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**VAX/VMS**  
**UETP User's Guide**

Order No. AA-D643B-TE

**VAX11**



**March 1980**

This guide explains the function of the VAX/VMS User Environment Test Package (UETP) and provides operating instructions for running the UETP on a VAX/VMS system.

# **VAX/VMS UETP User's Guide**

Order No. AA-D643B-TE

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## CONTENTS

	Page
PREFACE	v
CHAPTER 1 INTRODUCTION TO THE UETP	1-1
1.1 THE ROLE OF THE UETP	1-1
1.1.1 Who Uses the UETP	1-1
1.1.2 What the UETP Tests	1-2
1.1.3 The UETP's Relationship to Error-Logging and Diagnostics	1-2
1.2 HOW THE UETP WORKS	1-3
1.2.1 The Master Command Procedure	1-3
1.2.2 The Initialization Phase	1-4
1.2.3 The Device Test Phase	1-4
1.2.4 The Native Mode Test Phase	1-5
1.2.5 The System Load Test Phase	1-5
1.2.6 The Compatibility Mode Test Phase	1-5
1.2.7 The Termination Phase	1-5
1.3 INTERPRETING UETP OUTPUT	1-6
CHAPTER 2 UETP OPERATING INSTRUCTIONS	2-1
2.1 PREPARING THE SYSTEM	2-1
2.1.1 Booting the System	2-1
2.1.2 Logging In	2-1
2.1.3 Preparing Devices	2-2
2.1.3.1 Setting Up Disk Drives	2-2
2.1.3.2 Setting Up Magnetic Tape Drives	2-4
2.1.3.3 Setting Up Terminals and Line Printers	2-4
2.1.3.4 Other Devices	2-4
2.2 DEFINING UETP VARIABLES	2-5
2.2.1 The Console Log	2-5
2.2.2 The Load Test	2-5
2.2.3 Single-Run Versus Continuous UETP Execution	2-6
2.3 RUNNING THE ENTIRE UETP	2-7
2.3.1 Using CTRL/Y and CTRL/C	2-7
2.3.1.1 CTRL/Y	2-7
2.3.1.2 CTRL/C	2-8
2.3.2 UETP Log Files	2-8
2.4 RUNNING INDIVIDUAL UETP PHASES	2-9
2.4.1 The Device Tests	2-9
2.4.1.1 The Logical Name UETP\$CTRLNAME	2-10
2.4.2 The Native Mode Tests	2-11
2.4.2.1 The System Services Test	2-12
2.4.2.2 The Native Mode VAX-11 SORT Test	2-12
2.4.2.3 The VAX-11 RMS Test	2-12
2.4.3 The System Load Test	2-13
2.4.4 The Compatibility Mode Test	2-15
2.4.4.1 The File Transfer Utility (FLX) Test	2-16
2.4.4.2 The RSX-11M Executive Directives Test	2-16

## CONTENTS

		Page	
CHAPTER	3	UETP MESSAGES	3-1
	3.1	FORMAT OF SYSTEM MESSAGES	3-1
	3.2	ALPHABETICAL LIST OF MESSAGES	3-2
APPENDIX	A	SUMMARY OF OPERATING INSTRUCTIONS	A-1
	A.1	LOGGING IN	A-1
	A.2	PREPARING DEVICES FOR TESTING	A-1
	A.2.1	Disk Drives	A-1
	A.2.2	Magnetic Tape Drives	A-2
	A.2.3	Terminals and Line Printers	A-2
	A.2.4	Other Devices	A-2
	A.3	RUNNING THE ENTIRE UETP	A-2
	A.4	RUNNING INDIVIDUAL UETP PHASES	A-3
	A.4.1	The Device Tests	A-3
	A.4.2	The Native Mode Tests	A-3
	A.4.3	The System Load Test	A-4
	A.4.4	The Compatibility Mode Test	A-4
APPENDIX	B	A UETP CONSOLE DIALOGUE	B-1
	B.1	EXAMPLE OF DIALOGUE	B-2
INDEX			Index-1

## FIGURES

FIGURE	1-1	The UETP Master Command Procedure	1-3
--------	-----	-----------------------------------	-----

## TABLES

TABLE	2-1	Device Codes	2-3
	2-2	Guideline for Selecting Number of Load Test Users	2-6
	2-3	The Device Tests	2-10

## PREFACE

### MANUAL OBJECTIVES

The purpose of the VAX/VMS UETP User's Guide is to explain the function of the User Environment Test Package (UETP) and to provide complete UETP operating instructions.

### INTENDED AUDIENCE

The major audiences for the VAX/VMS UETP User's Guide are manufacturing technicians and DIGITAL field service and software support personnel. The guide tells them how to run the test package and how to interpret test results. The guide also allows customers to interpret what is happening while the UETP executes. In addition, the customers themselves may choose to run the UETP by following instructions contained in the guide.

### STRUCTURE OF THIS DOCUMENT

This guide contains three chapters and one appendix.

- Chapter 1 is an introduction to the UETP that discusses the role of the UETP, the way it works, and the output it produces.
- Chapter 2 provides detailed operating instructions for running the entire UETP package and for running individual UETP tests separately.
- Chapter 3 explains all the messages that the UETP tests can return.
- Appendix A is a summary description of operating instructions explained in detail in Chapter 2.
- Appendix B is an example of a console dialogue between a user and UETP.

### ASSOCIATED DOCUMENTS

The UETP User's Guide makes reference to the following documents:

- VAX/VMS Command Language User's Guide
- VAX-11/780 Hardware User's Guide

- VAX/VMS I/O User's Guide
- VAX/VMS Operator's Guide
- VAX-11 Software Installation Guide
- VAX/VMS System Manager's Guide
- VAX/VMS System Messages and Recovery Procedures Manual

For a complete listing and short description of current VAX-11 documentation, including mention of each document's intended audience, consult the VAX-11 Information Directory and Index.

#### CONVENTIONS USED IN THIS DOCUMENT

This document uses the following conventions:

Convention	Meaning
Username: [SYSTEST]	In examples of dialogue with the system, user input is printed in red to distinguish it from system-generated output or prompting characters.
`\${UETP} [/OUTPUT-filespec]	In demonstrating the format of UETP calls, the guide encloses optional input in square brackets ([ ]). Note, however, that square brackets are required syntax in directory specifications such as [SYSTEST].



## SUMMARY OF TECHNICAL CHANGES

The following is a summary of technical changes that are new to Version 2.0 of UETP and that are documented for the first time in this edition of the UETP User's Guide.

New devices supported by the UETP are the TU58 cassette; the RL02, RM05, and RX02 disks; and the TS04, TU45, and TU77 magnetic tapes.

Mailboxes are now supported by UETP.

In preparing to test magnetic tape drives, it is no longer necessary to issue the INITIALIZE and MOUNT commands; the UETP now does this automatically.

The symbol MAGTAP has been changed to UET\$MAGTAP.

The VAX-11 Fortran IV-PLUS Compiler test has been deleted from the UETP.

The native mode test phase now uses the command files UETNATV01.EXE, SORTUETP.COM, and UETNRMS00.COM; the files UETNATV02.COM and UETFORT00.COM have been deleted.

The compatibility mode test phase now uses the file UETCOMP03.COM, in addition to UETCOMP00.COM.

The termination phase file UETTERM01.EXE has been deleted.

The UETP User's Guide now documents the RSX-11M executive directives test and provides an expanded description of the UETP data file UETINIDEV.DAT.

In running individual test phases within the UETP, the symbol UET\$SAME is used in conjunction with the logical names SYS\$OUTPUT and SYS\$ERROR to determine where UETP messages are printed.



CHAPTER 1  
INTRODUCTION TO THE UETP

The VAX/VMS User Environment Test Package (UETP) is a collection of tests designed to demonstrate that the hardware and software components of a VAX/VMS system are in working order. At the end of the series, most hardware and software components have been requested to perform one or more tasks. The tests show not only that individual components work but also that the various components work together as an integrated system. DIGITAL software support representatives run the UETP on a newly installed VAX/VMS system as the formal sample procedure. In three sections, this chapter discusses the following topics:

- The role of the UETP (Section 1.1)
- The way in which the UETP works (Section 1.2)
- The output from the UETP tests (Section 1.3)

The UETP tests are simple to run. To run all of them at once, you first type a command to invoke the UETP and then respond to two prompts. Using the information you have provided, the tests proceed automatically. Alternatively, you can choose to run only one test at a time; you can select an individual test by invoking a specific image or command procedure. Chapter 2 of this guide gives complete instructions for running the collection of tests automatically and for running each test on its own.

## 1.1 THE ROLE OF THE UETP

The UETP leads the system through a series of exercises that simulate a typical timesharing environment; that is, the tests make demands on the system that are similar to demands that might originate from everyday use. The UETP does not attempt to test every feature exhaustively. When the UETP runs to completion without encountering nonrecoverable errors, the system under test is ready for use.

### 1.1.1 Who Uses the UETP

The primary users of the UETP are VAX-11 manufacturing technicians and DIGITAL field service and software support representatives. The UETP is an important part of the final assembly and test (FA&T) of every VAX/VMS system. If you are a manufacturing technician, you run the UETP many times on each system to ensure that it works properly. The UETP is the last of a thorough regimen of tests; before a system can be shipped to a customer, it must successfully complete all diagnostic tests as well as the UETP.

## INTRODUCTION TO THE UETP

If you are a field service or software support representative, you run the UETP after installing a VAX/VMS system at the customer site. By running the UETP, you can ensure that the system was not damaged in transit and that the hardware and software have been correctly installed and generated. Furthermore, in its role as the sample procedure, the UETP demonstrates to the customer that the newly installed system is capable of doing useful work.

### 1.1.2 What the UETP Tests

The UETP exercises devices and functions that are common to all VAX/VMS systems with the exception of optional features such as high-level language compilers and network devices. The system components tested include:

- All standard line printers, terminals, magnetic tapes, and disks connected to the system
- Most RSX-11M utilities that run in compatibility mode on VAX/VMS
- Various native mode functions such as system services, record management services (VAX-11 RMS), and native mode utilities
- The system's multiuser capability

The UETP directly tests the features listed above; moreover, in the process of running its tests, the UETP indirectly tests additional functions of the system. For example, the UETP uses command procedures to execute some of its tests. The tests themselves therefore show how command procedures can be used for indirect job processing. In addition, various system commands are issued throughout the tests. In particular, the system load test, which demonstrates the system's multiuser capability, issues many commands within a short time.

### 1.1.3 The UETP's Relationship to Error-Logging and Diagnostics

When the UETP encounters an error, it reacts either by returning an error message and proceeding or by reporting a fatal error and terminating a particular phase of the UETP. In either case, the UETP does not attempt to discover the cause of the error; it reacts, in other words, just like a typical user program.

