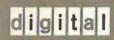
VAX DSM



DASL Management Guide

AA VAX KM66E

Order Number: AA-KM66E-TE

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Related Documents

Other documentation about the DASL software consists of:

• DASL Handbook

This document, for first-time users of DASL applications, describes how to use applications that were created with the DASL software. It also describes how to use application environment options such as the Report Directory, the Message Center, and the Query Database Menu.

• DASL Pocket Reference

This document provides a summary of DASL commands and input conventions.

• DASL Programmer's Guide

This document introduces the DSM Application Software Library (DASL) software and explains how to create a simple application using the DASL software.

• DASL Reference Manual

This document describes the six major modules of the DASL software and provides related reference material, including the syntax and elements of DASL commands.

• DASL Version 6.0 Master Index

This document contains index entries for manuals in the DASL documentation set.

The DASL manuals are part of the VAX DSM documentation set. This set also includes:

• Introduction to DSM

This document introduces the common syntax and language elements of DSM-11[™] (Digital Standard MUMPS on the PDP-11[™] computer) and VAX DSM (Digital Standard MUMPS layered on the VMS operating system).

• VAX DSM Database Operations Guide

This document describes how to maintain the integrity and reliability of the VAX DSM database. It also describes transaction processing.

• VAX DSM Callable Routines Reference Manual

This document describes the callback interface, which allows routines written in software languages that run layered on the VMS operating system to access a subset of the functionality offered by the VAX DSM language.

Preface

Intended Audience

The DASL Management Guide is intended for programmers with a working knowledge of the VAX DSMTM language and some knowledge of the VMSTM operating system.

Manual Objectives

The DASL Management Guide describes how to set up terminal features required by the DASL™ software, install the DASL software with DSM™, and manage the DASL software after installation.

The DASL Management Guide contains four chapters that include the following information:

Chapter 1 Setting Terminal Features

> Describes how to set up terminal features required by the DASL software. Chapter 1 also describes how to set up terminal features for international applications.

Chapter 2 Installing the DASL Software

> Describes how to install the DASL software with the VAX DSM software and how to initialize the DASL software.

Chapter 3 Establishing and Using DASL Work Areas

> Describes how to establish DASL work areas, customize the DASL software, load the DASL demonstration system, and add DASL symbols

and logical names to your LOGIN.COM file.

Chapter 4 Performing DASL Database Conversions

> Describes how to use the DASL database conversion routine, ^%DACVRT, when installing an updated version of the DASL software.

VAX DSM Installation and Management Guide

This document describes how to install and manage VAX DSM systems and explains the internal structure of the VAX DSM database.

• VAX DSM Language Pocket Reference

This document summarizes VAX DSM language elements, the DSM command syntax, and I/O options.

VAX DSM Language Reference Manual

This document describes the syntax and elements of the VAX DSM language.

• VAX DSM Programmer's Guide

This document describes how to use the programming capabilities of the VAX DSM language.

• VAX DSM Version 6.0 Master Index

This document includes index entries for manuals in the VAX DSM documentation set (excluding the DASL manuals).

• VAX DSM Version 6.0 Release Notes

This document contains enhancement and upgrade information for Version 6.0 of VAX DSM.

Further information about the MUMPSTM programming language can be obtained from the $ANSI\ MUMPS\ Standard$.

The VAX DSM and DASL documentation sets are now available on the VMS Online Documentation Library Compact Disk. These documentation files can be used with the VMS DECwindowsTM Bookreader. The Bookreader is an online documentation viewer that is provided with the VMS DECwindows software.

Conventions Used in This Document

The DASL Management Guide uses the following conventions:

Convention	Meaning	
italic text	Introduces new terms. Indicates the title of a manual.	
bold text	Emphasizes important information. Indicates user input for online documentation.	
red text	Indicates user input for hardcopy documentation.	
Return	Indicates that you press the key labeled Return.	
SP	Indicates that a space must separate components of a command or command line.	

