MicroVAX 3000 Series Startup Procedures for Factory-Installed VMS

Order Number EK–430AA–IN–001

If your system contains factory-installed VMS, read this document before booting your system.

This document provides instructions for running the first-time startup procedures for MicroVAX 3000 series systems with factory-installed VMS software.

Use these instructions after installing your system hardware.

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Preface

This document describes the procedure for starting VMS Factory-Installed Software (FIS). This software is loaded onto the system disk before the system leaves the factory.

The factory-installed software must be modified to accommodate customized passwords and system environment particulars. Make these modifications during the startup procedure, executed when VMS FIS is started for the first time.

The requirements for modifying FIS depend on how the system is to be used. For example, your system can be configured in the following ways:

- As a standalone system

- As a simple VAXcluster

- As a dual-host system, or a system in a more complex VAXcluster network with distributed resource sharing and sophisticated disk management

Before you begin the startup procedure, you should determine how the system is to be configured. You should first read through the procedures to make sure you have the appropriate information to enter for your configuration. If your system is to be part of a cluster or network, ask your Network Coordinator or System Administrator for such information as the DECnet node address, cluster group number, and cluster password for your system.

If you are not familiar with networking and clustering, you should refer to the following manuals contained in the VMS documentation:

VMS VAXcluster Manual
Guide to DECnet–VAX Networking
VMS Networking Manual

Conventions

The following conventions are used in this manual:

Convention	Meaning
Key	A symbol denoting a terminal key used in text and examples in this book. For example, Break indicates that you press the Break key on the terminal keypad. Return indicates that you press the Return key on the terminal keypad.
BOLD	This bold type indicates user input. For example: >>> **BOOT MUA0** This line shows that the user must enter BOOT MUA0 at the console prompt.
NOTE	Provides general information about the current topic.
CAUTION	Provides information to prevent damage to equipment or software.

NOTE: *The software version numbers used in the examples throughout this manual may differ from the version number of your software.*

Chapter 1

Using VMS Factory-Installed Software

This section describes how to start VMS factory-installed software for the first time. The procedure for booting FIS requires that you first enter boot commands at the console prompt (>>>). When software customization begins, the software will display a series of prompts. Unless otherwise instructed, type each command or response, then press Return.

1. Enter the console mode, indicated by the console prompt (>>>). To enter console mode:

   a. Set the system on/off switch to off (0).

   b. Set the Break Enable/Disable switch on the CPU cover panel to the enable position (up, dot inside the circle).

   c. Set the system on/off switch to on (1).

   Wait for the system to complete self-tests and display the console prompt (>>>).

2. Make sure the system disk is on line and is not write-protected. The Run/Ready button should be in (lit), and the Write-Protect button should be out (not lit).

3. If you are using an allocation class of zero or if your system has no RF-series ISEs, you should skip this step.

   If your system is going to be configured as a cluster with a nonzero allocation class, refer to Chapter 2 for information on how to program parameters for RF-series ISEs.

4. Enter the SET BOOT command to define the system disk as the default boot device. Set boot to DIA0 for MicroVAX 3300/3400 systems. Set boot to DUA0 for MicroVAX 3800/3900 systems.

   >>> **SET BOOT DIA0**

   or

   >>> **SET BOOT DUA0**

5. Enter the BOOT command to boot factory-installed VMS.

   >>> **BOOT**

6. Set the Break Enable/Disable switch to disable (down, dot inside the circle).

After booting the ISE with the factory-installed software, the system displays startup messages and other routine messages from the VMS Operator Communication (OPCOM) facility.

The system displays a VMS banner and then prompts you for the date and time. After you enter the date and time, some messages are displayed, followed by a prompt:

```
VAX/VMS Version Vn.n   Major version id = 1 Minor version id = 0

Please enter date and time (DD--MMM-YYY HH:MM): 14-APR-1990 12:00

========================================================
Modifying Factory Installed Software for Customer Use

%SET-I-NEWAUDSRV, identification of new audit server......
%LICENSE-F-EMTLDB, license database contains no license records

   .
   .
   .

Do you want to enter Customer's cluster and password information(Y/N)?
```

NOTE: *In the examples throughout this document, the VAX/VMS Version number is indicated by n.n. The actual version number appears in your VMS banner.*

Refer to the appropriate subsection to complete the startup procedures for factory-installed VMS:

- To configure VMS for a standalone system, refer to Section 1.1.