If the UETP encounters an error that you cannot immediately diagnose, you can turn to the VAX/VMS error-logging and diagnostic facilities. The system continuously maintains data on various kinds of errors. By running the SYE error report generator, you can obtain a detailed report of hardware and system errors that occurred while the UETP was running. SYE reports optionally provide detailed information on the state of the system at the time each error occurred. The diagnostic facilities can help in a different way. These tests exhaustively examine a device or medium to isolate the sources of any errors.

The VAX/VMS System Manager's Guide contains operating instructions for the SYE report generator.

# INTRODUCTION TO THE UETP

## 1.2 HOW THE UETP WORKS

You can run the UETP tests in one of three ways:

- By invoking the master command procedure
- By invoking a specific UETP test phase
- By invoking a specific UETP test

The master command procedure contains commands that initiate each test phase in turn. When you invoke the procedure, it begins by asking two questions; your responses provide information needed by various test phases. After you answer the questions, all of the tests run to completion without further input from you.

In addition, the modular design of the UETP permits you to run a single test or a test phase consisting of several tests. For example, the device test phase runs a different test for each type of device. You can test either all the devices at once or only the devices associated with a specific controller.

Chapter 2 explains how to run the whole package of tests at once, how to run a specific UETP phase, and how to run each test individually. The remainder of this section explains the structure of the test package and the function of each test phase.

### 1.2.1 The Master Command Procedure

The file UETP.COM is the master command procedure that you invoke to run the whole package of tests. Figure 1-1 below shows the principal commands within UETP.COM; these are the commands that actually invoke the various test phases. Additional commands within the file perform such tasks as asking for input from the console, defining logical names, and manipulating files generated by the tests. The additional commands are essential to making the UETP package as automated a procedure as possible.

As Figure 1-1 shows, the procedure runs each test phase either by executing a RUN command or by calling a command procedure to run a test or test phase.

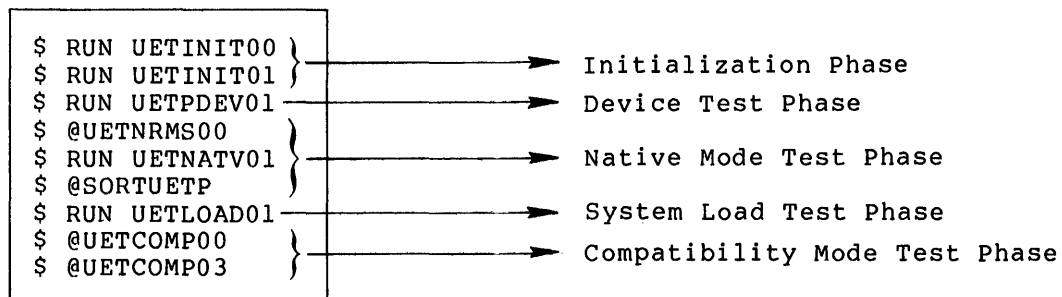


Figure 1-1 The UETP Master Command Procedure

## INTRODUCTION TO THE UETP

### 1.2.2 The Initialization Phase

The initialization phase prepares for the actual tests in the following ways:

- Commands within the master command file prompt for input from the terminal. (Section 2.2 explains the prompts in detail.) The input defines certain variables that affect the execution of the UETP tests.
- The image UETINIT00.EXE gathers information on all the controllers in the system and on their associated devices. The image writes the information into a file called UETINIDEV.DAT and then displays the file at the terminal.
- Using the information in the file UETINIDEV.DAT, the second initialization image, UETINIT01.EXE, verifies that all the devices in the system are operable by performing a simple read/write operation to each device. If a device fails this test, the device's entry in UETINIDEV.DAT specifies that the device is unavailable. As a result, subsequent UETP tests ignore that device.

### 1.2.3 The Device Test Phase

The device test phase includes separate tests for each type of device to be tested (disks, line printers, magnetic tapes, and terminals). For each controller in the system, the image UETPDEV01.EXE creates a separate detached process and passes to it a controller name. (Section 2.4.1 explains how the controller name is passed.) Each detached process runs the appropriate device test to examine all the controller's associated devices. For example, if a system has three terminal controllers, one line printer controller, and two disk controllers, the image creates six detached processes: three processes to test terminals, one to test line printers, and two to test disks.

This test phase is able to exercise many devices simultaneously by creating detached processes that execute at the same time. The image UETPDEV01.EXE terminates when all devices on all controllers have completed testing.

The terminal and line printer tests generate several pages or screens of output, where each page or screen contains a header line and a test pattern of ASCII characters. A header line contains the test's name, the device's name, the date, the time, and a test page number.

For each disk in the system, the disk test allocates a large file into which it randomly writes blocks of data. The test then checks the data for errors, records the errors in the file UETPLOG.LOG (if there are any), and then deletes the disk file.

The magnetic tape test exercises all the tape drives in the system. The test creates a large file on each mounted tape, into which it writes multiple sequential records of varying sizes. After writing the records, the test rewinds the tape and validates the written records.

## INTRODUCTION TO THE UETP

### 1.2.4 The Native Mode Test Phase

The native mode test phase exercises software services provided explicitly for VAX/VMS (in contrast to RSX-11M utilities that run in compatibility mode). This phase includes three separate tests:

- UETNATV01.EXE
- SORTUETP.COM
- UETNRMS00.COM

The test initiated by UETNATV01.EXE issues all the system services available to VAX/VMS programmers. For each service, the test produces both success and failure return codes. For the success codes, the test verifies that the service worked correctly. The native mode utility VAX-11 SORT is tested by the command procedure SORTUETP.COM. The test initiated by the command procedure UETNRMS00.COM handles all the record management services (VAX-11 RMS), which are used in programs to perform I/O.

### 1.2.5 The System Load Test Phase

The system load test, directed by the image UETLOAD01.EXE, creates a number of detached processes, all of which execute a command procedure. (When you initiate the UETP, you specify the number of detached processes to be created; the number depends on the amount of memory and the system disk in your system. See Section 2.2.2.) Each process simulates a user logged in at a terminal; the commands within each procedure are the same type of commands that a user can enter from a terminal.

The load test creates the detached processes in quick succession, and generally the processes execute their command procedures simultaneously. The effect on the system is analogous to an equal number of real users concurrently issuing commands from terminals. In this way, the load test creates an environment that is similar to normal system use.

### 1.2.6 The Compatibility Mode Test Phase

The compatibility mode test issues commands that call most RSX-11M utilities and executive directives running in compatibility mode on VAX/VMS. The command procedure UETCOMP00.COM issues several commands for each utility and then, in most cases, compares the output from the commands with output that is known to be correct. This phase also tests executive directives with the command procedure UETCOMP03.COM. (Section 2.4.4 lists all the utilities that this phase tests.)

### 1.2.7 The Termination Phase

The termination phase signals the end of the UETP package. The master command procedure deletes temporary files and performs other cleanup activity. It then displays the time at which the UETP run ended.

## INTRODUCTION TO THE UETP

In addition, the master command procedure UETP.COM determines whether the UETP needs to be restarted. (You can request multiple runs when you start up the test package; see Section 2.2.3.) To automatically start up another run, the procedure passes control directly to the device test phase.

### 1.3 INTERPRETING UETP OUTPUT

You can monitor the progress of the UETP tests at the terminal from which they were invoked. The terminal always displays status information, such as messages that announce the beginning and ending of each test and messages that signal an error. The tests send other types of output to various log files (which can include the issuing terminal) depending on how you invoked the tests.

The log files contain output generated by the actual test procedures. For example, one log file contains the command output produced by the load test; another contains output created by the compatibility mode utilities. (Section 2.3.2 contains a list of the log files.) Even if the UETP completes successfully, with no errors visibly displayed at the terminal, it's good practice to check these log files for errors. For example, errors originating from the detached processes created by the Load and Device Tests will appear in the log files, though they might not be displayed at the terminal. Further, when errors are displayed at the terminal, check the log files for more detailed information about their origin and nature.

The error messages that appear at the terminal and within the log files have two basic sources:

- The UETP tests themselves
- The system components that are tested

Chapter 3 of this guide lists and explains all the messages that the tests can generate. However, to clarify messages sent by the tested system components, you need to refer either to the VAX/VMS System Messages and Recovery Procedures Manual or to the manual that describes the individual component.



## CHAPTER 2

### UETP OPERATING INSTRUCTIONS

This chapter presents the UETP operating instructions, including:

- How to prepare and boot the system for running the UETP (Section 2.1)
- How to define UETP variables (Section 2.2)
- How to run the whole package (Section 2.3)
- How to run individual UETP test phases (Section 2.4)

#### 2.1 PREPARING THE SYSTEM

The images and command procedures that comprise the UETP are included in the distributed VAX/VMS system. You can run the UETP any time after the system has been generated and booted. This section describes the steps needed to set the system up for running the UETP.

##### 2.1.1 Booting the System

To prepare for the UETP tests, boot the system in the normal manner. Bootstrap instructions are contained in the VAX-11 Software Installation Guide.

##### 2.1.2 Logging In

You should log into the console terminal connected to the system. Section 2.2.1 below discusses output to the terminal in conjunction with the UETP log files.

All UETP files reside in the [SYSTEST] directory on the system disk. To access these files, you must log in under the user name SYSTEST. The password to this account in the distributed system is UETP. (Note that because the SYSTEST account has powerful privileges, its password should be changed after the VAX/VMS system has been installed at the customer site. The AUTHORIZE utility, described in the VAX/VMS System Manager's Guide, can be used to change account passwords.)

## UETP OPERATING INSTRUCTIONS

In the system distributed by DIGITAL, the [SYSTEST] account has the following privileges and quotas assigned to it.

### Privileges:

CMKRNL	PRMMBX	DIAGNOSE
DETACH	PRMCEB	
GRPNAM	GROUP	
SYSNAM	LOG_IO	
PHY_IO	VOLPRO	

### Quotas:

ASTLM:10  
DIOLM:12  
BIOLM:12  
TQCNT:20

To check that these privileges and quotas remain assigned, issue the following two commands:

```
$ SHOW PROCESS/PRIVILEGES (RET)
$ SHOW PROCESS/QUOTAS (RET)
```

In response to these commands, the terminal will display all privileges and quotas in effect for the current account. If any are missing, run the AUTHORIZE utility (as explained in the VAX/VMS System Manager's Guide) to add them.

Note that, because the disk test writes to a major portion of the disk volume, disk quotas must be turned off when running UETP test or test phases that utilize the disk.

You cannot run the entire UETP concurrently with other user programs or while user volumes are mounted. By design, the UETP assumes and requests the exclusive use of system resources. Unpredictable results could occur should this restriction be ignored. For example, since the UETP intentionally stresses system resources such as memory pool space and disk blocks, it may cause applications that depend on these resources to misbehave.

### 2.1.3 Preparing Devices

After logging in, you must set up all the devices to be tested. For quick reference, each subsection below concludes with a summary of the preparatory steps.

**2.1.3.1 Setting Up Disk Drives** - For each disk drive in the system, perform the following steps:

- Physically mount a disk that does not contain any data worth preserving (that is, a scratch disk) and start up the drive. If the disk has not been initialized, use the INITIALIZE command to do so.

```
$ INITIALIZE/DATA_CHECK DMA0: TEST1 (RET)
```

This command initializes a disk on an RK06 or RK07 drive (DMA0:) and assigns the volume label TEST1 to the disk. Table 2-1 lists the codes for the various device types.

