Software Product Description

PRODUCT NAME: Remote System Manager, Version 2.3 **SPD 29.59.03**

DESCRIPTION

Remote System Manager (RSM) is a VMS and ULTRIX layered product that permits a system manager to manage a number of computer systems efficiently.

RSM uses the DECnet network to automate the recurring system management tasks of:

- Software distribution and installation (both operating systems (VMS only) and applications)
- File backup and restore
- System administration (VMS systems only)

For flexibility in configuration, RSM is available as four separately licensed products described below:

RSM VMS Server

This product maintains RSM Client software and administrative information, maintains libraries of application software, directs the installation of software, schedules file backups, and receives file backups.

Additionally for RSM VMS Clients, the Server provides for the remote maintenance of user accounts, directories, DECnet proxies, licenses, and libraries of operating systems.

The RSM Server license includes the right to install the RSM VMS Client on the same node.

RSM Server software can be installed on a cluster and configured to use the distributed resources available to all nodes that share the cluster alias. Alternatively, the Server software can be configured to operate on a single, specified node in the cluster. Configuring the RSM Server for operation on a single cluster-member restricts the use of RSM and the associated workload to a single node.

Configuring the RSM Server for full VAXcluster system operation allows more efficient use of cluster-wide resources, providing redundancy and load balancing with minimum manager preparation and effort. In this configuration, all members of the cluster, who share the cluster alias, will perform some of the work associated with RSM operations.

Typical networks would have one or more RSM Servers, each serving a number of Clients. Where there are multiple RSM Servers for a given set of Clients, one Server is designated for management operations and the others are Software library servers or Backup target servers.

RSM VMS Client

This product provides VMS systems with the ability to receive software distributed from an RSM Server including operating systems. This product also permits files to be backed up to and restored from an RSM Server.

RSM ULTRIX Client

This product provides ULTRIX systems with the ability to receive software distributed from an RSM Server. Operating systems cannot be installed on ULTRIX Clients as of this release. This product also permits files to be backed up to and restored from an RSM Server.

Features

Software Distribution and Installation

The Software Distribution Services (SDS) component of the RSM Server performs the installation of software to RSM Clients. RSM stores copies of applications for both VMS and ULTRIX and operating systems for VMS systems in a library on the RSM Server and uses the DECnet network to distribute software automatically to the RSM Client during the installation process.

Note: Software that is installed using SDS remains subject to any licensing restrictions associated with that software.

Application Software Installation

RSM provides users with the ability to take applications from an RSM Server library and install those applications on one or more RSM Clients. Application software is installed at the RSM Client using the standard installation utility for that system (for VMS systems, the VMSINSTAL utility; for ULTRIX systems, the setld utility).

RSM's Application Sets feature provides for the creation and manipulation of "sets" of related applications. The concept of Application Sets makes performing operations on an entire set of applications as easy as performing operations on a single application.

RSM provides users with the ability to manage and enforce application prerequisites. This feature permits applications to be stored in the library along with information on the software prerequisites for the application. When RSM is requested to install this application, RSM automatically verifies that RSM has installed all of the software prerequisites on the Client. If RSM finds that any prerequisite software is not present on the Client, RSM automatically installs the required prerequisite software.

Restrictions

For VMS:

SDS can install any VMS application that can be installed with the VMSINSTAL utility and conforms to the following rules:

- The application's installation procedure must conform to the guidelines presented in the *VMS Developer's Guide to VMSINSTAL.*
- The application must be installable while VMSINSTAL is running as a noninteractive process. In addition, the application must be installable using a VMSINSTAL auto-answer file.

SDS executes VMSINSTAL as a detached process. Therefore, any application installation procedure that performs terminal-related activities (such as SET TERMINAL) or modifies its execution based on process mode (such as INTERACTIVE or BATCH) may fail.

The application installation procedure must not depend on local conditions such as node name or pre-existing files.

