VAX CIT Message Desk Installation and Configuration Guide

Order Number: AA-PALKA-TE

This document contains instructions for installing the CIT Message Desk application on VAX/VMS systems and instructions for configuring the application. It also explains how to read the on-line release notes before or after installing the product. This document applies to the CIT Message Desk Version 1.0 and to all maintenance updates used throughout that version.

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Software Version:	VAX CITMD V1.0

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Preface

This manual describes how to install and configure the CIT Message Desk (CITMD) application. It applies to Version 1 of CITMD and all maintenance updates for that version.

Keep this document with your distribution kit. You will need to refer to it again if you receive any maintenance updates, or if you need to reinstall CITMD for any other reason.

Intended Audience

This installation and configuration guide is intended for system managers who understand the general installation procedures on VAX/VMS systems and who have read the guide *Using the CIT Message Desk*.

Structure of This Guide

This guide is divided into two chapters:

- **Chapter 1** explains how to install the CIT Message Desk. It outlines the checks and actions required before installing CITMD and the procedures to follow after installation. It describes how to:
  - — Prepare to install CITMD.
  - — Follow the installation procedure.
  - — Start the application after installation.
  - — Read the Release Notes.
  - — Respond to any problems you may have with the installation.

    For information on reporting problems with CITMD, see Section 1.4.3.

- **Chapter 2** explains how to configure the CIT Message Desk. It outlines the checks and actions required before using CITMD and describes the procedures for defining access and user privileges. It describes how to:
  - — Define access and user privileges.
  - — Create additional CITMD message files so that individual Attendants can receive calls and take messages for a group or building only.
  - — Set the monitoring state for General Users.
  - — Complete configuration procedures for a Northern Telecom Meridian™ SL1™ PBX.

Conventions Used in This Guide

The following list describes the typing conventions used in this guide to indicate command names, menu options and keyboard keys.

`Text in courier type`	In examples or procedures, this style indicates system prompts or system messages.
UPPERCASE	Indicates the name of a command.
Ctrl/Z	Indicates that you should press the key marked "Ctrl" and then press the letter key that follows, such as the "Z" key.

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Associated Documents

The following documentation is essential reading:

- *Using the VAX CIT Message Desk*

  This manual provides a general introduction to CITMD. It describes the two groups of CITMD users, Attendants and General Users, and the different features it provides for these groups. It also describes how to use CITMD, and summarizes the commands that are available.

- *Release Notes*

  CITMD release notes are provided on-line and are not included in this document. These release notes may contain important information about CITMD.

  You can read the release notes before you install CITMD, and at any time after the product is installed. To read the release notes, follow the installation procedure up to step 4. At that step, you can choose to display or to print the release notes, or both. You can then choose whether to continue with the installation procedure.

For more information about installing layered products on VAX/VMS systems, see the *VMS System Manager's Manual.*

1 Installing the CIT Message Desk

This chapter explains how to install the CIT Message Desk. It outlines the checks and actions required before installation, and the procedures to follow after installation. The following sections describe:

- Preparing to install CITMD.
- Installation procedures.
- Starting the application after installation.
- Reading the on-line CITMD release notes.
- What to do if you have problems with the installation.

1.1 Preparing to Install CIT Message Desk

The following sections describe the checks and actions required before you install CITMD.

1.1.1 Contents of the Installation Kit

The bill of materials specifies the number and contents of your media. Check the contents of your kit against the list in the bill of materials. If your kit is damaged, or if you find that parts of it are missing, call your Digital representative.

Table 1–1 shows details of the media on which the CIT Message Desk may be delivered.

Table 1–1 Media Details

Media	Quantity	Label
TK50 cartridge	1	CITMD V1.0
1600 b.p.i. magnetic tape	1	CITMD V1.0

Note that the TK50 cartridge can be read from both a TK50 and a TK70 tape drive.

1.1.2 Software Requirements

The CIT Message Desk Version 1.0 requires:

- VAX/VMS Version 5.1 or later
- CIT Applications Interface Version 2.0

You can install CITMD before installing the VAX CIT Applications Interface, but without the applications interface CITMD cannot provide Dialing Services. VAX CIT Applications Interface requires a link to a server node on which VAX CIT Server software is installed. The server software uses a communications link with a CIT-compatible PBX to provide telephony features.

1.1.3 Installation Procedure Requirements

This section describes the preparations you need to make before installing the kit.

1.1.3.1 Basic Requirements

To ensure the installation runs smoothly:

- Back up the system disk before starting the installation procedure.
- Ensure there are at least 1200 free blocks on the system disk.
- Install CITMD from the system manager's account with your default device and directory set to SYS$UPDATE.

1.1.3.2 Support of License Management Facility (LMF)

The CIT Message Desk supports the VMS License Management Facility (LMF) for installation on VMS V5 systems. If you need to register CIT Message Desk through the LMF, the kit includes a Product Authorization Key (PAK) containing the information you need for registration.

To register your PAK, use the command procedure SYS$UPDATE:VMSLICENSE.COM. For more information on this command procedure and the LMF, refer to *VMS License Management Utility Reference Manual*.

The installation procedure for CIT Message Desk asks if you have an authorization key registered and loaded. You can install the kit without authorization, but you will not be able to run the software.

1.1.3.3 Information Required During Installation

The installation procedure creates a startup command procedure (CITMD$STARTUP.COM) for the CITMD application. To create this file, the installation procedure prompts you to specify:

- **The protocol identifier for the PBX**
  The protocol identifier identifies the protocol that the PBX uses to communicate with the server. During the installation procedure, you are prompted to specify one of the following protocol identifiers:
  - HCI™ for a British Telecom Regent 257™ PBX, or Mitel SX2000™ PBX
  - IAP[1] for a Northern Telecom Meridian™ SL1™ PBX
  - HICOM for a Siemens HICOM™ PBX
- **The logical identifier for the PBX**
  The logical identifier for the PBX as defined by the system manager of the CIT server node. A logical identifier is a name that identifies the PBX. During the installation procedure, you must specify the same logical identifier used by the system manager of the server node.