## UETP OPERATING INSTRUCTIONS

Table 2-1  
Device Codes

Code	Device Type
DB	RP04, RP05, RP06 Disk
DD	TU58 Cassette
DL	RL02 Disk
DM	RK06, RK07 Disk
DR	RM03, RM05 Disk
DY	RX02 Disk
LP	Line Printer
MS	TS04 Magnetic Tape
MT	TE16, TU45, TU77 Magnetic Tape
TT	Interactive Terminal

Note that all volumes must have unique labels.

- Issue a MOUNT command to connect the disk to the file system. For example:

```
$ MOUNT/SYSTEM DMA0: TEST1 (RET)
```

This command mounts the volume labeled TEST1 on the drive DMA0:. The qualifier /SYSTEM indicates that you are making the volume available to all users in the system.

- If the volume does not contain the directory [SYSTEST], issue a CREATE command to set it up. The UETP uses this directory when testing the disk.

```
$ CREATE/DIRECTORY DMA0:[SYSTEST] (RET)
```

### NOTE

The TU58 Cassette is not autoconfigured in the system. In order to identify it to the system and to load its driver, you must execute certain SYSGEN commands. Refer to the VAX/VMS System Manager's Guide for detailed instruction on how to connect the TU58 Cassette to the system by means of the SYSGEN utility.

### Summary:

*Physically mount a scratch disk*

*Start up the drive*

*Issue one or more of the following commands as required:*

```
$ INITIALIZE/DATA...CHECK device-name: label (RET)
```

```
$ MOUNT/SYSTEM device-name: label (RET)
```

```
$ CREATE/DIRECTORY device-name:[SYSTEST] (RET)
```

## UETP OPERATING INSTRUCTIONS

**2.1.3.2 Setting Up Magnetic Tape Drives** - For each magnetic tape drive, perform the following steps:

- Physically mount a write-enabled scratch tape at least 600 feet long
- Turn on power to the device
- Position the tape at the BOT marker
- Press the ONLINE switch

**2.1.3.3 Setting Up Terminals and Line Printers** - To be tested by the UETP, terminals and line printers must be powered up and must be online to the system. Check that line printers and hard-copy terminals are properly loaded with paper. The amount of paper required depends on the number of UETP runs that you intend to initiate. For each run, a line printer and a hard-copy terminal each require two pages.

In addition, check that all terminals are set to the correct baud rate and are assigned appropriate characteristics (see the VAX-11/780 Hardware User's Guide).

Summary:

*Turn on power to the device*

*Check paper supply if the device produces hard copy*

*Press the ONLINE switch*

*Check baud rates and terminal characteristics*

**2.1.3.4 Other Devices** - The UETP does not test the following devices; their status has no effect on UETP execution:

- Card readers
- Network devices (DMC11s)
- Null devices
- Dial-up terminal lines
- Nonstandard devices

Furthermore, the UETP does not test the console terminal or the console device. If you are able to boot the system, log in, and start the UETP, you have shown that these devices are usable.

## UETP OPERATING INSTRUCTIONS

### 2.2 DEFINING UETP VARIABLES

This section explains several variables that you must define each time you run the entire UETP package. These UETP variables determine:

- The amount of information to be output to the console
- The number of users to be simulated by the UETP in the system load test
- The number of consecutive runs to be made by the UETP

You decide how much information should be output to the console by including or omitting the /OUTPUT qualifier to the call to the UETP. The remaining two variables are defined by your answers to two questions that the UETP asks when it starts up.

#### 2.2.1 The Console Log

To initiate the UETP, you issue a call to the UETP master command procedure as follows:

```
$ @UETP [/OUTPUT=filespec] @RET
```

If you do not specify the /OUTPUT qualifier, the UETP proceeds to send all its output to the console. In most cases, however, it is more convenient for the UETP to write most of its output to a disk file. Furthermore, if you run the UETP from a hard-copy terminal, the typing of all the output considerably slows down the tests. This slowdown is multiplied if you request continuous UETP runs from a hard-copy terminal.

By appending the /OUTPUT qualifier to the UETP call, you request a short console log. The UETP then creates an output file, with the name you specified, on the system disk in the [SYSTEST] directory. During the run, the UETP displays status information at the console such as error messages and notifications of the beginning and ending of each phase. This information enables you to determine whether the UETP is proceeding normally.

If the short console log indicates a problem, you can examine the output file for further information. This disk file contains most of the output generated by various phases of the UETP, as well as the status information displayed at the console. Some phases have additional separate output files. For example, the load test generates a large amount of information which in itself is not very significant: this information is written to a file called UETPLOG.LOG (see Section 2.3.2).

#### 2.2.2 The Load Test

The purpose of the Load Test is to simulate a situation in which a number of detached processes, or users, are competing with one another for system resources. Each detached process executes a command procedure, thereby simulating a user entering commands from a terminal.

## UETP OPERATING INSTRUCTIONS

When the command procedure is finished, the detached process is deleted. You can monitor the number of currently active processes at the computer console where both the beginning and the end of each process will be displayed.

When you initiate a UETP run (see Section 2.3), the UETP prompts for the desired number of detached processes or load test users, as follows:

```
ENTER NUMBER OF LOAD TEST USERS [0] : n [RET]
```

The maximum number of users that you should enter in answer to this prompt depends upon the amount of memory and the system disk in your VAX/VMS system; refer to Table 2-2 for guidance in making this decision. (Note that Table 2-2 is not meant to assist you in determining the number of actual users that your system can accommodate.)

Table 2-2  
Guideline for Selecting Number of Load Test Users

System	Size of Memory	Number of Load Test Users
RP- and RM-Based	256K	10
	384K	15
	512K	20
	640K	25
	768K	30
	896K	35
	1 megabyte	40
RK-Based	256K	6
	384K	9
	512K	12
	640K	15
	768K	18
	896K	21
	1 megabyte	25

### 2.2.3 Single-Run Versus Continuous UETP Execution

The UETP can be run once or twice to check that the system is working, or it can be repeated many times to evaluate the system's response to continuous use. For example, a field service technician who is interested only in verifying that a newly installed system works might

## UETP OPERATING INSTRUCTIONS

run the UETP once or twice, whereas a manufacturing technician might let the system run all night as part of the VAX/VMS system's Final Assembly and Test (FA&T).

When the UETP prompts, as follows, respond by entering the desired number of runs (n).

```
ENTER NUMBER OF COMPLETE UETP RUNS [0]:n (RET)
```

If you type 1 in response to this prompt, the UETP stops after completing its initial run. If you specify a number greater than 1, the UETP continuously restarts itself until it completes the number of runs specified.

When you intend to specify multiple UETP runs, be sure to request a short console log (see Section 2.2.1), and make certain that all line printers and hard-copy terminals have enough paper.

### 2.3 RUNNING THE ENTIRE UETP

The following dialogue shows how to initiate one or more complete UETP runs.

```
$ @UETP [/OUTPUT=filespec] (RET)

*** WELCOME TO UETP V2.0 BUILT 20-SEP-1979 ***

VAX/VMS UETP STARTED: mm/dd/yy hh:mm

ENTER NUMBER OF LOAD TEST USERS [0]:n (RET)
ENTER NUMBER OF COMPLETE UETP RUNS [0]:n (RET)
```

When you have entered the first line, optionally specifying a short console log, the UETP responds by asking the two questions shown. (See Sections 2.2.2, and 2.2.3, for explanations of these questions.) After you have answered the last question, the UETP initiates its sequence of tests, which run to completion without further input from you.

#### 2.3.1 Using `CTRL/Y` and `CTRL/C`

The control characters `CTRL/Y` and `CTRL/C` allow you to interrupt temporarily or to terminate UETP execution before it completes normally.

2.3.1.1 `CTRL/Y` - `CTRL/Y` interrupts the current UETP test and temporarily returns control to the command language interpreter. While the test is interrupted, you can issue a subset of system commands; this subset is defined in the VAX/VMS Command Language User's Guide. You can then either terminate the test by typing STOP or continue the test from the point of interruption by typing CONTINUE. If you type STOP, the entire UETP aborts and control returns to the command language interpreter.

Note that `CTRL/Y` does not affect detached processes already created by the interrupted test phase; for example, if `CTRL/Y` were pressed during the device tests, the detached processes created (by the device

## UETP OPERATING INSTRUCTIONS

tests) to handle individual controllers would continue running, even if STOP were typed in an effort to abort the test phase itself. To stop a detached process, you must first obtain its pid (process identification number) by typing SHOW PROCESS **RET**. Then, substituting this number for pid, type STOP/ID=pid**RET**.

On the other hand, pressing **CTRL/Y** during a UETP command procedure, rather than during an individual test phase, has the same effect as pressing **CTRL/C** (see below).

2.3.1.2 **CTRL/C** - Several UETP test phases react to **CTRL/C** by cleaning up all activity and terminating immediately. The tests that have enabled **CTRL/C** in this way display the following message as they start to run:

```
%UETP-I-ABORTC, 'testname' to abort this test, type ^C
```

You cannot continue a test phase after you press **CTRL/C** to stop it; the UETP continues to the next test in the master command procedure. Note that **CTRL/C** also stops any detached processes already created by the current test phase.

### 2.3.2 UETP Log Files

At the end of a successful single or multiple pass of the UETP package, the [SYSTEST] directory on the system disk will contain two files, UETPLOG.LOG and SSLOG.LOG; it will contain three if you specified the optional output file in the call to UETP (that is, @UETP/OUTPUT=filespec). The following list describes these three files:

- filespec (that is, @UETP/OUTPUT=filespec) - An optional log created if you request an output file in the call to the UETP. This file contains all the information normally displayed at the console as well as information that describes the progress of the tests in somewhat greater detail.
- UETPLOG.LOG - A large log file that is a concatenation of individual log files from the following tests:
  - The device tests
  - The native mode tests
  - The system load test
  - The compatibility mode tests
  - The SORT test
- SSLOG.LOG - A log file created by the native mode system services test. This file contains information on the testing of each system service.

If a UETP run does not complete normally, UETP will be unable to clean up its files; in this event, the [SYSTEST] directory may contain other log files. These log files are ordinarily concatenated and placed within UETPLOG.LOG. If, however, they appear on the system disk, they may be used for error checking; but they must be deleted before running any new tests. You may delete them yourself or rerun the entire UETP, which, when it starts up, checks for old log files and deletes them.



## UETP OPERATING INSTRUCTIONS

The following is a listing and brief description of these temporary log files:

- UNATIVE.LOG - A log file containing the output from the native mode utility test.
- UCOMP.LOG - A log file containing the output from the compatibility mode test.
- LOAD.LOG - A log file containing output from the system load test. This test creates a variable number of detached processes, each of which generates a version of the LOAD.LOG file.
- LOGP.LOG - A log file containing output from the device tests. These tests also create detached processes for each device, so there will be a version of LOGP.LOG for each device.

