VMS SYSMAN Utility Manual

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This document describes the System Management (SYSMAN) Utility, a tool that centralizes the management of nodes and clusters.

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Preface

Intended Audience

This document is intended for VMS system managers who maintain two or more VMS nodes. The manual shows how to define a system management environment, modify your process attributes for the environment, and perform management tasks. SYSMAN functions assume a knowledge of DCL commands and a familiarity with VAXcluster management requirements.

Document Structure

This document consists of the following three sections:

- Description—Provides a full description of the SYSMAN Utility.
- Usage Summary—Outlines the following SYSMAN information:

  -Invoking the utility
  -Exiting from the utility
  -Restrictions or privileges required

- Commands—Describes SYSMAN commands, including format, parameters, and examples.

Associated Documents

Consult the *VMS DCL Dictionary* for descriptions of the DCL system management commands.

The *Introduction to VMS System Management* contains an overview of VMS system management tasks. The *Guide to Setting Up a VMS System* and the *Guide to Maintaining a VMS System* provide descriptions of day-to-day VMS system maintenance procedures.

For additional cluster information, see the *VMS VAXcluster Manual* and the *VMS Show Cluster Utility Manual*.

Conventions

This manual uses the following conventions:

Convention	Meaning
RET	In examples, a key name (usually abbreviated) shown within a box indicates that you press a key on the keyboard; in text, a key name is not enclosed in a box. In this example, the key is the RETURN key. (Note that the RETURN key is not usually shown in syntax statements or in all examples; however, assume that you must press the RETURN key after entering a command or responding to a prompt.)
CTRL/C	A key combination, shown in uppercase with a slash separating two key names, indicates that you hold down the first key while you press the second key. For example, the key combination CTRL/C indicates that you hold down the key labeled CTRL while you press the key labeled C. In examples, a key combination is enclosed in a box.
$ 05-JUN-1988 11:55:22	In examples, system output (what the system displays) is shown in black. User input (what you enter) is shown in red.
$ . . .	In examples, a vertical series of periods, or ellipsis, means either that not all the data that the system would display in response to a command is shown or that not all the data a user would enter is shown.
input-file, . . .	In examples, a horizontal ellipsis indicates that additional parameters, values, or other information can be entered, that preceding items can be repeated one or more times, or that optional arguments in a statement have been omitted.
[logical-name]	Brackets indicate that the enclosed item is optional. (Brackets are not, however, optional in the syntax of a directory name in a file specification or in the syntax of a substring specification in an assignment statement.)
quotation marks apostrophes	The term quotation marks is used to refer to double quotation marks ("). The term apostrophe (') is used to refer to a single quotation mark.

SYSMAN Description

The System Management (SYSMAN) Utility is a new utility for VMS Version 5.0 that centralizes the management of nodes and clusters. Rather than logging in to individual nodes and repeating a set of management tasks, SYSMAN allows you to define your management environment to be a particular node, a group of nodes, or a cluster. With a management environment defined, you can perform system management tasks from your local node. SYSMAN executes these tasks on all nodes in the target environment.

Managing a system with SYSMAN is similar to the traditional management of an individual system because SYSMAN uses many of the same software tools. It can process most DCL commands, such as MOUNT, DEFINE, INITIALIZE, SET, and SHOW. It can also execute most VMS system management utilities and command procedures, such as AUTHORIZE, AUTOGEN, and INSTALL.

SYSMAN contains new or enhanced tools for system management as well. Various commands let you perform the following tasks:

- Set disk quotas—SYSMAN includes the DISKQUOTA command set, which operated as a standalone utility in VMS Version 4.6.
- Modify system (SYSGEN) parameters—SYSMAN includes the PARAMETERS command set, which displays and modifies system parameters.
- Build site-specific startup procedures—SYSMAN includes the STARTUP command set, which displays or modifies startup components of the VMS operating system, site-specific programs, and layered products.
- Modify cluster parameters—SYSMAN includes the CONFIGURATION command set, which displays and modifies cluster parameters.

The following sections discuss different aspects of SYSMAN. The sections include

- Defining a management environment
- Centralizing system management
- Adjusting your profile
- Executing commands
- Creating and maintaining disk quotas
- Executing commands on remote nodes

1 Defining a Management Environment

The default system management environment for SYSMAN is the local node from which you execute the utility.

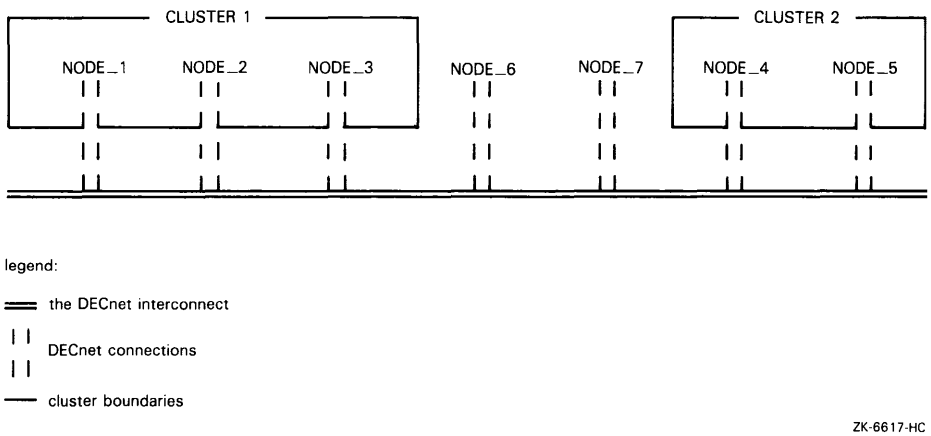
Your first step in using SYSMAN is to define the target environment. The management environment can be whichever single node, group of nodes, or cluster you need to manage. It can be your local node or cluster as well as any node or cluster available through DECnet.

Your management options are numerous. You can define a management environment to be any of the following:

- Your local node
- Your own cluster
- A subset of nodes in your cluster
- A nonclustered node available through DECnet
- Another cluster
- A subset of nodes in another cluster
- Any group of individual nodes

Figure SM–1 serves as a model for the following discussion of management environments. The figure depicts seven nodes, five of them belonging to cluster organizations.

Figure SM–1 Defining a Management Environment



If you assume that you execute SYSMAN from NODE_1, then NODE_1 is the management environment when SYSMAN starts running. NODE_1 is always referred to as the *local* node because it is the node on which you have invoked SYSMAN. All other nodes are considered to be *remote*. NODE_1 can continue to be the management environment, or you can change the environment to be any node, group of nodes, or cluster shown in Figure SM–1.

1.1 Defining Another Node as the Environment

Instead of managing the local node, you can define a management environment to be any node available through DECnet. For example, the following SET ENVIRONMENT command defines the management environment to be NODE_2:

```
SYSMAN>
%SYSMAN-I-ENV, current command environment:
        Individual nodes: NODE_2
        Username ALEXIS   will be used on nonlocal nodes
```

A SYSMAN environment remains in effect until you change it or exit from the utility. Whenever you redefine an environment, SYSMAN displays the new context. You can always verify the current environment with the command SHOW ENVIRONMENT.

A management environment can also be a group of nodes. The following command defines the management environment to be NODE_3, NODE_6, and NODE_7:

```
SYSMAN>
Remote Password: (password)

%SYSMAN-I-ENV, Current Command Environment:
        Individual nodes: NODE_6,NODE_7,NODE_3
        At least one node is not in local cluster
        Username ALEXIS   will be used on nonlocal nodes
```

Unless you are working on your local node or within your own cluster, you are working in a *nonlocal* environment in SYSMAN. When defining a nonlocal environment, SYSMAN prompts for a password.

The utility also prompts for a password when you attempt to manage a system under a different name. You can change your user name by including the /USERNAME qualifier on the SET ENVIRONMENT command.

1.2 Defining a Cluster Environment

To define a cluster as your target environment requires the /CLUSTER qualifier on the SET ENVIRONMENT command. There are two types of cluster environments:

- A local cluster
- A nonlocal cluster

The local cluster is the one where you are executing SYSMAN. For example, to expand the management environment from NODE_1 to Cluster 1, enter the following command:

```
SYSMAN>
%SYSMAN-I-ENV, Current Command Environment:
        Clusterwide on local cluster
        Username ALEXIS   will be used on nonlocal nodes
```

In the cluster environment, SYSMAN executes commands on all nodes in Cluster 1, namely NODE_1, NODE_2, and NODE_3.

To manage a nonlocal cluster with SYSMAN, you must use the /NODE qualifier to identify the cluster you want to manage. If a cluster alias is defined for a cluster, the /NODE qualifier can include the alias rather than the node name. For example, to perform management tasks on Cluster 2, you would enter another SET ENVIRONMENT command with the /CLUSTER qualifier and name one node within Cluster 2 using the /NODE qualifier. For example:

```
SYSMAN>
Remote Password: (password)

%SYSMAN-I-ENV, Current Command Environment:
        Clusterwide on remote node NODE_4
        Username ALEXIS   will be used on nonlocal nodes
```

When a specified node is not in a cluster, the /CLUSTER qualifier has no effect.

2 Centralizing System Management

After defining a management environment, you use SYSMAN to perform traditional system management tasks. While you enter commands on your local node, SYSMAN executes the commands in the target environment. You can view devices, control disk quotas, start and stop queues, inspect and modify system parameters, view and modify the system startup procedures, and so forth.

In cluster environments or any environment with multiple nodes, you enter a set of commands once, and SYSMAN executes the commands sequentially on every node in the environment. SYSMAN displays the name of each node as it executes commands. For example, with SYSMAN you can run the INSTALL utility and make a file known on all nodes in the cluster by entering the following commands from your local node:

```
SYSMAN>
SYSMAN>
SYSMAN>
    .
    .
    .
%SYSMAN-I-OUTPUT, Command execution on node PHILCO
%SYSMAN-I-OUTPUT, Command execution on node CEDAR
```

When command execution is unsuccessful, SYSMAN displays an error message. If a node cannot execute a command or if a node does not respond within a given time period, the utility notifies you before proceeding to the next node in the environment. A timeout period is optional, but can be set with the SET TIMEOUT command.

3 Adjusting Your Profile

Before SYSMAN executes any commands in an environment, it has to verify that you are an authorized user. It checks the information contained in the user authorization file (UAF) on each node within the environment to see that you are authorized. When you define an environment that is not part of your local cluster or when you change your user name, SYSMAN prompts for a password before checking the UAF.