The installation procedure also creates an account with the username, CITMD$ATT. The CITMD$ATT account is used as a message file by Attendants on your system, who answer calls and take messages for other users. The account is created so that:

- Users can use CITMD to leave messages and all Attendants on your system can receive and read them. When a user sends a message through CITMD, the message is automatically sent to the CITMD$ATT account.
- Only Attendants can access the file.

™ HCI and SX2000 are trademarks of MITEL Corporation.

™ Regent 257 is a trademark of British Telecom.

[1] IAP is the acronym used by DIGITAL for Northern Telecom's protocol, ISDN/AP™.

™ Meridian, SL1, and ISDN/AP are trademarks of Northern Telecom Ltd.

™ HICOM is a trademark of Siemens Ag.

During the installation procedure you are prompted to specify a user identification code (UIC) and a password for the CITMD$ATT account. The UIC must be numeric (octal) with the group number and member number in the following format:

```
[group, member]
```

For example,

```
[625,713]
```

Note that the UIC must not include a system group number. A system group number is a low group number usually from 1 to 10 (octal) which allows the user to have SYSTEM privileges. If you specify a system group number for the CITMD$ATT UIC, the installation procedure returns an error message and prompts you for another UIC.

The range of system group numbers is determined by the SYSGEN parameter MAXSYSGROUP. To check the range of system group numbers set by MAXSYSGROUP, log into the system manager's account and enter the following:

```
$ RUN SYS$SYSTEM:SYSGEN
SYSGEN> SHOW MAXSYSGROUP
```

Note that the group numbers set by MAXSYSGROUP are decimal.

For more information on UICs and the MAXSYSGROUP parameter, see the *Guide to VMS System Security* and the *VMS System Generation Utility Manual*.

1.1.3.4 Starting and Testing the Kit

The installation procedure automatically runs the startup file CITMD$STARTUP.COM to start CITMD. If, however, you install CITMD on a cluster, you need to run the startup file on each node in the cluster before using CITMD. See Section 1.3.2 for more information.

Note that you must complete the configuration procedures in Chapter 2, before users can start up CITMD.

The installation procedure also runs the Installation Verificaton Procedure (IVP). The IVP tests the installation by checking that all CITMD directories and files have been created during installation.

1.2 Installation Procedures

The following sections describe the VMSINSTAL command procedure and give a step-by-step guide to the CIT Message Desk installation procedure.

1.2.1 Using VMSINSTAL

The VMSINSTAL command line has the following format:

```
$ @VMSINSTAL CITMD010 source OPTIONS N
```

CITMD010
The release or maintenance update of CITMD.

source
The name of the device from which you are installing CITMD. The device name is in the form *ddcu:* where *dd* is the device code, *c* is the controller, and *u* is the unit number.

OPTIONS N
Set the OPTIONS N parameter if you want VMSINSTAL to prompt you to display or to print the release notes.

If you enter only @VMSINSTAL at the command line, VMSINSTAL prompts you for these parameters. Digital recommends that you include the OPTIONS N parameter, so that you can read the release notes during installation.

1.2.2 Installation Procedure

The rest of this section describes the installation procedure. You can get help by entering a question mark (?) in response to any of the questions asked during the installation procedure.

These installation instructions use *MUA0:* as an example of the source device from which you install CITMD.

To cancel the installation procedure at any time, press Ctrl/Y. VMSINSTAL then deletes all files it has created up to that point and exits. If you want to retry the installation procedure after pressing Ctrl/Y, you must proceed from step 2.

Step 1: Log in to the system manager's account and set your default device and directory to SYS$UPDATE.

```
Username: SYSTEM
Password:
$ SET DEFAULT SYS$UPDATE
```

Step 2: Invoke VMSINSTAL.

```
$ @VMSINSTAL CITMD010 MUA0: OPTIONS N

   VAX/VMS Software Product Installation Procedure V5.2

It is dd-mmm-yyyy at hh:mm.
Enter a question mark (?) at any time for help.

%VMSINSTAL_W_DECNET, Your DECnet network is up and running.
Do you want to continue anyway [NO]?
Are you satisfied with the backup of your system disk [YES]?
```

Step 3: Insert the installation volume.

```
Please mount the first volume of the set on MUA0:.
```

Insert the tape into the drive. VMSINSTAL automatically mounts the volume for you.

```
Are you ready?
%MOUNT-I-MOUNTED, CITMD mounted on _MUA0:

The following products will be processed:

  CITMD V1.0


        Beginning installation of CITMD V1.0 at hh:mm

%VMSINSTAL-I-RESTORE, Restoring product saveset A...
```

Step 4: Select a release notes option.

This step applies only if you specified OPTIONS N in step 2.

```
Release notes included with this kit are always copied to SYS$HELP.

Additional Release Notes Options:
     1. Display release notes
     2. Print release notes
     3. Both 1 and 2
     4. None of the above

Select option [2]:
```

The CITMD Release Notes are automatically copied to SYS$HELP. If you want to display or print the Release Notes, select option 1, 2, or 3.

If you select option 1, VMSINSTAL displays the release notes immediately on your screen. You can terminate the display at any time by entering Ctrl/C.

If you select option 2, VMSINSTAL prompts you for a queue name:

```
Queue name [SYS$PRINT]:
```

You can enter a queue name, or send the file to the default output print device.

If you select option 3, VMSINSTAL displays the release notes immediately on your screen and then prompts you for a queue name.

VMSINSTAL then prompts:

```
Do you want to continue the installation [NO]?

%VMSINSTAL-I-RELMOVED, the product release notes have been successfully moved
to SYS$HELP.
```

Step 5: Verify Licensing.

```
  CITMD Software Installation Procedure.

   Product:      CITMD
   Producer:     DEC
   Version:      1.0
   Release Date: 30-NOV-1989

Does this product have an authorization key registered and loaded?
```

If you have not registered and loaded the PAK for this kit, the installation will continue but you will not be able to run the software after the installation. See Section 1.1.3.2.

Step 6: Specify information for the CITMD$ATT account.

If you are installing CITMD for the first time, the installation procedure now prompts you to specify details for the CITMD$ATT account.

```
The CITMD$ATT account is created during this installation.
The account provides the Message file for CITMD Attendants.

Enter the password for the new account: password

Re-enter the password for verification: password

Enter the UIC for the new account:  [nnn,nnn]

Is the UIC [nnn,nnn] correct? [YES]:
```

Enter a password and the UIC for the CITMD$ATT account.