### NOTE

When outputting UETP logs to the lineprinter, use the PRINT command or the PIP utility.

## 2.4 RUNNING INDIVIDUAL UETP PHASES

When you run the entire UETP, it automatically steps through a sequence of phases that test various parts and functions of the system. Each phase can be run separately so that you can test a specific part or function in isolation. This section gives operating instructions for directly initiating each phase.

In summary, this section tells you how to run

- The device tests (2.4.1)
- The native mode tests (2.4.2)
- The system load test (2.4.3)
- The compatibility mode tests (2.4.4)

Note that you must be logged in to the SYSTEST account to run the individual tests as described in this section (see Section 2.1.2).

During some of the following tests, the symbol UET\$SAME must be set equal to 1. This means that SY\$OUTPUT and SY\$ERROR are both defined to be the terminal from which you are executing. If SY\$ERROR and SY\$OUTPUT are different, then set UET\$SAME equal to 0.

### 2.4.1 The Device Tests

The UETP device test consists of an executable image, called UETPDEV01.EXE, which creates a detached process for every device controller to be tested. For example, if a system includes three terminal controllers, the device test creates three detached processes to test terminals. In parallel, the detached processes execute images that test different types of devices. If you do not want to test all the device types, you can run an image that tests only one specific controller.

## UETP OPERATING INSTRUCTIONS

Note that the magnetic tape test requires a reel containing at least 600 feet of tape.

Table 2-3 lists the device test images, the devices to be tested, and the commands to invoke each test. The DEFINE command in Table 2-3 assigns a controller name to the group logical name UETP\$CTRLNAME. The acronym devc stands for the device code (see Table 2-1, in Section 2.1.3.1) together with the controller designation (usually a letter [for example, A or B] used to distinguish like controllers from one another). See Section 2.4.1.1 for more information on the logical name UETP\$CTRLNAME.

Table 2-3  
The Device Tests

Test Image Name	Devices Tested	Command(s) to Invoke the Test
UETPDEV01.EXE	Disks Line printers Magnetic tapes Terminals	\$RUN UETPDEV01
UETDISK00.EXE	Disks	\$DEFINE/GROUP UETP\$CTRLNAME devc (RET) \$RUN UETDISK00 (RET)
UETPRIN00.EXE	Line Printers	\$DEFINE/GROUP UETP\$CTRLNAME devc (RET) \$RUN UETPRIN00 (RET)
UETTAP00.EXE	Magnetic tapes	\$DEFINE/GROUP UETP\$CTRLNAME devc (RET) \$@UETTAP00 (RET)
UETTTYS00.EXE	Terminals	\$DEFINE/GROUP UETP\$CTRLNAME devc (RET) \$RUN UETTTYS00 (RET)

2.4.1.1 **The Logical Name UETP\$CTRLNAME** - The initial phase of the UETP creates a file called UETINIDEV.DAT that contains data on the VMS-supported controllers in the system and their associated devices. UETPDEV01 uses the information in this file to find a controller name to pass to each detached process that it creates. UETPDEV01 passes the name by assigning it to the group logical name UETP\$CTRLNAME. Each detached process then uses that logical name to determine which devices to test.

As long as the file UETINIDEV.DAT exists, UETPDEV01 can automatically pass the controller names to the device tests. If you have run the UETP before, the file exists unless you have explicitly deleted it.

## UETP OPERATING INSTRUCTIONS

The "UETINIDEV.DAT" file is an ASCII sequential file that the user can type out or edit if needed. The contents of this file have the following meaning:

```
DDB X DDD 00000000 00000000
UCB Y   U  nnnnnnnn nnnnnnnn nnnnnnnn
```

where

```
X      = 0, if there are testable units for this controller
X      = 2, if this controller is not to be tested
Y      = 1, if this unit is testable
Y      = 3, if this unit is not testable
DDD    = device name
U      = device unit number

nnnnnnn = device characteristics
```

When you run an image that tests a particular controller, you must explicitly define UETP\$CTRLNAME, as in the following example:

```
$ DEFINE/GROUP UETP$CTRLNAME TTB (RET)
$ RUN UETTTYS00 (RET)
```

This example assigns the controller name TTB to the logical name UETP\$CTRLNAME and then runs the terminal test image UETTTYS00.EXE. If your system has more than one terminal controller and you want to test all connected terminals, you must both define UETP\$CTRLNAME and run UETTTYS00.EXE separately for each controller.

When you run a device test for a specific controller, the group logical name UETP\$CTRLNAME remains assigned after the test completes. To deassign this logical name, issue the following command:

```
$ DEASSIGN/GROUP UETP$CTRLNAME (RET)
```

When UETDEV01 initiates the individual device tests, it deassigns the logical name UETP\$CTRLNAME at the end of the tests.

Test Output - When UETPDEV01 initiates the device tests, they record their results in versions of the file LOGP.LOG, which is listed in the [SYSTEST] directory on the system disk. When the tests run as part of the package, the UETP eventually concatenates all the versions of LOGP.LOG into the file UETPLOG.LOG and then purges the individual device test logs. However, when you run UETPDEV01 separately, the log files remain in versions of LOGP.LOG until you explicitly delete them.

When you run a test that exercises a specific controller - for example, UETDISK00 - the test sends its output to your terminal.

### 2.4.2 The Native Mode Tests

The native mode test phase includes three separate tests:

- The system services test (UETNATV01.EXE)
- The native mode VAX-11 SORT test
- The VAX-11 RMS test (UETNRMS00.COM)

## UETP OPERATING INSTRUCTIONS

**2.4.2.1 The System Services Test** - The system services test consists of a collection of images, each of which tests one or more system service. To activate the service tests, issue the following command:

```
$ RUN UETNATV01 (RET)
```

The image UETNATV01.EXE initiates a detached command procedure called SSTEEST.COM, which in turn calls the individual test images. Each test image issues numerous calls to the system services. Under test, several calls are intended to produce a success return code. These calls test various legal ways to invoke the service; in so doing, the image also tests how the service responds to a call in different system contexts. The remainder of the calls test failure codes defined for the service.

The image checks the results of each call against results that are known to be correct. If all the results match, the test is successful; if the image detects any discrepancies, the test fails. In general, the success or failure of one service does not affect the testing of any other service.

**Test Output** - The system services test sends the following status messages to the terminal:

```
ZUETP-I-BEGIN, UETNATV01 beginning at 'date' 'time'  
ZUETP-I-ABORTC, UETNATV01 to abort this test, type ^C  
ZUETP-I-TEXT, UETNATV01 # VMS system services errors found is 'n'  
ZUETP-I-ENDED, UETNATV01 ended at 'date' 'time'
```

The third message reports the number of system services that failed the test. If n is not equal to 0, check the SSLOG.LOG file on the system disk. This file, which is created at the start of the test, contains logging status information on the test results for each service. From it, you can find out which service, if any, has failed. (See the description of the SATSMS messages in Chapter 3.)

**2.4.2.2 The Native Mode VAX-11 SORT Test** - The VAX-11 SORT test exercises the functions of the VAX-11 Sort utility. To activate the test, you run the command procedure SORTUETP.COM as follows:

```
$ UET$SAME:=1 (RET)  
$ @SORTUETP [/OUTPUT=filespec] (RET)
```

The sorted data are written into sequential relative or indexed sequential files. In most cases, the file compare utility (DIF) is used to compare the results of the test commands with results that are known to be correct.

**2.4.2.3 The VAX-11 RMS Test** - The VAX-11 RMS test exercises many of the record management options provided by VAX-11 RMS services. The test runs under the control of the command procedure UETNRMS00.COM. To include magnetic tape exercises in the test, the logical name UET\$MAGTAP must be defined.

## UETP OPERATING INSTRUCTIONS

The following command sequence defines the logical name UET\$MAGTAP and runs the VAX-11 RMS test:

```
$ UET$SAME:=1 (RET)
$ DEFINE/GR UET$MAGTAP device-name (RET)
$ @UETNRMS00 [/OUTPUT=filespec] (RET)
```

To test the various I/O functions provided by VAX-11 RMS, the test creates files on disk and on magnetic tape (if the logical name UET\$MAGTAP is defined). At the end of the test, these files are deleted and the magnetic tape rewound to Beginning of Tape (BOT).

### NOTE

The logical name UET\$MAGTAP should be deassigned at the end of the test.

Test Output - When you run the VAX-11 RMS test separately, the test sends status messages and any error messages to the terminal or to an output file if you have requested one. (See the second command above, which shows the optional output file specification.) When the test runs as part of the UETP package, all the VAX-11 RMS test messages appear at the terminal. If you have specified an output file in the call to the UETP (that is, @UETP /OUTPUT=filespec) the messages also appear in that file.

### 2.4.3 The System Load Test

The purpose of the system load test is to simulate a number of terminal users who are simultaneously demanding system resources.

The load test uses the logical name UETP\$USERS to determine the number of detached processes to create; each detached process executes a command procedure to simulate a user issuing commands from a terminal.

To run the system load test separately, type the following two commands, inserting the desired number of simulated users (n):

```
$ DEFINE/GROUP UETP$USERS n (RET)
$ RUN UETLOAD01 (RET)
```

(See Section 2.2.2 and Table 2-2 therein for guidance in selecting the correct number of users for your system.)

When you run the UETP as a whole, it prompts for the number of users to be simulated (see Section 2.2.2). Your response to the prompt ENTER NUMBER OF LOAD TEST USERS [0]: defines the group logical name UETP\$USERS.

The following is an example of the kind of information displayed during a system load test run; here, 12 users (n=12) were simulated.

## UETP OPERATING INSTRUCTIONS

(Refer to Chapter 3 for an explanation of the format and meaning of the messages displayed below.)

```
$ DEFINE/GROUP UETP$USERS 12 (RET)
$ RUN UETLOAD01 (RET)
ZUETP-I-BEGIN, UETLOAD01 beginning at 22-MAY-1980 10:51:59.52
ZUETP-I-ABORTC, UETLOAD01 to abort this test, type ^C
ZUETP-I-USER, UETLOAD01 1 user running
ZUETP-I-USER, UETLOAD01 2 users running
ZUETP-I-USER, UETLOAD01 3 users running
ZUETP-I-USER, UETLOAD01 4 users running
ZUETP-I-USER, UETLOAD01 5 users running
ZUETP-I-USER, UETLOAD01 6 users running
ZUETP-I-USER, UETLOAD01 7 users running
ZUETP-I-USER, UETLOAD01 8 users running
ZUETP-I-USER, UETLOAD01 9 users running
ZUETP-I-USER, UETLOAD01 10 users running
ZUETP-I-USER, UETLOAD01 11 users running
ZUETP-I-USER, UETLOAD01 12 users running
ZUETP-I-USER, UETLOAD01 11 users running
ZUETP-I-USER, UETLOAD01 10 users running
ZUETP-I-USER, UETLOAD01 9 users running
ZUETP-I-USER, UETLOAD01 8 users running
ZUETP-I-USER, UETLOAD01 7 users running
ZUETP-I-USER, UETLOAD01 6 users running
ZUETP-I-USER, UETLOAD01 5 users running
ZUETP-I-USER, UETLOAD01 4 users running
ZUETP-I-USER, UETLOAD01 3 users running
ZUETP-I-USER, UETLOAD01 2 users running
ZUETP-I-USER, UETLOAD01 1 user running
ZUETP-I-ENDED, UETLOAD01 ended at 22-MAY-1980 11:01:17.86
$
```

In this example, the DEFINE command assigns the number 12 to the group logical name UETP\$USERS. When the load test executes in response to the next command, it creates 12 detached processes that execute different command procedures. (The load test in fact uses only 10 different command procedures to simulate users. For more than 10 users, the load test runs multiple copies of the command procedures.)

