sharing DNS directories.

1.10 Installing RSM Servers on VAXcluster Systems

If you install RSM Version 2.3 server software on a cluster, you can configure the server software to use the distributed resources available to all nodes that share the cluster alias. Alternatively, you can configure the server software to operate on a single specified node in the cluster. The RSM configuration procedure that you run after installing the server software prompts for your selection.

Note

If you plan to configure the server software to run on a VAXcluster system, make sure all nodes sharing the cluster alias are correctly licensed to run RSM server software. Otherwise, the software does not start.

1.10.1 Operating RSM on All Members of VAXcluster Systems

Configuring the RSM server for full VAXcluster system operation allows more efficient use of clusterwide resources, providing redundancy and load balancing with a minimum of preparation and effort by the manager. The full-cluster configuration is especially useful in clusters consisting of similar hardware systems. Note, however, that all members of the cluster will absorb some of the workload associated with RSM as follows:

- All nodes using the cluster alias must run RSM and they must share the same access rights to the RSM database and other RSM files. Nodes running RSM must maintain RSM execution queues, linking the execution queues to clusterwide generic queues.
- Any node using the cluster alias can perform various RSM operations such as distributing software applications, controlling a backup task, and executing the RSM user interface. (The user interface is the menu or command system through which an RSM manager controls RSM.)

To install the server software on a VAXcluster system or to run the server configuration procedure, you must log in to any cluster member that uses the cluster alias (see Chapter 3). For more information about RSM server operation on clusters, refer to the *Remote System Manager Management Guide*.

Note

During server configuration, you must designate a specific cluster member to execute initial system load (ISL) procedures because the ISL must execute on the same node that services the ISL boot request. For more information about the designated ISL boot service node, refer to Chapter 3 and to the *Remote System Manager Management Guide*.

1.10.2 Operating RSM on One Member of a VAXcluster System

Configuring the RSM server for operation on a single cluster member restricts the use of RSM (and the associated RSM workload) to a single node. Such a configuration is mandatory for a stand-alone system and is useful for clusters with dissimilar hardware (for example, a cluster consisting of 10 VAX workstations and one VAX 8500 computer system). In such a cluster, sharing the RSM workload among all cluster members could unnecessarily tax workstations whose resources are better spent processing the applications for which they are intended.

To install the server software on a single node of a cluster or to run the configuration procedure, you must log in to the cluster member on which you will be running the server software. For more information about the RSM server configuration procedure, see Chapter 3.

1.11 Multiple Server Environments

If your environment includes a management server and one or more target servers, library servers, or both, you must install RSM Version 2.3 software on the management server before you install RSM Version 2.3 software on any of the target or library servers.

A management server running RSM Version 2.3 can communicate and function with target and library servers running RSM Version 2.0, 2.1, 2.2, and 2.3.

1.12 Configuration Requirements for the Server's System

RSM extensively uses the facilities of the server's operating system and depends on the configuration of the base operating system and RSM files. Adhere to the following constraints when performing any system operations:

- Do not move operating-system-related files (for example, the system startup command file, the DECnet database, and the user authorization file) from where they were placed during the installation process.
- When modifying any operating system data files, use only the operating system utilities or follow the procedures contained in the appropriate manuals.
- Do not use search lists to define any RSM program or database files. Search lists can prevent RSM from locating the correct copy of the files that it accesses.

2

Server Installation and Verification

The Remote System Manager (RSM) server software is installed using the standard VMS installation procedure, VMSINSTAL. This chapter details the installation procedure for the RSM server software, including a step-by-step installation dialog.

Note

The procedure for installing the RSM software on a client system is provided in Part II (Chapter 5 and Chapter 6) of this guide.

VMSINSTAL prompts you with a series of questions. Your answers determine how VMSINSTAL installs RSM software on your system. For help on any of the question prompts, enter a question mark (?) in response to the question. Default responses are in square brackets [ ]. Press RET to accept the default response.

To terminate the installation procedure, press Ctrl/Y. This causes the installation procedure to delete all files it created up to that point and to exit the process. If you want to retry the installation procedure after terminating the installation, you must invoke VMSINSTAL from the beginning.

To save a copy of the VMSINSTAL session for reference, use the command SET HOST 0 /LOG=*file-name*. This creates a log file of the login session. See Appendix B for a sample server installation.

Before installing RSM, be sure that:

- VMS Version 5.1, 5.2, 5.3, or 5.4 software is installed on your system.
- DECnet–VAX software is installed and running on your system.
- You registered a Product Authorization Key (PAK) for RSM server software, as described in the *VMS License Management Utility Manual*.
- The VAX Distributed Name Service (DNS) is installed and accessible on the network (see Section 1.9 for additional information).

- You know the name of the DNS server node that the RSM server software will use.
- When you run the Installation Verification Procedure (IVP), you have the appropriate access to the DNS directory. You also need to know the appropriate DNS syntax for the name of a client.
- Your system has enough free blocks of disk space on the system disk (see Section 1.5 for additional information).
- You have read the VMS installation and operations guide for your VAX computer.
- You have read the first three chapters of the *Remote System Manager Management Guide*.
- You have read the RSM release notes.

Digital recommends that you read the RSM release notes before you install software. The installation procedure allows you to display or print the release notes before continuing the actual installation. After you complete the installation, the release notes are available in the SYS$HELP:RSMSRV023.RELEASE_NOTES file.

2.1 Server Installation Procedure

To install the RSM server software, follow these steps:

Step 1. Log in to the system manager account.

The system manager account has the necessary privileges to run VMSINSTAL.

Note

To install the server software on a single node of a cluster, you must be logged in to the cluster member on which you will be running the server software.

Step 2. Invoke VMSINSTAL.

Enter this command line:

```
$ @SYS$UPDATE:VMSINSTAL RSMSRV023 ddcu: OPTIONS N RET
```

The value *ddcu:* represents the device on which your distribution medium is mounted. OPTIONS N is the VMSINSTAL option that allows you to view or print release notes. If you do not include OPTIONS N, the release notes do not appear and automatically move to SYS$HELP. However, Digital

strongly recommends that you read the release notes before proceeding with the installation.

The following banner appears:

```
        VAX/VMS Software Product Installation Procedure Vx.x

It is dd-mmm-yyyy at hh:mm.
Enter a question mark (?) at any time for help.
```

Step 3. Check the system environment.

VMSINSTAL checks your system environment and notifies you of any running processes:

```
%VMSINSTAL-W-DECNET, Your DECnet network is up and running.
%VMSINSTAL-W-ACTIVE, The following processes are still active:
                     .
                     .
                     .
* Do you want to continue anyway [NO]?  YES RET
```

This display is informational and does not mean that you should not continue. However, if you answer NO or press RET, the installation terminates and you return to the DCL prompt. If you answer YES, the installation continues.

Step 4. Check backup.

The following message reminds you to back up your system disk before installing software:

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

If you answer YES, the installation continues. If you answer NO, the installation terminates and you return to the DCL prompt.

Step 5. Mount the installation kit volume.

The procedure prompts you to mount the installation kit volume. Mount the volume and make sure that the device is in the ready state. Answer YES and press RET when you are ready. A confirmation message informs you when the medium is mounted.

```
Please mount the first volume of the set on ddcu:

* Are you ready?  YES RET
%MOUNT-I-MOUNTED, RSM023 mounted on _ddcu:.
```

Step 6. The installation is started.

Once you mount the installation kit volume, the following messages appear:

```
The following products will be processed:
  RSMSRV V2.3

       Beginning installation of RSMSRV V2.3 at hh:mm

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

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]:
```

Digital recommends that you read the release notes before you install RSM. If you choose option 1 or 3, VMSINSTAL displays the release notes on your terminal. If you choose option 2 or 3, VMSINSTAL prompts you for a print queue name, as follows:

```
Queue name [SYS$PRINT]:
```

Type a queue name or press RET. VMSINSTAL queues a copy of the release notes to a printer and displays a message such as the following:

```
Job RSMSRV023 (queue queue, entry nnn) started on device
```

After you choose your release notes option, the following message appears:

```
* Do you want to continue the installation?
```

If you entered YES, the procedure continues with this message:

```
%VMSINSTAL-I-RELMOVED, The release notes have been successfully moved
               to SYS$HELP.
```

If you entered NO, the procedure terminates and returns you to the DCL prompt.

RSM supports the VMS License Management Facility (LMF) provided by VMS Version 5.0. Before you install RSM, you must register a Product Authorization Key (PAK) for the RSM product. The following PAK information for RSM is displayed along with a question that requires you to verify that you registered a PAK for RSM:

```
  Beginning installation of RSM V2.3

      Product:      RSM-SERVER
      Producer:     DEC
      Version:      2.3
      Release Date: 1-JUL-1990

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

If you answer YES and you registered a PAK for RSM, the installation procedure and IVP will run to completion. If you answer NO, the installation will complete but RSM cannot be started and the IVP will not execute.

After you complete the preceding steps, VMSINSTAL asks whether you want to purge files that will be replaced during the installation. If you want to retain old copies, answer NO. Otherwise, answer YES or press RET.

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

VMSINSTAL asks whether you want to run the IVP as part of the installation procedure with the following question:

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

If you answer YES, the IVP runs automatically at the end of the installation process. After you respond YES to this question, the following information appears:

```
    One of the IVP tests consists of using RSM to:

        1) Add a client entry to the namespace

        2) Modify the client entry, then

        3) Remove the client entry

    You must enter a client name to use during this test.  This name must
    not already exist in the namespace.
```

The IVP verifies that the major components of the RSM server were installed correctly and that RSM can access the DNS namespace. The IVP uses the RSM ADD CLIENT command to enter a name in the namespace. If the name already exists in the namespace, the installation procedure prompts you for a name that does not exist. See Chapter 4 for information on error handling.

```
* Enter the client name to use for the IVP:  client-name RET
```

Enter a client name using the full DNS object name. See the DNS manager for the name and the structure of the names.

If you elect not to run the IVP as part of the installation procedures, you can run the IVP at a later time (see Section 2.2 for more information).

The next step in the installation procedure asks you to enter the disk device that RSM will use:

```
* Enter the name of the disk device RSM will use [SYS$SYSDEVICE]:  RET
```

Note

Do not specify a VAX Distributed File Service (DFS) device in response to the above question. Specifying a DFS device causes the installation to fail.

Specify the disk on which you want VMSINSTAL to create the RSM directory tree. This directory structure contains files necessary to provide RSM services, locations for log files, and directories for RSM databases and software libraries. If you plan to configure RSM for full-cluster operation, the disk device must be available to all members of the cluster. Refer to Section 1.5 for information on the amount of disk space you will need for the disk you select. The default is the system device (SYS$SYSDEVICE). Press RET to enter the default. If you want to use a device other than SYS$SYSDEVICE, you must enter the name of that device.

```
* Enter the name of the directory RSM will use [RSM$S]:  RET
```

Specify the name of the directory at the root of the RSM directory tree. The default directory name is RSM$S, which you choose by pressing RET. If you wish to use another directory, enter the name of that directory. This directory will reside on the disk specified in the previous question.

Next, two user identification codes (UICs) must be assigned to two RSM accounts along with the password for each account:

```
In order to ensure that the RSM clients can access the
server's databases, this installation procedure creates
a non-privileged account called RSM$MANAGER.

You must specify a unique UIC for the RSM$MANAGER
account so that it will not conflict with other accounts
on your system.
```

If you are installing RSM for the first time, the installation procedure prompts you for a UIC to assign to the RSM$MANAGER account with the following question:

```
* Enter the UIC for the RSM manager account [[300,301]]:  RET
```

Press RET to use the default [300,301]. If you want to use another UIC, enter that UIC enclosed in brackets.

If you have previously installed the RSM server software, the following message appears:

```
%RSMSRV-I-EXISTS, the identifier RSM$MANAGER already exists with
             UIC [ggg,mmm]
This procedure will assume the RSM$MANAGER account also exists.
```

Next, you must assign a password for the RSM$MANAGER account:

```
Please enter a password for the RSM$MANAGER account. The password
you specify must contain at least 8 and no more than 31 characters
and may not refer to the account name, the product name, or your system
node or cluster name.