The password must be at least eight characters in length and can be any combination of alphanumeric characters that you choose. However, you must not specify the name of the product, the name of the node, or the name of the account, CITMD$ATT. If you specify one of these names, the installation procedure returns an error message and prompts you for another password.

Note that when you specify a password, it is not displayed on-screen.

When you specify the UIC:

- Include the code in square brackets ([ ]). For example:

  ```
  [123,446]
  ```

- Do not specify a system group number. If you specify a system group number for the CITMD$ATT UIC, the installation procedure returns an error message and prompts you for another UIC. See Section 1.1.3.3 for more information.

Step 7: Purge files.

```
Do you want to purge files replaced by this installation [YES]?
```

If the system contains previous versions of CITMD, most of the existing files are replaced during installation with new files, but the old files are not automatically purged. Digital recommends purging the old files.

If you purge, all existing files are replaced except for the following files:

- CITMD$SYS_PHONEBOOK.DAT—which is the database for the CITMD phonebook. The installation procedure does not replace or purge CITMD$SYS_PHONEBOOK.DAT.
- CITMD$ATT.DIR—which contains the Attendant's message file. The installation procedure does not purge or replace the CITMD$ATT account or the files within it.

Step 8: Select installation options.

```
CITMD$STARTUP.COM will now be created for you.

This Installation Procedure places the logical identifier
for the PBX and the protocol identifier in the CITMD startup
file, SYS$MANAGER:CITMD$STARTUP.COM, which allows CITMD to
communicate with the CIT Applications Interface on your
node.
Provide the values in response to the following questions.
You are given the opportunity to re-enter mistyped values.


Enter the identifier for the protocol used by the PBX:

Is the protocol identifier protocol_identifier correct? [YES]?
```

Specify the protocol that the PBX uses to communicate with the server:

- If your system uses a British Telecom Regent 257 PBX or a Mitel SX2000 PBX, the protocol identifier is HCI.
- If your system uses a Northern Telecom Meridian SL1 PBX, the protocol identifier for the PBX is IAP.
- If your system uses a Siemens HICOM PBX, the protocol identifier is HICOM.

If you specify the wrong protocol identifier, the PBX may not support all of the features that appear on-screen when the application is in use. To correct the protocol identifier in the startup file, you must edit the file CITMD$STARTUP.COM when installation is complete. This allows you to specify the correct protocol identifier and creates a new version of the startup file—see Section 1.3.2 for details of how to start up CITMD.

```
Enter the logical identifier for the PBX:

Is the logical identifier logical_identifier correct? [YES]?
```

Specify the logical identifier for the PBX. This identifies the PBX that is connected to the server. The logical identifier is then included in the startup file CITMD$STARTUP.COM.

You will not be able to use CITMD to make phone calls if you specify the wrong logical identifier. To correct the logical identifier in the startup file, you must edit the file CITMD$STARTUP.COM when installation is complete. This allows you to specify a new identifier, and creates a new version of the startup file—see Section 1.3.2 for details of how to start up CITMD.

```
Add the following command line to the system startup file,
SYSTARTUP_V5.COM, in SYS$MANAGER:-

$ @SYS$MANAGER:CITMD$STARTUP.COM

 For clusters this line should be added to the startup file
 for each node.

This Installation procedure will run the CITMD$STARTUP file
at the conclusion of the installation.
If you are installing CITMD on a cluster you will need to
run the CITMD$STARTUP file on each node in the cluster,
in order to make CITMD available after the installation.
```

You must add the command line to the system startup file after installation is successful. See Section 1.3.2.

Step 9: Run the IVP.

```
Do you want to run the IVP immediately after installation [YES]?
```

The IVP checks that all CITMD logical names are defined, CITMD directories are created, and that files are moved to their target directories. If you choose not to run the IVP immediately after installation, refer to Section 1.3.4.

```
       You have answered all the questions necessary
       for the installation to be completed. The
       installation will now run unattended.

%VMSINSTAL-I-ACCOUNT, This installation adds an identifier named CITMD$ATTID.
%UAF-I-RDBADDMSG, identifier CITMD$ATTID value: %nnnnnnnnn added to RIGHTSLIST.DAT
%VMSINSTAL-I-SYSDIR, This product creates system disk directory VMI$ROOT:[CITMD]
%VMSINSTAL-I-ACCOUNT, This installation creates an ACCOUNT named CITMD$ATT.
%UAF-I-ADDMSG, user record successfully added
%UAF-I-RDBADDMSG, identifier CITMD$ATT value:[nnnnnn,nnnnnn] added to RIGHTSLIST.DAT
%VMSINSTAL-I-SYSDIR, This product creates system disk directory VMI$ROOT:[CITMD$ATT]
%VMSINSTAL-I-RESTORE, Restoring product saveset B...
%VMSINSTAL-I-RESTORE, Restoring product saveset C...
%VMSINSTAL-I-MOVEFILES, Files will now be moved to their target directories...
```

Table 1–2 in Section 1.3.7 shows all the files that are created or modified by the installation procedure, and the directories to which they are moved.

If you chose to run the IVP, VMSINSTAL now calls the IVP to verify that CITMD has been installed successfully.

```
     Starting the CITMD Installation Verification Procedure

CITMD$ATTENDANT is CITMD$ATT
CITMD$ATTMAILDIR is SYS$COMMON:[CITMD$ATT]

CITMD$DIR is SYS$COMMON:[CITMD]

CITMD$PBX_TYPE is protocol_identifier

CITMD$PBX_NAME is logical_identifier
```

```
CITMD$MONITOR is Y

CITMD System Phonebook (CITMD$SYS_PHONEBOOK.DAT) is in CITMD$DIR.

CITMD Personal Phonebook FDL file (CITMD$PERS_PHONEBOOK.FDL)
is in CITMD$DIR.

CITMD ACL Command File (CITMD$SET_ACL.COM) is in CITMD$DIR.

CITMD Mail Keys Definition File (CITMD$KEYDEF.COM) is in CITMD$DIR.

CITMD Attendants' Mail Keys Definition File (CITMD$KEYDEF_ATT.COM)
is in CITMD$DIR.

CITMD Attendants' Help File (CITMD$ATT_protocol_identifier.HLB) is in SYS$HELP.

CITMD General Users' Help File (CITMD$GEN_protocol_identifier.HLB) is in SYS$HELP.

The Installation Verification Procedure for CITMD was successful.

      CITMD Installation Verification Procedure
      completed at hh:mm
```