To deassign the group logical name UETP\$USERS after the system load test completes, issue the command

```
$ DEASSIGN/GROUP UETP$USERS (RET)
```

The UETP master command procedure deassigns all group logical names assigned by its tests as part of the termination phase. The group logical name UETP\$USERS remains assigned only if you run the system load test separately or if the UETP package does not complete normally.

Test Output - The command procedures executed by the load test can generate a large amount of output, depending on the number of detached processes created. For each detached process (or user), the test creates a version of an output file called LOAD.LOG. The console displays status information only as the load test progresses. (See the example above for the types of messages displayed.)

When the load test runs as part of the entire UETP, the UETP appends the LOAD.LOG files, writes the appended output to the file UETPLOG.LOG, and deletes the individual output files. However, when the load test runs separately, the LOAD.LOG files remain, one for each simulated user; they are not appended or written to another file. You must delete them yourself.

## UETP OPERATING INSTRUCTIONS

For example, the following listing shows all the LOAD.LOG files created by the load test illustrated above.

```
$ DIRECTORY/SIZE/DATE LOAD.LOG;* (RET)

DIRECTORY DB01:[SYSTEST]
22-MAY-80 11:05

LOAD.LOG#12      2.      22-MAY-80
LOAD.LOG#11      5.      22-MAY-80
LOAD.LOG#10     18.      22-MAY-80
LOAD.LOG#9       24.      22-MAY-80
LOAD.LOG#8       39.      22-MAY-80
LOAD.LOG#7        2.      22-MAY-80
LOAD.LOG#6       40.      22-MAY-80
LOAD.LOG#5       17.      22-MAY-80
LOAD.LOG#4        5.      22-MAY-80
LOAD.LOG#3       56.      22-MAY-80
LOAD.LOG#2        2.      22-MAY-80
LOAD.LOG#1        5.      22-MAY-80
```

TOTAL OF 215./297. BLOCKS IN 12. FILES

Issue the following command to delete the load test output files:

```
$ DELETE LOAD.LOG;* (RET)
```

### 2.4.4 The Compatibility Mode Test

When the compatibility mode phase runs as part of the entire UETP, it tests all the utilities listed below. When you run this phase separately, you can choose to test all these utilities or only one specific utility. The command procedure UETCOMP00.COM issues several commands to each utility and then, in most cases, uses the File Compare (DIF) utility to compare the results of the test commands with results that are known to be correct.

By default, the compatibility mode test applies to all utilities listed below. Note that the second command in the following command procedure is bracketed to indicate that it is optional. If you wish to include the FLX TEST in the UETCOMP00.COM command procedure, you must define the UET\$MAGTAP device-name, as indicated. Likewise, when the ALL utility is specified in the @UETCOMP00 command -- whether explicitly or by default -- you must also define UET\$MAGTAP device-name. Note, too, that you must deassign the UET\$MAGTAP logical name at the end of the test.

```
$ UET$SAME:=1 (RET)
[ $ DEFINE/GR UET$MAGTAP device-name ]
$ @UETCOMP00 [ /OUTPUT=filespec ] [ utility ] (RET)
```

where utility is one of the following values:

ALL (the default)	PIP
DMP	SLP
FLX	SOS
LBR	SRT
PAT	VFY

## UETP OPERATING INSTRUCTIONS

2.4.4.1 **The File Transfer Utility (FLX) Test** - The FLX test uses the logical name UET\$MAGTAP to determine which tape drive to use for testing. You must define the logical name UET\$MAGTAP yourself if you run the compatibility mode phase separately. For example:

```
$ UET$SAME:=1 (RET)
$ DEFINE/GR UET$MAGTAP MT0: (RET)
$ @UETCOMP00 (RET)
```

The above command sequence assigns the device name MT0: to the logical name UET\$MAGTAP and then invokes the compatibility mode tests. If you invoke the tests without defining the logical name UET\$MAGTAP, the phase skips the FLX test.

The following commands define the logical name UET\$MAGTAP and specifically invoke the FLX test:

```
$ UET$SAME:=1 (RET)
$ DEFINE/GR UET$MAGTAP MT1: (RET)
$ @UETCOMP00 FLX (RET)
```

2.4.4.2 **The RSX-11M Executive Directives Test** - To run the executive directives part of the compatibility mode phase, use the following command:

```
$ UET$SAME:=1 (RET)
$ @UETCOMP03 [/OUTPUT=filespec] (RET)
```

The command procedure UETCOMP03.COM calls on various task images to test the RSX-11M executive directives. This phase should run two or three minutes and should not produce any errors. While this test is running, several lines of characters should be printed at your terminal following a line which says:

```
*** PRINT TEST ***
```

When the test is run as part of the UETP, all of the output is directed to a file named UCOMP.LOG, which is later copied into the file UETPLOG.LOG.

Test Output - When you run the compatibility mode test on its own, it sends all its output to the terminal unless you specify an output file. For example, the following command directs the command procedure to write all its output to the file UTILITY.LOG on the system disk.

```
$@UETCOMP00/OUTPUT=UTILITY.LOG (RET)
```

When the test runs as part of the UETP package, the utility output is written to a file called UCOMP.LOG, which is duplicated in the file UETPLOG.LOG.



## CHAPTER 3

### UETP MESSAGES

This chapter contains an alphabetical listing and description of the messages returned by the UETP tests. It does not describe the messages returned by components of the VAX/VMS system as a result of the testing. For explanations of the latter type of message you must refer to the VAX/VMS System Messages and Recovery Procedures Manual or to the manual that describes the part of the system that returned the message. For example, if the compatibility mode test causes a utility to detect an error, the utility itself returns an error message. To clarify this message, you must consult the manual that describes the utility.

In Section 3.2, variable parts of each message are enclosed in apostrophes. For example, in the message

```
READERR, error reading 'input-file'
```

the value 'input-file' is determined by the program that encountered the error.

#### 3.1 FORMAT OF SYSTEM MESSAGES

The general format of messages displayed by the VAX/VMS operating system is as follows:

```
%FACILITY-L-CODE, TEXT  
[-FACILITY-L-CODE, TEXT]
```

FACILITY is the name of the system component that issues the message.

L is a severity level indicator having one of the following values:

Code	Meaning
S	Success
I	Information
W	Warning
E	Error
F	Fatal or severe error

(Severity levels are defined in more detail in the VAX/VMS System Messages and Recovery Procedures Manual.)

CODE is an abbreviation of the message text. (The message descriptions in Section 3.2 are alphabetized by this code.)

## UETP MESSAGES

TEXT is the explanation of the message.

[-FACILITY...]

is a related message.

### 3.2 ALPHABETICAL LIST OF MESSAGES

ABORT, 'testname' aborted [at ['date'] 'time']

**Explanation:** A test ended abnormally.

**User Action:** Investigate the reason for the abnormal termination of the test.

ABORTC, 'testname' to abort this test, type  $\text{AC}$

**Explanation:** The image displaying this message responds to  $\text{CTRL/C}$  by terminating gracefully (that is, deassigning all logical names and deleting all files) and passing control to the command language interpreter. You cannot restart the image after typing  $\text{CTRL/C}$ . Use  $\text{CTRL/Y}$  to temporarily interrupt an image.

**User Action:** None.

ATPC, at PC 'location'

**Explanation:** This message displays a PC location to provide further information about an error described in one or more accompanying messages.

**User Action:** If the error is severe or reproducible, use a Software Performance Report (SPR) to describe the error to DIGITAL.

BADFIELD, 'record' field invalid at PC 'location'

**Explanation:** The VAX-11 RMS test detected a discrepancy in the record, found at the PC location specified, which VAX-11 RMS itself did not detect.

**User Action:** Rerun the test and, if the error recurs, send an SPR to DIGITAL.

BADLOGIC, internal logic error detected [at PC 'location']

**Explanation:** An unexpected internal software error occurred.

**User Action:** Collect as much information as possible and send an SPR to DIGITAL.

BADWORD, invalid data 'xxxxxxx' at 'location'

**Explanation:** An unexpected word of data was encountered.

**User Action:** Collect as much information as possible and send an SPR to DIGITAL.

BEGIN, 'testname' beginning at 'date' 'time'

**Explanation:** This message announces the beginning of a specific test.

**User Action:** None.

## UETP MESSAGES

CONF, the following devices are sysgened into this system

**Explanation:** The image UETINIT00 displays this message before listing all the controllers and devices generated into the system. The message and the list appear in a disk file if you requested a short console log (see Section 2.2.1); otherwise, they appear at the terminal that initiated the tests.

**User Action:** None.

DATAER, data error on 'device-type' unit 'number' byte 'location'  
good data = 'xxxxxxxx' bad data = 'xxxxxxxx'

**Explanation:** The disk test (UETDISK00) detected a difference between the data that was written from memory to a device and the same data after it was written back from the device to memory.

**User Action:** Investigate the device that caused the error.

DDB, UETINIT00 DDB 0 'controller' 00000000 00000000

**Explanation:** The message displays the name of a VMS-supported controller in the system. The message is part of a listing that describes all VMS-supported controllers and devices in the system.

**User Action:** None.

DENOSU, 'testname' device 'device-type' is not supported

**Explanation:** The device name in the message is not known to, and therefore cannot be tested by, the UETP (NET, for example).

**User Action:** None.

DESTP, 'testname' stopped testing 'controller' unit 'number' at 'time'

**Explanation:** A device that passed the simple read/write test in the initial phase of the UETP could not complete its test in the device test phase. For example, this problem can occur on a disk that does not have enough free space to hold the test file.

**User Action:** If you think that the device should be tested by the UETP, investigate and fix the problem; otherwise, ignore the message.

DEUNUS, 'testname' device 'device-name' is unusable, error code  
= 'xxxxxxxx'

**Explanation:** The specified device failed to pass the simple read/write test in the initial phase of the UETP. Subsequent tests in the UETP package will not attempt to test the device. Another message usually follows to explain why the device failed the test. Possible causes are that the device is down, offline, not mounted, not initialized, or not write-enabled.