After checking the UAF on a remote node, SYSMAN assigns the privileges, defaults, and identifiers that it copies from your UAF record on that node to an existing process on the node called SMISERVER. The utility uses a SMISERVER process on all nodes but the local node (from which you are running SYSMAN) to execute commands in an environment. The attributes of the SMISERVER process include a default disk device and directory, any rights identifiers defined in your UAF record, and a set of privileges. The attributes do not include symbolic names, logical names, preset terminal characteristics, or key definitions established through a login command procedure. (The only environment that has the attributes defined in a login command procedure is the local node from which you are executing SYSMAN.)

SYSMAN allows you to modify two attributes of the SMISERVER process:

- You can modify your current privileges.
- You can change the default device and directory.

3.1 Modifying Your Current Privileges

Because many system management commands involve sensitive use of the system, they require enhanced privileges. You need to anticipate the privilege requirements of commands that you enter in an environment, and if necessary, add privileges for which you are authorized so that your current privileges for the environment meet command requirements. Typically, system managers have the same privileges on all nodes. However, if you do not have the required privileges on a node, SYSMAN cannot execute the command and returns an error message.

The SYSMAN command SET PROFILE temporarily changes your current privileges in an environment. For example, to create a quota file requires the SYSPRV privilege. Prior to creating a quota file, you make SYSPRV (for which you are assumed to be authorized) one of your current privileges in the following way:

```
SYSMAN>
SYSMAN>
%SYSMAN-I-DEFDIR, Default directory on node ATHENS  -- WORK1:[YANI]
%SYSMAN-I-DEFPRIV, Process privileges on node ATHENS --
        TMPMBX
        OPER
        NETMBX
        SYSPRV
```

This profile is in effect until you change it, reset the environment, or exit from the utility.

The SET PROFILE command temporarily changes the attributes of your current local process. However, when you exit from the utility, all attributes are restored to their values at the time SYSMAN was invoked.

3.2 Resetting the Default Device and Directory

Most often, the default device and directory specified in your UAF record is a first-level directory under which you create and maintain files and subdirectories. SYSMAN uses the default device and directory name in the current environment when resolving file specifications. It also assigns the default device and directory name to any files that you create during a session.

In some cases, you may need to reset the default device and directory in your SYSMAN profile to reflect the device and directory where you need to work. For example, you may have a directory containing command procedures, some system management utilities require that the default directory be SYS$SYSTEM, and so forth.

Use the SET PROFILE command with the /DEFAULT qualifier to reset the default device and directory specification for your process and all server processes in the environment, as follows:

```
SYSMAN>
```

4 Executing Commands

The primary purpose of SYSMAN is to let you gain access to management environments quickly and perform ordinary system management tasks as simply as possible. The SYSMAN commands SET ENVIRONMENT and SET PROFILE define the management sphere and set up privileges that subsequent tasks require.

To perform actual management tasks, you use DCL commands and SYSMAN commands. The following sections describe the types of commands available to you.

4.1 DCL Commands

The SYSMAN command DO executes a DCL command or DCL command procedure on all nodes in an environment. Each DO command executes as an independent subprocess, so there is no process context retained between DO commands. For this reason, you must express all DCL commands in a single command string, and you cannot run a program that expects input.

When operating in a cluster environment, SYSMAN executes DO commands sequentially on all nodes in the cluster. After a command completes or times out on one node, SYSMAN sends it to the next node in the environment. Any node that is unable to execute a command returns an error message.

Some DCL commands, such as MOUNT/CLUSTER or SET QUORUM /CLUSTER, operate clusterwide by design. To avoid executing such commands excessively in SYSMAN, define the environment to be a single node within the cluster.

4.2 Disk Quota Commands

The DISKQUOTA command set lets you assign disk quotas to users and monitor disk usage. SYSMAN contains all the commands from the Disk Quota Utility except the USE command. When performing a disk quota function, SYSMAN performs the operation on the device named by the /DEVICE qualifier. If there is no mention of a device, SYSMAN uses the default disk. Section 5 describes how to create and maintain disk quotas.

4.3 Cluster Parameter Commands

The CONFIGURATION commands let you inspect, set, or modify certain cluster parameters, specifically system time and the security data of a local area cluster.

A local area cluster has a group number and password that ensures its integrity on an Ethernet. This security data identifies which nodes belong to the local area cluster, thus preventing access to a cluster by an unauthorized node. The CONFIGURATION command set allows you to display and modify the group number and password.

4.4 System Parameter Commands

The PARAMETERS command set lets you inspect, set, and modify system parameters and parameter files in the current environment. You can modify a standard system parameter file for use in subsequent bootstrap operations, or dynamically modify the parameter values of the active system (dynamic parameters only). The PARAMETERS commands duplicate the parameter functions of the SYSGEN Utility.

Caution: Many of the system generation parameters can affect other parameters or the performance of the system. The recommended method of modifying system parameters is to edit the file SYS$SYSTEM:MODPARAMS.DAT and invoke AUTOGEN.

The procedure for inspecting or modifying a system parameter file is summarized as follows:

1. Use the PARAMETERS SHOW command to examine the parameter values in the work area.
2. Enter a PARAMETERS USE command to initialize the work area to use the values of a new parameter file, the current system parameter file, or the default values, if the active values do not provide a suitable base for subsequent operations.
3. Enter PARAMETER SET commands to modify parameters on an individual basis. These modifications have no effect outside the work area.
4. Enter a PARAMETERS WRITE command to create a parameter file, modify the current system parameter file on disk, or modify the active system in memory (dynamic parameters only).

See the *Guide to Setting Up a VMS System* for further information on inspecting and modifying system parameters.

4.5 Startup Commands

The STARTUP command set displays and modifies the execution characteristics of command procedures and executable programs that start the VMS operating system, site-specific programs, and layered products. Using STARTUP commands you can display the names of startup files, modify their characteristics, and add site-specific files or layered products.

With VMS Version 5.0, the command procedure STARTUP.COM calls all files involved in startup tasks. These startup files reside in SYS$STARTUP. A file with the logical name STARTUP$STARTUP_VMS lists the names of files that start the VMS operating system and describes the manner in which they execute. A file with the logical name STARTUP$STARTUP_LAYERED lists files that start site-specific products and layered products.

STARTUP$STARTUP_VMS is provided for your information. You can display it, but DIGITAL recommends that you do not modify it. However, you might want to modify STARTUP$STARTUP_LAYERED so it contains all the files you want to execute at your installation. The only way to modify the STARTUP$STARTUP_LAYERED is with the STARTUP command set.

STARTUP$STARTUP_LAYERED lists the files and command procedures that start site-specific products and layered products. It contains the following characteristics of each file:

- Name of the component file to be run. The file type must be either EXE or COM.
- Phase in which the component file is to run. You can install layered products during one of four phases. Each phase describes a minimum environment that exists at that point in the startup process, as follows:

  1 LPBEGIN — SYSTARTUP_V5.COM executes here and any other files that prepare an environment necessary for layered products.

  2 LPMAIN — The majority of layered products execute here.

  3 LPBETA — Layered products execute here that have a dependency on previously installed products.

  4 END — Products execute here that are dependent on layered products.
- Mode by which the component file is to run. A command procedure or image can be run directly, or it can be spawned. A command procedure can be run in batch.
- Node restrictions for the component. This is either the node or nodes on which the component file should *only* be run, or the node or nodes on which the component file should *not* be run.
- Parameters passed to the component file for execution. You can pass up to eight parameters, using the following format:

  ```
  (P1:args,P2:args,...)
  ```

See the *Guide to Setting Up a VMS System* for more information on the Version 5.0 startup procedure.

5 Creating and Maintaining Disk Quotas

SYSMAN encompasses the Disk Quota (DISKQUOTA) Utility, which was a standalone utility in VMS Version 4.6. DISKQUOTA commands allow an installation to limit the disk consumption of users. You can assign disk quotas to users and maintain an accurate record of disk use for ODS Level 2 disks. You create a quota file for each disk *except the system disk*. The quota file records the current usage and the maximum disk usage for all users.

Now that DISKQUOTA is an integral part of the SYSMAN utility, it is easier for you to create and maintain disk quota files. SYSMAN allows you to access disks that are normally unavailable from your local node. With SYSMAN you can obtain a display of all disks on the other nodes, including those that are mounted privately or as system disks. You can run DISKQUOTA on this kind of disk without logging in to each node.

5.1 Contents of a Quota File

The first step in allocating disk space is to create a quota file for each volume or each volume set. A quota file records all users allowed to use the disk and shows their current disk usage as well as their maximum disk allocation. A quota file has the following format:

```
SYSMAN> DISKQUOTA SHOW * /DEVICE=DJA$14:

     UIC          Usage       Permanent Quota   Overdraft Limit
[0,0]             0           333333            3333
[TTD,DAVIS]       15590       333333            3333
[TTD,MORGAN]      1929        333333            3333
[MKT,MORSE]       7650        333333            3333
    .
    .
    .
```

- The User Identification Code (UIC) of each user entitled to maintain files on the volume appears in the UIC column. UIC [0,0] appears in all quota files; use it as a template to set default values for quotas and overdrafts.
- The number of disk blocks currently dedicated to a user's files appears in the Usage column. The count of allocated blocks include blocks used, plus a block in the index file, extension headers, and blocks reserved through disk clustering. (The DCL command DIRECTORY /SIZE=ALL /BY_OWNER=owner results in a more exact figure of disk use.)
- The maximum number of blocks on the volume that a user's files can occupy appears in the Permanent Quota column. Once exceeded, the system issues an error message when a file is created.
- The number of blocks over the quota that a user's files can occupy appears in the Overdraft Limit column.

The absolute maximum number of blocks permitted a user on a volume is the sum of the quota and the overdraft. Only users with the EXQUOTA privilege can bypass disk quota restrictions.

A quota file, which is called QUOTA.SYS, is stored in directory [000000] with other system files and requires one block of disk storage for every 16 entries.

5.2 Establishing Disk Quotas

To create a quota file on a disk, use the command DISKQUOTA CREATE and specify the target disk with the /DEVICE qualifier. The command sets up a file called QUOTA.SYS in directory [000000].

The quota file has one entry, UIC [0,0], that is used to store default values for quotas and overdrafts. After creating the file, use the DISKQUOTA MODIFY command to adjust [0,0] to an appropriate value for the device.

Note: If you create a quota file or enable disk quotas on a disk that has files on it, use the DISKQUOTA REBUILD command to update the disk quota entries with the current usage information.