- To configure VMS for a simple VAXcluster, refer to Section 1.2.

- To configure VMS for a dual-host system, or a complex VAXcluster network, refer to Section 1.3.

1.1 Modifying FIS for Standalone Systems

If you intend to use your system as a standalone system, enter responses to the prompts displayed as follows:

```
Do you want to enter Customer's cluster and password information(Y/N)?
```

1. Enter Y. This reply allows you to enter the password information.

   The system displays the following prompt, asking you to confirm the system date and time:

   ```
   The system time is dd-mmm-yyyy   hh:mm:ss:ss

   Is this correct? (Y/N)
   ```

2. Enter N if the date and time are incorrect. If you enter N, the system prompts you to enter the correct date and time, and to review it.

   The system then displays the following prompt:

   ```
   Will this node be a cluster member (Y/N)?
   ```

3. Enter N since this node is not going to be a cluster member.

   If DECwindows is installed on the system, you will see the following prompt:

   ```
   Do you want DECwindows as the default windowing system? (Y/N)
   ```

4. Enter Y if you are sure that you want DECwindows as the default windowing system, otherwise enter N.

   The system then displays prompts asking for the account passwords.

5. Enter the account passwords by responding to the system prompts as follows:

   NOTE: *The passwords shown here are sample passwords. You should enter your own unique passwords. Remember to record your passwords. If you forget your password, you cannot log in to your account.*

```
Enter new password for account SYSTEM:  PANCAKES
Re-enter the password for account SYSTEM:  PANCAKES
%UAF-I-MDFYMSG, user record(s) updated

Enter new password for account SYSTEST: BRATHWURST
Re-enter the password for account SYSTEST: BRATHWURST
%UAF-I-MDFYMSG, user record(s) updated

Enter new password for account FIELD:  ZIRHUMBA
Re-enter the password for account FIELD:  ZIRHUMBA
%UAF-I-MDFYMSG, user record(s) updated
```

The procedure verifies the passwords and rejects any that can be easily guessed. The following status messages are displayed if the passwords are acceptable:

```
%VMS-I-PWD_OKAY, account password for SYSTEM verified
%VMS-I-PWD_OKAY, account password for SYSTEST verified
%VMS-I-PWD_OKAY, account password for FIELD verified
```

The following status message is then displayed:

```
Creating RIGHTS database file, SYS$SYSTEM:RIGHTSLIST.DAT
```

Ignore any messages of the following type:

```
%SYSTEM-F-DUPIDENT, duplicate identifier
```

The following status message is displayed when the VMS FIS setup procedure is completed:

```
%UAF-I-RDBDONEMSG, rights database modified
```

The system now displays a list of prompts reminding you to perform certain tasks when the software installation is completed:

- Register any Product Authorization Keys (PAKs).

- Back up the system disk.

- Tailor the system disk.

The system displays the following message, followed by further information messages:

```
Running AUTOGEN -- Please wait
```

At this point the system shuts itself down and then reboots automatically from the default boot device. This process takes several minutes. The system displays a series of information messages.

```
SHUTDOWN -- Perform an Orderly System Shutdown
        .
        .
        .
VAX/VMS Version Vn.n  Major version id = 1 Minor version id = 0
        .
        .
        .
SYSTEM        job terminated at 24-AUG-1989 14:47:28.34
Accounting information:
Buffered I/O count:        133   Peak working set size:     401
Direct I/O count:           12   Peak virtual size:        2379
Page faults:               325   Mounted volumes:             0
Charged CPU time: 0 00:00:55.23  Elapsed time:      0 00:01:31.24
```

6. Press Return.

   The system prompts you for a username and password. You must log
   in to the SYSTEM account to perform post-installation tasks.