Valid characters include A through Z, 0 through 9, $ (dollar sign) and
_ (underscore).

As with the DCL SET PASSWORD command, your input will not echo on the
terminal and you will be asked to verify the password.

* Enter the password for the [RSM$MANAGER] account:  password RET

* Re-enter the password for the [RSM$MANAGER] account for verification:
```

At these prompts, enter the password and the verification of the password for the RSM$MANAGER account. The password must be an alphanumeric string of at least 8 and not more than 31 characters. The procedure does not display the password or the verification of the password to protect system security.

After you enter the password for the RSM$MANAGER account, RSM automatically assigns the next unused UIC in the same group to the next account, RSM$VMSINSTL. The next message informs you of this.

```
In order to ensure that the RSM clients can access the
VMSINSTAL savesets on the server, this installation procedure
creates a non-privileged account called RSM$VMSINSTL for
their use.

If RSM$VMSINSTL exists from a previous installation, it will be kept.
The UIC for this account will be the next available UIC
with the same group as the RSM manager account.

%RSMSRV-I-FOUNDUIC, Using UIC [ggg,mmm] for the RSM VMSINSTAL account
```

After the installation procedure assigns a UIC for the RSM$VMSINSTL account, you must assign the password for this account:

```
Please enter a password for the RSM$VMSINSTL account. The password
you specify must contain at least 8 and no more than 31 characters
and may not refer to the account name, the product name, or your system
node or cluster name.

Valid characters include A through Z, 0 through 9, $ (dollar sign) and
_ (underscore).
```

```
As with the DCL SET PASSWORD command, your input will not echo on the
terminal and you will be asked to verify the password.

* Enter the password for the [RSM$VMSINSTL] account:  password RET
* Re-enter the password for the [RSM$VMSINSTL] account for verification:

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

At these prompts, enter the password and the verification of the password for the RSM$VMSINSTL account. The password must be an alphanumeric string of at least 8 and not more than 31 characters. The procedure does not display the password or the verification of the password to protect system security.

Note

If you select a UIC other than [300,301] for the RSM$MANAGER account, you should select a group with two unused member codes.

Step 7. The DNS client is installed.

The next step in installing the RSM server software is to install the DNS client software. To install the DNS client, you must supply the name of a node on which the DNS server software is installed and running. The following is the dialog for installing the DNS client:

```
Installing VAX Distributed Name Service Client
```

If this is the first time you have installed the DNS client on this system, the procedure displays the following question:

```
* Enter the DNS server node name:  node-name RET
```

Enter the DECnet node name of a node where the DNS server is located.

If the DNS client was previously installed on this node (either from a previous installation of the RSM server or from another product that uses DNS, such as VAX Distributed File Service (DFS)), the procedure displays the following information and prompt:

```
A VAX Distributed Name Service Client Interface exists on this system
from a previously installed product.

The existing DNS client setup file, SYS$SYSTEM:DNS$DEFAULT_FILE.DAT,
will be appended to the new SYS$SYSTEM:DNS$DEFAULT_FILE.DAT.

The following DNS server nodes have been found. Select a node name
from this list or the name of another DNS server node.

node_a (area.number)

* Enter the name of an existing DNS server node:
```

At this prompt you can enter either the DNS server node name that was displayed or another node name on which the DNS server resides.

Note

If you plan to install multiple RSM management servers, refer to the *Remote System Manager Management Guide* for information about sharing DNS directories.

After you specify the DNS server node, the following message appears:

```
%COPY-S-COPIED, node-name::SYS$SYSROOT:[SYSLIB]DNS$NS_DEF_FILE.DAT;1 copied
to VMI$ROOT:[SYSEXE]DNS$DEFAULT_FILE.DAT;1 (1 block)
```

If the DNS client was previously installed, an additional message appears, informing you that the previous DNS$DEFAULT_FILE.DAT was appended to the new DNS$DEFAULT_FILE.DAT.

Step 8. The software is installed.

The installation dialog is now complete and the following message appears:

```
Unless your distribution kit has several volumes, there will be no
further questions.
```

At this point, VMSINSTAL performs the installation of the RSM server software and displays a series of messages that indicate the installation activity is taking place. Appendix B provides an example of the complete installation dialog along with these informational messages.

Appendix A provides a complete list of the files, accounts, rights identifiers, and directories added during the installation.

When the software installation completes, VMSINSTAL displays the following instructions for completing the RSM server installation.

```
The following post-installation steps are necessary.
Refer to the installation guide for details.

1. Edit the system startup procedure to start RSM on this
   server. [add @SYS$STARTUP:RSM$SERVER_STARTUP]

2. Edit SYS$MANAGER:SYLOGIN.COM. [add @SYS$MANAGER:RSM$SYMBOLS]

3. Execute @SYS$MANAGER:RSM$CONFIGURE.COM.

%VMSINSTAL-I-MOVEFILES, Files will now be moved to their target directories
%RUN-S-PROC_ID, identification of created process is xxxxxxxx
RSM Server startup beginning...
```

If this is the first time the server software is installed, an error message indicates that the startup procedure did not find the server configuration file and the startup procedure aborts as shown in the following messages:

```
%RSM-F-NOCONFIG_FILE, SYS$MANAGER:RSM$CONFIG.DAT not readable
%RMS-E-FNF, file not found
RSM-F-STARTUP_ABORT, RSM server startup aborting
```

If the server software has been previously installed, the startup procedure completes and the following message appears:

```
RSM Server startup complete
```

Refer to Chapter 3 for a description of these postinstallation procedures.

If you requested that the IVP be run, VMSINSTAL next runs the IVP. Otherwise, the installation procedure completes (see step 10).

Step 9. The Installation Verification Procedure is run.

If you indicated earlier in the installation procedure that you wanted to run the IVP, VMSINSTAL displays a series of messages indicating the IVP activity as it occurs. These messages are:

```
Installation Verification Procedure for RSM V2.3

Checking for presence of the DNS Client software ...

Checking to see if the DNS Client software is installed ...


Checking to see if the DNS namespace can be accessed
        and used successfully ...

Execution of the RSM commands resulted in the following
output log:

$ DEFINE/USER RSM$SERVER_TYPE M
$ MANAGE
ADD CLIENT client-name/NODE_NAME = IVPTMP
%RSM-I-CLIENT_DEFINED, client .client-name defined
MODIFY CLIENT client-name/NODE_NAME = TMPIVP
%RSM-I-CLIENT_MODIFIED, client .client-name modified
%RSM-I-MODIFIED, object modified
REMOVE CLIENT client-name
%RSM-I-CLIENT_DELETED, client .client-name removed
%RSM-I-DELETED, object deleted
$ SET NOVERIFY
```

VMSINSTAL now displays a message stating that either the installation procedure was successful or the IVP failed. If you receive an error message during the IVP, refer to Chapter 4 for more information.

```
Installation verification successfully completed.
To run this IVP again, type "@SYS$TEST:RSM$SERVER_IVP."
```

You can run the IVP at any time to check the RSM software. See Section 2.2 for a description of how to run the IVP independently of the installation.

Step 10. The installation procedure completes.

The following messages mean that VMSINSTAL successfully completed installation and verification of the RSM server software. If VMSINSTAL reports a failure, review the installation prerequisites.

```
Installation of RSMSRV V2.3 completed at hh:mm

VMSINSTAL procedure done at hh:mm
```

Replace any medium that you removed from the console drive before you began the installation.

At this point, the RSM server software is installed. You must now perform the postinstallation procedures. Refer to Chapter 3 for a description.

2.2 Running the IVP Separately

This section describes how to run the IVP separately from the installation procedure or to rerun the IVP after you install the RSM server software.

The IVP is a command procedure included with the RSM kit. The IVP verifies that the RSM server is installed correctly. The installation procedure places the procedure file RSM$SERVER_IVP.COM in the SYS$TEST directory. The IVP tests that the major components of the RSM server were installed correctly.

To run the IVP independently of the installation procedure, enter the following command:

```
$ @SYS$TEST:RSM$SERVER_IVP RET
```

If you run the IVP independently of the installation procedure, the IVP prompts for the name of the client to be used for the IVP. The following is a sample dialog of the IVP:

```
Installation Verification Procedure for RSM V2.3

Checking for presence of the DNS Client software ...

Checking to see if the DNS Client software is installed ...

The final test consists of the following steps:

        1). Use RSM to add a client entry into the namespace.
        2). Use RSM to modify the client entry.
        3). Use RSM to remove the client entry that was added.
```

```
The name used should not already exist in your namespace.

Please enter the client name which you wish to use:  client-name RET
```

The IVP tests that the major components of the RSM server were installed correctly and that RSM can use DNS. The IVP uses the RSM ADD CLIENT command to enter an object name in the namespace. This name cannot already exist in the namespace, and it must be the full DNS object name. If the object name already exists in the namespace, the IVP will fail. See Chapter 4 for information on error handling.

After you enter the client name, the following log appears, describing the IVP activity:

```
Checking to see if the DNS namespace can be accessed
        and used successfully ...

Execution of the RSM commands resulted in the following
output log:

$ DEFINE/USER RSM$SERVER_TYPE M
$ MANAGE
ADD CLIENT client-name/NODE_NAME = IVPTMP
%RSM-I-CLIENT_DEFINED, client .client-name defined
MODIFY CLIENT client-name/NODE_NAME = TMPIVP
%RSM-I-CLIENT_MODIFIED, client .client-name modified
%RSM-I-MODIFIED, object modified
REMOVE CLIENT client-name
%RSM-I-CLIENT_DELETED, client .client-name removed
%RSM-I-DELETED, object deleted
$ SET NOVERIFY

Installation verification successfully completed.
To run this IVP again, type "@SYS$TEST:RSM$SERVER_IVP."
$
```

The RSM$SERVER_IVP.COM file is independent of the RSM software and can be deleted without adversely affecting RSM operations. However, Digital strongly recommends that you keep this file so that you can run the IVP later.

3
Server Postinstallation Procedures

This chapter describes the postinstallation procedures required to start your RSM server software. These procedures include granting authorization and proxies to use the RSM server, editing the system startup files, configuring the server software, and starting the server.

3.1 Granting Authorization and Proxies

This section describes how to grant a rights identifier and how to add the necessary proxies for a management server and for any separate library and target servers that you configure.

3.1.1 Management Server Rights and Proxies

To use the RSM management server, the account from which you will run the RSM server user interface must have the RSM$MANAGE rights identifier. This same account must also have a local proxy to the RSM$MANAGER account to access the database.

The following example shows the procedure for establishing the RSM$MANAGE rights identifier for the SYSTEM account:

```
$  SET DEFAULT SYS$SYSTEM RET
$  RUN AUTHORIZE RET
UAF>  GRANT/IDENTIFIER RSM$MANAGE SYSTEM RET
%UAF-I-GRANTMSG, identifier RSM$MANAGE granted to SYSTEM
UAF>  EXIT RET
%UAF-I-NOMODS, no modification made to system authorization file
%UAF-NAFNOMODS, no modifications made to network authorization file
%UAF-I-RDBDONEMSG, rights database modified
$
```

After you grant the rights identifier to the desired account, you must next set up a proxy on the RSM server system between any accounts used to run RSM and the RSM$MANAGER account.

NOTE

You must specify the /DEFAULT qualifier with the ADD/PROXY command immediately following the local account name. In the examples that follow, the local account is RSM$MANAGER.

The VMS proxy mechanism does not allow a default proxy to access more than one account. In the following example, if *server*::SYSTEM already had a proxy to another account on the server node, the Authorize Utility would replace the existing proxy with a new proxy.

For example, if you plan to run RSM from the SYSTEM account, set up the proxy by using the following procedure:

```
$  SET DEFAULT SYS$SYSTEM RET
$  RUN AUTHORIZE RET
UAF>  ADD/PROXY server::SYSTEM RSM$MANAGER/DEFAULT RET
%UAF-I-NAFADDMSG, record successfully added to NETPROXY.DAT
UAF>  EXIT RET
%UAF-I-NOMODS, no modifications made to system authorization file
%UAF-I-NAFDONEMSG, network authorization file modified
%UAF-I-RDBNOMODS, no modifications made to rights database
$
```

In addition, the account from which you plan to run RSM must have a file limit (FILLM) quota of at least 100.