Step 10: End the installation procedure.

```
On completion of this Installation Procedure
you must set up the Access Control List for
the CITMD Attendant's Message File.

Use the following command when this installation
procedure has finished:

$ @citmd$dir:CITMD$SET_ACL.COM
```

You must set up the Access Control List for the CIT$ATT message file created during installation. See Section 1.3.1.

```
         Installation of CITMD V1.0 completed at hh:mm

         VMSINSTAL procedure done at hh:mm
$ LOGOUT
SYSTEM     logged out at dd-mmm-yyyy hh:mm:ss.ss
```

Note that during the installation procedure, VMSINSTAL deletes or changes entries in the process symbol tables. Therefore, if you are going to continue using the system manager's account, and want to restore those symbols, log out and log in again.

1.3 After the Installation

The following sections describe the actions to take when installation is complete, and include a table showing files that are created or modified during installation.

1.3.1 Setting up an Access Control List

Before starting CITMD, you must set up an Access Control List (ACL) on the CITMD Attendant's message file (CITMD$ATT.DIR). This file is automatically created for the CITMD$ATT account during installation. The ACL lets you control access to the file so that only Attendants that you authorize can use it.

To set up the ACL on the message file, log in to the system manager's account and enter the following:

```
$  @CITMD$DIR:CITMD$SET_ACL.COM
```

An ACL consists of access control list entries (ACEs) which grant or deny access to a particular system object, for example, a file. The ACL that you attach to the file has one ACE defined, the identifier CITMD$ATTID. You must use the Authorize utility to grant Attendants the identifier before they can access the message file. See the procedure in Section 2.1.1.

1.3.2 Starting the CIT Message Desk

The installation procedure creates a startup file (CITMD$STARTUP.COM), which specifies the logical identifier and protocol identifier for the PBX, and starts the CITMD application.

If you are installing CITMD on a cluster, you must run the CITMD$STARTUP.COM file on each node.

If you want CITMD to restart whenever the system restarts, include the following command line in the site-specific startup command file (SYSTARTUP_V5.COM) for each node:

```
@SYS$MANAGER:CITMD$STARTUP
```

1.3.3 Changing CITMD$STARTUP.COM

This section applies only if, at any time after installing CITMD, you have to change the logical identifier for the PBX, or change an invalid protocol identifier in the CITMD startup file.

The installation procedure prompts you to specify a logical identifier for the PBX and a protocol identifier which identifies the protocol that the CIT Server software uses to communicate with the PBX. These identifiers are included in the CITMD startup file SYS$MANAGER:CITMD$STARTUP.COM.

If you specify an invalid logical identifier or protocol identifier during installation, or if an identifier changes at any time after installation, you must replace the identifier specified in the startup file. To do this, you edit the CITMD$STARTUP.COM file:

- **Protocol identifier**

  To specify a new PBX protocol identifier, edit the following line in CITMD$STARTUP.COM:

  ```
  $ DEFINE/SYSTEM CITMD$PBX_TYPE  protocol_identifier
  ```

  Specify the identifier as HCI, HICOM, or IAP.

  For example:

  ```
  $ DEFINE/SYSTEM CITMD$PBX_TYPE  HCI
  ```

- **Logical identifier**

  To change the logical identifier for the PBX, edit the following line in CITMD$STARTUP.COM:

  ```
  $ DEFINE/SYSTEM CITMD$PBX_NAME logical_identifier
  ```

  For example:

  ```
  $ DEFINE/SYSTEM CITMD$PBX_NAME CIT_PBX
  ```

1.3.4 Run the IVP

If you did not run the IVP automatically after installation, you can run it by entering the following command:

```
$ RUN SYS$TEST:CITMD$IVP
```

The IVP tests the installation by checking that:

- All CITMD system-wide logicals have been defined.
- The CITMD$ATT account has been created and the mail file set up.
- CITMD.EXE has been created in the directory, SYS$SYSTEM.
- CITMD$DIR has been created and all files and protections have been set up.

Section 1.3.7 specifies all the files that are created or modified by the installation, and the directories to which they are moved.

If the IVP fails, it does not necessarily mean you have failed to install CITMD. See Section 1.4.2.

1.3.5 Read the Release Notes

If you did not follow the recommendation to read the release notes during installation (see Section 1.2.2), read them now.

When installation is complete, you can read the release notes by displaying or printing the file SYS$HELP:CITMD010.RELEASE_NOTES.

These release notes may contain important information about the CIT Message Desk application.

1.3.6 Back Up the System Disk

When you have installed CITMD successfully, back up the system disk.

1.3.7 Files Created or Modified

Table 1–2 shows all the files that are created or modified by the installation procedure, and the directories to which they are moved.

Table 1–2 Files Created or Modified During Installation

File Name	Directory
CITMD_KEYDEF_ATT.COM	CITMD$DIR
CITMD_KEYDEF.COM	CITMD$DIR
CITMD$PERS_PHONEBOOK.FDL	CITMD$DIR
CITMD$SET_ACL.COM	CITMD$DIR
CITMD$SYS_PHONEBOOK.DAT	CITMD$DIR
CITMD$SYS_PHONEBOOK.FDL	CITMD$DIR
CITMD$ATT.DIR	SYS$COMMON
CITMD.DIR	SYS$COMMON
CITMD010.RELEASE_NOTES	SYS$HELP
CITMD$ATT_HCI.HLB	SYS$HELP
CITMD$ATT_HICOM.HLB	SYS$HELP
CITMD$ATT_IAP.HLB	SYS$HELP
CITMD$GEN_HCI.HLB	SYS$HELP
CITMD$GEN_HICOM.HLB	SYS$HELP
CITMD$GEN_IAP.HLB	SYS$HELP
CITMD$IVP.COM	SYS$TEST
CITMD$STARTUP.COM	SYS$MANAGER
CITMD.EXE	SYS$SYSTEM

Additionally, when mail is sent to the CITMD$ATT account, a MAIL.MAI file is automatically created. See Section 2.1.1.