Acknowledgment

Digital Standard MUMPS (DSM) is an extension of the ANSI Standard Specification for the Massachusetts General Hospital Utility Multi-Programming System (MUMPS). MUMPS was originally developed at the Laboratory of Computer Science at Massachusetts General Hospital and was supported by grant HS00240 from the National Center for Health Services Research and Development.

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Chapter 1 **Setting Terminal Features**

The DASL software requires certain terminal operating characteristics. This chapter explains how to set operating characteristics on Digital's terminals. (You may also use other ANSI terminals that are similar to the terminals described in this chapter.)

Before you initialize the DASL software, you must set up terminal operating features for Digital's VT100™ terminals, Digital's VT200-series terminals, and Digital's VT300™-series terminals.

Set-Up Requirements on Digital's VT100 Terminals

If you are using VT100 terminals, use the Set-Up State to make sure that terminals have:

- Tabs set at every eighth character position
- Auto XON XOFF enabled (set to ON)
- New line disabled (set to OFF)

All other terminal set-up features are optional. However, you can also choose to set the following features:

- Margin bell disabled (set to OFF)
- Programming mode set to ANSI
- Pound sign set to number sign (#)
- Wraparound disabled (set to OFF)

On VT100 terminals, Set-Up State consists of two screens. Use the first screen, SET-UP A, to set tab stops and screen brightness. Use the second screen, SET-UP B, to set other terminal features.

See the operating manual of your VT100 terminal for detailed set-up instructions.

Set-Up Requirements on Digital's VT200-Series Terminals

If you are using VT200-series terminals, use the VT200-series Set-Up Directory Screen to set terminal operating characteristics.

You can choose several set-up screens from this directory. Each set-up screen displays menu items that you select to set terminal characteristics.

The required characteristics for the VT200-series terminals are:

- No new line
- Set eight column tabs

All other terminal set-up features are optional.

Table 1-1 describes the terminal operating features you can set in each set-up screen.

Table 1-1 Terminal Features for VT200-Series Terminals

Set-Up Screen	Setting
Main Set-Up Directory	Set-Up = English
	North American Keyboard
Display Set-Up	No auto wrap
General Set-Up VT200 mode, 7-bit controls	
	No new line
Keyboard Set-Up	No auto answerback
	No margin bell
Tab Set-Up	Set 8 column tabs

See the operating manual of your VT200-series terminal for detailed set-up instructions.

Set-Up Requirements on Digital's VT300-Series Terminals

If you are using VT300-series terminals, use the VT300-series Set-Up Directory Screen to set up terminal characteristics required by the DASL software.

The following terminal characteristics are required by the DASL software:

- No new line
- Set eight column tabs

All other terminal set-up features are optional.

Table 1-2 describes the terminal operating features you can set in each set-up screen.

Table 1-2 Terminal Features for VT300-Series Terminals

Set-Up Screen	Setting
Display Set-Up	Auto wrap — no auto wrap
	New line mode — no new line
Communications Set-Up	Auto answerback — disabled
Keyboard Set-Up	Keyboard dialect — North American
	Keyboard mode — typewriter
	Cursor key mode — normal
	Margin bell — off
Tab Set-Up	Set 8 column tabs

See the operating manual of your VT300-series terminal for detailed set-up instructions.

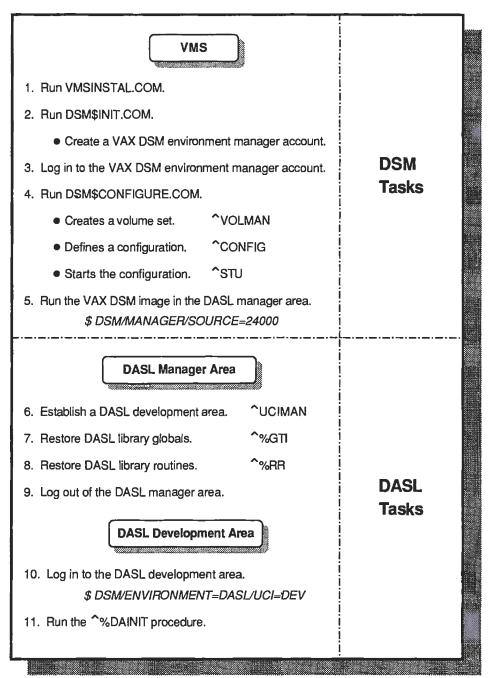
Set-Up Options for International Applications

You can set up Digital's VT200-series terminals and Digital's VT300-series terminals to enter and display international character sets.