Note

If you installed RSM on a single node, the value for *server* is the DECnet node name where the server is installed.

If you installed RSM on all members of a VAXcluster system, the value for *server* is the cluster alias where the server is installed.

3.1.2 Separate Library Server and Target Server Proxies

If this server is a target server, a library server, or a combination of the two, you must create three more proxies: two on this server and one on the management server. The purpose of these proxies is to allow the two servers to communicate.

Note

If you installed RSM on a single node, the value for *server* and *management-server* in the examples that follow is the DECnet node name where the server is installed.

If you installed RSM on all members of a VAXcluster system, the value for *server* and *management-server* in the examples that follow is the cluster alias where the server is installed.

At this server, you use the following procedure to set up a proxy for the management server:

```
$  SET DEFAULT SYS$SYSTEM RET
$  RUN AUTHORIZE RET
UAF>  ADD/PROXY management-server::RSM$MANAGER RSM$MANAGER/D RET
%UAF-I-NAFADDMSG, record successfully added to NETPROXY.DAT
UAF>  EXIT RET
%UAF-I-NOMODS, no modifications made to system authorization file
%UAF-I-NAFDONEMSG, network authorization file modified
%UAF-I-RDBNOMODS, no modifications made to rights database
$
```

At this server, you need to establish a proxy from the account on the management server that will access the RSM server software at this server. For example, if you plan to run RSM from the SYSTEM account at the management server, use the following procedure:

```
$  SET DEFAULT SYS$SYSTEM RET
$  RUN AUTHORIZE RET
UAF>  ADD/PROXY management-server::SYSTEM RSM$MANAGER/D RET
%UAF-I-NAFADDMSG, record successfully added to NETPROXY.DAT
UAF>  EXIT RET
%UAF-I-NOMODS, no modifications made to system authorization file
%UAF-I-NAFDONEMSG, network authorization file modified
%UAF-I-RDBNOMODS, no modifications made to rights database
$
```

At the management server, use the following procedure to set up the proxy for this server:

```
$  SET DEFAULT SYS$SYSTEM RET
$  RUN AUTHORIZE RET
UAF>  ADD/PROXY server::RSM$MANAGER RSM$MANAGER/D RET
%UAF-I-NAFADDMSG, record successfully added to NETPROXY.DAT
UAF>  EXIT RET
%UAF-I-NOMODS, no modifications made to system authorization file
%UAF-I-NAFDONEMSG, network authorization file modified
%UAF-I-RDBNOMODS, no modifications made to rights database
$
```

3.1.3 Adding Proxies for Clients on Separate Library Servers

On separate library servers and on combined target and library servers you need to add a set of proxies for the clients that will access this server.

Note

Do not add this proxy to a management server. A management server automatically adds this proxy when it performs INSTALL RSM operations on each client. Separate target servers do not need a proxy for each client.

Each client needs a proxy to the RSM$VMSINSTL account on the server. To establish these proxies, use the following procedure:

```
$  SET DEFAULT SYS$SYSTEM RET
$  RUN AUTHORIZE RET
UAF>  ADD/PROXY client::RSM$CMANAGER RSM$VMSINSTL/D RET
%UAF-I-NAFADDMSG, record successfully added to NETPROXY.DAT
UAF>  EXIT RET
%UAF-I-NOMODS, no modifications made to system authorization file
%UAF-I-NAFDONEMSG, network authorization file modified
%UAF-I-RDBNOMODS, no modifications made to rights database
$
```

Note

The value for *client* in the preceding example is the DECnet node name where the client is installed.

3.2 Enabling Proxy Access on the DECnet FAL Object

For RSM operations to work properly, the DECnet File Access Listener (FAL) object must allow both incoming and outgoing proxy access (the default setting) on both RSM servers and clients.

You can verify the characteristics of the DECnet FAL object by using the following command:

```
$  MCR NCP SHOW OBJECT FAL CHARACTERISTICS RET


Object Volatile Characteristics as of 12-APR-1989 08:06:30

Object = FAL

Number                    = 17
File id                   = FAL.EXE
Proxy access              = incoming and outgoing
```

A display similar to the preceding example indicates that the FAL object does allow both incoming and outgoing proxy access. If the FAL object does not allow both incoming and outgoing proxy access, use the following commands to change its characteristics:

```
$  MCR NCP DEFINE OBJECT FAL PROXY BOTH RET
$  MCR NCP SET OBJECT FAL PROXY BOTH RET
$
```

3.3 Editing the System Startup File

For the system to start up the RSM server automatically, you must edit the system startup command file, SYS$MANAGER:SYSTARTUP_V5.COM, to include the RSM server startup command file, RSM$SERVER_STARTUP.COM. To do this, add the following line:

```
$  @SYS$STARTUP:RSM$SERVER_STARTUP
```

Add this line after the statement that invokes the DECnet startup command file, STARTNET.COM. Placing the RSM startup command file after the DECnet startup command file ensures that DECnet is started first.

Note

If DECnet startup is in batch mode, RSM startup must occur later in the same batch stream to ensure that RSM starts after DECnet startup completes.

The following sample portion of a SYSTARTUP_V5.COM file shows the addition of the statement that invokes the RSM startup command file. This statement executes the RSM$SERVER_STARTUP command procedure in the SYS$STARTUP directory.

```
   .
   .
   .
$ IF F$SEARCH("SYS$SYSTEM:NETACP.EXE") .NES. "" -
        THEN @SYS$MANAGER:STARTNET.COM
   .
   .
   .
$ !Command procedure to startup RSM
$ !
$ IF F$SEARCH("SYS$STARTUP:RSM$SERVER_STARTUP.COM") .NES. "" -
        THEN @SYS$STARTUP:RSM$SERVER_STARTUP.COM
   .
   .
   .
```

RSM provides the ability for all processes on the server to have access to global VMS symbols that can be shared by all VMS RSM clients in the RSM network. The RSM RSM$SYMBOLS.COM file defines the symbols that are distributed by the RSM Client Administrative Services (CAS) facility.

To allow all processes on the server to have access to the RSM global symbols, a command to execute the RSM$SYMBOLS.COM file must be included in the system login command file. To do this, edit the SYLOGIN.COM file and add the following line:

```
$ @SYS$MANAGER:RSM$SYMBOLS
```

For more information on RSM global symbols and the CAS facility, refer to Chapter 8 in the *Remote System Manager Management Guide*.

3.4 Server Configuration Procedures

The final postinstallation procedure is to configure the RSM server. The configuration procedure defines certain parameters that the RSM server software uses, including whether the server will run on one member or all members of a VAXcluster system. In addition, this procedure defines the type of RSM server being installed on this system. The *Remote System Manager Management Guide* provides more in-depth discussion of the configuration procedure.

The RSM configuration procedure provides the following four server configuration options:

1. Management server, which includes the following:
   - The four RSM facilities: Basic Operational Services (BOS), Software Distribution Services (SDS), Backup and Restore Services (BRS), and Client Administrative Services (CAS)
   - The user interface
   - The SDS library server
   - The BRS target server
2. BRS target server, which stores the client's data that was backed up
3. SDS library server, which stores the software for distribution to clients
4. A combination of both the BRS target server and SDS library server

The BRS target server and the SDS library server do not include the management components or a user interface.

The configuration software also detects whether the server is installed on a VAXcluster system. If it is, the configuration procedure asks whether you want the software restricted to one member of the cluster or spread across all members of the cluster.

3.4.1 Invoking the Configuration Procedure

To run the configuration procedure, log in to the system manager account. In addition, if the server includes the BRS target component, the account must have directory creation privileges for the backup disk directory that you specify in the configuration dialog.

Note

To configure the server software for operation on a single node of a cluster, you must be logged in to the cluster member on which you will be running the server software.

Invoke the configuration procedure by entering the following:

```
$ @SYS$MANAGER:RSM$CONFIGURE RET
```

The configuration procedure responds with the following:

```
Initializing default values, please wait.
```

During this time, the procedure sets up internal variables and tables.

When the initialization task completes, the procedure displays the configuration options list:

```
        How should this RSM server be configured?  Select one
        of the following options:

        [1] Management server
        [2] Backup target server
        [3] Software library server
        [4] Combination backup target and software library server

        [9] Exit

        Type '?' at any prompt for a description of the information
        requested.
Enter one of the above choices [4]:
```

If this is the first RSM server you are installing on your network, you must select option 1. If this is a subsequent RSM server, you may select option 2, 3, or 4 (but not option 1).

The options list appears each time the option you choose completes processing.

If you choose options 1 through 4, the following appears:

```
Setting the server name ...
```

If the server is installed on a VAXcluster system, the configuration procedure displays the following:

```
   This host is a VAXcluster member.
* Should the RSM server software be accessible to all cluster members [N]:
```

Press RET if you want to restrict the server software and its associated workload to a single member of the VAXcluster system (the member on which you are executing the configuration procedure). Enter YES if you want to distribute the server software and its associated workload among all members of the cluster.

If you answered YES to the above question, making the software accessible to all cluster members, the configuration procedure prompts for the following information:

```
Enter the name of the node that will service ISL boot requests [ ]:
```

Enter the node name of the designated ISL boot service node. The prompt displays a default name if the server was configured previously. Refer to the *Remote System Manager Management Guide* for information about a designated ISL boot service node.

The configuration procedure prompts for the name of the RSM server:

```
Enter the name for this RSM server [ ]:
```

Enter the RSM name that you are assigning to this server. The name for the server must be unique in the DNS namespace. The name does not have to be the node name.

If you are creating another RSM environment by adding a second RSM management server, you need to refer to the *Remote System Manager Management Guide* for guidelines on creating another RSM environment.

The configuration dialog prompts you for values that RSM will use. Each prompt provides a default value that for the normal case should be adequate.

3.4.2 Configuration Dialog for Option 1

With option 1, the dialog continues with the following:

```
Configuring the software distribution service components...

   Configuring the SDS management component...

Enter the maximum number of active software distribution tasks [4]:
```

This question sets a limit on the maximum number of concurrent SDS tasks to assign to the SDS batch queue.

```
Enter the number of times to retry SDS tasks before aborting [3]:
```

This question sets the retry limit that determines how many times SDS will retry a failed install or fetch operation if you select the retry option for these operations.

```
How long should SDS wait before retrying failed operations [00:30:00.0]:
```

This question sets the retry interval that determines how long SDS should wait between retries if you select the retry option for these operations.

For more information on SDS and how RSM uses these values, refer to the *Remote System Manager Management Guide*.

Next, you must assign a password that RSM can use to create an encryption key for remote boot disk operations. RSM is the only entity that will ever use this password. You do not need to record this password in any way.

```
Please enter a password for the remote boot disk. The password you
specify must contain at least 8 and no more than 31 characters and may not
refer to the account name, the product name, or your system node or cluster
name.

Valid characters include A through Z, 0 through 9, $ (dollar sign) and
_ (underscore).
```

```
As with the DCL SET PASSWORD command, your input will not echo on the
terminal and you will be asked to verify the password.

* Enter the password for the remote boot disk:  password RET
* Re-enter the password for the remote boot disk for verification: -
password RET
```

Next the procedure configures the SDS library component with the following dialog:

```
   Configuring the SDS library component...

There are no configuration questions for the SDS library component.
```

Next the procedure configures the BRS management component with the following dialog:

```
Configuring the backup and restore services components...

   Configuring the BRS management component...

How often should the BACKUP scanner be run [01:00:00.0]:
```

This question sets the time interval between scans of the BRS schedule database for backup requests. That is, this default specifies that BRS is to scan the schedule database hourly for backup requests that are due.

```
How long should a backup be allowed to run before resubmission? [06:00:00.0]:
```

This question asks how long an active backup task should run before it is restarted. BRS will use this value to determine whether a backup failed.