1.4 Error Conditions

The following sections give advice on what to do if you have problems that cause the installation procedure or the IVP to fail, or problems following successful installation.

1.4.1 Errors During the Installation Procedure

If the installation procedure fails, the following message is displayed:

```
CITMD V1.0 Installation failed.
```

An error during installation can be caused by the use of an incorrect version of the VAX operating system, or if system quotas or resources are inadequate.

For descriptions of the error messages generated by these conditions, and recovery procedures, see the manual *VMS System Messages and Recovery Procedures*.

If installation fails and you solve the problem, you must repeat the installation procedure from step 2.

1.4.2 Errors During the IVP

If the IVP fails, the following message is displayed:

```
The Installation Verification Procedure for CITMD has failed.

CITMD Installation Verification Procedure
completed at hh:mm
```

Failure of the IVP does not necessarily mean you have failed to install CITMD.

If you install CITMD on a cluster and the IVP fails, make sure that you run the startup file CITMD$STARTUP.COM on each node (see Section 1.3.2). When you have run the startup file on all nodes in the cluster, rerun the IVP following the instructions in Section 1.3.4.

If the IVP continues to fail, an error may have occurred during installation. To determine problems during installation, refer to Section 1.4.1.

1.4.3 Determining and Reporting Problems

If an error occurs while you are using CITMD and you believe that the error is caused by a problem with the application, take one of the following actions:

- If you are within the warranty period or if you have a Software Support Contract that gives you telephone support, contact Digital's Customer Support Center or submit a Software Performance Report (SPR).
- If you have a Self-Maintenance Software Contract, submit a Software Performance Report (SPR).

If you find an error in the CIT Message Desk documentation, fill in and submit the Reader's Comments form at the back of the document in which the error was found. Specify the problem, the relevant section, and the page number.

1.5 Example Installation

This section contains an example installation of CITMD.

Example 1–1 Example Log File for CITMD Installation

```
$ @VMSINSTAL CITMD MUA0 OPTIONS N

        VAX/VMS Software Product Installation Procedure V5.2


It is 23-AUG-1989 at 17:20.
Enter a question mark (?) at any time for help.

* Are you satisfied with the backup of your system disk [YES]?

Please mount the first volume of the set on  MUA0:.
* Are you ready? y
%MOUNT-I-MOUNTED, CITMD mounted on _MUA0:

The following products will be processed:
  CITMD V1.0

        Beginning installation of CITMD V1.0 at 17:23

%VMSINSTAL-I-RESTORE, Restoring product saveset A ...

    Release notes included with this kit are always copied to SYS$HELP.

    Additional Release Notes Options:
```

Example 1–1 Cont'd. on next page

Example 1–1 (Cont.) Example Log File for CITMD Installation

```
        1.  Display release notes
        2.  Print release notes
        3.  Both 1 and 2
        4.  None of the above

* Select option [2]:
* Do you want to continue the installation [NO]? y
%VMSINSTAL-I-RELMOVED , The product's release notes have been successfully moved to SYS$HELP.

                 CITMD Software Installation Procedure.


        Product:      CITMD
        Producer:     DEC
        Version:      1.0
        Release Date: 30-NOV-1989
* Does this product have an authorization key registered and loaded? y

        The CITMD$ATT account is created during this installation.
        This account provides the Message file for CITMD Attendants.


* Enter the password for the new account :

* Re-enter the password for verification :


* Enter the UIC for the new account: [nnn,nnn] : [300,333]

* Is the UIC [300,333] correct?  [YES]?
* Do you want to purge files replaced by this installation [YES]?


        CITMD$STARTUP.COM will now be created for you.

        This Installation Procedure places the logical identifier
        for the PBX and the protocol identifier in the CITMD startup
        file, SYS$MANAGER:CITMD$STARTUP.COM, which allows CITMD to
        communicate with the CIT Applications Interface on your
        node.

        Provide the values in response to the following  questions.
        You are given the opportunity to re-enter mistyped  values.


* Enter the identifier for the protocol used by the PBX: : hci

* Is the protocol identifier HCI correct? [YES]?

* Enter the logical identifier for the PBX: : cit$pbx

* Is the logical identifier CIT$PBX correct?  [YES]?

        Add the following command line to the system startup file,
        SYSTARTUP_V5.COM, in SYS$MANAGER:-

        $ @SYS$MANAGER:CITMD$STARTUP.COM

        For clusters this line should be added to the startup file
        for each node.
```

Example 1–1 Cont'd. on next page

Example 1–1 (Cont.) Example Log File for CITMD Installation

```
        This Installation Procedure will run the CITMD$STARTUP file
        at the end of the installation.
        If you are installing CITMD on a cluster you will need to
        run the CITMD$STARTUP file on each node in the cluster,
        in order to make CITMD available after the installation.

* Do you want to run the IVP immediately after installation [YES]?

         You have  answered   all  the  questions  necessary
         for   the   installation   to  be  completed.   The
         installation will now run unattended.

%VMSINSTAL-I-ACCOUNT, This installation adds an identifier named CITMD$ATTID.
%UAF-I-RDBADDMSG, identifier CITMD$ATTID value: %X8001000E added to RIGHTSLIST.DAT
%VMSINSTAL-I-SYSDIR, This product creates system disk directory  VMI$ROOT:[CITMD].
%VMSINSTAL-I-ACCOUNT, This installation creates an ACCOUNT named CITMD$ATT.
%UAF-I-ADDMSG, user record successfully added
%UAF-I-RDBADDMSGU, identifier CITMD$ATT value: [000300,000333] added to RIGHTSLIST.DAT
%VMSINSTAL-I-SYSDIR, This product creates system disk directory VMI$ROOT:[CITMD$ATT].
%VMSINSTAL-I-RESTORE, Restoring product saveset B ...
%VMSINSTAL-I-RESTORE, Restoring product saveset C ...
%VMSINSTAL-I-MOVEFILES, Files will now be moved to their target directories...

        Starting the CITMD Installation Verification Procedure

CITMD$ATTENDANT is CITMD$ATT

CITMD$ATTMAILDIR is SYS$COMMON:[CITMD$ATT]

CITMD$DIR is SYS$COMMON:[CITMD]

CITMD$PBX_TYPE is HCI

CITMD$PBX_NAME is CIT$PBX

CITMD$MONITOR is Y

CITMD System Phonebook (CITMD$SYS_PHONEBOOK.DAT) is in CITMD$DIR.

CITMD Personal Phonebook FDL file (CITMD$PERS_PHONEBOOK.FDL)
is in CITMD$DIR.

CITMD ACL Command File (CITMD$SET_ACL.COM) is in CITMD$DIR.

CITMD Mail Keys Definition File (CITMD$KEYDEF.COM) is in CITMD$DIR.

CITMD Attendants' Mail Keys Definition File (CITMD$KEYDEF_ATT.COM)
is in CITMD$DIR.

CITMD Attendants' Help File (CITMD$ATT_HCI.HLB) is in SYS$HELP.

CITMD General Users' Help File (CITMD$GEN_HCI.HLB) is in SYS$HELP.

The Installation Verification Procedure for CITMD was successful.

        CITMD Installation Verification Procedure
        completed at 17:46
```

