Software Product Description

PRODUCT NAME: DECram for VMS, Version 1.0 **SPD 34.26.00**

DESCRIPTION

DECram for VMS is a disk device driver that allows a VMS system manager to create pseudo disks (RAMdisks) that reside in VAX main memory for the purpose of improving I/O performance. Frequently accessed data can be accessed much faster from a DECram device than from a physical disk device. These RAMdisks can be accessed through the VMS file system just as physical disks are accessed, requiring no change to application and/or system software.

The number of DECram units used will most often be quite small (usually one, but sometimes two or more).

Since VAX main memory is allocated for the DECram device, a substantial amount of extra memory is generally required. The amount of memory dedicated is selectable. The VMS system manager designates the amount of memory dedicated to the DECram device(s) and the files that will be stored on it. The maximum size of a DECram device is 524,280 blocks.

User Interface

The user interface to a DECram device is the same as other disk class devices. Note that the response to a SHOW DEVICE/FULL command will indicate "device type unknown" in current VMS releases. The device type DT$_RAM_DISK is not known by the SHOW DEVICE command in current VMS releases.

Management Interface

A DECram device is managed using the same tools used to manage any other VMS supported disk, i.e, SYSGEN, INITIALIZE, MOUNT, etc. The standard utilities are used differently to set up a DECram device, however.

System Analysis

Before creating a DECram device, the VMS system manager must determine its size. Each disk block allocated to a DECram device will mean one less page of VAX memory available. The system manager should also assess the need for multiple DECram units.

System Generation

System startup must be modified, in most cases, to set up the device and to copy any required files to the DECram device. Creating a disk of any useful size will require increasing the SYSGEN parameter SPTREQ by
((total size of all DECram devices +127)/128)
+(128 * number of DECram units).

In addition, the VMS system manager must reassess the values for the SYSGEN parameters that control Paging and Swapping behavior.

Autogen/Reboot

It will not be possible to use the DECram device without a system reboot, unless the system manager has already defined SPTREQ to be large enough.

Restrictions

DECram for VMS V1.0 currently has the following restrictions:

- Data in a DECram device is volatile.
- DECram devices cannot be served in a VAXcluster.
- DECram devices cannot be members of a Shadow Set.
- DECram device cannot exceed 524,280 blocks.

DECram for VMS will not support long term data storage since data in a DECram device is volatile. In the case of a system or hardware failure, data stored in the DECram device is lost and must be recreated.

HARDWARE REQUIREMENTS

VAX, MicroVAX, VAXstation, or VAXserver configuration as specified in the System Support Addendum (SSA 34.26.00-x).

SOFTWARE REQUIREMENTS

VMS Operating System

Refer to the System Support Addendum (SSA 34.26.00-x) for availability and required versions of prerequisite /optional software.

ORDERING INFORMATION

Software Licenses: QL-GJ9A*-**
Software Media: QA-GJ9A*-**
Software Product Services: QT-GJ9A*-**

DECram for VMS documentation is available on the media kit only in text and PostScript® formats.

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