For ULTRIX:

SDS can install any ULTRIX application that can be installed with the setld utility. The setld program does not permit the installation of subsets that cannot fit into the available disk space.

Application subset naming has changed as of ULTRIX V4.0. The version labeling used by SDS only supports this new naming convention. ULTRIX applications present in SDS libraries since V2.2 will not work, however, applications prior to ULTRIX V4.0 can be reinstalled if needed with a modified use of the subset version naming.

All NFS file systems should be dismounted before using setld with the -a, -d, and -l options.

Operating System Software Installation — VMS Clients Only

RSM can install a VMS Operating System on an RSM Client. Using this capability, managers of RSM Servers can take a VAXstation, MicroVAX, or VAXserver, connect it to an Ethernet network, and have a preconfigured operating system transmitted over the Ethernet and installed on the RSM Client.

The system manager selects a FETCHed operating system from the SDS library for downloading; it must be a version of VMS that supports the system to be initial system loaded (ISLed). Once designated for ISLing, the Client is booted from the Ethernet and the Client system is downloaded.

Restrictions

For the installation of operating system software, both the RSM Server and its Client must be on the same Local Area Network.

Approximately 15,000 blocks of disk space should be reserved for storing the remote boot disk image that RSM uses to perform an initial system load (ISL) on the management server.

File Backup and Restore

The Backup and Restore Services (BRS) component provides scheduled file backups from RSM Clients to RSM Servers. BRS also has the ability to restore files that it backed up.

Backups are scheduled by creating an RSM Server database entry for each backup task required for each Client. This entry defines all of the attributes of the backup task, such as the frequency of the backup (daily, weekly, monthly), the style of backup (incremental or full), the files to be backed up, and whether to store the backed up data on disk or tape.

Restrictions

When restoring to an RSM Client from a tape backup, RSM copies the information to be restored to an RSM Server disk prior to transferring this information to the RSM Client. There must be sufficient disk space on the RSM Server for this operation.

In order for RSM to perform an image restore of an RSM Client, that Client must have at least two writable storage devices.

For ULTRIX:

Backups on ULTRIX systems use the native backup utilities (dump and tar) in multiuser mode, and these utilities are subject to certain limitations. Specifically, any user or system activity that modifies files while they are being backed up may corrupt the backup. Digital recommends

that non-image backups be performed whenever possible, because during non-image backups RSM uses the tar utility, which is less vulnerable to corruption problems.

System Administration

The Client Administrative Services (CAS) component of the RSM Server provides remote management of user accounts, directories, and proxies on RSM VMS Clients. It provides a mechanism for maintaining consistent logical names, symbol names, and DECnet node names across the set of RSM VMS Clients. Also, it distributes VMS license information for Clients as of VMS V5.0 and checks security of DECnet and guest accounts on RSM Clients.

Restrictions

The mechanism for maintaining consistent logical names, symbols, and DECnet node names is provided by commands in a menu interface that allow a master copy of these databases to be distributed from the RSM Server to specified RSM VMS Clients.

There is no command line interface to this component of RSM.

Additional Features

RSM Server Hierarchy

The RSM Management Server can control the operation of up to four other RSM Servers. This feature allows centralized scheduling of RSM operations while other RSM Servers contain the SDS library or receive the backup output files.

Menu and Command Line User Interface

This version of RSM supports both a menu-style and a command line interface. The menu interface is designed to aid the user in the correct structuring of RSM command lines.

Groups

In many situations, a number of computer systems perform similar tasks. These systems typically use the same software and can operate on the same backup schedule. RSM's Group feature permits all of these systems to be referenced by a single group name. RSM operations on a Group are performed on each system in the group.

Management of LMF licenses

RSM provides the ability to create and maintain a VMS License Management database on the RSM Management Server for each VMS Client. RSM can then transmit this database to the VMS Client and install it as a Secondary LMF Database. This feature requires that both the Server and Client be executing VMS V5.0 at a minimum.

Configuration

Any given RSM Server should not be configured to support more than 40 RSM Clients.