Example 1–1 Cont'd. on next page

Example 1–1 (Cont.) Example Log File for CITMD Installation

```
On completion of this Installation Procedure
you must set up the Access Control List for
the Attendants' Message File.

Use the following command when this Installation
Procedure has finished:

$ @citmd$dir:CITMD$SET_ACL.COM

  Installation of CITMD V1.0 completed at 17:46

  VMSINSTAL procedure done at 17:47
```

2 Configuring the CIT Message Desk

This chapter describes how to configure CIT Message Desk following successful installation. The following sections describe how to:

- Define access and user privileges for the two groups of CITMD users, Attendants and General Users.
- Create additional CITMD message files so that individual Attendants can receive calls and take messages for a specified group or building only
- Set the monitoring state for General Users.
- Define VMS Mail keys for users so that they can use keys to peform VMS Mail functions.
- Complete configuration procedures for the Northern Telecom Meridian SL1 PBX.

2.1 Defining Access and User Privileges

There are two groups of CITMD users:

- **Attendants**

  Attendants answer calls and take messages for other users. An Attendant may be a group secretary, for example, or a message attendant.

- **General Users**

  General users have their calls answered by an Attendant and use CITMD to receive messages and respond to messages taken by the Attendant.

Because Attendants and General Users perform different tasks, CITMD provides two user interfaces, one for Attendants and one for General Users. These interfaces provide access to different dialing, message, and phonebook features. So that Attendants and General Users can use these different features, you must define access and user privileges.

To define access and user privileges you must:

- Authorize Attendants so that they can access the CITMD Attendants' message file.
- Add Attendants to the System Phonebook.
- Add General Users to the System Phonebook.

Note

Once you have set up Attendants with access and user privileges, they can add General Users to the CITMD System Phonebook.

The following section describes how to set up Attendants with access privileges, and how to configure CITMD so that Attendants can receive messages and organize messages for other users.

2.1.1 Setting Up Attendants

To set up an Attendant with access to CITMD, you must:

- Authorize the Attendant to use the CITMD message file (CITMD$ATT) which is created during installation. All Attendants on your system use the message file to take messages from callers and to organize messages left by other users.

  You can also create other message files so that individual Attendants answer calls and take messages for a group or building only. See Section 2.1.1.3.

- Enter details of the Attendant in the CITMD System Phonebook. All Attendants and General Users must have an entry in the CITMD System Phonebook. Each entry specifies a user's telephone number and name, which CITMD uses when providing Dialing and Message Services.

The following sections describe how to complete these procedures.

2.1.1.1 Authorizing an Attendant

The CITMD$ATT message file is used by all Attendants on your system to receive CITMD messages, organize messages, and respond to messages. So that only Attendants can access the CITMD message file, an access control list (ACL) has been attached to CITMD$ATT.

An ACL consists of access control list entries (ACEs) which grant or deny access to a particular system object, for example, a file. The ACL for the CITMD$ATT directory has one ACE defined, the identifier CITMD$ATTID.

Before any Attendant can access CITMD, you must use the VMS Authorize utility to grant them with the CITMD$ATTID identifier. To grant an Attendant with the identifier, complete the following procedure:

1. Log in to the system account and set default to the directory SYS$SYSTEM:

```
$ SET DEFAULT SYS$SYSTEM
```

2. Invoke the Authorize utility (AUTHORIZE):

```
$ RUN AUTHORIZE
```

3. Enter the following command line, specifying the VMS username of the person you are defining as an Attendant:

```
UAF> GRANT/ID CITMD$ATTID username
```

4. Type EXIT or press Ctrl/Z to exit the Authorize utility.

You must complete this procedure for each Attendant on your system who is to use CITMD.

For more information on Access Control Lists, refer to the system manager's manual, *VMS Access Control List Editor Manual*. For more information on the Authorize utility, refer to the System Manager's manual, *VMS Authorize Utility Manual*.

2.1.1.2 Adding an Attendant to the CITMD Phonebook

All Attendants on your system must be added to the CITMD System Phonebook before they can access CITMD. So that all Attendants have an entry in the System Phonebook, you must:

1. Add one Attendant to the System Phonebook.
2. Instruct that Attendant to add details of the other Attendants.

To add an entry for the first Attendant, you must run CITMD from the system account. Thereafter, you must not use the system account for access to other CITMD features. CITMD uses information in the System Phonebook to provide dialing and message features. Because you can run CITMD without specifying any information in the phonebook, CITMD cannot provide these features from the system account.

To enter details of an Attendant in the CITMD System Phonebook, complete the following procedure:

1. Log in to the system account.
2. Enter the following command at DCL level:

   ```
   $ TELEPHONE PHONEBOOK
   ```

   The Phonebook Services menu is displayed.
3. Select ADD from the Phonebook Services menu by using the arrow keys on your keyboard to highlight the ADD command, and press Return.