**User Action:** Either make the device usable or ignore the message.

UETP MESSAGES

ENDED, 'testname' ended at 'date' 'time'

**Explanation:** This message announces the completion of a specific test.

**User Action:** None.

ERBOX, \*\*\*\*\*  
\* Error count = nnn \*  
\*\*\*\*\*

**Explanation:** This message assigns a sequence number (nnn) to an error described in a subsequent message.

**User Action:** None.

NOTRAN, no string translation performed

**Explanation:** The device tests use the group logical name UETP\$CTRLNAME to obtain the name of a controller whose devices are to be tested. The system load test uses the group logical name UETP\$USERS to determine the number of detached processes to create. This message appears when you run either the device tests or the system load test separately and the appropriate logical name has not been defined.

**User Action:** Define the group logical name UETP\$CTRLNAME or UETP\$USERS and rerun the tests. Note that you need to define the logical names explicitly only when you run the device or system load tests separately. (See Section 2.4.1 for further information.)

OPENIN, error opening 'input-file' as input

**Explanation:** Self-explanatory. This message is usually accompanied by a VAX-11 RMS message indicating the reason for the failure.

**User Action:** If possible, correct the situation that caused the error.

OPENOUT, error opening 'output-file' as output

**Explanation:** Self-explanatory. This message is usually accompanied by a VAX-11 RMS message indicating the reason for the failure.

**User Action:** If possible, correct the situation that caused the error.

READERR, error reading 'input-file'

**Explanation:** Self-explanatory. This message is usually accompanied by a VAX-11 RMS message indicating the reason for the failure.

**User Action:** If possible, correct the situation that caused the error.

## UETP MESSAGES

RMSERROR, RMS service error

**Explanation:** The VAX-11 RMS test returns this message when VAX-11 RMS itself encounters an error. A subsequent RMS message then describes the actual error.

**User Action:** If possible, correct the situation that caused the error described in the RMS message. The VAX/VMS System Messages and Procedures Manual describes all the VAX-11 RMS messages.

SATSMS, test module 'testname' 'status'

**Explanation:** This message announces that the testing of a specific system service has begun, ended successfully, or failed. The message appears in the file SSLOG.LOG and is created by the native mode system service test. (See Section 2.4.2.1.)

**User Action:** None if 'status' is begun or successful. However, if 'status' is failed, the test supplies a series of messages to describe the reasons for failure. In this case, see the description of the TEXT message for suggested user action.

SYSERROR[PC], 'testname' system service error [at PC 'location']

**Explanation:** A test received an unexpected error return from a VMS system service.

**User Action:** A suggestion is to run the native mode system services test phase individually (see Section 2.4.2.1); the test might reproduce the error that caused this message to appear. If the error occurred because of a quota or privilege violation, refer to Section 2.1.2 for an explanation of how to modify privilege and quota allocations for the SYSTEST account. For other types of error, collect as much information as possible and send an SPR to DIGITAL.

TEXT, 'text'

**Explanation:** Some UETP tests use this message to convey information that is usually self-explanatory. The native mode system services test, for example, uses this message to explain why a system service failed its test.

**User Action:** In most cases no user action is indicated; however, there are two suggested user actions if a TEXT message written to the UETPLOG.LOG or SSLOG.LOG file describes a system service test failure: (1) Check the quota and privilege allocations for the SYSTEST account if the message includes a system service error code that indicates a quota or privilege violation. (See Section 2.1.2 for information on examining and modifying account allocations for quotas and privileges.) (2) Forward a listing of SSLOG.LOG to DIGITAL if other types of system service test failures are described and are repeatable.

UCB, UETINIT00 UCB 1 'unit-number' 'xxxxxxx' 'xxxxxxx' 'xxxxxxx'

**Explanation:** This message describes a device unit on a controller named in a preceding DDB message. The three hexadecimal values are equal to the device-characteristics words 1, 2, and 3. (The VAX/VMS I/O User's Guide contains information on device-characteristics words.)

**User Action:** None.

## UETP MESSAGES

UNXPCTSTS, unexpected status detected

**Explanation:** The VAX-11 RMS test encountered a condition other than End of File (EOF) when it expected to find EOF. A VAX-11 RMS message follows the UNXPCTSTS message and explains the condition actually encountered.

**User Action:** See the description of the accompanying VAX-11 RMS message in the VAX/VMS System Messages and Recovery Procedures Manual.

USER, UETLOAD01 nnn user[s] running

**Explanation:** The image UETLOAD01 issues this message to announce the number of users currently active in the system load test (see Section 2.4.3).

**User Action:** None.

WRITEERR, error in writing 'file-spec'

**Explanation:** A test was unable to write to the specified file.

**User Action:** Remove the write lock (if any), try the test again, or report the problem (if reproducible) to DIGITAL by means of an SPR.

APPENDIX A  
SUMMARY OF OPERATING INSTRUCTIONS

This appendix summarizes the UETP operating instructions to provide a quick reference section for those who are already familiar with running the UETP. For further information about any instruction given below, see the appropriate section in Chapter 2.

### A.1 LOGGING IN

Log into the SYSTEST account as follows:

```
(RET)
Username: SYSTEST (RET)
Password: (RET)
```

Note that the system does not echo the password.

### A.2 PREPARING DEVICES FOR TESTING

This section tells you how to prepare different kinds of devices for testing by the UETP.

#### A.2.1 Disk Drives

To prepare each disk for testing, perform the following steps:

- Physically mount a scratch disk
- Start up the drive
- Issue one or more of the following commands as required:

```
$ INITIALIZE/DATA_CHECK device-name: label (RET)
$ MOUNT/SYSTEM device-name: label (RET)
$ CREATE/DIRECTORY device-name: [SYSTEST] (RET)
```

Note that the TU58 Cassette must be connected to the system by certain SYSGEN commands (see note in Section 2.1.3.1).

## SUMMARY OF OPERATING INSTRUCTIONS

### A.2.2 Magnetic Tape Drives

To prepare each magnetic tape drive for testing, perform the following steps:

- Physically mount a write-enabled scratch tape at least 600 feet long
- Turn on power to the device
- Position the tape at the BOT marker
- Press the ONLINE switch

### A.2.3 Terminals and Line Printers

Prepare terminals and line printers for testing by performing the following steps:

- Turn on power to the device
- Check the paper supply if the device produces hard copy (two pages for each pass of the UETP)
- Press the ONLINE switch
- Check baud rates and terminal characteristics (see the VAX-11/780 Hardware User's Guide)

### A.2.4 Other Devices

The UETP does not test the following devices:

- Card reader
- Network devices (DMC11s)
- Null devices
- The console terminal and the console floppy disk
- The terminal used to initiate the UETP tests
- Dial-up terminal lines
- Nonstandard devices

## A.3 RUNNING THE ENTIRE UETP

To initiate the UETP test package, enter a call to the UETP master command procedure and respond to the three prompts shown below:

```
$ @UETP [/OUTPUT=filespec] (RET)

*** WELCOME TO UETP V2.0 BUILT 20-SEP-1979 ***
UETP STARTING AT dd-mmm-ssss hh:mm:ss

ENTER NUMBER OF LOAD TEST USERS (DJ): n (RET)
ENTER NUMBER OF COMPLETE UETP RUNS (DJ): n (RET)
```



## SUMMARY OF OPERATING INSTRUCTIONS

Sections 2.2.2, 2.2.3, and 2.2.4 explain the three prompts in detail. Table 2-2 provides a guideline for choosing the number of load test users according to the amount of memory in the VAX/VMS system being tested.

Use `CTRL/Y` or `CTRL/C` to interrupt the tests (see Section 2.3.1).

### A.4 RUNNING INDIVIDUAL UETP PHASES

This section shows how to initiate individual UETP test phases.

#### A.4.1 The Device Tests

To test disks, line printers, magnetic tapes, and terminals all at once, issue the following command.

```
$ RUN UETPDEV01 (RET)
```

Note that the file UETINIDEV.DAT must exist on the system disk; see Section 2.4.1.1.

To test disks only, issue the following commands:

```
$ DEFINE/GROUP UETP$CTRLNAME devc (RET)
$ RUN UETDISK00 (RET)<RE
```

where devc is the device code plus the controller designation (DMB, for example). The group logical name UETP\$CTRLNAME must be defined explicitly when you run individual device tests.

To test line printers only, issue the following commands:

```
$ DEFINE/GROUP UETP$CTRLNAME devc (RET)
$ RUN UETPRIN00 (RET)
```

To test magnetic tapes only, issue the following commands:

```
$ DEFINE/GROUP UETP$CTRLNAME devc (RET)
$ @ UETTAPE00 (RET)
```

To test terminals only, issue the following commands:

```
$ DEFINE/GROUP UETP$CTRLNAME devc (RET)
$ RUN UETTTYS00 (RET)
```

#### A.4.2 The Native Mode Tests

The native mode test phase includes three separate tests:

- The system services test
- The native mode VAX-11 SORT test
- The VAX-11 RMS test

## SUMMARY OF OPERATING INSTRUCTIONS

To run the system services test, issue the following command:

```
$ RUN UETNATV01 (RET)
```

To run the native mode VAX-11 SORT test, issue the following commands:

```
$ UET$SAME:=1 (RET)
$ @SORTUETP [/OUTPUT=filespec] (RET)
```

To run the VAX-11 RMS test, issue the following commands:

```
$ UET$SAME:=1 (RET)
$ DEFINE/GR UET$MAGTAP device-name (RET)
$ @UETNRMS00 (RET)
```

Note that the RMS test cannot include magnetic tape tests unless you explicitly define the logical name UET\$MAGTAP as shown above.

### A.4.3 The System Load Test

To run the system load test, issue the following commands:

```
$ DEFINE/GROUP UETP$USERS n (RET)
$ RUN UETLOAD01 (RET)
```

Note that you must define the group logical name UETP\$USERS when you run the load test separately. See Section 2.2.2 and Table 2-2 for further information.

### A.4.4 The Compatibility Mode Test

To run the compatibility mode test, issue the following commands:

```
$ UET$SAME:=1 (RET)
$ DEFINE/GR UET$MAGTAP device-name (RET)
$ @UETCOMP00 [/OUTPUT=filespec] [utility] (RET)
```

where utility is one of the following values:

ALL (the default)	PIP
DMP	SLP
FLX	SOS
LBR	SRT
PAT	VFY

Note that you must define the logical name UET\$MAGTAP to include the FLX test in the compatibility mode test phase; see Section 2.4.4.

To run the RSX-11M executive directive tests, issue:

```
$ UET$SAME:=1 (RET)
$ @UETCOMP03 [/OUTPUT=filespec] (RET)
```

## APPENDIX B

### A UETP CONSOLE DIALOGUE

This appendix is an example of a user dialogue with UETP in the course of a test run. It is meant to show what kind of information exchange actually takes place at the computer console when a user runs the UETP.