The configuration procedure next asks a series of questions to configure the BRS target component:

```
   Configuring the BRS target component...

Enter the location for disk backups [ddcu:[RSM$SAVESETS]]:
```

This question asks you to specify the name of a disk directory to use for backup. If backups are to be disk resident, this is the directory where RSM will store the savesets. If the backups are to be tape resident, you must still specify a disk directory. BRS stores the log files and listing files on this disk.

```
Enter the default device for tape backups (e.g. MUA0, NONE) [NONE]:
```

This question asks for the name of a default tape drive. Answer this question only if you want to perform backups to tape. The actual tape drive can be altered during the BRS scheduling activity or during the actual backup. If you do not wish to use tape backups, or if you prefer not to specify a default tape drive, enter NONE.

```
Enter the length of time to wait for operator responses [00:20:00.0]:
```

If you specified a tape destination in the previous question, the configuration procedure asks you how long BRS should wait for an operator response to an operator communication (OPCOM) message requesting the operator to mount the tape. A value of 0 indicates that tape backups are to be performed without operator intervention.

```
Enter the maximum number of concurrent disk-based BACKUP/RESTORE tasks [4]:
```

This question sets a limit on the number of disk-based jobs that can run simultaneously from the disk-based backup queue.

```
Enter the maximum number of concurrent tape-based BACKUP/RESTORE tasks [1]:
```

This question sets a limit on the number of tape-based jobs that can run simultaneously from the tape-based backup queue.

For more information on BRS and how RSM uses these values, refer to the *Remote System Manager Management Guide*.

The previous question is the last in the dialog portion of the management server configuration procedure. The procedure then creates the directory for the disk-based backups.

```
    Creating directory for disk-based backups ...

%CREATE-I-CREATED, ddcu:[xxxxx] created
```

At this point, the management server configuration procedure completes and then updates the startup command files. The procedure returns to the configuration menu.

3.4.3 Configuration Dialog for Options 2, 3, and 4

Options 2, 3, and 4 configure additional library and target servers. These options use the same dialog as option 1.

- Option 2 uses the same dialog and questions for configuring a BRS target server and begins with

  Configuring the BRS target component...

- Option 3 uses the same dialog for configuring an SDS library server, has no questions, and begins with

  Configuring the SDS library component...

- Option 4 combines the dialog and questions for options 2 and 3 and begins with

  Configuring the SDS library component...

Each time a configuration option completes, it updates the RSM startup command files.

3.4.4 Exiting the Configuration Procedure

Option 9 on the menu exits the configuration procedure. The exit option does not change the RSM startup command files.

As you exit, the configuration procedure creates one proxy:

```
  This configuration procedure adds one proxy to the DECnet proxy
   database.

       Proxy                          Purpose
       -----                          -------

<SERVER>::RSM$MANAGER -> RSM$MANAGER  Allows local RSM operations access
                                      to the RSM$MANAGER account.
```

If the server is not a management server, the procedure displays the following additional text:

```
    In addition to the proxy just added, you must manually
    create three additional proxies (two on this server and one on
    the management server):

        Proxy                           Purpose
        -----                           -------
On this server:

<management-server>::RSM$MANAGER->RSM$MANAGER

                                        Allows remote RSM operations from the
                                        management server access to this
                                        server's RSM$MANAGER account.

<management-server>::<user-account>->RSM$MANAGER

                                        Allows the remote user interface to
                                        submit jobs to this server.

<user-account> is any and all accounts which will be using the RSM
                  management interface at the management server.  In
                  most cases, this is the SYSTEM account.

On the management server:

<<SERVER>>::RSM$MANAGER->RSM$MANAGER   Allows this server access to the
                                       management server's RSM$MANAGER
                                       account.
```

Refer to Section 3.1 for information on creating these proxies.

The last task the configuration procedure performs is to add the server to the DNS namespace used by RSM:

```
   Adding server to the namespace ...

ADD SERVER server-name/NODE_NAME=node-name
%RSM-I-SERVER_DEFINED, server .server-name defined
MODIFY SERVER server-name/NODE_NAME=node-name
%RSM-I-SERVER_MODIFIED, server .server-name modified
%RSM-I-MODIFIED, object modified
EXIT

   Any configuration changes you have made will not take effect until
   you have restarted the RSM server on this machine.  To restart the RSM
   server, execute SYS$STARTUP:RSM$SERVER_STARTUP.COM.
```

If you already added the RSM server's node name to the namespace, you will see the following display:

```
   Adding server to the namespace ...

ADD SERVER server-name/NODE_NAME=node-name
%DNS-E-ENTRYEXISTS, Creation not possible, entry already exists
MODIFY SERVER .server-name/NODE_NAME=node-name
%RSM-I-SERVER_MODIFIED, server .server-name modified
%RSM-I-MODIFIED, object modified
EXIT

   Any configuration changes you have made will not take effect until
   you have restarted the RSM server on this machine.  To restart the RSM
   server, execute SYS$STARTUP:RSM$SERVER_STARTUP.COM.
```

3.5 Server Startup Procedure

At this point, the server is configured and ready for startup. You must perform the startup procedure to make the configuration information available. Also, you must perform this startup procedure if you run the configuration procedure to reconfigure the server. To start up the server, enter the following command at the DCL prompt:

```
$  @SYS$STARTUP:RSM$SERVER_STARTUP
```

4

Error Handling for Server Installation

This chapter describes error messages that you could encounter during the installation and verification of the RSM server software. Each message provides suggestions for error recovery.

These messages are specific to installing and verifying RSM server software. If you receive any error messages that begin with %VMSINSTAL, refer to the *VMS Install Utility Manual* for an explanation of and possible solution to the problem.

4.1 Installation Error Messages

This section describes error messages that you might encounter while installing RSM software.

%RSMSRV-E-DNSINUSE, the old DNS client is in use

Explanation: The RSM server installation kit contains a new version of the DNS client. In order for the new DNS client to be installed properly, the old copy of the DNS client must not be in use.

User Action: Perform the following steps. Then reexecute the server installation procedure.

1. Stop the RSM$BKPSCAN process if it is executing.
2. Make sure that no users are running the RSM command interface; that is, no users are logged into MANAGE.
3. Make sure that no RSM operations are in progress. Specifically, there can be no backup batch queues in operation. Use the DCL SHOW QUEUE command for the RSM$BKP_TAPE_BATCH and RSM$BKP_DISK_BATCH queues to verify that no backup requests exist. If any operations are in progress, wait for them to complete before proceeding.
4. If the VAX Distributed File Service (DFS) is installed on your system, make sure that users are not running the DFS$CONTROL program.

5. If the DNS server is installed on this system, you must execute the following command to shut down the DNS server software:

   ```
   $ @SYS$MANAGER:DNS$STOP
   ```

   If you shut down the DNS server software, the IVP cannot be run as part of the installation procedure. You will have to run the IVP separately. Also, you must start the DNS server before running the IVP.

6. Issue the following command to shut down the DNS client software:

   ```
   $ @SYS$MANAGER:DNS$CLIENT_STOP
   ```

   You must stop the DNS server before you can shut down the DNS client.

%RSMSRV-E-NEEDGBLPG, the *software-component* requires *n* free global pages.

Explanation: The RSM server or DNS client *software-component* requires the number of global pages listed in the error message.

User Action: Ensure that the node you are installing RSM on has the required number of global pages.

%RSMSRV-E-NEEDGBLSEC, the *software-component* requires *n* free global sections.

Explanation: The RSM server or DNS client *software-component* requires the number of global sections listed in the error message.

User Action: Ensure that the node you are installing RSM on has the required number of global sections.

%RSMSRV-E-NODECNET, DECnet not up

Explanation: DECnet software is not installed and/or not running on the system during the installation.

User Action: If DECnet software is installed on the system, start it by executing the SYS$MANAGER:STARTNET.COM file. If DECnet software is not installed, install it and start it.

%RSMSRV-E-PEAKSPACE, RSM requires *number* blocks for installation.

Explanation: The minimum amount of disk space needed to install RSM is not available.

User Action: Delete unnecessary files from the system disk until *number* blocks of disk space are available.

%RSMSRV-E-VERSION, RSM requires VMS version *version* or later to install.

Explanation: The VMS version running on the system is not supported by RSM.

User Action: Upgrade VMS to a version supported by RSM.

4.2 IVP Error Messages

This section describes error messages that you could encounter during the RSM Installation Verification Procedure (IVP). You might encounter the first three messages while the IVP is checking for the presence of the DNS client software, checking to see whether the DNS client is installed, or creating a command file to execute the verification procedures.

DNS Client software is not present in SYS$SHARE.

Explanation: The IVP was unable to locate the DNS client software. This occurs because either the installation of the DNS client failed or the system was modified since the installation.

User Action: If the DNS installation failed, identify the cause of the failure from the error messages that appeared during step 7 of the server installation procedure. Resolve the cause of the DNS client installation failure. Then rerun the RSM server installation procedure.

DNS Client image is not a known file entry.

Explanation: There were not enough global pages or global sections to install the DNS client as a known image. The DNS client installation requires 300 global pages and 9 global sections.

User Action: Follow the guidelines in Section 1.6.1 for modifying the GBLPAGES and GBLSECTIONS SYSGEN parameters. Rerun the RSM server installation procedure.

Error writing to temporary command file.

Explanation: The IVP attempts to create a command file that executes RSM server software to add a client, modify that client, and then remove that client. This message indicates that the IVP was unable to write to the temporary output file IVP.TMP.

User Action: Identify the specific error from the secondary error message. Correct the condition that caused the error. Then rerun the IVP.

You might encounter the following error messages while the IVP attempts to add the client to the namespace. These messages will appear as part of the output log generated as a result of the command procedures.

%DNS-E-ACCESSDENIED, No rights to perform requested operation

Explanation: The account from which you are running the IVP does not have appropriate access to the DNS directory you specified with the client name.

User Action: Obtain the appropriate access for the DNS directory, or when specifying the client's full name, use a directory for which you do have access. (Refer to Section 1.9 for information on DNS requirements.) You can rerun the IVP (see Section 2.2).

%DNS-E-ENTRYEXISTS, Creation not possible, entry already exists

Explanation: The client name used for the IVP already exists in the namespace.

User Action: Rerun the IVP using a name that does not already exist in the namespace (see Section 2.2).

Part II

RSM Client Software Installation Procedures

Part II describes the procedures for installing the RSM client software.

Chapter 5 describes installation procedures for VMS clients.

Chapter 6 describes installation procedures for ULTRIX clients.

5
VMS Client Software Installation

This chapter describes the installation procedures for the RSM VMS client software, including preinstallation considerations and postinstallation instructions. RSM does not provide a separate distribution medium for the client software. The VMS client software is installed using the RSM Software Distribution Services (SDS) INSTALL RSM command. This command invokes the VMS Install Utility at the client system.

The INSTALL RSM command must be issued from the RSM management server. Therefore, before installing RSM VMS client software, you must have performed the following tasks:

1. Successfully execute the RSM server installation procedures as described in Chapter 2.
2. Successfully execute the server postinstallation procedures as described in Chapter 3, including:
   - Grant authorization and proxies
   - Edit system start-up files
   - Execute server configuration procedures
3. For VMS Version 5.0 client systems, if you did not create an LMF license database for the client as described in the *Remote System Manager Management Guide*, you must first register a Product Authorization Key (PAK) on the client system for the RSM client software before using the software. To register a PAK for the RSM client software, refer to the instructions in the *VMS License Management Utility Manual*.

Digital recommends that you read the RSM release notes before you install software. The server installation procedure allows you to display and/or print the release notes before you continue the actual installation. After you complete the server installation, the release notes are available in the SYS$HELP:RSMSRV023.RELEASE_NOTES file on the server.

Note

If you want your server also to be an RSM client, you need to install the RSM client software on your server, using the instructions in this chapter.

5.1 VMS Client Preinstallation Considerations

This section describes the preparation necessary for installing the RSM VMS client software.

5.1.1 Required Hardware

The RSM VMS client software can be used on any VAX processor except for MicroVAX I, VAXstation I, VAX–11/725, and VAX–11/730 systems. The VAX processor requires no special hardware other than the hardware needed to support DECnet operations.

5.1.2 Required Software

RSM VMS client software requires that your system operate the following software:

- VMS Version 4.7 through 5.4 software.
- DECnet–VAX software.