7. Log in to this account as follows. When you see the VMS prompt ($),
   the startup procedure is completed.

```
Welcome to VAX/VMS

USERNAME: SYSTEM
PASSWORD: PANCAKES

%LICENSE-I-NOLICENSE, no license is active for this software product
%LOGIN-LOGOPRCON, login allowed from OPA0:
        Welcome to VAX/VMS
$
```

   Do not forget your password. If you do not enter the correct password,
   the system displays the following message:

```
User authorization failure
```

   If you forget the password, follow the instructions for breaking into the
   system given in the *Guide to Setting Up a VMS System*.

8. You should now perform the following operations:

   • Register any Product Authorization Keys (PAKs) you received with
     your system. (Refer to information following this list.)

   • Back up the system disk. (Refer to the appropriate VMS
     documentation.)

   • Delete unwanted VMS files. (Refer to the appropriate VMS
     documentation.)

To register PAKs, enter the following:

`$ @SYS$UPDATE:VMSLICENSE` `Return`

NOTE: *Care should be taken to ensure the information (as read from the PAK) is entered correctly.*

If you make a mistake while entering any PAK, continue the data entry sequence and reject the entered data at the end of the sequence when the system asks you to confirm that the data entered is correct. The system then gives you the opportunity to re-enter the data correctly.

NOTE: *Care should be taken when re-entering data to ensure that the PAK data is entered correctly.*

See the *VMS License Management Utility Manual* for any additional information you may need.

See the *VMS Installation and Operations Manual* for further information on entering Program Authorization Keys (PAKs), customizing and testing the system, startup and shutdown, and backup procedures.

It is possible to later include the system as part of a network or VAXcluster. Including the system in a VAXcluster network brings many advantages. Data can be transferred between systems, disks can be shared, and batch processing and printer queues can be organized to share other resources.

The NETCONFIG.COM and CLUSTER_CONFIG.COM command procedures can be used to include the system in a network and cluster, provided you have the appropriate software licenses and PAKs. See the *VMS VAXcluster Manual*, the *Guide to DECnet–VAX Networking*, and the *VMS Networking Manual* for further details.

1.2 Modifying FIS for a Simple VAXcluster

If you intend to use your system as part of a VAXcluster, where disks are shared between different computers in the same network, you will require a node name and node ID which can be obtained from your Network Coordinator.

The following procedure describes how to set up VMS FIS for use as a server in a simple VAXcluster network. The following procedure applies to a typical system configuration. This configuration can be modified later, if required, using standard VMS procedures.

1. Complete the steps to boot VMS FIS as described in Chapter 1.

```
Do you want to enter Customer's cluster and password information(Y/N)?
```

2. Enter Y. This reply allows you to enter the cluster and password information.

   The system then displays the following prompt:

```
Will this node be a cluster member (Y/N)?
```

3. Enter Y since this node is going to be a cluster member.

   A series of system prompts are then displayed.

4. Respond to the system prompts as listed in Table 1–1.

Table 1–1: System Prompts for Local Area and Mixed-Interconnect Configurations

System Prompt	How to Respond
What is the node's DECnet node name?	Enter DECnet node name, for example, JUPITR. The DECnet node name may be from 1 to 6 alphanumeric characters in length and may not include dollar signs or underscores.
What is the node's DECnet node address?	Enter DECnet node address, for example, 2.2. You can obtain the DECnet node address from your Network Coordinator.
Will the Ethernet be used for cluster communications (Y/N)?	Enter Y. The Ethernet is required for cluster (SCS internode) communications in local area and mixed-interconnect configurations.
Enter this cluster's group number:	Enter a number in one of the ranges, 1 to 4095 or 61440 to 65535. You can obtain this number from your Network Coordinator.
Enter the cluster's password:	Enter the cluster password which must be from 1 to 31 alphanumeric characters in length and may include dollar signs and underscores. You can obtain the cluster's password from your Network Coordinator.
Re-enter the cluster's password for verification:	Re-enter the password.
Will JUPITR be a disk server (Y/N)?	Enter Y. In local area and mixed-interconnect configurations, the system disk is always served to the cluster. See the *VMS VAXcluster Manual* on served cluster disks.