5.3 Quota Enforcement

During normal use of a volume with a quota file, the system automatically updates the usage counts as users create, delete, extend, and truncate files.

To create new files, usage counts must be below the permanent quota. If an operation to add new files exceeds the permanent quota, the system prohibits the operation and issues an error message.

A current file can be extended, even if over quota, by entering the operation a second time. Operations to extend the file succeed until the usage exceeds the sum of the permanent quota and the overdraft values.

The DISKQUOTA DISABLE command suspends quota operations on a volume. To permanently disable quotas on a device, disable the quotas with the DISKQUOTA DISABLE command and delete the file QUOTA.SYS. Otherwise, the system implicitly enables quotas when the disk is mounted. Whenever quotas are enabled on a volume—either implicitly with the MOUNT command or explicitly with the DISKQUOTA ENABLE command, you must update disk quota information using the command DISKQUOTA REBUILD. In updating the quota file, the system adds new UICs and corrects usage counts for each user.

6 Executing Commands on Remote Nodes

SMISERVER is the detached process responsible for executing SYSMAN commands on remote nodes. One copy of SMISERVER on a node can handle any number of concurrent SYSMAN commands.

A remote node that is not part of a cluster needs to have a command in the site-specific startup procedure SYS$MANAGER:SYSTARTUP.COM (invoked from the SYSTEM account) to create the SMISERVER process. Insert the following command:

```
$  @SYS$SYSTEM:STARTUP  SMISERVER
```

You can also use this command to restart SMISERVER without rebooting the system.

On any node that is part of a cluster, SMISERVER is normally started by the system startup procedure SYS$SYSTEM:STARTUP.COM. (The system must have a SYSGEN parameter VAXCLUSTER with a value of 1 or more.)

7 Command Summary

This section summarizes the SYSMAN commands by function and format. See the Command Section for a complete description.

Task	Command	Function
Using SYSMAN	SET ENVIRONMENT	Establishes a management context for subsequent SYSMAN commands.
	SET PROFILE	Modifies the default device and directory and the current privileges for the current management environment.
	SET TIMEOUT	Establishes the amount of time that SYSMAN waits for a node to respond.
	EXIT	Terminates the SYSMAN session and returns control to the DCL command level.
	HELP	Provides information on SYSMAN commands.
	SHOW ENVIRONMENT	Displays the current command context.
	SHOW PROFILE	Displays the default device and directory and the current privileges.
	SHOW TIMEOUT	Displays the current timeout period.
Using DCL commands	DO	Executes a DCL command or DCL command procedure.
Inspecting and modifying cluster parameters	CONFIGURATION SET CLUSTER_AUTHORIZATION	Updates security data in a local area cluster.
	CONFIGURATION SET TIME	Updates system time.
	CONFIGURATION SHOW CLUSTER_AUTHORIZATION	Displays cluster security data.
	CONFIGURATION SHOW TIME	Displays current system time.
Controlling and monitoring disk usage	DISKQUOTA ADD	Adds an entry to a disk quota file.
	DISKQUOTA CREATE	Creates and enables a disk quota file for a volume that does not contain one.
	DISKQUOTA DISABLE	Suspends disk quota operations on a volume.
	DISKQUOTA ENABLE	Resumes disk quota operations on a volume.
	DISKQUOTA MODIFY	Changes an entry in the quota file or adjusts the default quota and overdraft values.
	DISKQUOTA REBUILD	Reconstructs the disk usage counts for all entries.
	DISKQUOTA REMOVE	Deletes an entry from a disk quota file.
	DISKQUOTA SHOW	Displays disk quotas and usage counts.

Task	Command	Function
Inspecting and modifying system parameters	PARAMETERS USE	Initializes the current work area with system parameter values and the name of the site-independent command procedure.
	PARAMETERS SHOW	Displays the values of system parameters in the work area, plus the default, minimum, and maximum values of the parameters and their units of measure.
	PARAMETERS SET	Modifies the value of a system parameter in the work area.
	PARAMETERS WRITE	Writes the system parameter values and the name of the site-independent command procedure from the work area to a parameter file, the current system parameter file, or the active system in memory.
	PARAMETERS ENABLE CHECKS	Ensures that range checks are in effect. Enables range checks after a PARAMETERS DISABLE CHECKS command.
	PARAMETERS DISABLE CHECKS	Inhibits range checks on system parameter values specified in a PARAMETERS SET command.
Modifying the startup database or program characteristics	STARTUP ADD	Adds an executable file or command procedure to the startup database.
	STARTUP DISABLE	Prevents a component of the startup database from executing on one or more nodes in the environment.
	STARTUP ENABLE	Allows a component of the startup database to execute.
	STARTUP MODIFY	Edits a record in the startup database describing how a startup component executes.
	STARTUP REMOVE	Deletes one or more components from the startup database.
	STARTUP SET DATABASE	Determines the default database.
	STARTUP SHOW	Displays the name of the current startup database or its contents.

SYSMAN Usage Summary

The System Management Utility (SYSMAN) centralizes system management so that you can manage nodes or clusters from one location.

FORMAT

RUN SYS$SYSTEM:SYSMAN

PARAMETERS

None.

usage summary

To invoke SYSMAN, enter the following command at the DCL prompt:

```
$
```

The utility responds with the following prompt:

```
SYSMAN>
```

You can then enter SYSMAN commands at the SYSMAN> prompt. These commands follow the standard rules of DCL syntax.

As an alternative, you can enter the RSX command MCR, which expands to RUN SYS$SYSTEM:

```
$
```

With the MCR command, you can invoke SYSMAN and supply a command in one command string. With any SYSMAN command (except SET ENVIRONMENT), SYSMAN executes the command string and exits. After executing a SET ENVIRONMENT command, the utility returns the SYSMAN> prompt.

To exit from SYSMAN, enter the EXIT command at the SYSMAN> prompt or press CTRL/Z. Either method returns control to the DCL command level.

SYSMAN requires you to have the OPER privilege on the local node and authorization for the OPER or SETPRV privilege on any remote node in the management environment. You must also have the privileges required by individual commands, as documented in the Command Section. To determine which privileges are required for DCL commands or for system management utilities, refer to the *VMS DCL Dictionary* or the appropriate utility reference.

SYSMAN has the following restrictions:

- It cannot be run from a batch job in any environment that requires a password.
- Some DCL commands, such as SET CLUSTER/QUORUM, MOUNT/CLUSTER, and some forms of the REPLY command, operate clusterwide by design, so they should not be run in a SYSMAN environment defined as a cluster.

SYSMAN COMMANDS

This section describes SYSMAN commands and provides examples of their use.

CONFIGURATION SET CLUSTER_AUTHORIZATION
CONFIGURATION SET TIME
CONFIGURATION SHOW CLUSTER_AUTHORIZATION
CONFIGURATION SHOW TIME
DISKQUOTA ADD parameter
DISKQUOTA CREATE
DISKQUOTA DISABLE
DISKQUOTA ENABLE
DISKQUOTA MODIFY parameter
DISKQUOTA REBUILD
DISKQUOTA REMOVE parameter
DISKQUOTA SHOW parameter
DO command-line
EXIT
HELP [keyword]
PARAMETERS DISABLE CHECKS
PARAMETERS ENABLE CHECKS
PARAMETERS SET
PARAMETERS SHOW
PARAMETERS USE
PARAMETERS WRITE
SET ENVIRONMENT
SET PROFILE
SET TIMEOUT
SHOW ENVIRONMENT
SHOW PROFILE
SHOW TIMEOUT
STARTUP ADD
STARTUP DISABLE
STARTUP ENABLE
STARTUP MODIFY
STARTUP REMOVE
STARTUP SET DATABASE
STARTUP SHOW

CONFIGURATION SET CLUSTER_AUTHORIZATION

Modifies security data in a local area cluster.

The command requires the SYSPRV privilege.

FORMAT

CONFIGURATION SET CLUSTER_AUTHORIZATION

PARAMETERS

None.

QUALIFIERS

/GROUP_NUMBER=[n]

Specifies the cluster group number that is recorded in SYS$SYSTEM:CLUSTER_AUTHORIZE.DAT. A group number uniquely identifies each local area cluster configuration on a single Ethernet. This number must be in the range from 1 to 4095 or 61440 to 65535.

/PASSWORD=password

Specifies a password for cluster access. A password consists of 1 to 31 characters, including alphanumeric characters, the dollar sign, and underscore. A password provides a second level of validation to ensure the integrity of individual clusters on the same Ethernet that accidentally use identical group numbers. A password also prevents an intruder who discovers the group number from joining the cluster.

DESCRIPTION

The CONFIGURATION SET CLUSTER_AUTHORIZATION command modifies the group number and password of a local area cluster, as recorded in SYS$SYSTEM:CLUSTER_AUTHORIZE.DAT. If your configuration has multiple system disks, SYSMAN automatically updates each copy of CLUSTER_AUTHORIZE.DAT, provided the environment is defined as a cluster (SET ENVIRONMENT/CLUSTER).

Caution: If you change either the group number or the password, you must reboot the entire cluster.

The file CLUSTER_AUTHORIZE.DAT is initialized during execution of CLUSTER_CONFIG.COM and maintained through the SYSMAN Utility. Under normal conditions, you do not need to alter records in the CLUSTER_AUTHORIZE.DAT file interactively. However, if you suspect a security breach, you use the CONFIGURATION commands in SYSMAN to make the change.

EXAMPLE

```
SYSMAN>
SYSMAN>
SYSMAN>
Enter cluster group number [4027]:
%SYSMAN-I-GRPNOCHG, Group number not changed
The cluster authorization file has been updated.
The entire cluster should be rebooted.
```

The CONFIGURATION SET CLUSTER_AUTHORIZATION command in this example sequence modifies the cluster password. Note that the environment is defined to be a cluster, and the SYSPRV privilege is established before entering the CONFIGURATION SET CLUSTER_AUTHORIZATION command.

CONFIGURATION SET TIME

Modifies the current system time.

The command requires the LOG_IO privilege; in a cluster environment it also requires the SYSLCK privilege.

FORMAT

CONFIGURATION SET TIME*[=time]*

PARAMETERS

None.

DESCRIPTION

The CONFIGURATION SET TIME command allows you to reset the system time. Specify a time value using the following format:

[dd-mm-yyyy[:] [hh:mm:ss.cc]

See the *VMS DCL Concepts Manual* for a discussion of acceptable time formats.

In an environment of individual nodes, SYSMAN sets the time to the specified value on each node. Without a time specification, SYSMAN sets the time according to the time-of-year clock on each node.