   CITMD displays a System Phonebook entry form:

   ```
   Surname:
   First name:                    Middle Initial:
   Familiar name:                 Phone:
   Node:                          Username:
   Location:                      Comment:

   Attendant - Y/N [N]:           Agent ID:

   Registered Local User - Y/N [N]:

   Are these details correct - Y/N [N]:
   ```

4 Complete the entry form by typing the information required for each field. (If you have no information to add at a field, press Return and the cursor moves to the next field.) The following fields must be completed for the entry to be added:

- Surname—the Attendant's surname.
- Username—the Attendant's VMS username.
- Phone—the Attendant's extension number.
- Agent ID—the Attendant's identification number if your system uses a Northern Telecom Meridian SL1 PBX (see Section 2.4). If your system uses another PBX, you are not prompted for an Agent Id.
- Attendant - Y/N [N]—type "Y" to enter the Attendant. You must enter "Y" so that the Attendant can use CITMD Attendant features. If you do not specify "Y", the user is automatically entered as a General User.
- Registered Local User—type "Y" to register the Attendant as a local user. All CITMD Attendants and General Users on your system must be Registered Local Users so that CITMD can identify the CITMD users on your system.

5 When you have completed the form, enter "Y" at the following field:

```
Are these details correct - Y/N [Y]: Y
```

Details of the Attendant are now included in the System Phonebook.

You must now instruct the Attendant to add details of the other Attendants on your system. The procedure for Attendants adding an entry in the System Phonebook is described in the manual, *Using the VAX CIT Message Desk*.

2.1.1.3 Creating an Additional CITMD Message File

If your business or system requires an Attendant to answer calls and take messages for a particular group of CITMD users on your system, you can create a separate CITMD message file. By setting up an additional message file, Attendants can receive calls, take messages, and organize messages for only that group.

To create and configure an additional message file, complete the following procedures.

Creating Another Attendant Message File

To create a CITMD message file:

1. Log in to the system account and set default to the directory SYS$SYSTEM.
2. Invoke the Authorize utility (AUTHORIZE):

   ```
   $ RUN AUTHORIZE
   ```

3. Use AUTHORIZE to add a user record to the system UAF. The ADD command and qualifiers creates a new record:

   ```
   UAF> ADD Username /PASSWORD=password /UIC=[nnn,nnn]-
   _UAF> /DEVICE=Devicename /DIRECTORY=[Directoryname]
   ```

   Specify the "Username" as the name of the account which is to be the new CITMD message file for the Attendants. For example:

   ```
   UAF> ADD CITMD$ATT2 /PASSWORD=SP0152 /UIC=[014,006]-
   _UAF> /DEVICE=SYS$COMMON /DIRECTORY=[CITMD$ATT2]
   ```

4. Exit the Authorize utility by pressing Ctrl/Z.
5. You must now create a first-level directory for the new account.
   To create the first-level directory, enter the following command, specifying a name for the directory and the UIC of the new account:

   ```
   $ CREATE/DIRECTORY device:[directoryname]/OWNER=[nnn,nnn]
   ```

   For example:

   ```
   $ CREATE/DIRECTORY SYS$COMMON:[CITMD$ATT2]/OWNER=[014,006]
   ```

Creating an Access Control List

To control access to the Attendant's new message file, you must now create an Access Control List (ACL) for the new account and directory. To do this, you must:

1 Create an access control list entry (ACE). An ACE grants or denies access to a system object, such as a file. For the new message file, you must specify an identifier as an ACE so that only Attendants to whom you grant the identifier can access the file.

To create an identifier, complete the following:

i Log in to the system account and set default to the directory SYS$SYSTEM.

ii Invoke the Authorize utility (AUTHORIZE):

```
$ RUN AUTHORIZE
```

iii Enter the following command:

```
UAF> ADD/IDENTIFIER Id-name
```

The identifier name (Id-name) is a string of 1 to 31 alphanumeric characters that may contain underscores and dollar signs. The name must contain at least one nonnumeric character. For example:

```
UAF> ADD/IDENTIFIER CITMD$ATTID2
```

iv Exit the Authorize utility by pressing Ctrl/Z.

2 Set the ACL on the new message directory. Enter the following commands, specifying the identifier and directory for the message file:

```
$  SET ACL/ACL=(IDENTIFIER=identifier, ACCESS=READ+WRITE-
_$ +EXECUTE+DELETE+CONTROL) SYS$SYSDEVICE:[VMS$COMMON]-
_$ Directoryname

$  SET ACL/ACL=(IDENTIFIER=identifier, OPTION=DEFAULT, -
_$  ACCESS=READ+WRITE+EXECUTE+DELETE+CONTROL) -
_$  SYS$SYSDEVICE:[VMS$COMMON]Directoryname
```

For example:

```
$  SET ACL/ACL=(IDENTIFIER=CITMD$ATTID2, ACCESS=READ+WRITE-
_$ +EXECUTE+DELETE+CONTROL) SYS$SYSDEVICE:[VMS$COMMON]-
_$ CITMD$ATT2.DIR
```

```
$  SET ACL/ACL=(IDENTIFIER=CITMD$ATTID2, OPTION=DEFAULT, -
_$  ACCESS=READ+WRITE+EXECUTE+DELETE+CONTROL) -
_$  SYS$SYSDEVICE:[VMS$COMMON]CITMD$ATT2.DIR
```

For more information on Access Control Lists, refer to the System Management manual, *VMS Access Control List Editor Manual*. For more information on the Authorize utility, refer to the System Management manual, *VMS Authorize Utility Manual*.

Redefining Logicals

Before Attendants can access the new CITMD message file, you must redefine logicals set up during installation.