Table 1-1 (Cont.): System Prompts for Local Area and Mixed-Interconnect Configurations

System Prompt	How to Respond
Will JUPITR serve HSC disks (Y)?	Enter N.
Will JUPITR serve RFxx disks (Y)?	Enter Y.
Enter a value for JUPITR's ALLOCLASS parameter:	Enter 0 (or the desired allocation class for your system).
Does this cluster contain a quorum disk (Y/N)?	Enter N.

NOTE: *If DECwindows is installed on the system disk, the system displays a prompt asking if DECwindows should be the default windowing system for this system.*

It is easy to set DECwindows as the default windowing system at a later stage. To do this, you must modify the VMS System Generation Parameter, WINDOW_SYSTEM, generate a new set of bootstrap parameters, and boot the system again. See the VMS Installation and Operations Manual, the Guide to Setting Up a VMS System or the VMS System Generation Utility Manual for further details.

5. The system then displays prompts asking for the account passwords. Enter the account passwords by responding to the system prompts as follows:

NOTE: *The passwords shown here are sample passwords. You should enter your own unique passwords. Remember to record your passwords. If you forget your password, you cannot log in to your account.*

```
Enter new password for account SYSTEM:  PANCAKES
Re-enter the password for account SYSTEM:  PANCAKES
%UAF-I-MDFYMSG, user record(s) updated

Enter new password for account SYSTEST: BRATHWURST
Re-enter the password for account SYSTEST: BRATHWURST
%UAF-I-MDFYMSG, user record(s) updated

Enter new password for account FIELD:  ZIRHUMBA
Re-enter the password for account FIELD:  ZIRHUMBA
%UAF-I-MDFYMSG, user record(s) updated
```

The procedure verifies the passwords and rejects any that can be easily guessed. The following status messages are displayed if the passwords are acceptable:

```
%VMS-I-PWD_OKAY, account password for SYSTEM verified
%VMS-I-PWD_OKAY, account password for SYSTEST verified
%VMS-I-PWD_OKAY, account password for FIELD verified
```

The following status message is then displayed:

```
Creating RIGHTS database file, SYS$SYSTEM:RIGHTSLIST.DAT
```

Ignore any messages of the following type:

```
%SYSTEM-F-DUPIDENT, duplicate identifier
```

The following status message is displayed when the VMS FIS setup procedure is completed:

```
%UAF-I-RDBDONEMSG, rights database modified
```

The system now displays a list of prompts reminding you to perform certain tasks when the software installation is completed:

- Register any Product Authorization Keys (PAKs).

- Back up the system disk.

- Tailor the system disk.

The system displays the following message, followed by further information messages:

```
Running AUTOGEN -- Please wait
```

At this point, the system shuts itself down and then reboots automatically from the default boot device. This process takes several minutes. The system displays a series of information messages:

```
SHUTDOWN -- Perform an Orderly System Shutdown
VAX/VMS Version Vn.n Major version id = 1 Minor version id = 0
     .
     .
     .
SYSTEM          job terminated at 24-AUG-1989 14:47:28.34

Accounting information:
Buffered I/O count:        133    Peak working set size:        401
Direct I/O count:           12    Peak virtual size:           2379
Page faults:               325    Mounted volumes:                0
Charged CPU time: 0 00:00:55.23   Elapsed time:       0 00:01:31.24
```

6. Press Return.

    The system prompts you for a username and password. You must log in to the SYSTEM account to perform post-installation tasks.

7. Log in to this account as follows. When you see the VMS prompt ($), the start-up procedure is completed.

```
Welcome to VAX/VMS

USERNAME: SYSTEM
PASSWORD: PANCAKES

%LICENSE-I-NOLICENSE, no license is active for this software product
%LOGIN-LOGOPRCON, login allowed from OPA0:
            Welcome to VAX/VMS
$
```

Do not forget your password. If you do not enter the correct password, the system displays the following message:

```
User authorization failure
```

If you forget the password, follow the instructions for breaking into the system given in the *Guide to Setting Up a VMS System.*

8. You should now perform the following operations:

    *   Register any Product Authorization Keys (PAKs) you received with your system. (Refer to information following this list.)