In a cluster environment, SYSMAN sets the time to the specified value on each node. However, if you do not specify a value, SYSMAN uses the time-of-year clock. In a local cluster, SYSMAN reads the clock on the node from which you are executing SYSMAN and assigns this value to all nodes in the cluster. In a remote cluster, SYSMAN reads the clock on the target node in the cluster and assigns that value to all nodes. Note that the time-of-year clock is optional for some processors; see the *VAX Hardware Handbook* for further information.

SYSMAN uses special processing in a cluster environment to insure that all processors in the cluster are set to the same time. Because of communication and processing delays, it is not possible to synchronize clocks exactly. However, the variation is typically less than a few hundredths of a second. If SYSMAN cannot set the time to within one half second of the specified time, you receive a warning message that names the node that failed to respond quickly enough.

As a result of slight inaccuracies in each processor clock, times on various members of a cluster tend to drift apart. The following procedure synchronizes system times in a cluster environment:

```
$  SYNCH_CLOCKS:
$  RUN SYS$SYSTEM:SYSMAN
       SET ENVIRONMENT/CLUSTER
       CONFIGURATION SET TIME
       EXIT
$  WAIT 6:00:00
$  GOTO SYNCH_CLOCKS
```

The procedure sets the time on all cluster nodes to the value obtained from the local time-of-year clock, waits 6 hours, then resets the time for the cluster.

EXAMPLE

```
SYSMAN>
SYSMAN>
SYSMAN>
```

The CONFIGURATION SET command in this example sequence modifies the system time on nodes ASCONA, LUGANO, and LUCERN.

CONFIGURATION SHOW CLUSTER_AUTHORIZATION

Displays the group number of a local area cluster.

The command requires the SYSPRV privilege.

FORMAT

CONFIGURATION SHOW CLUSTER_AUTHORIZATION

PARAMETERS

None.

QUALIFIERS

/OUTPUT[=file-spec]

Redirects output from SYS$OUTPUT to the specified file. If no file specification is provided, SYSMAN writes the output to SYSMAN.LIS in the current directory.

DESCRIPTION

The CONFIGURATION SHOW CLUSTER_AUTHORIZATION command displays the group number of a local area cluster, as recorded in SYS$SYSTEM:CLUSTER_AUTHORIZE.DAT during the CLUSTER_CONFIG dialog. In a cluster or multinode environment, SYSMAN displays the group number of the first node and then displays the names of any nodes in the cluster whose group numbers, passwords, or both, are different.

EXAMPLE

```
SYSMAN>
   .
   .
   .
SYSMAN>
SYSMAN>
Node ZENITH: Cluster group number 65240
```

The CONFIGURATION SHOW CLUSTER_AUTHORIZATION command in this example displays the group number of node ZENITH. Because the group number and password on other nodes in the cluster are identical, no further information is displayed.

CONFIGURATION SHOW TIME

Displays the current date and system time to the hundredths of a second.

FORMAT CONFIGURATION SHOW TIME

PARAMETERS *None.*

QUALIFIERS */OUTPUT[=file-spec]*

Redirects output from SYS$OUTPUT to the specified file. If no file specification is provided, SYSMAN writes the output to SYSMAN.LIS in the current directory.

EXAMPLE

```
SYSMAN>
    .
    .
    .
SYSMAN>
System time on node ZENITH:  1-APR-1988 13:32:19.45
System time on node HOSTA: 1-APR-1988 13:32:27.79
System time on node KEBBI: 1-APR-1988 13:32:58.66
```

The CONFIGURATION SHOW TIME command in this example displays the system time for all nodes in the cluster.

DISKQUOTA ADD

Adds an entry to a disk quota file and initializes the usage count to zero.

This command requires write access to the quota file.

FORMAT

DISKQUOTA ADD *uic*

PARAMETER

uic

Specifies the user identification code (UIC) for which the quota entry is added. You can specify the UIC in numeric or alphanumeric format. For complete information on UIC specification, refer to the *VMS DCL Concepts Manual*.

You can also add quota entries for rights identifiers. These are rights granted a user with the AUTHORIZE Utility. Rights identifiers use an ID format rather than a UIC format. See the *VMS System Services Reference Manual* for a complete description.

When working in nonlocal environments, be careful that the alphanumeric UIC or rights identifiers that you use are valid for the environment.

QUALIFIERS

/DEVICE=device-spec

Specifies the location of the quota file. SYSMAN validates the device specification. A logical name may be specified for device-spec. If so, it is translated in the target environment.

Without a device specification, SYSMAN uses the default disk on the target node. Unless you have set a default device with the SET PROFILE command, the default disk is the current device on the local node or the login default on another node, depending on the established environment.

/OVERDRAFT=value

Specifies a positive integer that provides an overdraft value for the specified UIC. If omitted, the overdraft value defaults to the overdraft value in the entry for [0,0].

/PERMQUOTA=value

Specifies a positive integer that provides the quota for the specified UIC. If omitted, the permanent quota defaults to the value of the quota in the entry for [0,0].

DESCRIPTION

The DISKQUOTA ADD command appends individual entries to a quota file on the specified disk. Note that the quota file must already exist and be enabled.

Unless you specify the permanent quota and overdraft values, the utility applies the default values from the UIC entry [0,0]. You adjust UIC [0,0] with the DISKQUOTA MODIFY command.

EXAMPLE

```
SYSMAN>
%SYSMAN-I-ENV, Current command environment:
        Individual nodes: ZURICH,ASCONA
        Username ALEXIS    will be used on nonlocal nodes.
SYSMAN>
SYSMAN>
_SYSMAN>
SYSMAN>
```

The first command in this example defines the management environment to be nodes ZURICH and ASCONA. The second command adds the SYSPRV privilege to the user's current privileges in order to write to the quota file. The third command adds UIC [MKT,MORSE] to the quota file on the device named WORK1 on both nodes ZURICH and ASCONA, setting the permanent quota to 200 disk blocks and the overdraft limit to 50 disk blocks, for an absolute limit of 250 blocks. The final command adds an entry for the rights identifier PAYROLL. Any user holding the PAYROLL identifier can use this disk space.

DISKQUOTA CREATE

Creates and enables a quota file for a disk volume that does not currently contain one.

This command requires write access to the volume's master file directory (MFD), plus one of the following: the SYSPRV privilege, a system UIC, or ownership of the volume.

FORMAT

DISKQUOTA CREATE

PARAMETERS

None.

QUALIFIERS

/DEVICE=device-spec

Specifies the disk volume on which to create a quota file. SYSMAN validates the device specification. A logical name may be specified for device-spec. If so, it is translated in the target environment.

Without a device specification, SYSMAN uses the default disk on the target node. Unless you have set a default device with the SET PROFILE command, the default disk is the current device on the local node or the login default on another node, depending on the established environment.

DESCRIPTION

The DISKQUOTA CREATE command creates a quota file for a volume that does not currently have one.

Only one quota file, [000000]QUOTA.SYS, can be present on any volume or volume set. As soon as you create a quota file, establish default values for quotas and overdrafts by adjusting UIC [0,0] with the DISKQUOTA MODIFY command. When a disk has existing files, use the DISKQUOTA REBUILD command to have SYSMAN update the quota file to contain current usage values.

Note: DIGITAL recommends that you do not create and enable a quota file on the system volume.

EXAMPLE

```
SYSMAN>
%SYSMAN-I-ENV, Current command environment:
        Node ATHENS of local cluster
        Username ALEXIS    will be used on nonlocal nodes

SYSMAN>
    .
    .
    .
SYSMAN>
SYSMAN>
_SYSMAN>
```

The commands in this example sequence display the characteristics of the current management environment and verify the device name. Then they create a quota file on the disk DJA31 and set up default quota values.

DISKQUOTA DISABLE

Suspends the maintenance and enforcement of disk quotas on a volume.

This command requires the SYSPRV privilege, a system UIC, or ownership of the volume.

FORMAT

DISKQUOTA DISABLE

PARAMETERS

None.

QUALIFIERS

/DEVICE=device-spec

Specifies a disk volume on which to disable a quota file. SYSMAN validates the device specification. A logical name may be specified for device-spec. If so, it is translated in the target environment.

Without a device specification, SYSMAN uses the default disk on the target node. Unless you have set a default device with the SET PROFILE command, the default disk is the current device on the local node or the login default on another node, depending on the established environment.

DESCRIPTION

The DISKQUOTA DISABLE command suspends quota operations on a volume. To permanently disable quotas on a device, disable the quotas with the DISKQUOTA DISABLE command and delete the file QUOTA.SYS. Otherwise, the system implicitly enables quotas when the disk is mounted, leaving invalid quota information.

If you enable the quota file later, enter the DISKQUOTA REBUILD command to update UIC entries and usage counts.

EXAMPLE

```
SYSMAN>
SYSMAN>
```

The command in this example suspends quota enforcement on disk DJA1, located on node AMANDA.

DISKQUOTA ENABLE

Resumes quota enforcement on a disk volume.

This command requires the SYSPRV privilege, a system UIC, or ownership of the volume.

FORMAT

DISKQUOTA ENABLE

PARAMETERS

None.

QUALIFIERS

/DEVICE=device-spec

Specifies a disk volume on which to enable the quota file. SYSMAN validates the device specification. A logical name may be specified for device-spec. If so, it is translated in the target environment.

Without a device specification, SYSMAN uses the default disk on the target node. Unless you have set a default device with the SET PROFILE command, the default disk is the current device on the local node or the login default on another node, depending on the established environment.

DESCRIPTION

The DISKQUOTA ENABLE command reinstates the enforcement of quotas on a volume that had been suspended with the DISKQUOTA DISABLE command. Whenever you enable quotas on a volume, use the DISKQUOTA REBUILD comand to update UIC entries and usage counts.

EXAMPLE

```
SYSMAN>
SYSMAN>
SYSMAN>
SYSMAN>
```

The command in this example resumes quota enforcement on the default disk DJA12, which is located on node BAXTER. The DISKQUOTA REBUILD command updates the quota file, correcting quotas and adding any new entries.

DISKQUOTA MODIFY

Changes an entry in a quota file or adjusts default values for quotas and overdrafts. If a new quota limit is less than the current usage count, the utility issues a warning message before it implements the new quota.

The command requires write access to the quota file.

FORMAT

DISKQUOTA MODIFY *uic*

PARAMETER

uic

Specifies the user identification code (UIC). You can specify the UIC in numeric or alphanumeric format. For complete information on UIC specification, refer to the *VMS DCL Dictionary*.