B.1 EXAMPLE OF DIALOGUE

\$ @UETP

\*\*\* WELCOME TO UETP V2.0 BUILT 20-SEP-1979 \*\*\*  
UETP STARTING AT 23-FEB-1980 15:20:26.25

ENTER NUMBER OF LOAD TEST USERS [D]: 10

ENTER NUMBER OF COMPLETE UETP RUNS [D]: 1

ZUETP-I-BEGIN, UETINIT00 beginning at 23-FEB-1980 15:20:33.84  
ZUETP-S-CONF, the following devices are sysgened into this system  
ZUETP-S-DDB, UETINIT00 DDB 0 DBA 00000000 00000000  
ZUETP-S-UCB, UETINIT00 UCB 1 0 1C4D4008 02000501 032F1316  
ZUETP-S-UCB, UETINIT00 UCB 1 1 1C4D4008 02000501 032F1316  
ZUETP-S-UCB, UETINIT00 UCB 1 2 1C4D4008 02000301 019B1316  
ZUETP-S-DDB, UETINIT00 DDB 0 OPA 00000000 00000000  
ZUETP-S-UCB, UETINIT00 UCB 1 0 0C040007 00842042 180002A0  
ZUETP-S-DDB, UETINIT00 DDB 0 MBA 00000000 00000000  
ZUETP-S-UCB, UETINIT00 UCB 1 1 0C150001 010000A0 00000000  
ZUETP-S-UCB, UETINIT00 UCB 1 2 0C150001 010000A0 00000000  
ZUETP-S-UCB, UETINIT00 UCB 1 4 0C150001 001201A0 00000000  
ZUETP-S-UCB, UETINIT00 UCB 1 15 0C150001 005401A0 00000000  
ZUETP-S-DDB, UETINIT00 DDB 0 NLA 00000000 00000000  
ZUETP-S-UCB, UETINIT00 UCB 1 0 0C150001 008400A0 00000000  
ZUETP-S-DDB, UETINIT00 DDB 0 DMA 00000000 00000000  
ZUETP-S-UCB, UETINIT00 UCB 1 0 1C4D4008 02000201 032F0316  
ZUETP-S-UCB, UETINIT00 UCB 1 1 1C4D4008 02000101 019B0316  
ZUETP-S-DDB, UETINIT00 DDB 0 TTA 00000000 00000000  
ZUETP-S-UCB, UETINIT00 UCB 1 0 0C040007 00504042 181013A0  
ZUETP-S-UCB, UETINIT00 UCB 1 1 0C040007 00504042 181013A0  
ZUETP-S-UCB, UETINIT00 UCB 1 2 0C040007 00504042 181013A0  
ZUETP-S-UCB, UETINIT00 UCB 1 3 0C040007 00504042 181013A0  
ZUETP-S-UCB, UETINIT00 UCB 1 4 0C040007 00506042 181013B0  
ZUETP-S-UCB, UETINIT00 UCB 1 5 0C040007 00504042 181013A0  
ZUETP-S-UCB, UETINIT00 UCB 1 6 0C040007 00504042 181013A0  
ZUETP-S-UCB, UETINIT00 UCB 1 7 0C040007 00500042 100012A0  
ZUETP-S-DDB, UETINIT00 DDB 0 MTA 00000000 00000000  
ZUETP-S-UCB, UETINIT00 UCB 1 0 0C444038 08000102 000003C0  
ZUETP-S-DDB, UETINIT00 DDB 0 CSA 00000000 00000000  
ZUETP-S-UCB, UETINIT00 UCB 1 1 1C054008 02001001 004D011A  
ZUETP-S-DDB, UETINIT00 DDB 0 NET 00000000 00000000

```

ZUETP-S-UCB, UETINIT00 UCB 1 0 0C1C2000 01000000 00000000
ZUETP-I-ENDED, UETINIT00 ended at 23-FEB-1980 15:21:38.59
ZUETP-I-BEGIN, UETINIT01 beginning at 23-FEB-1980 15:21:41.04
ZUETP-I-DENOSU, UETINIT01 device OPA is not supported
ZUETP-I-DENOSU, UETINIT01 device MBA is not supported
ZUETP-I-DENOSU, UETINIT01 device NLA is not supported
ZUETP-I-DENOSU, UETINIT01 device CSA is not supported
ZUETP-I-DENOSU, UETINIT01 device NET is not supported
ZUETP-I-ENDED, UETINIT01 ended at 23-FEB-1980 15:21:58.33

```

\*\*\*\*\* PERIPHERAL DEVICE TEST \*\*\*\*\*

```

ZUETP-I-BEGIN, UETPDEV01 beginning at 23-FEB-1980 15:22:03.48
ZUETP-I-ABORTC, UETPDEV01 to abort this test, type ^C
ZUETP-I-BEGIN, test of controller DBA beginning at 15:22:09.00
ZUETP-I-BEGIN, test of controller DMA beginning at 15:22:13.68
ZUETP-I-BEGIN, test of controller TTA beginning at 15:22:18.73
ZUETP-I-BEGIN, test of controller MTA beginning at 15:22:47.29
ZUETP-I-ENDED, test of controller TTA ended at 15:23:37.86
ZUETP-I-ENDED, test of controller DBA ended at 15:25:02.14
ZUETP-I-ENDED, test of controller DMA ended at 15:26:03.43
ZUETP-I-ENDED, test of controller MTA ended at 15:29:12.99
ZUETP-I-ENDED, UETPDEV01 ended at 23-FEB-1980 15:29:15.02

```

\*\*\*\*\* NATIVE MODE TESTS \*\*\*\*\*

```

**** VAX-11 RMS tests beginning at 23-FEB-1980 15:29:18.90 ****
$ RUN UETNRMS01
ZRMSTST-I-BEGIN, BLOCK I/O TESTS beginning at 15:29:22.48
ZRMSTST-I-ENDED, BLOCK I/O TESTS ended at 15:29:28.20
ZRMSTST-I-BEGIN, XAB TESTS beginning at 15:29:30.18
ZRMSTST-I-ENDED, XAB TESTS ended at 15:29:33.22
ZRMSTST-I-BEGIN, SEQUENTIAL TESTS beginning at 15:29:34.84
ZRMSTST-I-ENDED, SEQUENTIAL TESTS ended at 15:30:11.36
ZRMSTST-I-BEGIN, RELATED FILENAME AND DIRECTORY TESTS beginning at 15:30:13.20
ZRMSTST-I-ENDED, RELATED FILENAME AND DIRECTORY TESTS ended at 15:30:17.35
ZRMSTST-I-BEGIN, RELATIVE TESTS beginning at 15:30:19.87
ZRMSTST-I-BEGIN, LOCKING TESTS beginning at 15:30:23.61
ZRMSTST-I-ENDED, LOCKING TESTS ended at 15:30:25.79
ZRMSTST-I-BEGIN, LOCKING TESTS beginning at 15:30:29.39
ZRMSTST-I-ENDED, LOCKING TESTS ended at 15:30:31.64
ZRMSTST-I-BEGIN, LOCKING TESTS beginning at 15:30:35.09
ZRMSTST-I-ENDED, LOCKING TESTS ended at 15:30:37.33
ZRMSTST-I-ENDED, RELATIVE TESTS ended at 15:30:39.08

```

ZRMSTST-I-BEGIN, INDEXED TEST beginning at 15:30:40.89  
ZRMSTST-I-ENDED, INDEXED TEST ended at 15:32:43.85  
ZRMSTST-I-BEGIN, COPY beginning at 15:32:45.66  
ZRMSTST-I-ENDED, COPY ended at 15:32:47.60  
ZRMSTST-I-BEGIN, APPEND beginning at 15:32:49.11  
ZRMSTST-I-ENDED, APPEND ended at 15:32:51.06  
[EOF]

\$ ! See if the append succeeded with the DIF program  
\$ MCR DIF TI:=APPEND.PIP,APPENDIT.PIP

\*\*\*\*\*  
\*\*\*\*\* FILE COMPARE UTILITY \*\*\*\*\*  
\*\*\*\*\* DIF -- VERSION 1.12 \*\*\*\*\*  
\*\*\*\*\*

\*\*\*\*\*  
\*\*\*\*\* MERGED LIST OF DIFFERENCES \*\*\*\*\*  
\*\*\*\*\*

NONE

\$ SET NOVERIFY  
\_MTA0: ALLOCATED  
%MOUNT-I-MOUNTED, UETTAP mounted on \_MTA0:  
\$ RUN UETNRMS01  
ZRMSTST-I-BEGIN, MAGTAPE TESTS beginning at 15:33:25.27  
ZRMSTST-I-ENDED, MAGTAPE TESTS ended at 15:34:20.03

\*\*\*\*\*  
Please ignore any delete errors  
\*\*\*\*\*  
\*\*\*\* VAX-11 RMS tests ending at 23-FEB-1980 15:33:55.01 \*\*\*\*

\*\*\*\*\* VMS SYSTEM SERVICES \*\*\*\*\*  
ZUETP-I-BEGIN, UETNATV01 beginning at 23-FEB-1980 15:33:59.33  
ZUETP-I-ABORTC, UETNATV01 to abort this test, type ^C  
ZUETP-I-TEXT, THE FOLLOWING MSGS ARE PART OF THE \$BRDCST TEST ... PLEASE IGNORE



```

***** LOAD TEST *****
ZUETP-I-BEGIN, UETLOAD01 beginning at 23-FEB-1980 15:48:14.97
ZUETP-I-ABORTC, UETLOAD01 to abort this test, type ^C
ZUETP-I-USER, UETLOAD01 1 user running
ZUETP-I-USER, UETLOAD01 2 users running
ZUETP-I-USER, UETLOAD01 3 users running
ZUETP-I-USER, UETLOAD01 4 users running
ZUETP-I-USER, UETLOAD01 5 users running
ZUETP-I-USER, UETLOAD01 6 users running
ZUETP-I-USER, UETLOAD01 7 users running
ZUETP-I-USER, UETLOAD01 8 users running
ZUETP-I-USER, UETLOAD01 9 users running
ZUETP-I-USER, UETLOAD01 10 users running
ZUETP-I-USER, UETLOAD01 9 users running
ZUETP-I-USER, UETLOAD01 8 users running
ZUETP-I-USER, UETLOAD01 7 users running
ZUETP-I-USER, UETLOAD01 6 users running
ZUETP-I-USER, UETLOAD01 5 users running
ZUETP-I-USER, UETLOAD01 4 users running
ZUETP-I-USER, UETLOAD01 3 users running
ZUETP-I-USER, UETLOAD01 2 users running
ZUETP-I-USER, UETLOAD01 1 user running
ZUETP-I-ENDED, UETLOAD01 ended at 23-FEB-1980 15:55:02.30

```

```
***** COMPATIBILITY MODE TESTS *****
```

```
*** COMPATIBILITY MODE TEST BEGIN AT 23-FEB-1980 15:55:06.43 ***
COMPATIBILITY MODE DMP TEST SUCCESSFUL
```

```
ZMOUNT-I-MOUNTED, UETTAP mounted on _MTA0:
COMPATIBILITY MODE FLX TEST SUCCESSFUL
```

```
COMPATIBILITY MODE LBR TEST SUCCESSFUL
```

```
COMPATIBILITY MODE PAT TEST SUCCESSFUL
```

```
COMPATIBILITY MODE PIP TEST SUCCESSFUL
```

```
COMPATIBILITY MODE SLP TEST SUCCESSFUL
```

```
COMPATIBILITY MODE SOS TEST SUCCESSFUL
```

```
COMPATIBILITY MODE SRT TEST SUCCESSFUL
```