    *   Back up the system disk. (Refer to the appropriate VMS documentation.)

    *   Delete unwanted VMS files. (Refer to the appropriate VMS documentation.)

To register PAKs, enter the following:

```
$ @SYS$UPDATE:VMSLICENSE   Return
```

NOTE: *Care should be taken to ensure the information (as read from the PAK) is entered correctly.*

If you make a mistake while entering any PAK, continue the data entry sequence and reject the entered data at the end of the sequence when the system asks you to confirm that the data entered is correct. The system then gives you the opportunity to re-enter the data correctly.

NOTE: *Care should be taken when re-entering data to ensure that the PAK data is entered correctly.*

See the *VMS License Management Utility Manual* for any additional information you may need.

See the *VMS Installation and Operations Manual* for further information on entering Program Authorization Keys (PAKs), customizing and testing the system, startup and shutdown, and backup procedures.

In a VAXcluster network, queues for printer and batch processing operations may be configured to work on other systems in the VAXcluster.

Consult your network coordinator for details of existing queues which may be available in your network.

If you are setting up a new network, see the *VMS VAXcluster Manual* for a detailed discussion on setting up remote printer and batch processing queues.

The VMS command procedure NETCONFIG.COM can be used to include the system in a network, provided you have the appropriate software licenses and PAKs. See the *VMS VAXcluster Manual*, the *Guide to DECnet–VAX Networking*, and the *VMS Networking Manual* for further details.

1.3 Modifying FIS for a Complex Network or Dual-Host System

In a more complex computer network or dual-host VAXcluster it may be necessary to enter disk allocation class and quorum disk information for the network. This information will enable disks to be shared on a selective basis between some systems on the network. Quorum disk information may also allow more rigorous definition of cluster operations during the removal of systems from the network.

In addition, queues for printer and batch processing operations can be set up, allowing work to be executed on other systems in the network.

See the *VMS VAXcluster Manual*, the *Guide to DECnet–VAX Networking*, and the *VMS Networking Manual* for a detailed discussion on setting up VMS computers as members of more complex computer networks, including setting up remote printer and batch processing queues.

1.3.1 Configuring VMS for Dual-Host Systems

The *VMS Installation and Operations* manual provides information on how to configure a dual-host system for cluster operation. You can set up the system for operation in the following ways:

- As a pair of boot servers for a new local area cluster to which you intend to add satellites

- As a two-node cluster to which you do not currently intend to add satellites

- As a pair of boot servers that you want to add to an existing cluster

NOTE: *In a dual-host configuration, you must assign the same allocation class to both host systems and to the RF-series ISEs. This allocation class must be different from that of other systems or of hierarchical storage controllers (HSCs) in a cluster. Refer to Chapter 2 for information on setting parameters for RF-series ISEs.*

The following system software licenses are required to configure a dual-host system:

Host A	Host B
VMS	VMS
VAXcluster	VAXcluster
DECnet full-function	DECnet end-node

Two VMS commands are particularly useful for checking your work when you have completed modifying VMS for a dual-host system.

- Use the VMS DCL command SHOW DEVICE D to list the ISEs. Make sure the number of ISEs displayed matches the physical number in the dual-host system.

  - Too many ISEs indicates an incorrect allocation class setting for an ISE.

  - Too few ISEs indicates an incorrect unit number for an ISE.

- Use the VMS DCL command SHOW DEVICE DI/FULL to check that the alternate host name for the dual-host system is displayed.

Chapter 2
Programming Parameters for RF-Series ISEs

This chapter describes the procedures for setting and examining parameters for RF-series ISEs.

Two types of DSSI storage adapters are available for MicroVAX 3000 series systems: an embedded DSSI host adapter that is part of the KA640 CPU (used in MicroVAX 3300/3400 systems), and the KFQSA storage adapter.

Each storage adapter provides a separate DSSI bus that can support up to seven RF-series ISEs (six ISEs for a dual-host configuration). The adapters make a connection between the CPU and the requested ISE on their respective DSSI bus. Each ISE has its own controller and server that contain the intelligence and logic necessary to control data transfers over the DSSI bus.