You can also specify quota entries for rights identifiers. These are rights granted a user with the AUTHORIZE Utility. Rights identifiers use an ID format rather than a UIC format. See the *VMS System Services Reference Manual* for a complete description.

When working in nonlocal environments, make sure that the alphanumeric UIC or rights identifiers that you use are valid for the environment.

QUALIFIERS

/DEVICE=device-spec

Specifies the disk volume that contains the quota file. SYSMAN validates the device specification. A logical name may be specified for device-spec. If so, it is translated in the target environment.

Without a device specification, SYSMAN uses the default disk on the target node. Unless you have set a default device with the SET PROFILE command, the default disk is the current device on the local node or the login default on another node, depending on the established environment.

/OVERDRAFT=value

Specifies a positive integer that provides an overdraft value for the specified UIC. If you omit a value, the overdraft value defaults to the overdraft value in the entry for [0,0].

/PERMQUOTA=value

Specifies a positive integer that provides the quota for the specified UIC. If you omit a value, the permanent quota defaults to the value of the quota in the entry for [0,0].

DESCRIPTION

The DISKQUOTA MODIFY command changes values in a quota file for the disk named in the device specification. If you establish a quota limit that is less than the current usage count, a user can still log in and out, but cannot create files.

After creating a quota file, use the DISKQUOTA MODIFY command to set default values for quotas and overdrafts. UIC [0,0] sets the default permanent quota and overdraft values for a quota file, so you must change the entry [0,0] to values appropriate for your installation. Unless you specify quota and overdraft values when adding a file entry, the utility applies these defaults to UIC entries.

EXAMPLES

1
```
SYSMAN>
SYSMAN>
_SYSMAN>
```

The command in this example edits the entry for UIC [0,0] in the quota file on DUA12, which is located on node SIREN.

2
```
SYSMAN>
_SYSMAN>
```

The command in this example sets the permanent quota for UIC [TTD,DAVIS] to 900 blocks, while making no change to the overdraft limit. SYSMAN modifies the quota file that is located on disk SYS$DISK1 in the current environment.

DISKQUOTA REBUILD

Updates a quota file, adding new UICs and correcting usage counts for each user on the volume.

This command requires write access to the quota file, plus one of the following: the SYSPRV privilege, a system UIC, or ownership of the volume.

FORMAT

DISKQUOTA REBUILD

PARAMETERS

None.

QUALIFIERS

/DEVICE=device-spec

Specifies the disk volume that contains the quota file. SYSMAN validates the device specification and translates any logical name in the target environment before rebuilding the file.

Without a device specification, SYSMAN uses the default disk on the target node. Unless you have set a default device with the SET PROFILE command, the default disk is the current device on the local node or the login default on another node, depending on the established environment.

DESCRIPTION

The DISKQUOTA REBUILD command reads the disk, and updates usage counts for all existing entries and adds new entries. It sets quota and overdraft values to the defaults set in UIC [0,0] if the entry did not previously exist. While the REBUILD command is executing, file activity on the volume is frozen. No files can be created, deleted, extended, or truncated.

Use the DISKQUOTA REBUILD command in the following circumstances:

- After creating a quota file on a volume with existing files.
- When the quota file has been enabled after a period of being disabled. The command corrects the usage counts and adds any new UICs.

EXAMPLE

```
SYSMAN>
SYSMAN>
SYSMAN>
SYSMAN>
```

The command in this example enables the quota file and reconstructs the usage counts for all entries on disk DUA226, which is located on node WEST.

DISKQUOTA REMOVE

Deletes an entry from a quota file.

This command requires write access to the quota file.

FORMAT

DISKQUOTA REMOVE *uic*

PARAMETER

uic

Specifies the user identification code (UIC). You can specify the UIC in numeric or alphanumeric format. For complete information on UIC specification, refer to the *VMS DCL Concepts Manual.*

You can also specify quota entries for rights identifiers. These are rights granted a user with the AUTHORIZE Utility. Rights identifiers use an ID format rather than a UIC format. See the *VMS System Services Reference Manual* for a complete description.

When working in nonlocal environments, be careful that the alphanumeric UIC or rights identifiers that you use are valid for the environment.

QUALIFIERS

/DEVICE=device-spec

Specifies the disk volume containing the quota file. SYSMAN validates the device specification and translates any logical name in the target environment before deleting the UIC entry.

Without a device specification, SYSMAN uses the default disk on the target node. Unless you have set a default device with the SET PROFILE command, the default disk is the current device on the local node or the login default on another node, depending on the established environment.

DESCRIPTION

The DISKQUOTA REMOVE command eliminates the specified UIC from the quota file on the named device.

If the usage count for the UIC is not zero, the utility issues a warning message before it removes the UIC. Files remain on disk, and the user can still log on; however, any attempt to create files will fail.

The UIC [0,0] entry cannot be removed.

EXAMPLE

```
SYSMAN>
SYSMAN>
%SYSMAN-I-DEFDIR, Default directory on node VACUUM  -- WORK2:[CASEY]
%SYSMAN-I-DEFPRIV, Process privileges on node VACUUM --
        TMPMGX
        OPER
        NETMBX
        SYSPRV

SYSMAN>
```

The command in this example deletes UIC [TTD,DAVIS] from the quota file for disk DUA45, which is located on node VACUUM.

DISKQUOTA SHOW

Displays quotas, overdrafts, and usage counts.

This command requires no additional privileges to show one's own quota, overdraft, and usage count, but otherwise it requires read access to the quota file.

FORMAT

DISKQUOTA SHOW *uic*

PARAMETER

uic

Specifies the user identification code (UIC). You can specify the UIC in numeric or alphanumeric format. For complete information on UIC specification, refer to the *VMS DCL Concepts Manual*.

You can also specify quota entries for rights identifiers. These are rights granted a user with the AUTHORIZE Utility. Rights identifiers use an ID format rather than a UIC format. See the *VMS System Services Reference Manual* for a complete description.

You can use an asterisk wildcard character (*) to specify the quota entry as follows:

Command	Description
DISKQUOTA SHOW [TTD,CJ]	Show user CJ in group TTD
DISKQUOTA SHOW [TTD,*]	Show all users in group TTD
DISKQUOTA SHOW *	Show all entries

QUALIFIERS

/DEVICE=device-spec

Specifies the disk volume containing the quota file. DISKQUOTA validates device specification and translates any logical name in the target environment before displaying UIC entries.

Without a device specification, SYSMAN uses the default disk on the target node. Unless you have set a default device with the SET PROFILE command, the default disk is the current device on the local node or the login default on another node, depending on the established environment.

/OUTPUT[=file-spec]

Directs output to the specified file. Without a file specification, /OUTPUT defaults to SYSMAN.LIS in the current directory on the local node where you are running SYSMAN.

EXAMPLE

```
SYSMAN>
```

The command in this example displays quotas, overdrafts, and usage counts for all users in group ACCT on the default disk.

DO

Executes a DCL command or DCL command procedure on all nodes in the current environment.

The DO command requires the privileges of the DCL command being executed.

FORMAT

DO *[command-line]*

PARAMETERS

[command-line]

Specifies a command string that SYSMAN passes to the DCL for execution. For complete information on DCL command syntax, refer to the *VMS DCL Dictionary*.

QUALIFIERS

/OUTPUT[=file-spec]

Records output from the command in the specified file, which is located on the node from which you are executing SYSMAN. Position the qualifier immediately after the DO command. The default file specification is SYSMAN.LIS in the current device and directory. SYSMAN prefaces output with the message "%SYSMAN-I-OUTPUT Output From Node xxxxxx."

DESCRIPTION

The DO command executes the accompanying DCL command or DCL command procedure on all nodes in the current environment. Each DO command executes as an independent process, so there is no process context retained between DO commands. For this reason, you must express all DCL commands in a single command string, and you cannot run a program that expects input.

In a cluster environment, SYSMAN executes the commands sequentially on all nodes in the cluster. Each command executes completely before SYSMAN sends it to the next node in the environment. Any node that is unable to execute the command returns an error message. The utility displays an error message if the timeout period expires before the node responds. Some DCL commands, such as MOUNT/CLUSTER, operate clusterwide by design. For these commands to execute successfully in SYSMAN, define the enivronment to be a single node within the cluster.

Use the RSX command MCR to run programs located in SYS$SYSTEM. The MCR command allows you to run a program and supply a command in a single command string.

EXAMPLES

1

```
SYSMAN>
SYSMAN>
```

The first command in this example defines the management environment to be the cluster where NONAME is a member. The second command executes a DCL command on each node in the cluster. Output goes to the file SYSMAN.LIS rather than to the terminal.

2

```
SYSMAN>
SYSMAN>
SYSMAN>
_SYSMAN>
```

The first command in this example adds the CMKRNL and the SYSPRV privileges to the current privileges because they are required by the INSTALL and the AUTHORIZE utility. The next command installs the file STATSHR. The last command sets up an account for user JONES, specifying a password as well as a default device and directory.

The MCR command in the last line of the example allows you to invoke the Authorize Utility from SYS$SYSTEM and add a record to the UAF in one command string.

3

```
SYSMAN>
SYSMAN>
SYSMAN>
```

The commands in this example define the environment to be a single node and adjust the current privileges and directory. The DO command executes the command procedure PROCESS_INFO.COM, located in directory [CJ.PROGRAMS] and writes any output to SYSMAN.LIS in the directory from which SYSMAN is running.

EXIT

Terminates the SYSMAN session and returns control to the DCL command level. Any profile changes, established on the local node with the command SET PROFILE, are restored to their values at the time SYSMAN was invoked. You can also press CTRL/Z to exit at any time.

FORMAT

EXIT

PARAMETERS

None.

QUALIFIERS

None.

HELP

Provides online help information for using the SYSMAN commands, parameters, and qualifiers. Press CTRL/Z to exit.

FORMAT

HELP *[keyword...]*

PARAMETER

[keyword]

Specifies the command, parameter, or qualifier for which help information is to be displayed. If you omit the keyword, the HELP command displays a list of available help topics and prompts you for a particular keyword.

QUALIFIERS

None.

EXAMPLE

```
SYSMAN>
```

The command in this example displays help information about the SYSMAN command, DO.

PARAMETERS DISABLE CHECKS

Bypasses validation of parameter values. SYSMAN typically checks parameters to ensure they fall within the defined minimum and maximum values specified in the PARAMETERS SET command.

FORMAT PARAMETERS DISABLE CHECKS

PARAMETERS

None.

QUALIFIERS

None.