System logicals are defined so that General Users can send mail to Attendants and the mail is automatically filed in the CITMD$ATT message file. So that mail is filed in the new message file, you must instruct users to set up process logicals:

- Instruct all General Users in the group to add the following definition to their LOGIN.COM file:

  ```
  $ DEFINE CITMD$ATTENDANT Accountname
  ```

  The "Accountname" is the name of the account that you have created. For example:

  ```
  $ DEFINE CITMD$ATTENDANT CITMD$ATT2
  ```

- Instruct all Attendants using the new CITMD message file to add the following definitions to their LOGIN.COM file:

  ```
  $ DEFINE CITMD$ATTENDANT Accountname
  $ DEFINE CITMD$ATTMAILDIR devicename:[directoryname]
  ```

  The "Accountname" is the name of the account that you have created. For example:

  ```
  $ DEFINE CITMD$ATTENDANT CITMD$ATT2
  $ DEFINE CITMD$ATTMAILDIR SYS$COMMON:[CITMD$ATT2]
  ```

Authorizing the Attendants

For all Attendants who are to access the new message file, you must use the Authorize utility to grant them the new identifier. Complete the following procedure:

1 Log in to the system account and set default to SYS$SYSTEM.

2 Invoke the Authorize utility (AUTHORIZE):

```
$ RUN AUTHORIZE
```

3 Enter the following command line, specifying the new identifier and the Attendant's username:

```
UAF> GRANT/ID Id-name username
```

For example:

```
UAF> GRANT/ID CITMD$ATTID2 MWILSON
```

4 Type EXIT or press Ctrl/Z to exit the Authorize utility.

In addition, each Attendant must have an entry in the System Phonebook. To add an Attendant to the System Phonebook, complete the procedure in Section 2.1.1.2.

2.1.2 Adding General Users to the CITMD Phonebook

Before General Users can use CITMD, they must must be added to the CITMD Phonebook.

Remind Attendants for your group or system to add the information that is required. The procedure for Attendants adding an entry in the System Phonebook is described in the manual *Using the VAX CIT Message Desk*. More than one Attendant can add to the System Phonebook at the same time; thus, entries in the phonebook may be completed by a number of Attendants.

In addition to details of CITMD users, other information may also be entered in the System Phonebook. For example, details of personnel associated with your business can be added. CITMD uses information in the CITMD Phonebook to:

- Display on-screen information on calls, such as the name of a caller.
- Provide features, such as the call by name feature. This lets users make a call by specifying a name instead of a number. CITMD parses the information in the System Phonebook to find the telephone number that is listed under the name that they specify.

2.2 Setting the Monitoring State for General Users

During installation, a monitoring state is set so that Attendants and General Users monitor all calls that they make or receive when they use CITMD.

Monitoring provides CITMD with additional status information on calls, such as the identity of other parties, type of call, and current state of the call. Because this information is available, CITMD can also provide more features such as the CONFERENCE option. However, if there are a large number of users on your system, the information generated by monitoring may overload the link. This may cause problems and make CITMD run slowly.

So that the link does not become overloaded, you can set the monitoring state so that General Users monitor some calls only. CITMD provides General Users with two dialing menus instead of one:

- Dialing Services menu—which lists dialing options that do not require monitoring. The Dialing Services menu is automatically displayed when General Users select Dialing Services. The menu includes a FEATURES option which displays the Additional Features menu.
- Additional Features menu—lists all the options on the Dialing Services menu and additional dialing features, for example, the CONFERENCE option. When the Additional Features menu is displayed, monitoring is set on.

By selecting options from the Dialing Services menu, General Users can complete most dialing functions without monitoring set on. If they want more information on a call or they need to use dialing features such as the CONFERENCE option (which requires monitoring to be set on) they can then access the Additional Features menu.

To change the monitoring state for General Users, you must:

1 Edit the following line in SYS$MANAGER:CITMD$STARTUP.COM:

```
DEFINE/SYSTEM CITMD$MONITOR Y
```

so that the line reads:

```
DEFINE/SYSTEM CITMD$MONITOR N
```

2 Run the startup file so that the new value is defined:

```
@SYS$MANAGER:CITMD$STARTUP
```

2.3 Defining MAIL Keys

This section describes the procedures for General Users and Attendants to define VMS Mail keys.

CITMD uses VMS Mail as an interface for supporting the Message Services features that all users can access. Both Attendants and General Users use VMS Mail commands to complete different procedures:

- General Users receive CITMD messages in the same way that they receive new mail; the message is automatically placed in the Newmail folder of their VMS Mail file.

  To use Message Services to respond to a CITMD message, a General User must:

  1. Move the message into the CITMD message folder, which is in their mail file.
  2. Spawn from MAIL and enter CITMD Message Services.

- Attendants can use VMS Mail commands to move VMS Mail messages to the Attendant's message file. This lets the Attendant display the message if they want to use CITMD to respond to it and lets other Attendants read the message.

Both Attendants and General Users can define keys to perform these VMS Mail command procedures; CITMD provides two MAIL$INIT definition files which contain VMS Mail key definitions. To define MAIL$INIT, they must complete the following:

- **General Users**

  General Users must edit their LOGIN.COM file to include the following specification:

  ```
  $ Define MAIL$INIT SYS$COMMON:[CITMD]CITMD_KEYDEF.COM
  ```

  The SYS$COMMON:[CITMD]CITMD_KEYDEF.COM file contains the following key definitions:

  ```
  $ define/key/echo/terminate F17 "copy citmd"
  $ define/key/echo/terminate F18 "spawn citmd messages"
  ```

- **Attendants**

  Attendants must edit their LOGIN.COM file to include the following specification:

  ```
  $ Define MAIL$INIT SYS$COMMON:[CITMD]CITMD_KEYDEF_ATT.COM
  ```

  The SYS$COMMON:[CITMD]CITMD_KEYDEF_ATT.COM file contains the following key definition:

  ```
  define/key/echo/terminate F19 "file newmail CITMD$ATTMAILDIR:MAIL"
  ```

  The F19 key moves mail from the VMS Mail Newmail folder of the Attendant's account to the CITMD Attendant's message file.

Remind users to add the previous MAIL$INIT definitions into their LOGIN.COM files.

If users have already defined MAIL$INIT in their LOGIN.COM file, or the F17, F18 or F19 keys are already used to define functions, users can add the previous key definitions to their LOGIN.COM file and specify other keys.

2.4 Configuration Procedures for the Northern Telecom Meridian SL1 PBX

If your system uses a Northern Telecom Meridian SL1 PBX, the following procedures must be completed before users can access CITMD:

- All telephone sets must be configured as associated sets. This allows CITMD to assign channels to the users' telephones.

  Security must also be switched on for all General Users.

- All Attendants must be defined as ACD agents, and their agent identification number must be entered in the CITMD Phonebook. Your PBX administrator can provide you with the Attendants' identification numbers.

See your PBX administrator to complete the previous procedures.