On VT200-series terminals, you can enter and display characters in the DEC Multinational Character Set (MCS). Press Set-Up to move to the Main Set-Up Directory Screen. In this screen, you can select the language of the Set-Up Screen and the keyboard language.

The following sections in this chapter explain the installation process in detail.

Figure 2-1 DASL Installation and Initialization



MR-4742-RA

Using the VMSINSTAL.COM Procedure

To install the DASL software with the VAX DSM software, use the command procedure VMSINSTAL.COM, as described in the VAX DSM Installation and Management Guide.

During the VMSINSTAL.COM procedure, enter Y at the following prompt to load the DASL files into the SYS\$LIBRARY area:

```
Do you want to include DASL files [Y]? Y Return
```

The following message is displayed as the DASL files are loaded:

```
The following DASL files will be created in [SYSLIB]
```

```
DSM$DASL_ROUTINES.SAV
DSM$DASL GLOBALS.SAV
DSM$DASL DEMO.SAV
```

The following DASL files will be created in [SYSHLP.EXAMPLES]

```
DSM$DASL_PRTD_ROU.SAV
DSM$DASL PRTD GLO.SAV
```

Establishing the VAX DSM Environment Manager Account for DASL

The VAX DSM environment manager account is a VMS account that you use to perform system manager tasks in the DSM environment associated with the account.

You must create a VAX DSM environment manager account to define and manage the DASL environment. Some of the tasks you perform using the VAX DSM environment manager account are:

- Creating and extending VAX DSM volumes
- Creating and editing VAX DSM configurations
- Managing UCIs, globals, and routines

Use the SYS\$MANAGER:DSM\$INIT.COM command procedure to prepare a VMS account for use as a VAX DSM environment manager account. See the VAX DSM Installation and Management Guide for instructions on how to use the DSM\$INIT.COM command procedure.

Running the DSM\$CONFIGURE.COM Procedure

After you have created a VAX DSM environment manager account for the DASL environment, do the following:

- Log out of the VMS system manager account.
- 2. Log in to the VAX DSM environment manager account.

Note: Follow this procedure if you are installing the DASL software for the first time. If you are installing an updated version of the DASL software, see the "Installing Updated Versions of the DASL Software" section of this chapter.

Restoring DASL Library Globals

In the DASL manager area, follow this procedure to restore DASL library globals:

- 1. At the DSM prompt, enter D ^%GTI to run the global restore routine.
 - > D ^%GTI Return
- 2. At the "Input Device? >" prompt, enter the file name as follows:

```
Input Device? > SYS$LIBRARY: DSM$DASL_GLOBALS.SAV Return
```

Then, DSM displays the following message and prompt:

```
Globals were saved on 9-Apr-88 16:06:21

Header: DASL GLOBAL SAVE Version 6.0 (library globals - restore in managers UCI)

Restore all (A) or selected (S) ?
```

3. Enter A at the prompt to restore all globals.

```
Restore all (A) or selected (S) ? A Return
```

DSM lists all globals as they are restored and responds with the following message:

Globals restored

Restoring DASL Library Routines

In the DASL manager area, follow this procedure to restore DASL library routines:

- 1. At the DSM prompt, enter ^%RR to run the routine restore routine.
 - > D ^%RR Return
- 2. At the "Input Device? >" prompt, enter the file name as follows:

```
Input Device? > SYS$LIBRARY: DSM$DASL ROUTINES. SAV Return
```

Then, DSM displays the following messages and prompt:

```
Restoring routines from SYS$SYSROOT:[SYSLIB]DSM$DASL_ROUTINES.SAV;1

Saved on 7-APR-1988 09:39:08:20

Header: DASL ROUTINES Version 6.0 (library routines - restore in managers UCI)

Restore all (A) or selected (S) ?
```