\*\*\* COMPATIBILITY MODE TEST ENDING AT 23-FEB-1980 16:08:49.14 \*\*\*

\*\*\* RSX-11M EXECUTIVE DIRECTIVE TESTS BEGIN AT 23-FEB-1980 16:08:52.02 \*\*\*

\*\*\* PRINT TEST \*\*\*

ABCDEFGHIJKLMNOPQRSTUVWXYZ0123456789ABCDEFGHIJKLMNOPQRSTUVWXYZ0123456789  
ABCDEFGHIJKLMNOPQRSTUVWXYZ0123456789ABCDEFGHIJKLMNOPQRSTUVWXYZ0123456789  
ABCDEFGHIJKLMNOPQRSTUVWXYZ0123456789ABCDEFGHIJKLMNOPQRSTUVWXYZ0123456789  
ABCDEFGHIJKLMNOPQRSTUVWXYZ0123456789ABCDEFGHIJKLMNOPQRSTUVWXYZ0123456789  
ABCDEFGHIJKLMNOPQRSTUVWXYZ0123456789ABCDEFGHIJKLMNOPQRSTUVWXYZ0123456789

\*\*\* RSX-11M EXECUTIVE DIRECTIVE TESTS ENDING AT 23-FEB-1980 16:10:59.28 \*\*\*

```
*****  
*                               *  
*   END OF PASS 1 AT 23-FEB-1980 16:11:17.74   *  
*                               *  
*****  
*****  
*                               *  
*   END OF UETP AT 23-FEB-1980 16:11:26.30   *  
*                               *  
*****
```

\$

B-7

A UETP CONSOLE DIALOGUE



## INDEX

### A

Aborting UETP execution, 2-7, 2-8  
AUTHORIZE utility, 2-1, 2-2

### B

Booting the system, 2-1

### C

Code  
  device (devc), 2-10  
  message, 3-1  
Command procedure, 1-3, A-2  
Compatibility mode tests,  
  1-5, 2-15, A-4  
  log file for, 2-8  
Console  
  dialogue, B-1  
  log, 2-5  
Continuous UETP runs, 2-6  
CTRL/C, 2-7  
CTRL/Y, 2-7  
Controller, 1-4, 2-10, 2-11,  
  designation, 2-10, A-3

### D

Detached processes, 1-4, 1-5,  
  2-5, 2-6  
Device  
  code (devc), 2-10  
  tests, 1-4, 2-9, 2-10, A-3  
  log file for, 2-8, 2-9, 2-11  
Diagnostics, 1-2  
Disk drives,  
  preparing to test, 2-2, A-1  
  testing, 1-4, 2-9, 2-10, 2-11,  
  A-3

### E

Error  
  logging, 1-2  
  messages, 1-6, 3-1 to 3-6  
Executable images  
  see Images, executable

### F

Filespec, 2-8, 2-12, 2-13,  
  2-15, A-2

File transfer utility (FLX) test,  
  2-15, 2-16

### I

Images, executable,  
  UETDISK00.EXE, 2-10, 3-3, A-3  
  UETINIT00.EXE, 1-4, 3-3  
  UETINIT01.EXE, 1-4  
  UETLOAD01.EXE, 1-5, 2-14, A-4  
  UETNATV01.EXE, 1-5, 2-11, 2-12,  
  A-4  
  UETPDEV01.EXE, 1-4, 2-9, 2-10,  
  A-3  
  UETPRIN00.EXE, 2-10, A-3  
  UETTAP00.EXE, 2-10  
  UETTTYS00.EXE, 2-10, A-3  
Initialization  
  of disks, 2-2  
  phase, 1-4  
Initiating,  
  a UETP run, 2-5 to 2-7, A-2  
Interrupting UETP execution, 2-8  
I/O device tests, 1-4, 2-9, 2-10,  
  A-3  
  log file for, 2-8, 2-9, 2-11

### L

Line printers  
  testing of, 1-4, 2-4, 2-10,  
  A-2, A-3  
LOAD.LOG, 2-9, 2-14, 2-15  
Log files, 2-8, 2-9  
  see  
  Console  
  LOAD.LOG  
  LOGP.LOG  
  SSLOG.LOG  
  UCOMP.LOG  
  UETPLOG.LOG  
  UNATIVE.LOG  
Logging into system, 2-1, 2-2,  
  A-1  
Logical names  
  SYSS\$ERROR, 2-9  
  SYSS\$OUTPUT, 2-9  
  UET\$MAGTAP, 2-12 to 2-16, A-4  
  UET\$SAME, 2-9, 2-12 to 2-16,  
  A-4  
  UETP\$CTRLNAME, 2-10, 3-4, A-3  
  UETP\$USERS, 2-13, 2-14, 3-4,  
  A-4  
LOGP.LOG, 2-9, 2-11

INDEX

**M**

Magnetic tape drives  
 testing of, 1-4, 2-4, 2-10,  
 A-2, A-3  
 Master command procedure  
 (UETP.COM), 1-3, 1-4, 2-5,  
 2-6, 2-7, A-2  
 Messages  
 error, 1-6, 3-1 to 3-6  
 status, 2-12

**N**

Names, logical,  
 see Logical names  
 Native mode tests, 1-5, 2-11,  
 2-12, A-3, A-4  
 log file for, 2-9

**O**

Output  
 console, 1-6  
 log files, 2-8, 2-9  
 test, see tests

**P**

Password, 2-1, A-1  
 Phases,  
 UETP test, 1-3 to 1-6  
 running individual UETP test,  
 2-9, A-3, A-4  
 Privileges, account, 2-1, 2-2  
 Process  
 detached, 1-4, 1-5, 2-5, 2-6  
 identification number (PID),  
 2-8

**Q**

Quotas, account, 2-2

**R**

Record management services  
 (VAX-11 RMS),  
 test, 2-12, 2-13, A-3, A-4  
 see Native mode tests  
 Resources, system,  
 UETP's use of, 2-2  
 RSX-11 executive directives test,  
 1-5, 2-16, A-4

**S**

Software performance report  
 (SPR), 3-2  
 SORTUETP.COM, 1-5, 2-12, A-4  
 SSLOG.LOG, 2-8, 2-12, 3-5  
 SSTEEST.COM, 2-12  
 SYS\$ERROR, 2-9  
 SYS\$OUTPUT, 2-9  
 System load test, 1-5, 2-13,  
 2-14, A-4  
 selecting number of users for,  
 2-6  
 System services test, 1-5, 2-11,  
 2-12, A-3, A-4  
 see native mode tests  
 SYSTEST account, 2-1, A-1  
 privileges, 2-2, 3-6  
 quotas, 2-2, 3-6  
 username, 2-1, A-1  
 [SYSTEST] directory, 2-1, 2-8

**T**

Terminals  
 output at, 1-6  
 testing of, 1-4, 2-4, 2-9,  
 2-10, A-2, A-3  
 Termination phase, 1-5  
 Tests,  
 individual,  
 disk, 2-2, 2-3, 2-10, A-1,  
 A-3  
 file transfer (FLX), 2-15,  
 2-16, A-4  
 line printer, 2-4, 2-10, A-2,  
 A-3  
 magnetic tape drive, 2-4,  
 2-10, A-2, A-3  
 RSX-11M executive directives,  
 1-5, 2-16, A-4  
 system services, 1-5, 2-11,  
 2-12, A-3, A-4  
 terminal, 2-4, 2-10, A-2,  
 A-3  
 VAX-11 RMS, 1-5, 2-12, 2-13,  
 A-3, A-4  
 VAX-11 SORT, 1-5, 2-12, A-3,  
 A-4  
 phases  
 compatibility mode, 1-5, 2-15  
 A-4  
 device, 1-4, 2-9, 2-10, A-3  
 initialization, 1-4  
 native mode, 1-5, 2-11 to  
 2-13, A-3  
 system load, 1-5, 2-13 to  
 2-15, A-4  
 termination, 1-5

## INDEX

Tests, (Cont.)  
preparing devices for, 2-2 to  
2-4, A-1, A-2

### U

UCOMP.LOG, 2-9, 2-16  
UETDISK00.EXE, 2-10, 3-3, A-3  
UETINIDEV.DAT, 1-4, 2-10, 2-11,  
A-3  
UETINIT00.EXE, 1-4, 3-3  
UETINIT01.EXE, 1-4  
UETLOAD01.EXE, 1-5, 2-14, A-4  
UETNATV01.EXE, 1-5, 2-11, 2-12,  
A-4  
UETNRMS00.COM, 1-5, 2-11, 2-12,  
A-4  
UETCOMP00.COM, 1-5, 2-15, 2-16,  
A-4  
UETCOMP03.COM, 1-5, 2-16, A-4  
UETP  
aborting of, 2-7, 2-8  
continuous running of, 2-6, 2-7  
interrupting of, 2-7, 2-8  
log files, 2-8, 2-9  
messages, 1-6, 3-1 to 3-6  
output, 1-6, 2-8, 2-9  
role of, 1-1  
running of, 1-3, 2-7, 2-9  
users of, 1-1  
variables, 2-5  
UETP.COM, 1-3, A-2

UETPDEV01.EXE, 1-4, 2-9, 2-10, A-3  
UETP\$CTRLNAME, 2-10, 3-4, A-3  
UETP\$MAGTAP, 2-12, 2-13, 2-15,  
A-4  
UETP\$SAME, 2-9, 2-12 to 2-16,  
A-4  
UETP\$USERS, 2-14, 3-4, A-3, A-4  
UETPLOG.LOG, 1-4, 2-5, 2-8, 2-11,  
2-14, 2-16, 3-5  
UETPRIN00.EXE, 2-10, A-3  
UETTAP00.EXE, 2-10  
UETTTYS00.EXE, 2-10, A-3  
UNATIVE.LOG, 2-9  
Users  
load test, 2-6  
of UETP, 1-1  
UETP\$USERS, 2-14  
Utilities  
compatibility mode, 2-15, 2-16  
file compare (DIF), 2-15  
native mode, 1-5, 2-12, A-4  
types of, 2-15  
UTILITY.LOG, 2-16

### V

Variables,  
defining UETP, 2-5  
VAX-11 record management services  
(RMS), 1-5, 2-12, A-4  
VAX-11 SORT, 1-5, 2-11, 2-12,  
A-3, A-4



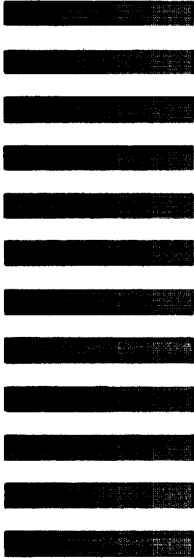


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