DESCRIPTION

The PARAMETERS DISABLE CHECKS command allows you to override maximum and minimum values established for system parameters. When you specify a value above the maximum or below the minimum, the VMS operating system sets the new parameter and displays an error message.

Note: Range checks are initially enabled because DIGITAL suggests that systems operate within these minimum and maximum values. Setting parameters outside these limits can result in system failures or hangs.

EXAMPLE

```
SYSMAN>
SYSMAN>
SYSMAN>
%SYSMAN-W-SETMIN, Value set to minimum for parameter MAXPROCESSCNT
SYSMAN>
SYSMAN>
```

In this example, the initial attempt to set MAXPROCESSCNT below the minimum fails because range checks are enabled. However, once range checks are disabled, the PARAMETERS SET MAXPROCESSCNT command succeeds.

PARAMETERS ENABLE CHECKS

Validates all parameter values to ensure they fall within the defined minimum and maximum values.

Because range checks are enabled by default, use PARAMETERS ENABLE CHECKS after entering a PARAMETERS DISABLE CHECKS command.

FORMAT PARAMETERS ENABLE CHECKS

PARAMETERS *None.*

QUALIFIERS *None.*

EXAMPLE

```
SYSMAN>
SYSMAN>
SYSMAN>
SYSMAN>
%SYSMAN-W-SETMIN, Value set to minimum for parameter WSMAX
SYSMAN>
Parameter Name    Current  Default  Minimum  Maximum Unit  Dynamic
WSMAX                2000     1024       60   6400 pages
```

The PARAMETERS ENABLE CHECKS command in this example illustrates that when range checking is disabled, the system accepts a working set value (WSMAX) of 20. However, once range checking is enabled with the PARAMETERS ENABLE CHECKS command, the system does not accept a WSMAX below the minimum, which is 60.

PARAMETERS SET

Changes the value of a specific parameter in the work area.

The PARAMETERS SET command does not modify parameter files, the current system parameter file on disk, or the active system. For information on performing these modifications, see the PARAMETERS WRITE command.

FORMAT

PARAMETERS SET *parameter-name*
value
/STARTUP[=][file-spec]

PARAMETERS

parameter-name

Specifies the name of the parameter to modify. Instead of a name, you can enter a period (.) to change the value of the most recently displayed or the most recently modified parameter. See the PARAMETERS SHOW command for an example of using the period in place of a parameter name.

For a list of system parameters and further information on them, use the command HELP PARAMETERS.

value

Specifies the new value for the parameter. Enclose values for ASCII parameters in quotation marks if they contain embedded spaces or other special characters.

Typically the value is an integer or the keyword DEFAULT. The keyword DEFAULT sets the parameter to its default value. The PARAMETERS SHOW command displays the defined minimum, maximum, and default values for the parameter, which are required unless range checking is disabled with the command PARAMETERS DISABLE CHECKS.

QUALIFIERS

/STARTUP[=] [file-spec]

Sets the name of the site-independent startup procedure to the given file specification. A file specification has a maximum length of 31 characters. The equal sign is optional. The initial startup command procedure is SYS$SYSTEM:STARTUP.COM. The qualifier does not allow any parameters.

EXAMPLES

1 SYSMAN>

The PARAMETERS SET command in this example assigns a value of 20 to the PFCDEFAULT parameter.

2 SYSMAN>

The PARAMETERS SET command in this example assigns the default value (40) to the GBLSECTIONS parameter.

3 SYSMAN>

The command in this example assigns SYS$SYSTEM:XSTARTUP.COM as the current site-independent startup command procedure.

PARAMETERS SHOW

Displays the value of a parameter or a group of parameters in the work area. In addition, the command shows the minimum, maximum, and default values of a parameter and its unit of measure.

FORMAT

PARAMETERS SHOW *[parameter-name]*

PARAMETER

parameter-name

Specifies the name of a parameter or a period (.). A period is interpreted as a request for the parameter specified in the last PARAMETERS SET or PARAMETERS SHOW command. The parameter name can be abbreviated, but the abbreviation must be unique because SYSMAN selects the first parameter that matches.

QUALIFIERS

/ACP

Displays all Files–11 ACP parameters.

/ALL

Displays the values of all active parameters.

/CLUSTER

Displays all parameters specific to clusters.

/DYNAMIC

Displays all parameters that would be in effect immediately after you enter a PARAMETERS WRITE ACTIVE command.

/GEN

Displays all general parameters.

/HEX

Displays numeric parameters in hexadecimal rather than decimal radix. Specify the /HEX system parameter name or the parameter type. If you specify the /HEX qualifier with the /NAMES qualifier, /HEX is ignored.

/JOB

Displays all Job Controller parameters.

/LGI

Displays all LOGIN security control parameters.

/MAJOR

Displays the most important parameters.

/MULTIPROCESSING

Displays parameters specific to multiprocessing.

/NAMES
Displays only parameter names. You can combine other qualifiers with this one.

/OUTPUT
Directs output to the specified file rather than SYS$OUTPUT. Without a file specification, the output goes to SYSMAN.LIS in the current directory.

/PQL
Displays the parameters for all default process quotas.

/RMS
Displays all parameters specific to VMS Record Management Services (VMS RMS).

/SCS
Displays all parameters specific to cluster System Communication Subsystems.

/SPECIAL
Displays all special control parameters.

/STARTUP
Displays the name of the site-independent startup procedure.

/SYS
Displays all active system parameters.

/TTY
Displays all parameters for terminal drivers.

DESCRIPTION

Parameters are displayed in decimal unless the /HEX qualifier is specified. Note that ASCII values are always displayed in ASCII.

Abbreviations for parameter names must be unique because the first parameter matching the abbreviation is selected for display. No ambiguity checks are made. For example, a specification of PARAMETERS SHOW GBL displays the GBLSECTIONS parameter. To display the GBLPAGFIL parameter, you must specify PARAMETERS SHOW GBLPAGF to avoid further ambiguity with the GBLPAGES parameter.

You can use a period (.) to indicate that you want to work with the system parameter that was specified in the last PARAMETERS SET or PARAMETERS SHOW command.

EXAMPLES

1

```
SYSMAN>
Parameter Name    Current   Default   Minimum        Maximum Unit  Dynamic
GBLSECTIONS           100        40        20        -1  Sections
SYSMAN>
SYSMAN>
Parameter Name    Current   Default   Minimum        Maximum Unit  Dynamic
GBLSECTIONS           110        40        20        -1  Sections
```

In this example, the user first displays the values of the GBLSECTIONS parameter and then refers to the parameter with a period to set its current value to 110. The next PARAMETERS SHOW command also uses the period notation to obtain confirmation that the change occurred.

2

```
SYSMAN>
```

The PARAMETERS SHOW command in this example produces the following output:

```
Parameters in use: Active
Parameter Name             Current   Default   Minimum   Maximum Unit  Dynamic
ACP_MULTIPLE                     0         1         0         1 Boolean     D
ACP_SHARE                        1         1         0         1 Boolean
ACP_MAPCACHE                    52         8         1        -1 Pages       D
ACP_HDRCACHE                   138       128         2        -1 Pages       D
ACP_DIRCACHE                   138        80         2        -1 Pages       D
ACP_DINDXCACHE                  37        25         2        -1 Pages       D
ACP_WORKSET                      0         0         0        -1 Pages       D
ACP_FIDCACHE                    64        64         0        -1 File-Ids    D
ACP_EXTCACHE                    64        64         0        -1 Extents     D
ACP_EXTLIMIT                   300       300         0      1000 Percent/10  D
ACP_QUOCACHE                   130        64         0        -1 Users       D
ACP_SYSACC                       4         8         0        -1 Directories D
ACP_MAXREAD                     32        32         1        64 Blocks      D
ACP_WINDOW                       7         7         1        -1 Pointers    D
ACP_WRITEBACK                    1         1         0         1 Boolean     D
ACP_DATACHECK                    2         2         0         3 Bit-mask    D
ACP_BASEPRIO                     8         8         4        31 Priority    D
ACP_SWAPFLGS                    14        15         0        15 Bit-mask    D
ACP_XQP_RES                      1         1         0         1 Boolean
ACP_REBLDSYS                     0         1         0         1 Boolean
```

3

```
SYSMAN>
```

The PARAMETERS SHOW command in this example produces a hexadecimal display of the values of the ACP system parameters.

```
Parameters in use: Active
Parameter Name            Current   Default   Minimum   Maximum Unit  Dynamic
ACP_MULTIPLE              00000000  00000001  00000000  00000001 Boolean     D
ACP_SHARE                 00000001  00000001  00000000  00000001 Boolean
ACP_MAPCACHE              00000034  00000008  00000001  FFFFFFFF Pages       D
ACP_HDRCACHE              0000008A  00000080  00000002  FFFFFFFF Pages       D
ACP_DIRCACHE              0000008A  00000050  00000002  FFFFFFFF Pages       D
ACP_DNDXCACHE             00000025  00000019  00000002  FFFFFFFF Pages       D
ACP_WORKSET               00000000  00000000  00000000  FFFFFFFF Pages       D
ACP_FIDCACHE              00000040  00000040  00000000  FFFFFFFF File-Ids    D
ACP_EXTCACHE              00000040  00000040  00000000  FFFFFFFF Extents     D
ACP_EXTLIMIT              0000012C  0000012C  00000000  000003E8 Percent/10  D
ACP_QUOCACHE              00000082  00000040  00000000  FFFFFFFF Users       D
ACP_SYSACC                00000004  00000008  00000000  FFFFFFFF Directories D
ACP_MAXREAD               00000020  00000020  00000001  00000040 Blocks      D
ACP_WINDOW                00000007  00000007  00000001  FFFFFFFF Pointers    D
ACP_WRITEBACK             00000001  00000001  00000000  00000001 Boolean     D
ACP_DATACHECK             00000002  00000002  00000000  00000003 Bit-mask    D
ACP_BASEPRIO              00000008  00000008  00000004  0000001F Priority    D
ACP_SWAPFLGS              0000000E  0000000F  00000000  0000000F Bit-mask    D
ACP_XQP_RES               00000001  00000001  00000000  00000001 Boolean
ACP_REBLDSYS              00000000  00000001  00000000  00000001 Boolean

4  SYSMAN>
   Startup command file = SYS$SYSTEM:STARTUP.COM
```

The PARAMETERS SHOW command in this example displays the name of the site-independent startup command procedure.

PARAMETERS USE

Reads a set of system parameters into the work area for inspection or manipulation.