3. Enter A at the prompt to restore all routines.

```
Restore all (A) or selected (S) ? A Return
```

Entering the Development Area

You must be in the DASL development area to run the DASL initialization routine. To enter the DASL development area:

- 1. Exit from the DASL manager area and return to the DCL prompt.
- 2. Log in to your DASL development area using the development area UCI, for example:
 - \$ DSM/ENVIRONMENT=DASL/UCI=DEV Return

In this example, the values DASL for ENVIRONMENT and DEV for UCI are examples of values you can use to indicate a DASL environment and a developer's UCI. Your environment and UCI may have different values.

Running the DASL Initialization Routine

To run the ^%DAINIT routine in the development area, enter D ^%DAINIT at the DSM prompt.

> D ^%DAINIT Return

The system responds with the following message:

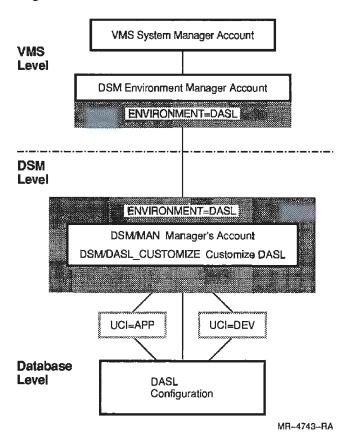
Initializing DASL

The system then calls the Application Parameters screen. Figure 2-2 displays a sample Application Parameters screen.

Figure 2-2 Application Parameters Screen

Application Parameters
Application Name: Demonstration System Default Delimiter: ;
Prefix for Generated Screens: X Reports: Y Queries: Z
Application Login Screen: ODEMO Application Logout Screen:
Routine to Run After Modifications to System Status:
Routine to Run After Modifications to Device Dictionary:
Edit or Quit: _

Figure 3-1 DASL Environment in DSM



Creating DASL Work Areas

You can create individual work areas within the DASL environment for developers and application users. Each work area defines user access to DSM globals. For example, application users work in one area to use the application: in this area, they can access only application routines and globals. Developers work in another area to develop the application: in this area, they can access DASL routines and globals, and create application screens and globals.

The DASL documentation set refers frequently to two areas: the development area and the application area. Table 3-1 describes these work areas.

Table 3-1 DASL Work Areas

Area	Tasks
Development	Develop and compile application screens and reports.
Application	Run a completed DASL application.

To create work areas, assign a unique User Class Identifier (UCI) to each area. A UCI is a directory within a volume set that provides a logical area for global and routine storage. Every user is associated with a volume set and a UCI. For example, a DASL application user can be associated with the DAS volume set and the APP UCI. At login, the system displays the following:

VAX DSM V6.0 [APP,DAS]

A DASL application developer can be associated with the DAS volume set and the DEV UCI as follows:

[DEV, DAS]

Because one volume set can have up to 30 UCIs, you can create up to 30 work areas for the DASL software in one DSM environment.

See the VAX DSM Database Operations Guide for a description of the ^UCIMAN Utility that you can use to assign UCIs.

Loading the DASL Demonstration System

The DASL software provides a demonstration system as a model for your applications. The demonstration system is an address book application.

To use the demonstration system, create a new work area for the demonstration system globals and routines. For example, you can create an application area with a unique UCI of APP.

Note: Do not load the demonstration system in the customization area. Demonstration system routines can overwrite DASL routines if you load the demonstration system in this area.

To load the DASL demonstration system:

1. At the DCL prompt, log in to your DASL application area as follows:

```
$ DSM/ENVIRONMENT=DASL/UCI=APP Return
```

2. Run the DASL initialization routine ^%DAINIT as follows:

```
> D ^%DAINIT Return
```

When you see the Application Parameters screen, enter a semicolon (;) as the default delimiter.

Note: The default delimiter used in the demonstration system globals is the semicolon (;). If you want to use a different default delimiter, you must change the delimiters in the ^MEET and ^ADBK globals to your delimiter of choice.