2.1 RF-Series ISE Parameters

Four principal parameters are associated with each RF-series ISE:

- ALLCLASS
- UNITNUM
- NODENAME
- Bus Node ID

The ALLCLASS parameter determines the device allocation class. The allocation class is a numeric value from 0 to 255 that is used by the VMS operating system to derive a path-independent name for multiple access paths to the same ISE. RF-series ISEs are shipped from the factory with a default allocation class of zero. Each RF-series ISE to be served to the cluster should have an allocation class that matches the allocation class of the host system. Refer to the *VMS VAXcluster* manual for rules for specifying allocation class values.

The UNITNUM parameter determines the unit number of the ISE. By default, the ISE unit number is supplied by the bus node ID plug on the Operator Control Panel (OCP). To set unit numbers and override the default

values, you use the console-based diagnostic and utility protocol (DUP) driver utility to supply values to the UNITNUM parameter and to set a value of zero to ISE parameter FORCEUNI.

The NODENAME parameter allows each ISE to have an alphanumeric node name of up to eight characters. RF-series ISEs are shipped from the factory with a unique identifier, such as R7CZZC, R7ALUC, etc. You can provide a node name of your choosing if you prefer.

The Bus Node ID parameter is provided by the bus node ID plug on the operator control panel (OCP). Each DSSI bus can support up to seven ISEs, bus nodes 0 through 6 (0 through 5 for dual-host systems). Refer to your *Operation* manual for instructions on changing bus node ID plugs.

NOTE: *All ISE parameters, with the exception of the Bus Node ID, are programmed and examined using the console-based DUP driver utility. The ISE Bus Node ID is physically determined by the numbered bus node ID plug that is inserted into the OCP.*

With an allocation class of zero, the operating system can use the default parameter values to provide each ISE with a unique device name. The operating system uses the node name along with the device logical name in the following manner:

NODENAMEDIAu$

where

NODENAME is a unique node name and u is the unit number.

With a nonzero allocation class, the operating system relies on unit number values to create a unique device name. The operating system uses the allocation class along with the device logical name in the following manner:

$ALLCLASS$DIAu

where

ALLCLASS is the allocation class for the system and ISEs, and u is a unique unit number.

The following instructions describe how to change ISE parameters using the DUP driver utility. In the sample procedures, the allocation class will be set to 2, the ISEs will be assigned new unit numbers, and the system disk will be assigned a new node name.

1. Enter the console mode.

    The procedure for programming internal parameters for RF-series ISEs requires that you issue commands to those RF-series ISEs at the console

prompt (>>>). You may type these commands in either uppercase or lowercase letters. Unless otherwise instructed, type each command, then press Return.

Enter console mode as follows.

a. Set the Break Enable/Disable switch on the CPU cover panel to the enable position (up, dot inside the circle).

b. Set the on/off switch for each unit (both hosts for a dual-host system, and any expanders for expanded systems) to on (1).

Wait for the system to display the console prompt (>>>).

2. Make sure the ISEs for which you want to set parameters are on line and are not write-protected. The Run/Ready button should be in (lit), and the Write-Protect button should be out (not lit).

3. For systems with embedded DSSI, enter SHOW DSSI at the console prompt for a display of all DSSI devices in your expanded system. For KFQSA-based DSSI, enter SHOW DEVICE.

The firmware displays two lines of information for each ISE. The first line contains the node number and node name. The second line contains the device name and unit number followed by the device type in parentheses.

For embedded DSSI, the device name consists of the letters DIAn and the DSSI host adapter is identified by an asterisk (*). For KFQSA-based DSSI, the device name consists of the letters DUcn, where c is the controller letter, and u is a unique unit number.

The following examples show a system with three RF71 ISEs. Example 2–1 shows a system with embedded DSSI and Example 2–2 shows a system with KFQSA-based DSSI.