FORMAT

PARAMETERS USE *source*

PARAMETER

source

The source of a system parameter file for data to be read into the work area. The source can be any of the following:

ACTIVE

Read parameters from the currently running system. When the work area is empty, this is the default.

CURRENT

Read parameters from the disk image of the currently running system.

DEFAULT

Read a parameter set containing the default values for all parameters.

file-spec

Read parameters from a previously created system parameter file. The default file type is PAR.

QUALIFIERS

None.

DESCRIPTION

The PARAMETERS USE command initializes the work area to use the values of a new parameter file, the current system parameter file, or the default values, if the active values do not provide a suitable base for subsequent operations.

EXAMPLE

```
SYSMAN>
```

The PARAMETERS USE command in this example initializes the work area with parameter values that should allow the VMS operating system to boot on any standard configuration. The initial values of the work area when the utility is invoked are the active values.

PARAMETERS WRITE

Writes the contents of the work area to the specified destination.

The command requires the SYSLCK privilege.

FORMAT

PARAMETERS WRITE *destination*

PARAMETER

destination

The destination of a new parameter file can be any of the following:

ACTIVE

Write the parameter set to the currently running system. Use of the ACTIVE parameter requires the CMKRNL privilege.

CURRENT

Write the parameter set to the disk image of the currently running system. The disk image is the current system parameter file on disk. Use of the CURRENT parameter requires write access to SYS$SYSTEM:VAXVMSSYS.PAR.

file-spec

Create the given file and write the parameter set to it. The default file type is PAR. Use of the parameter requires write access to the file.

QUALIFIERS

None.

DESCRIPTION

The PARAMETERS WRITE command writes the system parameter values and the name of the site-independent startup command procedure from the work area to your choice of a parameter file, the current system parameter file on disk, or the active system in memory. (Only the dynamic parameter values are written to the active system.)

Both the PARAMETERS WRITE ACTIVE and PARAMETERS WRITE CURRENT commands send a message to OPCOM to record the event.

EXAMPLES

1
```
SYSMAN>
```

The command in this example creates a new parameter specification file.

2
```
SYSMAN>
```

The command in this example modifies the current system parameter file on disk (SYS$SYSTEM:VAXVMSSYS.PAR).

SET ENVIRONMENT

Defines the node(s) or cluster to which subsequent commands apply.

The command requires OPER or SETPRV privilege on all nodes in the target environment.

FORMAT

SET ENVIRONMENT

PARAMETERS

None.

QUALIFIERS

/CLUSTER

Directs SYSMAN to apply subsequent commands to all nodes in the cluster. By default, the management environment is the local cluster. Specify a nonlocal cluster by naming one cluster member with the /NODE qualifier.

/NODE=(node1,node2,...)

Specifies that SYSMAN execute subsequent commands on the given nodes. If accompanied by the /CLUSTER qualifier, the environment becomes the cluster where the given node is a member. A node name can be a system name or a cluster alias.

/USERNAME=username

Specifies that this user name should be used for access control purposes on another node. SYSMAN uses the current user name if none is supplied. The utility prompts for a password whenever a new user name is specified.

DESCRIPTION

The SET ENVIRONMENT command defines the target node(s) or cluster for subsequent commands. When invoked, the system management environment is the local node where you are running SYSMAN. You can change the environment to any other node(s) in the cluster, the entire cluster, or any node(s) or cluster available through DECnet.

Designate a cluster environment with the /CLUSTER qualifier. When specifying a nonlocal cluster, also include the /NODE qualifier to identify the cluster.

You can display the current environment with the command SHOW ENVIRONMENT. To adjust privileges and defaults for the current environment, use the SET PROFILE command.

An environment exists until you exit from SYSMAN or establish another command context with the SET ENVIRONMENT command.

EXAMPLES

1

```
SYSMAN>
%SYSMAN-I-ENV, Current command environment:
        Clusterwide on local cluster
        Username ALEXIS    will be used on nonlocal nodes
```

The commands in this example define the command environment as the local cluster. SYSMAN confirms the new environment.

2

```
SYSMAN>
Remote Password:

%SYSMAN-I-ENV, Current command environment:
        Clusterwide on remote node CLACK
        Username ALEXIS    will be used on nonlocal nodes
```

The command in this example establishes a management environment on the cluster where node CLACK is a member. SYSMAN prompts for a password because it is a nonlocal environment.

3

```
SYSMAN>
%SYSMAN-I-ENV, Current command environment:
        Individual nodes: LESETH,JOSHUA,TORIN
        Username ALEXIS   will be used on nonlocal nodes
```

The command in this example defines the management environment to be 3 individual nodes.

SET PROFILE

Temporarily modifies a user's current privileges and default device and directory.

FORMAT

SET PROFILE

PARAMETERS

None.

QUALIFIERS

/DEFAULT=device:[directory]

Specifies the default disk device and directory name that the system should use in this environment to locate and catalog files.

/PRIVILEGES=(priv1,priv2...)

Specifies the privileges to add to the current privileges. Any enhanced privileges must be authorized.

DESCRIPTION

You need to consider the privilege requirements of commands that you will enter in an environment. The SET PROFILE command modifies process attributes for the current management environment. SYSMAN can add or delete current privileges, if they are authorized. It can also set a new default device and directory. Other attributes of your process remain constant. The profile is in effect until you change it, reset the environment, or exit from the utility. Section 3 discusses profile changes in more detail.

EXAMPLES

1 SYSMAN>

The command in this example changes the default device and directory in the user account to directory ALEXIS on device WORK1.

2 SYSMAN>

The command in this example make the authorized privileges, SYSPRV and CMKRNL, part of the current privileges. The privileges remain in effect until the environment changes, you enter another SET PROFILE command, or you exit.

SET TIMEOUT

Establishes the amount of time SYSMAN waits for a node to respond. Once the time limit expires, SYSMAN proceeds to execute the command on the next node in the environment.

FORMAT

SET TIMEOUT *time*

PARAMETER

time

Specifies a delta time value, which has the following format:

[dddd-] [hh:mm:ss.cc].

This is the amount of time that SYSMAN waits for a node to respond. By default, there is no timeout period, so SYSMAN waits indefinitely. See the *VMS DCL Concepts Manual* for a description of delta time values.

QUALIFIERS

None.

EXAMPLE

```
SYSMAN>
SYSMAN>
System time on node ASCONA: 1-APR-1988  14:22:33
%SYSMAN-I-NODERR, error returned from node LUGANO
%SMI-E-TIMEOUT, remote operation has timed out
System time on node JOSHUA: 1-APR-1988  14:23:15
```

The command in this example establishes a timeout period of 30 seconds. Because node LUGANO did not respond within 30 seconds, SYSMAN displays an error message and proceeds to execute the command on the next node in the environment.

SHOW ENVIRONMENT

Displays the target node(s) or cluster where SYSMAN is executing commands.

FORMAT SHOW ENVIRONMENT

PARAMETERS *None.*

QUALIFIERS *None.*

DESCRIPTION

The SHOW ENVIRONMENT command displays the current management environment. It can be the local cluster, local or remote nodes, or a nonlocal cluster. SYSMAN indicates if the environment is limited to individual nodes or if it is clusterwide. It also shows the current user name.

The environment exists until you exit from SYSMAN or enter another SET ENVIRONMENT command.

EXAMPLES

1

```
SYSMAN>
%SYSMAN-I-ENV, Current command environment:
        Clusterwide on local cluster
        Username ALEXIS   will be used on nonlocal nodes
```

The command in this example shows the current environment is the local cluster. User name ALEXIS will be used on other nodes in the cluster.

2

```
SYSMAN>
%SYSMAN-I-ENV, Current command environment:
        Clusterwide on remote cluster CLACK
        Username ALEXIS   will be used on nonlocal nodes
```

The command in this example shows that the command environment is a nonlocal cluster where node CLACK is a member.

3

```
SYSMAN>
%SYSMAN-I-ENV, Current command environment:
        Individual nodes: TURIN,JOSHUA
        At least one node is not in local cluster
        Username ALEXIS   will be used on nonlocal nodes
```

The command in this example shows that the command environment consists of 2 nodes.

SHOW PROFILE

Displays the current privileges and the default device and directory being used in the current environment.

FORMAT

SHOW PROFILE

PARAMETERS

None.

QUALIFIERS

/DEFAULT=device:[directory]

Specifies the default disk device and directory name that the system uses in this environment to locate and catalog files.

/PRIVILEGES=(priv1,priv2...)

Specifies privileges in effect for the current environment. Any enhanced privileges must be authorized.

DESCRIPTION

The SHOW PROFILE command displays the current privileges and the default device and directory that is being used in the current environment. You can modify these attributes with the SET PROFILE command.

These values remain in effect until you change environments or enter another SET PROFILE command.

EXAMPLE

```
SYSMAN>
%SYSMAN-I-DEFDIR, Default directory on node ATHENS  -- WORK1:[YANI]
%SYSMAN-I-DEFPRIV, Process privileges on node ATHENS --
        TMPMGX
        OPER
        NETMBX
        SYSPRV
```

The command in this example shows the default device and directory as well as current privileges.

SHOW TIMEOUT

Displays the amount of time SYSMAN waits for a node to respond. By default, there is no timeout period.

FORMAT SHOW TIMEOUT

PARAMETER

None.

QUALIFIERS

None.

EXAMPLE

```
SYSMAN>
%SYSMAN-I-TIMEVAL, timeout value is 00:00:04.00
```

The SHOW TIMEOUT command in this example displays the current timeout value, which is 4 seconds.

STARTUP ADD

Adds a component to the startup database.

The command requires read and write access to the startup database.

FORMAT

STARTUP ADD *FILE file-spec*

PARAMETER

FILE

Directs SYSMAN to add a component to the startup database. SYSMAN modifies STARTUP$STARTUP_LAYERED by default.

file-spec

Specifies which file to add to the startup database. Each component of the startup database must have a file type of COM or EXE and reside in SYS$STARTUP.

QUALIFIERS

/[NO]CONFIRM

Controls whether SYSMAN displays the file specification of each file before adding it to the startup database and requests you to confirm the addition. If you specify /CONFIRM, you must respond to the prompt with a Y (Yes) or a T (True) and press RETURN before the file is added. If you enter anything else, such as N or NO, the requested file is not added. The default is /[NO]CONFIRM.

/[NO]LOG

Controls whether the STARTUP ADD command displays the file specification of each file after it has been added.

/MODE=mode

Specifies the mode of execution for the file. Valid modes include DIRECT, SPAWN, BATCH, or ANY, described in Section 4.5.