RSM supports only a single level of Server hierarchy. Each RSM environment must contain one and only one management server. A management server can support a maximum of four other servers. The other servers can be target servers, library servers, combined target and library servers, or any combination of these. If users need to add more servers, they must partition the client population into distinct management domains.

RSM makes extensive use of facilities provided by the operating system on which it runs, causing RSM to be highly dependent upon the configuration of the base operating system. Operating system related files should not be moved from where they were placed during the installation process. Also search lists should not be created that prevent RSM from accessing the correct copy of these files in the standard locations. All modifications to operating system data files (i.e., DECnet databases, user authorization files, etc.) should be done using the operating system provided utilities or as described in the appropriate documentation.

HARDWARE REQUIREMENTS

VAX, MicroVAX, VAXstation, or VAXserver configuration as specified in the System Support Addendum (SSA 25.59.03-x).

SOFTWARE REQUIREMENTS

Distributed Name Service (DNS) (SPD 28.79.xx) must be installed within the network and accessible, via DECnet, from RSM Server nodes.

RSM Clients require that there be at least one RSM Server in the network.

For VMS Systems:

RSM Server Software:

VMS Operating System
DECnet–VAX

RSM Server provides initial load support for VMS Operating System

RSM Client Software:

VMS Operating System or
MicroVMS Operating System
DECnet–VAX

For ULTRIX Systems (RISC and VAX):

RSM Client Software:

ULTRIX Operating System
ULTRIX Worksystem Software
DECnet–ULTRIX

Refer to the System Support Addendum (SSA 25.59.03-x) for availability and required versions of prerequisite /optional software.

ORDERING INFORMATION

VMS Server

Software Licenses: QL-B13A*-**
Software Media: QA-B13A*-**
Software Documentation: QA-B13AA-GZ
Software Product Services: QT-B13A*-**

VMS Client

Software Licenses: QL-B14A*-**
Software Media: None[1]
Software Documentation: None[2]
Software Product Services: None[3]

ULTRIX/VAX Client

Software Licenses: QL-VWWA*-**
Software Media: None[1]
Software Documentation: None[2]
Software Product Services: None[3]

ULTRIX/RISC Client

Software Licenses: QL-GUXA*-**
Software Media: None[1]
Software Documentation: None[2]
Software Product Services: None[3]

* Denotes variant fields. For additional information on available licenses, services, and media, refer to the appropriate price book.

SOFTWARE LICENSING

The licensing terms are based on clusterwide licensing in which the license applies to a purchase power rating rather than a specific CPU. Customers continue to receive the right-to-use software on nodes within a cluster system. The RSM Server must be licensed on all members of the VAXcluster system that share the cluster alias. In this case, the VAXcluster license would be restricted to the rating purchased rather than the total rating of the VAXcluster system, unless the entire VAXcluster system shared the cluster alias.

This software is furnished under the licensing provisions of Digital Equipment Corporation's Standard Terms and Conditions. For more information about Digital's licensing terms and policies, contact your local Digital office.

LICENSE MANAGEMENT FACILITY SUPPORT

The RSM VMS Server, RSM VMS Client, and RSM ULTRIX RISC Client layered products support the VMS License Management Facility.

License units for this product are allocated on a CPU-capacity basis.

For more information on the License Management Facility, refer to the VMS Operating System Software Product Description (SPD 25.01.xx) or the *License Management Facility* manual of the VMS Operating System documentation set.

For more information about Digital's licensing terms and policies, contact your local Digital office.

SOFTWARE PRODUCT SERVICES

A variety of service options are available from Digital. For more information, contact your local Digital office.

SOFTWARE WARRANTY

Warranty for this software product is provided by Digital with the purchase of a license for the product as defined in the Software Warranty Addendum of this SPD.

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1 Client is distributed on the VMS Server media.

2 Client information is covered in the documentation for the VMS Server.

3 Client Services are provided in the Services offering for the VMS Server.