Example 2–1: SHOW DSSI Display (Embedded DSSI)

```
>>> SHOW DSSI
DSSI Node 0  (R7CZZC)
-DIA0  (RF71)
DSSI Node 1  (R7ALUC)
-DIA1  (RF71)
DSSI Node 2  (R7EB3C)
-DIA2  (RF71)
DSSI Node 7  (*)
>>>
```

Example 2–2: SHOW DEVICE Display (KFQSA-based DSSI)

```
>>> SHOW DEVICE
UQSSP Disk Controller 0  (772150)
-DUA0  (RF71)
UQSSP Disk Controller 1  (760334)
-DUB1  (RF71)
UQSSP Disk Controller 2  (760340)
-DUC2  (RF71)
UQSSP Tape Controller 0  (774500)
-MUA0  (TK70)
Ethernet Adapter 0  (774440)
-XQA0  (08-00-2B-09-A3-96)
```

In this example, each ISE will be assigned an allocation class of 2 and the system disk will be given a new node name. Also, ISEs DIA0, DIA1, and DIA2 (or DUA0, DUB1, and DUC2) will be assigned unit numbers 10, 11, and 12, respectively.

2.2 Entering the DUP Driver Utility

To examine and change internal RF-series ISE parameters, you must first activate the DUP driver utility by setting host to the specific ISE for which you want to modify or examine parameters.

Use the following command for embedded DSSI:

```
SET HOST/DUP/DSSI <node_number> PARAMS
```

where

<node_number> is the bus node ID (0–6) for the ISE on the bus.

Use the following command for KFQSA-based DSSI:

```
SET HOST/DUP/UQSSP/DISK <node_number> PARAMS
```

where

<node_number> is the bus node ID (0–6) for the ISE on the bus.

The following examples show the commands entered at the console prompt to start the DUP server for the ISE at node 0. In Example 2–3, you enter SET HOST/DUP/DSSI 0 PARAMS for embedded DSSI. In Example 2–4, you enter SET HOST/DUP/UQSSP/DISK 0 PARAMS for KFQSA-based DSSI.

Example 2–3: Starting the DUP Driver Utility (Embedded DSSI)

```
>>> SET HOST/DUP/DSSI 0 PARAMS
Starting DUP server...
Copyright (c) 1990  Digital Equipment Corporation

PARAMS>
```

Example 2–4: Starting the DUP Driver Utility (KFQSA-Based DSSI)

```
>>> SET HOST/DUP/UQSSP/DISK 0 PARAMS
Starting DUP server...
Copyright (c) 1990  Digital Equipment Corporation

PARAMS>
```

2.3 Setting Allocation Class

After entering the DUP driver utility for a specified ISE, you can examine and set the allocation class for the ISE as follows:

1. At the PARAMS> prompt, enter SHOW ALLCLASS to check the allocation class of the ISE to which you are currently connected.

2. Enter SET ALLCLASS 2 (or enter the allocation class you desire).

3. Enter SHOW ALLCLASS to verify the new allocation class.

   Example 2–5 shows the steps for examining and changing the allocation class for a specified ISE. In the example, the allocation class is changed from an allocation class of 0 to an allocation class of 2.

Example 2–5: Setting Allocation Class for a Specified ISE

```
PARAMS> SHOW ALLCLASS
Parameter      Current            Default          Type      Radix
---------- ------------------ ------------------ --------- -----
ALLCLASS                 0                  0      Byte      Dec   B
PARAMS> SET ALLCLASS 2
PARAMS> SHOW ALLCLASS

Parameter      Current            Default          Type      Radix
---------- ------------------ ------------------ --------- -----
ALLCLASS                 2                  0      Byte      Dec   B
```

2.4 Setting Unit Number

After entering the DUP driver utility for a specified ISE, you can examine and set the unit number for the ISE as follows:

1. At the PARAMS> prompt, enter SHOW UNITNUM to check the unit number of the ISE to which you are currently connected.

2. Enter SET UNITNUM 10 (or enter the unit number you desire).

3. Enter SET FORCEUNI 0 to override the default unit number value supplied by the bus node ID plug.

4. Enter SHOW UNITNUM to verify the new unit number.

5. Enter SHOW FORCEUNI to verify that the current value for the FORCEUNI parameter is 0.

   Example 2–6 shows the steps for changing the unit number of a specified ISE from unit number 0 to unit number 10.