Modifying the LOGIN.COM File for the DASL Software

In your LOGIN.COM file, you can assign symbols to DSM command lines that you use to log in to DASL work areas, and you can define logical names to represent DASL users and devices.

When you log in to your account, or when you run the LOGIN.COM file, the LOGIN.COM file sets the current terminal characteristics, logical names, and symbols for your current session.

Setting Terminal Characteristics in the LOGIN.COM File

In your LOGIN.COM file, you can use the DCL SET command to set default terminal characteristics. For example, enter the following command in your LOGIN.COM file:

\$ SET TERM/NOFORM

The SET TERM/NOFORM qualifier is required when you display reports on the terminal screen.

Assigning Symbols

You can assign a symbol to any DSM command string. You can then use the symbol in place of the entire string at the DCL prompt.

Use the = (Assignment statement) to create symbols for the DSM command strings that you use to log in to your DASL work areas, for example:

Symbol	DASL Work Area	
DSMA	Application area in which users use the completed application (Developers also use this area to test a completed application.)	
DSMD	Development area in which you develop your application	

In Example 3–1, you assign the symbols DSMA and DSMD to DSM command lines. For each symbol, you specify the 3-digit UCI that identifies the DASL area. In this example, APP represents the application area and DEV represents the development area.

After assigning these symbols in your LOGIN.COM file, you can use these symbols to log in to DSM at the DCL prompt.

Example 3-1 DSM Command Lines

\$ DSMA=="DSM/ENVIRONMENT=DASL/UCI=APP"

\$ DSMD=="DSM/ENVIRONMENT=DASL/UCI=DEV"

Note: Do not assign the symbol DSM to your DSM command line. If you assign the symbol DSM to a DSM command line, the other defined symbols for DSM command lines (for example, DSMD) may not access the correct globals and routines.

Defining Logical Names

The DASL software uses logical names to specify a User ID and a default batch destination.

At the VMS level, you can create logical names by using the DEFINE command at the DCL prompt. The DEFINE command takes the following syntax:

DEFINE/JOB splogical name spequivalence string

where:

/JOB indicates that all processes in the same job as the process that

created the logical name can access the logical name

logical_name is a name you define to use in place of an equivalence string

equivalence_string is a group of characters to which a logical name equates (Most

often, an equivalence string is a file specification, a device name,

or another logical name.)

When you are developing a DASL application, you can define two DASL logical names in your LOGIN.COM file.

- DSM\$DASL_USRID
- DSM\$DASL_BATCH

When you define your User ID through the login sequence, you can:

- Define user commands for your application while you are in the development area.
- Test application screens that display the user name without going through the application login screen.

The logical name DSM\$DASL_USRID equates to the User ID that you define for yourself in the User Dictionary of the Security System Option on the Application Environment Menu. This logical name sets the variable %USR. For example, if your User ID is SMITH, define DSM\$DASL_USRID in your LOGIN.COM file as follows:

\$ DEFINE/JOB DSM\$DASL USRID SMITH

DASL Conversion Routines

The DASL master conversion routine, ^%DACVRT, performs the VAX DSM \$DATA function on the conversion globals, and runs in sequence any conversion routines that have not yet been run. The routine ^%DACVRT contains the subroutine SITE^%DACVRT for site-specific conversions. Using ^%DACVRT, you can skip a DASL release, and still use a simplified conversion method.

The DASL software includes checks in the ^%DALOGIN, ^%DASL, and ^%DAS entry point routines to determine that the current version of these routines matches the current version of the database.

If the DASL software returns an error message at an application site when running the routine ^%DALOGIN, run the conversion subroutine SITE^%DACVRT.

If the DASL software returns an error message when running the ^%DASL and ^%DAS routines while you are developing an application, run the conversion routine ^%DACVRT.

If the conversion fails, take the following steps to complete the conversion procedure:

- 1. Resolve the conversion problem.
- 2. Use the VAX DSM KILL command to delete the conversion node that contains the error.
- 3. Reset the top nodes to the previous version number.
- 4. Run the conversion routine again.

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