/NODE=(node1,node2,...,nodex)

Names the nodes within the cluster that run the file during startup. By default, a startup file executes on all nodes in the cluster.

/PARAMETER=(P1:arg1,P2:arg2,...,P8:arg8)

Specifies the parameters that are to be passed to the file during startup. Parameters that are omitted receive the default parameters defined by the system parameter STARTUP_Pn.

/PHASE=phase-name

Indicates the phase within system startup when the file is to be executed. Valid phases include LPBEGIN, LPMAIN, LPBETA, and END. LPMAIN is the default.

SYSMAN
STARTUP ADD

DESCRIPTION

The STARTUP ADD command adds a component to the startup database. Startup components are the command procedures or executable files that perform actual startup work. Files from the startup database are used to start the VMS operating system, site-specific programs, and layered products. STARTUP$STARTUP_VMS and STARTUP$STARTUP_LAYERED list the components of the startup database.

Because a cluster shares one copy of the startup database, the SYSMAN environment can be defined as clustered or as a single node within the cluster.

EXAMPLE

```
SYSMAN>
_SYSMAN>
```

The STARTUP ADD command in this example adds a record to the startup database that starts FORTRAN Version 4.3.

STARTUP DISABLE

Prevents a file in the startup database from executing.

The command requires read and write access to the startup database.

FORMAT

STARTUP DISABLE *FILE file-spec*

PARAMETER

FILE

Directs SYSMAN to disable a component of the startup database. SYSMAN modifies STARTUP$STARTUP_LAYERED by default.

file-spec

Specifies the name of a component in the startup database. The startup file must reside in SYS$STARTUP and have a file type of COM or EXE. The wildcard characters % and * are permitted.

QUALIFIERS

/[NO]CONFIRM

Controls whether the STARTUP DISABLE command displays the file specification of each file before disabling it in the startup database and requests you to confirm that the file should be disabled. If you specify /CONFIRM, you must respond to the prompt with a Y (Yes) or a T (True) and press RETURN before the file is disabled. If you enter anything else, such as N or NO, the requested file is not disabled. The default is /[NO]CONFIRM.

/[NO]LOG

Controls whether the STARTUP DISABLE command displays the file specification of each file after it has been disabled.

/NODE=(node1,node2,...,nodex)

Identifies nodes within the cluster that do not run the file during startup. By default, the startup file is disabled on all nodes in the cluster.

/PHASE=phase-name

Indicates the phase of system startup in which the specified file normally executes. Valid phases include LPBEGIN, LPMAIN, LPBETA, and END. LPMAIN is the default.

DESCRIPTION

The STARTUP DISABLE command prevents a file in the startup database from executing. The command edits a record in the startup database, temporarily disabling the file.

EXAMPLE

```
SYSMAN>
```

The command in this example modifies the startup database so that FORTRAN will not be installed on node ZURICH.

STARTUP ENABLE

Allows a previously disabled file in the startup database to execute during system startup.

The command requires read and write access to the startup database.

FORMAT

STARTUP ENABLE *FILE file-spec*

PARAMETER

FILE

Directs SYSMAN to enable a component of the startup database. SYSMAN modifies STARTUP$STARTUP_LAYERED by default.

file-spec

Specifies the name of the startup file that you are enabling. Wildcard characters are accepted.

QUALIFIERS

/[NO]CONFIRM

Controls whether the STARTUP ENABLE command displays the file specification of each file before enabling it in the startup database and requests you to confirm that the file should be enabled. If you specify /CONFIRM, you must respond to the prompt with a Y (Yes) or a T (True) and press RETURN before the file is enabled. If you enter anything else, such as N or NO, the requested file is not enabled. The default is /[NO]CONFIRM.

/[NO]LOG

Controls whether the STARTUP ENABLE command displays the file specification of each file after it has been enabled.

/NODE=(node1,node2,...,nodex)

Names nodes within the cluster where the file should be enabled. By default, the startup file is enabled on all nodes.

/PHASE=phase-name

Indicates the phase within system startup when the specified file is to be enabled. Valid phases include LPBEGIN, LPMAIN, LPBETA, and END. LPMAIN is the default.

DESCRIPTION

The STARTUP ENABLE command permits a file that was previously disabled to execute during system startup.

EXAMPLE

```
SYSMAN>
```

The command in this example modifies the startup database. Node ZURICH will have FORTRAN Version 4.3 installed at startup.

STARTUP MODIFY

Changes information associated with a startup file in the startup database.

The command requires read and write access to the startup database.

FORMAT

STARTUP MODIFY *FILE file-spec*

PARAMETER

FILE

Directs SYSMAN to modify a record in the startup database. SYSMAN modifies STARTUP$STARTUP_LAYERED by default.

file-spec

Selects a startup file for modification. Wildcard characters are accepted.

QUALIFIERS

/[NO]CONFIRM

Controls whether the STARTUP MODIFY command displays the file specification of each file before modifying its startup characteristics in the startup data file and requests you to confirm that the file characteristics should be modified. If you specify /CONFIRM, you must respond to the prompt with a Y (Yes) or a T (True) and press RETURN before the file is modified. If you enter anything else, such as N or NO, the requested file is not modified. The default is /[NO]CONFIRM.

/[NO]LOG

Controls whether the STARTUP MODIFY command displays the file specification of each file after its startup characteristics have been modified.

/MODE=mode

Changes the mode of execution for a startup file. Valid modes include DIRECT, SPAWN, BATCH, or ANY, described in Section 4.5.

/NAME=file-spec

Changes the name of the startup file. The file must reside in SYS$STARTUP.

/PARAMETER=(P1:arg1,P2:arg2,...,P8:arg8)

Changes the parameters that are to be passed to the file during startup. Parameters that are omitted receive the default parameters defined by the system parameter STARTUP_Pn.

/PHASE=phase-name

Selects startup files for modification based on the phase in which they run. Valid phases include LPBEGIN, LPMAIN, LPBETA, and END. LPMAIN is the default.

SYSMAN
STARTUP MODIFY

DESCRIPTION

The STARTUP MODIFY command edits startup information associated with components in the startup database. For example, the command can rename a file or change the parameters that are passed to a file during startup. You can select a group of files for modification based on the phase in which they run.

EXAMPLE

```
SYSMAN>
_SYSMAN>
```

The command in this example changes two startup parameters for the command procedure FOR$LPMAIN_043_STARTUP.COM.

STARTUP REMOVE

Deletes a record in the startup database, so the specified startup file no longer executes during system startup.

The command requires read and write access to the startup database.

FORMAT

STARTUP REMOVE *FILE file-spec*

PARAMETER

FILE

Directs SYSMAN to remove a component from the startup database. SYSMAN modifies STARTUP$STARTUP_LAYERED by default.

file-spec

Specifies the name of the file to remove from the startup database. Wildcard characters are accepted.

QUALIFIERS

/[NO]CONFIRM

Controls whether the STARTUP REMOVE command displays the file specification of each file before deleting its record in the startup database and requests you to confirm that the file should be deleted. If you specify /CONFIRM, you must respond to the prompt with a Y (Yes) or a T (True) and press RETURN before the file is removed. If you enter anything else, such as N or NO, the requested file is not removed. The default is /[NO]CONFIRM.

/[NO]LOG

Controls whether SYSMAN displays the file specification of each file after it has been removed.

/PHASE=phase-name

Indicates the phase of system startup from which the file should be removed. Valid phases include LPBEGIN, LPMAIN, LPBETA, and END.

EXAMPLE

```
SYSMAN>
```

The command in this example takes the file FOR$LPMAIN_043_STARTUP.COM out of the startup database.

STARTUP SET DATABASE

Establishes the current startup database.

FORMAT

STARTUP SET DATABASE *database*

PARAMETER

database
Specifies the name of the target database, which is STARTUP$STARTUP_LAYERED by default. The second database, STARTUP$STARTUP_VMS is available for viewing; however, DIGITAL recommends that you do not modify it.

QUALIFIERS

None.

EXAMPLE

```
SYSMAN>
%SYSMAN-I-NEWCOMPFIL, current component file is now STARTUP$STARTUP_LAYERED
SYSMAN>
%SYSMAN-I-COMPFIL, contents of component database on node LUCERN
Phase    Mode    File
-----    ----    --------------------------
LPBEGIN  DIRECT  VMS$LPBEGIN_050_STARTUP.COM
LPMAIN   DIRECT  FOR$LPMAIN_043_STARTUP.COM
```

The commands in this example establish the layered products database as the default, so it can be displayed.

STARTUP SHOW

Displays the name of the current startup database or its components.

FORMAT

STARTUP SHOW *DATABASE*
FILE

PARAMETER

DATABASE

Directs SYSMAN to display the name of the current startup database. There are two startup databases: STARTUP$STARTUP_LAYERED and STARTUP$STARTUP_VMS. DIGITAL recommends that you do not modify the STARTUP$STARTUP_VMS database.

FILE

Displays the contents of the current startup database. The display includes the file name, phase, and mode of execution for each component in the database.

QUALIFIERS

/FULL

Displays full information about each component in the database. In addition to the phase, file name, and mode of execution for each startup component, SYSMAN displays the node(s) on which the file executes and the parameters passed to the file. Relevant with the FILE parameter.

/NODE

Displays the nodes within the cluster on which the file executes. By default, a startup file executes on all nodes in an environment. Relevant with the FILE parameter.

/OUTPUT=file-spec

Redirects command output from SYS$OUTPUT to the file named with the qualifier. Without a file-spec, SYSMAN writes the output to SYSMAN.LIS in the current directory.

/PARAMETERS

Lists the parameters with which the startup file executes. Parameters that are not specified receive the defaults defined by the system parameter STARTUP_Pn. Relevant with the FILE parameter.

/PHASE=phase-name

Displays components that execute in a specific phase of system startup. Valid phases include LPBEGIN, LPMAIN, LPBETA, and END. LPMAIN is the default. Relevant with the FILE parameter.

EXAMPLE

```
SYSMAN>
SYSMAN>
%SYSMAN-I-COMPFIL, contents of component database on node LUCERN
Phase        Mode    File
-----        ----    --------------------------------
BASEENVIRON  DIRECT  VMS$BASEENVIRON_050_LIB.COM
BASEENVIRON  CALLED  VMS$BASEENVIRON_050_SMISERVER.COM
BASEENVIRON  DIRECT  VMS$BASEENVIRON_050_VMS.COM
    .
    .
    .
```

The commands in this example display the contents of the VMS startup database.

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