Example 2–6: Setting a Unit Number for a Specified ISE

```
PARAMS> SHOW  UNITNUM
Parameter      Current             Default          Type      Radix
---------- ----------------    ----------------    --------   -----
UNITNUM                 0                      0    Word       Dec    U

PARAMS> SET UNITNUM 10
PARAMS> SET FORCEUNI 0
PARAMS> SHOW UNITNUM

Parameter      Current             Default          Type      Radix
---------- ----------------    ----------------    --------   -----
UNITNUM                10                      0    Word       Dec    U

PARAMS> SHOW FORCEUNI
Parameter      Current             Default          Type      Radix
---------- ----------------    ----------------    --------   -----
FORCEUNI                0                      1    Boolean    0/1    U
```

2.5 Setting Node Name

After entering the DUP driver utility for a specified ISE, you can examine and set the node name for the ISE as follows:

1. At the PARAMS> prompt, enter SHOW NODENAME to check the node name of the ISE to which you are currently connected.

2. Enter SET NODENAME SYSDSK (or enter the desired alphanumeric node name of up to eight characters).

3. Enter SHOW NODENAME to verify the new node name.

    Example 2–7 shows the steps for changing the node name of a specified ISE from the factory-supplied name to SYSDSK.

Example 2–7: Changing a Node Name for a Specified ISE

```
PARAMS> SHOW NODENAME
Parameter      Current            Default          Type     Radix
---------   ----------------   ----------------   --------  -----
NODENAME        R7CZZC             RF71            String   Ascii   B
PARAMS> SET NODENAME SYSDSK

PARAMS> SHOW NODENAME

Parameter      Current            Default          Type     Radix
---------   ----------------   ----------------   --------  -----
NODENAME        SYSDSK             RF71            String   Ascii   B
```

2.6 Exiting the DUP Server Utility

After you have completed setting and examining internal ISE parameters, enter the WRITE command at the PARAMS> prompt to save the ISE parameters you have changed using the SET command. The changes are recorded to nonvolatile memory.

If you have changed the allocation class or node name of an ISE, the DUP driver utility will ask you to initialize the controller. Answer Yes (Y) to allow the changes to be recorded, and to exit the DUP driver utility.

If you have not changed allocation class or node name, enter the EXIT command at the PARAMS> prompt to exit the DUP driver utility for the specified ISE. Example 2–8 shows the procedure for saving parameter changes. In the example, the controller is initialized.

Example 2–8: Exiting the DUP Driver Utility for a Specified ISE

```
PARAMS> WRITE
Changes require controller initialization, ok? [Y/(N)] Y

Stopping DUP server...
>>>
```

NOTE: *You must repeat the procedures in this chapter for each ISE for which you want to change parameters.*

Example 2–9 shows the display for the SHOW DSSI command for a system with embedded DSSI after the unit numbers for the ISEs have been changed from 0, 1, and 2 to 10, 11, and 12. Notice that the bus 0 device names are now DIA10, DIA11, and DIA12.

Example 2–9: SHOW DSSI Display

```
>>>SHOW DSSI
DSSI Node 0 (SYSDSK)
-DIA10 (RF71)
DSSI Node 1 (R7ALUC)
-DIA11 (RF71)
DSSI Node 2 (R7EB3C)
-DIA12 (RF71)
DSSI Bus 0 Node 7 (*)
>>>
```

Example 2–10 shows the display for the SHOW DEVICE command for a system with KFQSA-based DSSI after the unit numbers for the ISEs have been changed from 0, 1, and 2 to 10, 11, and 12. Notice that the bus 0 device names are now DUA10, DUB11, and DUC12.

Example 2–10: SHOW DEVICE Display (KFQSA-based DSSI)

```
>>> SHOW DEVICE
UQSSP Disk Controller 0 (772150)
-DUA10 (RF71)
UQSSP Disk Controller 1 (760334)
-DUB11 (RF71)
UQSSP Disk Controller 2 (760340)
-DUC12 (RF71)
UQSSP Tape Controller 0 (774500)
-MUA0 (TK70)
Ethernet Adapter 0 (774440)
-XQA0 (08-00-2B-09-A3-96)
```

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