5.1.3 Required Product Authorization Key (PAK)

RSM supports the License Management Facility (LMF) provided by VMS Version 5.0. Before you can use RSM client software on a VMS Version 5.0 system, LMF requires that you create a license database for the client (on RSM servers) or that you use the VMS License Management Utility on the client system to register a PAK for the RSM client software.

Refer to the *Remote System Manager Management Guide* for instructions for creating a license database for the client on RSM servers. Refer to the *VMS License Management Utility Manual* for instructions for using the VMS License Management Utility to register a PAK.

5.1.4 Required Disk Space

To install the RSM VMS client, there must be at least 1400 blocks of free disk space on the system disk (SYS$SYSDEVICE:). The RSM client software requires approximately 500 blocks after installation.

5.1.5 Required Global Sections and Global Pages

For the RSM client to function, you need 2 global sections and 78 global pages. If the current settings for the global sections and global pages are not adequate, VMSINSTAL could fail. Chapter 1 describes how to verify the settings for the global sections and global pages. These procedures should be performed on the client before you execute the INSTALL RSM command.

5.1.6 Account and Quota Requirements

The INSTALL RSM command allows you to specify which account on the client RSM will use to install the client software. To install the client software, the account on the VMS client must have the SYSPRV and CMEXEC privileges. Digital recommends that you use the system manager account (SYSTEM) on the client to install RSM client software. The default provided with the command is the SYSTEM account. The file limit (FILLM) quota for this account must be 100 or greater.

The RSM client does not have a user interface. No special accounts or privileges are required to use the RSM client software after it is installed. It can only be used directly by the RSM server.

The INSTALL RSM command creates a new account (RSM$CMANAGER) with a default UIC of [300,303] for the client. If another application is already using this UIC, the INSTALL RSM command looks for a unique UIC by incrementing the group number by 1 until a unique UIC is located on the client.

The RSM$CMANAGER account performs software installation, backups, and administrative commands on the RSM client. This account creates log files on the client system disk. These files are temporary, and the disk space occupied by them is normally insignificant.

To make sure that the RSM client has access to enough space for the log files, the installation procedure assigns a quota of 10,000 blocks to the RSM$CMANAGER account (if disk quotas are enabled on the client system disk).

5.1.7 Defining the VMS Client Node

Before you install the client software, the client must be defined in the RSM database and in the DECnet database at the RSM management server. In addition, you must add a proxy for this client on library servers (the proxy is automatically added on management servers).

To define the client in the RSM database, you must use the RSM Basic Operational Services (BOS) ADD CLIENT command. This command adds a client entry that all subsequent RSM commands will use to refer to the client. Refer to the *Remote System Manager Command Reference* for a complete description of this command.

If the client is not defined in the DECnet database at the RSM management server, perform the following procedure at the RSM management server:

```
$  RUN SYS$SYSTEM:NCP  RET
NCP>  DEFINE NODE client-node-name ADDRESS client-address  RET
NCP>  SET NODE client-node-name ALL  RET
NCP>  EXIT  RET
$
```

where

client-node-name	is the DECnet node name for the client system.
client-address	is the DECnet address for the client system.

5.1.8 Enabling Proxy Access on the DECnet FAL Object

For RSM operations to work properly, the DECnet FAL object must allow both incoming and outgoing proxy access (the default setting) on both RSM servers and clients.

You can verify the characteristics of the DECnet FAL object by using the command:

```
$  MCR NCP SHOW OBJECT FAL CHARACTERISTICS  RET


Object Volatile Characteristics as of 12-APR-1989 08:06:30

Object = FAL

Number                    = 17
File id                   = FAL.EXE
Proxy access              = incoming and outgoing
```

A display similar to the example shown above indicates that the FAL object does allow both incoming and outgoing proxy access. If the FAL object does not allow both incoming and outgoing proxy access, use the following commands to change its characteristics:

```
$  MCR NCP  RET
NCP>  SET OBJECT FAL PROXY BOTH  RET
NCP>  DEFINE OBJECT FAL PROXY BOTH  RET
NCP>  EXIT  RET
$
```

5.1.9 Defining the TASK Object

RSM uses the DECnet TASK object on the client node to install RSM on the client. To verify that the TASK object is present, use the Network Control Program (NCP) at the client system to issue the following commands:

```
$  RUN SYS$SYSTEM:NCP  RET
NCP> SHOW OBJECT TASK  RET

 Object Volatile Summary as of dd-mmm-yyyy hh:mm:ss

    Object   Number  File/PID              User Id          Password

   TASK           0                       *DECNET_TASK*
NCP> EXIT  RET
$
```

A summary similar to the example shown above indicates that the TASK object is present.

Note

The preceding example shows that the TASK object is associated with an invalid user name for security purposes. For more information about securing the TASK object, refer to the *Remote System Manager Management Guide*.

If the TASK object is not present, NCP returns the following message:

```
NCP> SHOW OBJECT TASK  RET

Object Volatile Summary as of dd-mmm-yyyy hh:mm:ss

Unrecognized component , object
NCP>
```

If the TASK object is not present, you need to create one by issuing the following NCP commands at the client system:

```
$  RUN SYS$SYSTEM:NCP  RET
NCP> DEFINE OBJECT TASK NUMBER 0 USER *DECNET_TASK*  RET
NCP> SET OBJECT TASK ALL  RET
NCP> EXIT  RET
$
```

Note

The preceding example illustrates creating a TASK object and associating it with an invalid user name for security purposes. For more information about securing the TASK object, refer to the *Remote System Manager Management Guide*.

On library servers, you must establish a proxy so that this client can access the RSM$VMSINSTL account. The procedure is as follows:

```
$  SET DEFAULT SYS$SYSTEM RET
$  RUN AUTHORIZE RET
UAF>  ADD/PROXY client-node-name::RSM$CMANAGER RSM$VMSINSTL/D RET
%UAF-I-NAFADDMSG, record successfully added to NETPROXY.DAT
UAF>  EXIT RET
%UAF-I-NOMODS, no modifications made to system authorization file
%UAF-I-NAFDONEMSG, network authorization file modified
%UAF-I-RDBNOMODS, no modifications made to rights database
$
```

NOTE

On VMS Version 5 library servers, you must specify the /DEFAULT qualifier with the ADD/PROXY command.

5.1.10 Installation Time

The installation time for an RSM client is approximately 10 minutes depending on network load and stability.

The installation executes asynchronously. If requested with the command, the INSTALL RSM command can send a MAIL notification when the process completes.

5.1.11 Installing RSM Clients on VAXcluster Systems

If you install the RSM client software on homogeneous VAXcluster systems (in which the operating environment is identical on each member node), you have the option of using the cluster alias node name or the DECnet node name of a particular member. When installing on heterogeneous VAXcluster systems (in which the environment can be unique on each node), the RSM client software requires that each member be treated as a different client. That is, you must install RSM client software on each node of the cluster.

To use the cluster alias, a client entry in the RSM database must be created in which the /NODE_NAME qualifier specifies the DECnet cluster alias. When you use the cluster alias, DECnet selects which cluster member to use for the connection to the cluster. Therefore, different members of the cluster can be accessed by RSM at different times.

If you use the cluster alias as the RSM name for the VAXcluster system, only clusterwide resources can be used. For example, you cannot schedule a backup for a member-specific disk by using the cluster alias. If you wish to perform RSM services on a particular member of the cluster, you must add a client entry to the RSM database for that cluster member.

5.1.12 Configuration Requirements for the Client System

RSM extensively uses the facilities of the server's operating system and depends on the configuration of the base operating system and RSM files. Adhere to the following constraints when performing any system operations:

- Do not move operating-system-related files (for example, the system startup command file, the DECnet database, and the user authorization file) from where they were placed during the installation process.
- When modifying any operating system data files, use only the operating system utilities or follow the procedures contained in the appropriate manuals.
- Do not use search lists to define any RSM program or database files. Search lists can prevent RSM from locating the correct copy of the files that it accesses.

5.2 VMS Client Installation

To install the RSM VMS client, use the INSTALL RSM command. This command is an SDS command and must be executed from an RSM management server. For a description of the INSTALL RSM command, refer to the *Remote System Manager Command Reference*.

After you enter the command, SDS enters a dialog mode that prompts you for account information (user name and password) that is required to install the RSM client software. If you install the RSM client on a group of clients, the account information (user name and password) must be the same for each client in the group.

To issue the INSTALL RSM command, you must perform the following steps:

1. When you install RSM client software on a VMS Version 5.0 system, use the RSM/LMF utility on the server to create a license database for the client, or use the VMS License Management Utility (on the client system) to register a PAK for the RSM client software.
2. Invoke RSM by entering the MANAGE command at the DCL prompt.
3. Access the SDS facility by entering the DISTRIBUTION_SERVICE command.
4. Issue the INSTALL RSM command and include the required parameter and desired command qualifiers.

Note

Before issuing the INSTALL RSM command, make sure you completed any necessary backup of data on the client system.

The following dialog illustrates the steps for installing RSM:

```
$ MANAGE RET
MANAGE> DISTRIBUTION_SERVICE RET
DISTRIBUTE> INSTALL RSM client/OPERATING_SYSTEM=VMS/RETRY- RET
_DISTRIBUTE> /NOTIFY=(SUCCESS=node::user,FAILURE=node::user) RET

Please enter the client username <SYSTEM>(VMS), <root>(ULTRIX): SYSTEM RET
Please enter the client password: password RET
Please re-enter the client password: password RET

%RSM-I-SUBMIT, submitted batch install of RSM client kit for DECnet
node node-name

 DISTRIBUTE>
```

Descriptions of the parameter, qualifiers, and dialog for the INSTALL RSM command follow.

Command Parameter

client

The RSM name for the client or clients on which the RSM client software is to be installed. You can specify a client name or a group of clients by using a group name. You must specify the client.

When you install RSM client software on an RSM server, be sure to use the client name you specified with the ADD CLIENT command for the system, not the server name.

Command Qualifiers

/NOTIFY=(SUCCESS=*"list"*,FAILURE=*"list"*)
/NONOTIFY
Specifies a list of MAIL addresses (*node::user* or *@distribution-list*) of people who should be notified when the installation completes. This qualifier is optional. The default is /NONOTIFY.

/OPERATING_SYSTEM=VMS
Specify VMS to indicate that you are installing the RSM VMS client software. For a VMS client, this qualifier is optional. The default is VMS.

/RETRY
/NORETRY
Specifies whether SDS should retry the operation if the operation fails. This qualifier is optional. The default is /NORETRY.

Command Dialog

client username
Enters the user name for the account at the client on which you plan to install the RSM client software. The default is SYSTEM. To select the default, press RET.

If you plan to install the RSM client software on a group of clients, the user name must be the same for all clients.

password
You must enter the password for the user account. The password does not appear when you enter it. You must reenter the password for verification. If you plan to install the RSM client software on a group of clients, the password for the user account must be the same for all clients.

5.3 VMS Client Postinstallation Procedures

This section describes some postinstallation procedures that you need to perform on your RSM client system.

5.3.1 Client Access to Global VMS Symbols

RSM provides the ability for all processes on the client to have access to global VMS symbols that can be shared by all VMS servers and clients in the RSM network. These symbols are defined in the RSM$SYMBOLS.COM file and are distributed with the RSM Client Administrative Services (CAS) facility.

To ensure that all processes on the client have access to these RSM global symbols, a command to execute the RSM$SYMBOLS.COM file must be included in the system login command file. To do this, the client's system manager must edit the SYLOGIN.COM file and add the following line:

```
$ @SYS$MANAGER:RSM$SYMBOLS
```

For more information on RSM global symbols and the CAS facility, refer to the *Remote System Manager Management Guide*.

5.3.2 Proxy for a Separate Target Server

If your RSM environment has a separate target server, you must add the *target-server*::RSM$MANAGER to RSM$CMANAGER proxy on the client system. Enter the following DCL commands on the client system:

```
$  SET DEFAULT SYS$SYSTEM RET
$  RUN AUTHORIZE RET
UAF>  ADD/PROXY target-server::RSM$MANAGER RSM$CMANAGER/DEFAULT RET
%UAF-I-NAFADDMSG, record successfully added to NETPROXY.DAT
UAF>  EXIT RET
%UAF-I-NOMODS, no modifications made to system authorization file
%UAF-I-NAFDONEMSG, network authorization file modified
%UAF-I-RDBNOMODS, no modifications made to rights database
$
```

Note

On VMS Version 5 client systems, you must use the /DEFAULT qualifier with the ADD PROXY command immediately following the local account name. In the preceding example, the local account name is RSM$CMANAGER.

5.3.3 Proxy for a Client That is Also a Separate Library Server

If you install client software on a separate VMS Version 5 library server, you must set the *management-server*::RSM$MANAGER to RSM$MANAGER proxy as the default proxy. Enter the following DCL commands on the library server after you install the client software:

```
$  SET DEFAULT SYS$SYSTEM RET
$  RUN AUTHORIZE RET
UAF>  ADD/PROXY management-server::RSM$MANAGER RSM$MANAGER/DEFAULT RET
%UAF-I-NAFMODMSG, record successfully modified in NETPROXY.DAT
UAF>  EXIT RET
%UAF-I-NOMODS, no modifications made to system authorization file
%UAF-I-NAFDONEMSG, network authorization file modified
%UAF-I-RDBNOMODS, no modifications made to rights database
$
```

5.4 VMS Client Error Handling

For information about error and status messages that you might encounter during installation of the VMS client software, refer to the *Remote System Manager Command Reference*.

6

ULTRIX Client Software Installation

This chapter describes the installation procedures for the RSM ULTRIX client software, including preinstallation considerations. RSM does not provide a separate distribution medium for the client software. Install the ULTRIX client software by using the RSM Software Distribution Services (SDS) INSTALL RSM command.

You need to issue the INSTALL RSM command from the RSM management server. Therefore, before installing RSM ULTRIX client software, you must perform the following tasks:

1. Successfully execute the RSM server installation procedures as described in Chapter 2.
2. Successfully execute the server postinstallation procedures as described in Chapter 3, including:
   - Grant authorization and proxies
   - Edit system start-up files
   - Execute server configuration procedures
3. For ULTRIX RISC client systems, you must register a Product Authorization Key (PAK) on the client system for the RSM client software before using the software. To register a PAK for the RSM client software, refer to the instructions in the *ULTRIX Guide to Software Licensing*.

Digital recommends that you read the RSM release notes before you install the software. The server installation procedure allows you to display and/or print the release notes before you continue the actual installation. After you complete the server installation, the release notes are in the SYS$HELP:RSMSRV023.RELEASE_NOTES file on the server.

6.1 ULTRIX Client Preinstallation Considerations

This section describes the preparation necessary for installing the RSM ULTRIX client software.

6.1.1 Required Hardware

The RSM ULTRIX client software can be used on any VAX RISC processor except for MicroVAX I, VAXstation I, VAX–11/725, and VAX–11/730 systems. RSM ULTRIX client software requires hardware to support DECnet operations.

6.1.2 Required Software

To install the RSM ULTRIX client software, be sure you installed ULTRIX Version 4.0 (or later) software and DECnet–ULTRIX software on your system.

6.1.3 Required Product Authorization Key (PAK) for ULTRIX RISC Client

RSM supports the License Management Facility (LMF) provided by ULTRIX Version 4.0. Before you can use RSM client software on an ULTRIX RISC Version 4.0 system, LMF requires that you use the License Management Facility (LMF) on the client system to register a PAK for the RSM client software.

Refer to the *ULTRIX Guide to Software Licensing* for instructions for using the ULTRIX License Management Facility to register a PAK.

6.1.4 Required Disk Space

Table 6–1 summarizes the disk space necessary to install the RSM ULTRIX client.

Table 6–1 Required Disk Space for ULTRIX Client

Preinstallation:		
Directory	**RISC**	**VAX**
Root	300 kilobytes	100 kilobytes
/usr/tmp	1.2 megabytes	830 kilobytes
Postinstallation:		
Directory	**RISC**	**VAX**
Root	470 kilobytes	275 kilobytes

6.1.5 Account Requirements

The INSTALL RSM command allows you to specify the account through which you install the client software. The default provided with the command is the root account.

The INSTALL RSM command checks the file /etc/passwd for the last UID and, incrementing the value by 1, creates a new account called RSM$USER. The command then checks the file /etc/group for the last GID and, incrementing the value by 5, creates a new group called RSM$GROUP. This procedure is the same procedure used by the ULTRIX **adduser(8)** command.

Note

Before you install RSM client software, make sure Yellow Pages software is disabled. Otherwise, RSM cannot create the necessary RSM$USER and RSM$GROUP accounts.

6.1.6 Defining the ULTRIX Client Node

Before you install the client software, the client must be defined in the RSM database and in the DECnet database at the RSM management server.

To define the client in the RSM database, you must use the RSM Basic Operational Services (BOS) ADD CLIENT command. This command adds a client entry that all subsequent RSM commands will use to refer to the client. For a complete description of this command, refer to the *Remote System Manager Command Reference*.

If the client is not defined in the DECnet database at the RSM management server, perform the following procedure at the management server:

```
$ RUN SYS$SYSTEM:NCP RET
NCP> DEFINE NODE client-node-name ADDRESS client-address RET
NCP> SET NODE client-node-name ALL RET
NCP> EXIT RET
$
```

where

client-node-name	is the DECnet node name for the client system.
client-address	is the DECnet address for the client system.

The client must have a guest account. Refer to the *DECnet–ULTRIX Installation Guide* for more information on ULTRIX guest accounts.

6.1.7 Installation Time

The installation time for an RSM client takes approximately 10 minutes, depending on network load and stability.

The installation executes asynchronously. If requested with the command, the INSTALL RSM command can send a MAIL notification when the process completes.

6.2 ULTRIX Client Installation

To install the RSM ULTRIX client, use the INSTALL RSM command. This is an SDS command that you must issue from an RSM management server. For a complete description of the INSTALL RSM command, refer to the *Remote System Manager Command Reference*.

After you enter the command, SDS enters a dialog mode that prompts you for account information (user name and password) required to install the RSM client software. If you plan to install the RSM client on a group of clients, the account information (user name and password) must be the same for each client in the group.

To issue this command, you must perform the following steps:

1. Invoke RSM by entering the MANAGE command at the DCL prompt.
2. Access the SDS facility by entering the DISTRIBUTION_SERVICE command.
3. Issue the command and include the desired command qualifiers.

The following dialog illustrates these steps:

```
$ MANAGE RET
MANAGE> DISTRIBUTION_SERVICE RET
DISTRIBUTE> INSTALL RSM client/OPERATING_SYSTEM=ULTRIX/RETRY- RET
_DISTRIBUTE> /NOTIFY=(SUCCESS=node::user,FAILURE=node::user) RET

Please enter the client username <SYSTEM>(VMS), <root>(ULTRIX): root RET
Please enter the client password: password RET
Please re-enter the client password: password RET

%RSM-I-SUBMIT, submitted batch install of RSM client kit for DECnet
node node-name

 DISTRIBUTE>
```

Descriptions of the parameter, qualifiers, and dialog for the INSTALL RSM command follow.

Command Parameter

client

The RSM name for the client or clients on which you plan to install the RSM client software. You can specify a client name or a group of clients by using a group name. You must specify the client.

Command Qualifiers

/NOTIFY=(SUCCESS=*"list"*,FAILURE=*"list"*)
/NONOTIFY

Specifies a list of MAIL addresses (*node::user* or *@distribution-list*) of people who should be notified when the installation completes. This qualifier is optional. The default is /NONOTIFY.

/OPERATING_SYSTEM=ULTRIX

Specify ULTRIX to indicate that you are installing the RSM ULTRIX client software. For an ULTRIX client, you must specify this qualifier.

/RETRY
/NORETRY

Specifies whether SDS should retry the operation if the operation fails. This qualifier is optional. The default is /NORETRY.

Command Dialog

client username

Enter the user name for the account at the client on which you plan to install the RSM client software. The default is root. To select the default, press RET.

If you install the RSM client software on a group of clients, the user name must be the same for all clients.

password

You must enter the password for the user account. The password does not appear when you enter it. You must reenter the password for a verification of the password. If you install the RSM client software on a group of clients, the password for the user account must be the same for all clients.

6.3 ULTRIX Client Postinstallation Procedures

If your RSM environment has a separate target server, you must add the *target-server*::RSM$MANAGER to RSM$USER proxy on the client system. Add the proxy by performing the following steps on the ULTRIX client system:

1. Log in to the client as the user root.

2. Edit the /etc/dnet_proxy file and add the following line:

```
target-server::RSM$MANAGER RSM$USER
```

Note

To remove client software from an ULTRIX client, manually delete files added during ULTRIX client software installation. For the list of files added, refer to Section A.3.1.

6.4 ULTRIX Client Error Handling

For information about error and status messages that you might encounter during installation of the ULTRIX client software, refer to the *Remote System Manager Command Reference*.

A

Files Added During Installation and Configuration

This appendix describes the effect that RSM has on the server and client during the installation procedures.

A.1 RSM Server

This section lists the files, logical names, accounts, DECnet objects, rights identifiers, proxy, and processes added during installation and configuration of the server.

A.1.1 Files Added During Installation

RSM$ROOT:ASM.DIR
RSM$ROOT:LOG.DIR
RSM$ROOT:[ASM]DATABASES.DIR
RSM$ROOT:[ASM]INISYS.DIR
RSM$ROOT:[ASM]KITS.DIR
RSM$ROOT:[ASM]PROCEDURES.DIR
RSM$ROOT:[ASM]SAVESETS.DIR
RSM$ROOT:[ASM]WORK.DIR
RSM$ROOT:[ASM.INISYS]RIS.DIR
RSM$ROOT:[ASM.INISYS.RIS]BIN.DIR
RSM$ROOT:[ASM.INISYS.RIS]CLIENTS.DIR
RSM$ROOT:[ASM.KITS]MASTER.DIR
RSM$ROOT:[ASM.PROCEDURES]RSM$BKP_BACKINIT.COM
RSM$ROOT:[ASM.PROCEDURES]RSM$BKP_RESTINIT.COM
RSM$ROOT:[ASM.PROCEDURES]RSM$BKP_SCAN.COM
RSM$ROOT:[ASM.PROCEDURES]RSM$BKP_SCANNER_STARTUP.COM
RSM$ROOT:[ASM.PROCEDURES]RSM$BKP_SRVR.COM
RSM$ROOT:[ASM.PROCEDURES]RSM$CAS_FUNCTIONS.COM
RSM$ROOT:[ASM.PROCEDURES]RSM$CAS_SUBMIT.COM
RSM$ROOT:[ASM.PROCEDURES]RSM$CAS_UI_SERVER.COM
RSM$ROOT:[ASM.PROCEDURES]RSM$CEA.COM

RSM$ROOT:[ASM.PROCEDURES]RSM$CHECK_DECNET.COM
RSM$ROOT:[ASM.PROCEDURES]RSM$CHECK_GUEST.COM
RSM$ROOT:[ASM.PROCEDURES]RSM$CHECK_LICENSE.EXE
RSM$ROOT:[ASM.PROCEDURES]RSM$CONFIGURE_CLUSTER_
QUEUE.COM
RSM$ROOT:[ASM.PROCEDURES]RSM$CONVERT.COM
RSM$ROOT:[ASM.PROCEDURES]RSM$GET_CLIENT_INFO.EXE
RSM$ROOT:[ASM.PROCEDURES]RSM$GET_SERVER_INFO.EXE
RSM$ROOT:[ASM.PROCEDURES]RSM$ISL_DECNET.DAT
RSM$ROOT:[ASM.PROCEDURES]RSM$ISL_STARTUP.COM
RSM$ROOT:[ASM.PROCEDURES]RSM$ISL_VMSCLIENT.EXE
RSM$ROOT:[ASM.PROCEDURES]RSM$LICENSE.COM
RSM$ROOT:[ASM.PROCEDURES]RSM$NETDCL.COM
RSM$ROOT:[ASM.PROCEDURES]RSM$READ_CONFIG.EXE
RSM$ROOT:[ASM.PROCEDURES]RSM$SDS_INSTALL_VMS_RSM.COM
RSM$ROOT:[ASM.PROCEDURES]RSM$SDS_ISL_ULT.SYS
RSM$ROOT:[ASM.PROCEDURES]RSM$SDS_PROTO.SYS
RSM$ROOT:[ASM.PROCEDURES]RSM$SDS_SRVR.COM
RSM$ROOT:[ASM.PROCEDURES]RSM$SDS_SYSTEMCHECK.EXE
RSM$ROOT:[ASM.PROCEDURES]RSM$SDS_ULT.SYS
RSM$ROOT:[ASM.PROCEDURES]RSM$SDS_WAIT.COM
RSM$ROOT:[ASM.PROCEDURES]RSM$SDS_WORK.COM
RSM$ROOT:[ASM.PROCEDURES]RSM$STARTUP_LOCK.DAT
RSM$ROOT:[ASM.PROCEDURES]RSMCEA_ULTRIX_MIPS.BIN
RSM$ROOT:[ASM.PROCEDURES]RSMCEA_ULTRIX_VAX.BIN
RSM$ROOT:[ASM.PROCEDURES]RSMCLNULT.SH
RSM$ROOT:[ASM.DATABASES]RSMCLN023.ANS
RSM$ROOT:[ASM.DATABASES]RSM$ISL_BOOT.DSK
RSM$ROOT:[ASM.DATABASES]RSM$SDS_VMSINSTAL_QUOTAS.DAT
RSM$ROOT:[ASM.SAVESETS]RSMCLN023.A
RSM$ROOT:[ASM.SAVESETS]RSMCLN023.B
RSM$ROOT:[ASM.SAVESETS]RSMCLNULT023.TAR
SYS$HELP:RSM$BKP_HELP.HLB
SYS$HELP:RSM$HELP.HLB
SYS$HELP:RSM$SDS_HELP.HLB
SYS$HELP:RSMSRV023.RELEASE_NOTES
SYS$LIBRARY:DNS$CLIENT.EXE
SYS$LIBRARY:RSM$BRS_SHARE.EXE
SYS$LIBRARY:RSM$CAS_SHARE.EXE
SYS$LIBRARY:RSM$ISL_VMSLAA.EXE
SYS$LIBRARY:RSM$ISL_VMSLOAD.EXE
SYS$LIBRARY:RSM$MENU.HLB
SYS$LIBRARY:RSM$MENU.MENU

SYS$LIBRARY:RSM$MENUTEXT.HELP
SYS$LIBRARY:RSM$SDS_SHARE.EXE
SYS$LIBRARY:RSM$SHARE.EXE
SYS$LIBRARY:RSM$SHARE1.EXE
SYS$LOADABLE_IMAGES:LADDRIVER.EXE (Added only on VMS 5.1, 5.2, 5.3)
SYS$LOADABLE_IMAGES:LASTDRIVER.EXE (Added only on VMS 5.1, 5.2, 5.3)
SYS$MANAGER:DNS$CHANGE_DEF_FILE.COM
SYS$MANAGER:DNS$CLIENT_STARTUP.COM
SYS$MANAGER:DNS$CLIENT_STOP.COM
SYS$MANAGER:RSM$CONFIGURE.COM
SYS$MANAGER:RSM$ISL_BOOT.COM
SYS$MANAGER:RSM$LOGICALS.COM
SYS$MANAGER:RSM$STOP_BKPSCAN.COM
SYS$MANAGER:RSM$SYMBOLS.COM
SYS$MESSAGE:DNS$MSG.EXE
SYS$MESSAGE:RSM$MESSAGES.EXE
SYS$MESSAGE:RSM$SDS_MESSAGES.EXE
SYS$STARTUP:RSM$SERVER_STARTUP.COM
SYS$STARTUP:RSM$SERVER_TAILOR.COM
SYS$SYSTEM:DNS$ADVER.EXE
SYS$SYSTEM:DNS$DEFAULT_FILE.DAT
SYS$SYSTEM:DNS$GLOBAL_CACHE.GBL
SYS$SYSTEM:DNS$SOLICIT.EXE
SYS$SYSTEM:LASTCP.EXE (Added only on VMS 5.1, 5.2, 5.3)
SYS$SYSTEM:RSM$BKP_BACKINIT.EXE
SYS$SYSTEM:RSM$BKP_RESTINIT.EXE
SYS$SYSTEM:RSM$BKP_SCAN.EXE
SYS$SYSTEM:RSM$BKP_SRVR.EXE
SYS$SYSTEM:RSM$CAS_UI_SERVER.EXE
SYS$SYSTEM:RSM$CEA.EXE
SYS$SYSTEM:RSM$ISL_SERVER.EXE
SYS$SYSTEM:RSM$MAIN.EXE
SYS$SYSTEM:RSM$NETDCL.EXE
SYS$SYSTEM:RSM$RECEIVER.EXE
SYS$SYSTEM:RSM$SDS_INSTALL.EXE
SYS$SYSTEM:RSM$SDS_UISERVER.EXE
SYS$SYSTEM:RSM$SDS_UTILITIES.EXE
SYS$TEST:RSM$SERVER_IVP.COM

A.1.2 Files Added During Configuration

RSM$ROOT:[ASM.DATABASES]RSM$LAD_INFO.DAT
RSM$ROOT:[ASM.PROCEDURES]RSM$$SERVER$CONFIG.BIN
SYS$MANAGER:RSM$CONFIG.DAT
SYS$STARTUP:RSM$BKP_STARTUP.COM
SYS$STARTUP:RSM$SDS_STARTUP.COM

A.1.3 Logical Names Added During Installation

RSM$BKP_DATA
RSM$CLIUTLMSG
RSM$LOG
RSM$PROCEDURES
RSM$ROOT
RSM$SDS_AP_LIBRARY
RSM$SDS_DATA
RSM$SDS_MESSAGES
RSM$SDS_OS_LIBRARY
RSM$SDS_RIS
RSM$SDS_SAVESETS
RSM$SDS_WORK
RSM$SYSMGTMSG

A.1.4 Logical Names Added During Configuration

RSM$BKP_ACTIVE_TIMEOUT
RSM$BKP_DIRECTORY
RSM$BKP_DISK_BATCH
RSM$BKP_INTERVAL
RSM$BKP_OPER_TIMEOUT
RSM$BKP_SERVER
RSM$BKP_TAPE
RSM$BKP_TAPE_BATCH
RSM$CURRENT_SERVER
RSM$RETRY_COUNTER
RSM$RETRY_WAIT
RSM$SDS_BATCH
RSM$SDS_MESSAGES
RSM$SERVER_TYPE
RSM$CLUSTER_WIDE

A.1.5 Accounts Added

RSM$MANAGER
RSM$VMSINSTL

A.1.6 DECnet Objects Added

Object: RSM$BKP_SRVR
Number: 0
File id: SYS$SYSTEM:RSM$BKP_SRVR.EXE

Object: RSM$CEA
Number: 0
File id: SYS$SYSTEM:RSM$CEA.EXE

Object: RSM$NETDCL
Number: 0
File id: SYS$SYSTEM:RSM$NETDCL.EXE

Object: RSM$RECEIVER
Number: 0
File id: SYS$SYSTEM:RSM$RECEIVER.EXE
User id: RSM$MANAGER
Password: *password*

Object: RSM$SDS_SRVR
Number: 0
File id: SYS$SYSTEM:RSM$SDS_UISERVER.EXE

A.1.7 Rights Identifiers Added

RSM$BKP_SAVESET_WRITE
RSM$BKP_SAVESET_READ
RSM$MANAGE
RSM$CEA
RSM$BACKUP
RSM$INSTALL

A.1.8 Proxy Added After Configuration

server-node-(or *cluster-alias*)-name)::RSM$MANAGER RSM$MANAGER

A.1.9 Processes Added

RSM$BKPSCAN
DNS$ADVER

A.2 VMS Client

This section lists the files, logical names, account, DECnet objects, rights identifier, and proxies added during installation of the VMS client.

A.2.1 Files Added

RSM$C_PROCEDURES:RSM$APPLICATION_STARTUP.COM
RSM$C_PROCEDURES:RSM$CAS_UPDECNET.COM
RSM$C_PROCEDURES:RSM$INSTALL_LOCK.DAT
RSM$C_PROCEDURES:RSM$NETDCL.COM
RSM$C_PROCEDURES:RSM$SDS_INSTALL_AP.COM
RSM$C_PROCEDURES:RSM$SDS_SCAN_SYSTEM_
DIRECTORIES.COM
RSM$C_PROCEDURES:RSM$SDS_SET_STARTUP.COM
RSM$C_ROOT:ASM.DIR
RSM$C_ROOT:LOG.DIR
RSM$C_ROOT:[ASM]PROCEDURES.DIR
RSM$C_ROOT:[ASM]STARTUP_PROCEDURES.DIR
RSM$C_ROOT:[ASM]WORK.DIR
SYS$MANAGER:RSM$CLIENT_STARTUP.COM (VMS V4.*x*)
SYS$MANAGER:RSM$CLIENT_TAILOR.COM (VMS V4.*x*)
SYS$MANAGER:RSM$DECNETLOGIN.COM
SYS$MANAGER:RSM$SYSTARTUP.COM (VMS V4.*x*)
SYS$MESSAGE:RSM$MESSAGES.EXE
SYS$MESSAGE:RSM$SDS_MESSAGES.EXE
SYS$STARTUP:RSM$CLIENT_STARTUP.COM (VMS V5.*x*)
SYS$STARTUP:RSM$CLIENT_TAILOR.COM (VMS V5.*x*)
SYS$STARTUP:RSM$SYSTARTUP.COM (VMS V5.*x*)
SYS$SYSTEM:RSM$CEA.EXE
SYS$SYSTEM:RSM$NETDCL.EXE
SYS$SYSTEM:RSM$SDS_CLNSYNC.EXE
SYS$UPDATE:RSM$TRIAL_INSTALL.COM

A.2.2 Logical Names Added

RSM$C_LOG
RSM$C_PROCEDURES
RSM$C_ROOT
RSM$C_SDS_WORK
RSM$SDS_MESSAGES
RSM$SDS_STARTUP_PROCEDURES

A.2.3 Accounts Added

RSM$CMANAGER

A.2.4 DECnet Objects Added

Object: RSM$CEA
Number: 0
File id: SYS$SYSTEM:RSM$CEA.EXE

Object: RSM$NETDCL
Number: 0
File id: SYS$SYSTEM:RSM$NETDCL.EXE

A.2.5 Rights Identifier Added

RSM$CEA

A.2.6 Proxy Added

On VMS Version 4.*x* systems:

server-node-name::RSM$MANAGER RSM$CMANAGER

On VMS Version 5.*x* systems:

server-node-name::RSM$MANAGER RSM$CMANAGER(D)

A.3 ULTRIX Client

This section lists the files, accounts, DECnet object, and proxy added during installation of the ULTRIX client.

A.3.1 Files Added

/etc/rsm/RSM_trial_install
/etc/rsm/install
/etc/rsm/perform_lmf_check.sh
/etc/rsm/fetch_ap
/etc/rsm/install_ap
/etc/rsm/rsm_restore.sh
/etc/rsm/fetch_os
/etc/rsm/rsm_getdev
/etc/rsm/trial_install
/etc/CEA
/etc/RSM$CEA
/etc/rsm/rsm_dump_broadcast.sh

A.3.2 Accounts Added

RSM adds the RSM$USER user name to the file /etc/passwd.
RSM adds the RSM$GROUP group to the file /etc/group.

A.3.3 DECnet Object Defined

Name: RSM$CEA
Number: 0
File: /etc/RSM$CEA

A.3.4 Proxy Added

In /etc/dnet_proxy, adds a proxy from *server*::RSM$MANAGER to RSM$USER, where *server* is the DECnet node name of the RSM management server.

B

Sample RSM Server Installation

This appendix displays a sample installation of the RSM server software on a single node. The actual dates, times, entry numbers, and version numbers may vary for you.

```
 Welcome to VAX/VMS V5.1

Username:  SYSTEM
Password:
 Welcome to VAX/VMS version V5.1 on node OAK
    Last interactive login on Monday, 1-JAN-1991 10:43
    Last non-interactive login on Monday, 1-JAN-1991 10:04


$  @sys$update:vmsinstal rsmsrv023 RET

 VAX/VMS Software Product Installation Procedure V5.1


It is 1-JAN-1991 at 11:07.
Enter a question mark (?) at any time for help.
%VMSINSTAL-W-DECNET, Your DECnet network is up and running.
* Do you want to continue anyway [NO]?  yes RET
* Are you satisfied with the backup of your system disk [YES]?  RET
* Where will the distribution volumes be mounted:  sys$update  RET

* Options:  n RET
The following products will be processed:
  RSMSRV V2.3
 Beginning installation of RSMSRV V2.3 at 11:09

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

    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]:  RET
* Do you want to continue the installation?  y RET
%VMSINSTAL-I-RELMOVED , The product's release notes have been successfully moved to SYS$HELP.

   Beginning installation of RSM V2.3

        Product:      RSM-SERVER
        Producer:     DEC
        Version:      2.3
        Release Date: 1-JUL-1990

* Does this product have an authorization key registered and loaded?  y RET
* Do you want to purge files replaced by this installation [YES]?  RET
* Do you want to run the IVP after the installation [YES]?  RET

    One of the IVP tests consists of using RSM to:

 1 Add a client entry to the namespace

 2) Modify the client entry, then

 3) Remove the client entry

    You must enter a client name to use during this test.  This name must
    not already exist in the namespace.

* Enter the client name to use for the IVP:)  .ivptest RET
* Enter the name of the disk device RSM will use [SYS$SYSDEVICE]:  RET
* Enter the name of the directory RSM will use [RSM$S]:  RET
```

```
 In order to ensure that the RSM server can access the
 server's databases, this installation procedure creates
 a non-privileged account called RSM$MANAGER.

 You must specify a unique UIC for the RSM$MANAGER
 account so that it will not conflict with other accounts
 on your system.

* Enter the UIC for the RSM manager account [[300,301]]:   RET

 Please enter a password for the RSM$MANAGER account.  The password
 you specify must contain at least 8 and no more than 31 characters
 and may not refer to the account name, the product name, or your system
 node or cluster name.

 Valid characters include A through Z, 0 through 9, $ (dollar sign) and
 _ (underscore).

 As with the DCL SET PASSWORD command, your input will not echo on the
 terminal and you will be asked to verify the password.


* Enter the password for the [RSM$MANAGER] account:  password RET

* Re-enter the password for the [RSM$MANAGER] account for verification:  password RET


 In order to ensure that the RSM clients can access the
 VMSINSTAL savesets on the server, this installation procedure
 creates a non-privileged account called RSM$VMSINSTL for
 their use.

 If RSM$VMSINSTL exists from a previous installation, it will be kept.
 Otherwise, the UIC for this account will be the next available UIC
 with the same group as the RSM manager account.

%RSMSRV-I-FOUNDUIC, Using UIC [300,302] for the RSM VMSINSTAL account

 Please enter a password for the RSM$VMSINSTL account.  The password
 you specify must contain at least 8 and no more than 31 characters
 and may not refer to the account name, the product name, or your system
 node or cluster name.

 Valid characters include A through Z, 0 through 9, $ (dollar sign) and
 _ (underscore).

 As with the DCL SET PASSWORD command, your input will not echo on the
 terminal and you will be asked to verify the password.


* Enter the password for the [RSM$VMSINSTL] account:  password RET


* Re-enter the password for the [RSM$VMSINSTL] account for verification:  password RET

%VMSINSTAL-I-RESTORE, Restoring product saveset B ...

        Installing VAX Distributed Name Service Client

* Enter the name of an existing DNS server node:  oak  RET
%COPY-S-COPIED, OAK::SYS$SYSROOT:[SYSLIB]DNS$NS_DEF_FILE.DAT;2 copied to
VMI$ROOT:[SYSUPD.RSMSRV023]DNS$DEFAULT_FILE.DAT;1 (1 block)

    Unless your distribution kit has several volumes, there will be no
    further questions.
```

```
%RSMSRV-I-CRTACC, Creating account RSM$MANAGER
%VMSINSTAL-I-ACCOUNT, This installation creates an ACCOUNT named RSM$MANAGER.
%UAF-I-ADDMSG, user record successfully added
%UAF-I-RDBADDMSGU, identifier RSM$MANAGER value: [000300,000301] added to RIGHTSLIST.DAT
%UAF-I-RDBADDMSGU, identifier RSM$MGR value: [000300,177777] added to RIGHTSLIST.DAT
%RSMSRV-I-CRTACC, Creating account RSM$VMSINSTL
%VMSINSTAL-I-ACCOUNT, This installation creates an ACCOUNT named RSM$VMSINSTL.
%UAF-I-ADDMSG, user record successfully added
%UAF-I-RDBADDMSGU, identifier RSM$VMSINSTL value: [000300,000302] added to RIGHTSLIST.DAT
%RSMSRV-I-UPDACC, Updating account RSM$MANAGER quotas and defaults.
%VMSINSTAL-I-ACCOUNT, This installation updates an ACCOUNT named RSM$MANAGER.
%UAF-I-MDFYMSG, user record(s) updated
%VMSINSTAL-I-ACCOUNT, This installation updates an ACCOUNT named RSM$MANAGER.
%UAF-I-MDFYMSG, user record(s) updated
%VMSINSTAL-I-ACCOUNT, This installation updates an ACCOUNT named RSM$MANAGER.
%UAF-I-MDFYMSG, user record(s) updated
%VMSINSTAL-I-ACCOUNT, This installation updates an ACCOUNT named RSM$MANAGER.
%UAF-I-MDFYMSG, user record(s) updated
%VMSINSTAL-I-ACCOUNT, This installation updates an ACCOUNT named RSM$MANAGER.
%UAF-I-MDFYMSG, user record(s) updated
%VMSINSTAL-I-ACCOUNT, This installation updates an ACCOUNT named RSM$MANAGER.
%UAF-I-MDFYMSG, user record(s) updated
%VMSINSTAL-I-ACCOUNT, This installation updates an ACCOUNT named RSM$MANAGER.
%UAF-I-MDFYMSG, user record(s) updated
%RSMSRV-I-UPMACC, Updating account RSM$VMSINSTL quotas and defaults.
%VMSINSTAL-I-ACCOUNT, This installation updates an ACCOUNT named RSM$VMSINSTL.
%UAF-I-MDFYMSG, user record(s) updated
%VMSINSTAL-I-ACCOUNT, This installation updates an ACCOUNT named RSM$VMSINSTL.
%UAF-I-MDFYMSG, user record(s) updated
%VMSINSTAL-I-ACCOUNT, This installation updates an ACCOUNT named RSM$VMSINSTL.
%UAF-I-MDFYMSG, user record(s) updated
%VMSINSTAL-I-ACCOUNT, This installation updates an ACCOUNT named RSM$VMSINSTL.
%UAF-I-MDFYMSG, user record(s) updated
%VMSINSTAL-I-ACCOUNT, This installation updates an ACCOUNT named RSM$VMSINSTL.
%UAF-I-MDFYMSG, user record(s) updated
%VMSINSTAL-I-ACCOUNT, This installation updates an ACCOUNT named RSM$VMSINSTL.
%UAF-I-MDFYMSG, user record(s) updated
%VMSINSTAL-I-ACCOUNT, This installation updates an ACCOUNT named RSM$VMSINSTL.
%UAF-I-MDFYMSG, user record(s) updated
%RSMSRV-I-CRTRGHT, Creating RSM rights identifiers.
%RSMSRV-I-GRNTRGHT, Granting RSM right identifiers to RSM manager accounts.
%RSMSRV-I-QUOTA, Checking for DISKQUOTAs on the RSM server device ...
%RSMSRV-I-PROCEED, Installation proceeding...
%VMSINSTAL-I-RESTORE, Restoring product saveset C ...
%RSMSRV-I-CRTDIR, Creating RSM subdirectories...
%VMSINSTAL-I-SYSDIR, This product creates system disk directory  SYS$SYSDEVICE:[RSM$S].
%CREATE-I-EXISTS, SYS$SYSDEVICE:[RSM$S] already exists
%VMSINSTAL-I-SYSDIR, This product creates system disk directory  SYS$SYSDEVICE:[RSM$S.ASM].
%VMSINSTAL-I-SYSDIR, This product creates system disk directory  SYS$SYSDEVICE:[RSM$S.ASM.DATABASES].
%VMSINSTAL-I-SYSDIR, This product creates system disk directory  SYS$SYSDEVICE:[RSM$S.ASM.INISYS].
%VMSINSTAL-I-SYSDIR, This product creates system disk directory  SYS$SYSDEVICE:[RSM$S.ASM.INISYS.RIS].
%VMSINSTAL-I-SYSDIR, This product creates system disk directory  SYS$SYSDEVICE:[RSM$S.ASM.INISYS.RIS.CLIENTS].
%VMSINSTAL-I-SYSDIR, This product creates system disk directory  SYS$SYSDEVICE:[RSM$S.ASM.INISYS.RIS.BIN].
%VMSINSTAL-I-SYSDIR, This product creates system disk directory  SYS$SYSDEVICE:[RSM$S.ASM.KITS].
%VMSINSTAL-I-SYSDIR, This product creates system disk directory  SYS$SYSDEVICE:[RSM$S.ASM.KITS.MASTER].
%VMSINSTAL-I-SYSDIR, This product creates system disk directory  SYS$SYSDEVICE:[RSM$S.ASM.PROCEDURES].
%VMSINSTAL-I-SYSDIR, This product creates system disk directory  SYS$SYSDEVICE:[RSM$S.ASM.SAVESETS].
%VMSINSTAL-I-SYSDIR, This product creates system disk directory  SYS$SYSDEVICE:[RSM$S.ASM.WORK].
%VMSINSTAL-I-SYSDIR, This product creates system disk directory  SYS$SYSDEVICE:[RSM$S.LOG].
%CREATE-I-EXISTS, SYS$SYSDEVICE:[RSM$S.LOG] already exists
%RSMSRV-I-CRTSTARTUP, Creating RSM startup file...
%RSMSRV-I-SECURE, Protecting the RSM images and startup files ...
%RSMSRV-I-CRTOBJ, Defining RSM DECnet objects...
```

```
 The following post-installation steps are necessary.
 Refer to the installation guide for details.

 1. Edit the system startup procedure to start RSM on this
    server. [add @SYS$STARTUP:RSM$SERVER_STARTUP]

 2. Edit SYS$MANAGER:SYLOGIN.COM. [add @SYS$MANAGER:RSM$SYMBOLS]

 3. Execute @SYS$MANAGER:RSM$CONFIGURE.COM.


%VMSINSTAL-I-MOVEFILES, Files will now be moved to their target directories...
%RUN-S-PROC_ID, identification of created process is 0000004D
%RSM-I-STARTUP_BEGIN, RSM Server startup beginning
%RSM-F-NOCONFIG_FILE, SYS$MANAGER:RSM$CONFIG.DAT not readable
%RMS-E-FNF, file not found
%RSM-F-STARTUP_ABORT, RSM server startup aborting
%RSM-I-STARTUP_HINT, make sure RSM$CONFIGURE has been run

Installation Verification Procedure for RSM V2.3

Checking for presence of the DNS Client software ...

Checking to see if the DNS Client software is installed ...


Checking to see if the DNS namespace can be accessed
        and used successfully ...

Execution of the RSM commands resulted in the following
output log:

$ DEFINE/USER RSM$SERVER_TYPE M
$ MANAGE
ADD CLIENT .IVPTEST/NODE_NAME = IVPTMP
%RSM-I-CLIENT_DEFINED, client .IVPTEST defined
MODIFY CLIENT .IVPTEST/NODE_NAME = TMPIVP
%RSM-I-CLIENT_MODIFIED, client .IVPTEST modified
%RSM-I-MODIFIED, object modified
REMOVE CLIENT .IVPTEST
%RSM-I-CLIENT_DELETED, client .IVPTEST removed
%RSM-I-DELETED, object deleted
$ SET NOVERIFY

Installation verification successfully completed.
To run this IVP again, type "@SYS$TEST:RSM$SERVER_IVP."
 Installation of RSMSRV V2.3 completed at 11:37

 VMSINSTAL procedure done at 11:38
$
```

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